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City University London

Research Title: "The effectiveness and acceptability of a computerised cognitive behavioural therapy programme and the psychometric properties of its service user generated outcome measure."

Completed by Despina Learmonth

For the qualification of Professional Doctorate in Health Psychology

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Submitted in September 2007

Doctorate in Health Psychology List of Contents

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Section A: Preface

Preface

This doctorate in Health Psychology adds to the body of knowledge that constitutes computerised cognitive behavioural therapy (CCBT), CCBT service user generated outcome measures, and eating disorder prevention and treatment. The various ways in which the work completed for this doctorate contributed to these three fields of psychological research and practice is discussed under the relevant headings below.

Computerised CBT

Compared with chronic diseases, such as those of angina, diabetes, arthritis, and asthma, depression is said to produce the greatest decrement in health (Moussavi et al., 2007). According to the Psychiatric Morbidity Survey Report (Singleton et al., 2000) in the UK at any one time some 6 million people are suffering from depression or anxiety disorders or both. That is almost one in six of the adult population. In the UK, treating depression places huge burdens on general practitioners (GPs) with almost 30 percent of GP consultations relating to a mental health problem (Norwich Union, 2004). The standard treatment response to depression and anxiety has been medication, but the National Institute of Health and Clinical Excellence (NICE, 2004) has questioned the wisdom of prescribing antidepressants as a first treatment step in mild to moderate depression. However, mental health services in the UK are plagued by long waiting lists and a huge shortage of qualified practitioners. As a result, only approximately 1% of those suffering from anxiety and/or depression are actually receiving psychotherapy or counselling (Cavanagh et al., 2006).

Besides increasing mortality through suicide, depression, along with anxiety, has been demonstrated to be associated with increased levels of smoking and alcohol consumption (Cargill, Emmons, Kahler, & Brown, 2001), poor sleep patterns, the decreased likelihood of visiting a medical practitioner at the onset of an illness (Marks, Murray, Evans, & Willig, 2000), and the lowered likelihood of adhering to medical advice or recommendations to treat illnesses (McKellar, Humphreys, & Piette, 2004; Kilbourne et al., 2005). Physical illness in turn is believed to increase vulnerability to anxiety and depression (Currie & Wang, 2004). When present co-morbidly with other illnesses, depression incrementally contributes to a greater deterioration in overall health than either depression alone, or any of the chronic diseases alone, or any combination of chronic diseases without depression (Moussavi et al., 2007). As there are no specific psychological intervention guidelines for many chronic physical illnesses, practitioners are frequently directed to the NICE depression guidelines (NICE, 2004). These guidelines recommend CCBT as a second step treatment choice in a stepped care approach.

Computerised CBT was initially developed in an attempt to try and ease the burden on healthcare services by providing an alternative for individuals suffering with mild to moderate anxiety and/or depression. There is also a move towards guided self-help as part of the shift to service user empowerment in the health services.

The work in this doctoral portfolio illustrates how psychology theory and practice was used to enable the cost-effective implementation and use of a CCBT programme, *Beating the Blues,* for the treatment of anxiety and depression in healthcare services. In a variety of different *Beating the Blues* focused projects involving training, implementation of services, and service improvement, aspects of health psychology were combined with knowledge about the implementation of CCBT services for anxiety and depression in primary and secondary care. The staff involved in these processes learnt about how sharing the benefits of exercise and a balanced diet with service users whilst incorporating these behaviour changes as goals into the overall intervention could have a positive effect on service users' outcomes. Health psychology was further integrated with clinical knowledge by drawing attention to the link between physical and mental ill-health; as well as to the NICE recommendations on exercise as an appropriate intervention for the management of anxiety and depression (NICE, 2004). Improved understanding of the role that the treatment of anxiety and depression has to play in the management of chronic physical illnesses encouraged staff to adopt a more holistic approach in their delivery of care.

Psychological knowledge of different learning styles and motivation for learning in designing and delivering training were employed to improve training sessions. Training workshops were both didactic and experiential in nature, allowing trainees to gain the requisite knowledge and then to become actively involved in using that knowledge to workshop aspects of implementation and care. This knowledge of different learning styles was passed onto colleagues to assist them in improving their own training sessions.

By disseminating the findings of the consultancies completed as part of this doctorate in Health Psychology, contact clients increased their understanding of the processes involved within each consultancy, and consequently relevant staff were better equipped to carry out similar training sessions. Communicating processes and outcomes of practice is crucial for improving professional practice. All too frequently there is not enough time allocated for this to take place, and when it does transpire very little thought seems to be put into the process or desired impact.

The impact of *Beating the Blues* on individuals suffering from physical co-morbidities as well as depression and/or anxiety was also addressed through research in applied settings. The research component of this doctoral portfolio focussed on the use of CCBT in a secondary care specialist CBT centre where many individuals referred to the programme, *Beating the Blues,* for anxiety and/or depression were also suffering from physical co-morbidities. The first part of the research study sought to identify whether the presence of physical co-morbidities among sufferers of depression and/or anxiety altered the impact of the CCBT programme. *Beating the Blues* was demonstrated to be as effective for service users with physical co-morbidities as for those without obvious physical difficulties. Large effect sizes for the intervention were found for both groups of service users. With an advent in the use of computer-based programmes, due to NHS service shortages, to assist individuals with health conditions, this study provided important evidence for the use of CCBT with individuals struggling with co-morbid physical illness. The outcomes of this research are to be used for consultation by NICE in the following two guideline updates in 2007/2008:

i) The treatment and management of depression in primary and secondary care (partial update of CG23), and

ii) The treatment of depression in people with chronic physical health problems (partial update of CG23).

The second part of the research study assessed service users' satisfaction with the computerised CBT programme, comparing the two intervention groups on measures on satisfaction. Satisfaction with *Beating the Blues* amongst both groups of service users was demonstrated and ratings did not differ significantly between groups. Qualitative data also provided information regarding the service and the programme. Assessing service users' experiences of a particular intervention is a very important component of establishing the effectiveness of an intervention. The qualitative feedback pointed at several main areas for improvement: i) more detailed information to take away after each session, ii) a different voiceover for the programme, iii) more flexibility in the programme with regards to responses available to users, iv) real life case studies (the case studies are actually based on real life examples, so this needs to be made clear to users), and v) more therapeutic support with the programme. The issues of increasing therapeutic support and providing more detailed information to take away will be the first areas to be tackled in improving the service. Therapeutic staff will also be encouraged to highlight how the management of anxiety and depression is important for the management of physical well-being, especially to service users experiencing co-morbid physical

difficulties. This will hopefully serve to increase the perceived relevance of the CCBT intervention.

The types of problems that the service users in the CBT specialist centre chose to work on while using *Beating the Blues* were also explored. This section of the research provided valuable information on the way in which service users described and perceived their main problems. Interestingly, service users seemed to view the way physical illnesses or symptoms impacted on their lives, rather than the illnesses or symptoms themselves, as issues of concern. This is very important for clinicians to be aware of when exploring the meaning that service users give to bodily discomfort and ill health. There was also a good level of awareness of adverse health behaviours amongst those who reported these as issues of concern. This type of information can be hugely helpful in problem formulation prior to the implementation of interventions to change health-related behaviour.

CCBT service user generated outcome measures

Finally the research focussed on the evaluation of a service user generated measure, the Subjective Units of Distress (SUDS) measure, contained within the *Beating the Blues* programme. This research was in response to growing pressure to develop psychometric instruments that can reflect the service user's perspective on their own psychological distress. This move is linked to the increasing emphasis on valuing service users' perspectives and service user empowerment; as well as to the importance of incorporating tools to measure health and wellbeing into healthcare services. Internal reliability for SUDS measure was demonstrated, and it was a found to be a valid wellbeing and quality of life measure.

Eating Disorders

The prevalence and incidence of eating disorders seems to have increased strikingly in Western societies in the last two decades (Dalle Grave, De Luca, & Campello, 2001). Eating disorders can be very difficult to treat, and anorexia nervosa has been reported to have the highest mortality rate of all the mental illnesses (Johnson, Cohen, Kasen, & Brook, 2002). Eating disorders can also lead to a number of irreversible physical conditions such as infertility, osteoporosis, and damage to the heart. Health psychologists' potentially vital role in the prevention and management of eating disorders is still not confidently recognised, as the psychopathology which is linked with eating disorders frequently marks individuals as requiring clinical psychologists' services.

The implementation of CBT interventions to assist eating disordered individuals aimed to reduce incidences of bingeing and purging whilst increasing self-esteem and coping skills. The interventions were based on motivational interviewing and CBT techniques. Most of the interventions implemented with eating disordered clients were successful in reducing bingeing and purging behaviour, whilst concurrently increasing coping skills and self-esteem. These interventions also helped to improve clients' overall health.

The systematic review included in this portfolio explored how computer-based prevention programmes could successfully be used to prevent the onset of eating disorders. Findings of this review suggested that computer-based prevention programmes may be effective in reducing factors that can contribute to the development of eating disorders in high risk individuals. Future studies however are needed to focus on: including larger participant samples to increase statistical power, more diverse participant samples, and longer episodes of follow-up data collection to ascertain how participants' outcomes change over greater periods of time.

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Section B: Research

Research title:

"The effectiveness and acceptability of a computerised cognitive behavioural therapy programme and the psychometric properties of its service user generated outcome measure."

Abstract

Background

Physical and psychological ill-health is strongly interlinked. Poor physical health can amplify psychological symptoms; whilst disabling physical symptomology and illnesses have been improved by the treatment of depression and/or anxiety.

Currently, demand outstrips the supply of psychological treatments for common mental health problems. This is mainly due to the lack of trained therapists in the UK. Effective and less therapist-intensive interventions are required. The efficacy of computerised cognitive behavioural therapy (CCBT) has been demonstrated in routine primary care. However, service users in secondary care and those with physical and psychological co-morbidities have frequently been excluded from these studies. Further research, particularly qualitative research, focusing on service users' satisfaction with CCBT has also been called for by National Institute for Health and Clinical Excellence (NICE) reviewers.

Concurrently, very little knowledge exists on what problems users bring to work on in CCBT sessions; whilst service user empowerment perspectives call for an increase in supported self-help interventions and "patient as expert" quality of life outcome measures in order to improve accessibility to services and actively involve service users in the delivery of their care.

Aims

The first reported piece of research was a naturalistic non-randomised study carried out to establish the effectiveness and acceptability of a CCBT programme, *Beating the Blues,* as an intervention for anxiety and depression in an NHS CBT specialist centre. The study also sought to identify whether physical co-morbidities altered the nature of the intervention's impact on clinical outcomes. The following two studies evaluated the psychometric properties of an electronic service user generated Subjective Units of Distress (SUDS) measure.

Methods

Five hundred and ninety service users were included in the study. Three groups, a control group, a standard intervention group, and a physical co-morbidity intervention group, were compared on pre- and post-BDI-II scores. The two intervention groups were also compared on pre- and post-BAI scores. Qualitative feedback and satisfaction rating scores were analysed to establish the acceptability of *Beating the Blues.*

The validity of the SUDS measure was assessed using the BDI-II, BAI, and CORE-OM as validated measures with which the SUDS could be correlated. The internal reliability and sensitivity of the SUDS measure were also evaluated. A conventional content analysis was carried out to explore what types of problems service users chose to work on when using *Beating the Blues.*

Results

In completer and intention-to-treat analyses, statistically significant differences were found for mean score changes on the BDI-II between the control group and both the intervention groups. No differences were found between the intervention groups on either the BDI-II or BAI. A quarter and one fifth of completers in each group achieved reliable and clinically significant change on the BDI-II and BAI respectively. In terms of acceptability, most of the participants found *Beating the Blues* to be a useful therapeutic tool. The qualitative feedback indicated four active core categories regarding both the features of *Beating the Blues* that service users found useful, and the ways in which they felt the programme could be improved upon.

Seven main categories emerged from a number of sub-categories focusing on the described problems that service users choose to work on when using *Beating the Blues.* Service users broadly described symptoms, and emotional and practical issues as problems.

The SUDS appeared to be sensitive to clinical change and to provide some measure of wellbeing, problems, and functioning; however, further research into certain aspects of its validity is still required.

Conclusion

The research findings provided compelling evidence that *Beating the Blues* may be of value to service users suffering with depression and/or anxiety and varied physical and psychological co-morbidities in secondary care CBT specialist centres. The electronic SUDS measure contained within the programme also demonstrated potential to successfully incorporate service users' perspectives into more comprehensive evaluations of their wellbeing and quality of life.

Further research needs to focus on: factors affecting adherence to *Beating the Blues* and its effectiveness with anxiety, the incorporation of physical health outcome measures, the use of the programme - including the SUDS measure - with individuals from different ethnic and socio-economic backgrounds, acceptability of the SUDS measure to practitioners, and reasons for its non-completion amongst service users.

Chapter 1

Study 1: Investigating the effectiveness and acceptability of computerised cognitive behavioural therapy for secondary mental healthcare service users with and without physical co-morbidities.

Part 1

1.1. Introduction

Conceptualisation of illness historically

Since the time of Hippocrates, conditions that are now regarded as mental illnesses, such as mania and melancholia, were treated by physicians with much the same sorts of medication as traditional medical disorders (Kendell, 2001). Greek philosophers such as Plato, Aristotle, and Hippocrates first proposed the principle of holism about 3,000 years ago. Holism was built upon the foundation that the mind and body were integrated and utterly inseparable. Hippocrates also proposed a *humoral theory* to explain why people became ill. This theory focused on the balancing of fluids (*humors)* in the body. Disease only occurred when this balance was disrupted; the mind as a separate entity had little or no part to play in the physical body's state of health (Sarafino, 1990). The Middle Ages saw the rise of religious overtones in illness aetiology and demon possession was frequently used as an explanation for any illnesses suffered. The *Renaissance* returned the focus of illness to bodily disruptions, until Descartes' theory of mind/body duality planted the seed for the idea that "insanity" was different from other medical illnesses. This divergent theory of dualism developed towards the end of the 18th century, and saw the establishment of "mad-houses" and "lunatic asylums". As post-mortem examinations revealed that insanity was not accompanied by the clear pathological changes visible in other diseases, general medical physicians no longer managed the "insane". Physicians could no longer cure "madness", and this social impression spawned the terms "disease of the mind", "disorder of the mind" and "mental illness". The school of psychoanalysis that emerged at the end of the 19th century considered all mental illness to be psychogenic, and therefore saw the only reasonable form of treatment as psychotherapy (Kendall, 2001).

Conceptualisation of illness today

This distinction between disorders or diseases of the mind and body is still made by many in Western society. The latest version of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) (1994) states in its introduction that: "The term *mental disorder* unfortunately implies a distinction between 'mental' disorders and 'physical' disorders that is a reductionistic anachronism of mind/body dualism. A compelling literature documents that there is much 'physical' in 'mental' disorders and much 'mental' in 'physical' disorders. The problem raised by the term 'mental disorders' has been much clearer than its solution, and unfortunately the term persists in the title of the DSM-IV because we have not found an appropriate substitute".

What the DSM-IV (1994) fails to point out is that there is also much 'social' in both. One of the central concerns of critical health psychology is the inadequacy of mainstream psychology's appropriation of the biopsychosocial model (Crossley, 2000). It is too frequently presented as a 'multiple rather than integrated explanatory framework' in which 'biological, social and psychological factors co-exist in a seemingly fragmented way' (Cooper et al., p.4, as cited in Crossley, 2000). Ogden (1996) is of the opinion that although mainstream health psychology was originally formulated as a challenge to the dualism of biomedical model, this dualism has largely been preserved with the addition of social as a third, but still essentially separate entity.

The challenge is not to reject the biopsychosocial model in favour of the phenomological-discursive model offered by critical health psychologists, but instead to attend to the fragmentary character of its nature. This introduction focuses predominantly on the disjointed physical and psychological dimensions of interaction.

There is evidence of somatic abnormalities in almost all common mental disorders. In some cases however, mental illnesses or psychiatric disorders are caused by actual brain impairment, for example, Pick's or Alzheimer's dementia, and Huntingdon's mood swings or depression. These illness are frequently known as 'organic mental' disorders because they are believed to be a direct consequence of physical brain impairment. The difficulty lies in the definition and naming of those disorders which do not seem to display any somatic etiology. As far back as 1855, Reynolds attempted to manage this difficulty by distinguishing between 'organic' and 'functional' disorders. 'Functional' disorders frequently only consist of

a group of symptoms, and seem to have no evidence of physical disease. They are characterised by physical symptoms and demonstrable structural or physiological changes in which emotional factors are believed to play a major aetiological role. For example, chronic fatigue syndrome and certain pain presentations are believed to be functional disorders.

The prevalent illnesses (functional disorders?) of depression and anxiety

As the incidence of depression increases, it is reaching the brink of becoming globally one of the most debilitating diseases this century. According to the World Health Organisation (WHO) in 2000 major depression was the leading cause of disability world-wide, ranking fourth among the ten leading causes of global disease burden. By the year 2020, depression is projected to reach second place in the ranking of leading causes of global disease burden (calculated via Disability Adjusted Life Years [DALYs] - described by WHO as the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability) for all ages and both sexes. Currently, depression is already the second cause of DALYs in the age category 15-44 years for both sexes combined.

Goldberg and Huxley (1997) stated that about 13% of the British population suffers from anxiety disorders or depression, with combinations of the two being very common. This represents more than 7 million people suffering from anxiety and or depression in the UK at any one time. These figures have been corroborated by the Psychiatric Morbidity Survey Report (Singleton, Bumpstead, O'Brien, Lee, & Meltzer, 2000) which claimed that mixed anxiety and depressive disorder (88 cases per 1,000) was the most prevalent neurotic disorder among the population as a whole. According to this report, in the UK, some 6 million people are suffering from depression or anxiety disorders or both. That is almost one in six of the adult population.

Depression is also the most common mental disorder to lead to suicide. Seventy percent of recorded suicides are committed by individuals suffering from depressive illnesses (Faukner, 1997). The Samaritans (2006) report that the lifetime suicide risk for people with severe depression may be as high as 6%. This compares with a risk of 1.3% in the general population. Suicide remains the most common cause of death in men under the age of 35 (Department of Health - National Service Framework, 2004).

"We learn in health psychology that the mind and body are thoroughly intertwined" (Sarafino, 1990)

Besides its role in increasing mortality through suicide, depression, along with anxiety, neuroticism, and increased hostility, has been demonstrated to be associated with increased levels of smoking and alcohol consumption (Cargill, Emmons, Kahler, & Brown, 2001), poor sleep patterns, the decreased likelihood of visiting a medical practitioner at the onset of an illness (Marks, Murray, Evans, & Willig, 2000), and the lowered likelihood of adhering to medical advice or recommendations to treat illnesses (DiMatteo, Lepper, & Croghan, 2000; McKellar, Humphreys, & Piette, 2004; Kilbourne et al., 2005). Jorm et al. (1999) even suggested that as smoking is associated with poorer mental health, general practitioners (GPs) helping service users to give up smoking need to be aware that some may have underlying mental health problems that require attention.

Lazarus and Folkman (1984) in their transactional model of stress talk about stressors, such as increasing workload, starting college, death of a loved one, or becoming a parent, which, as a resultant lack of coping resources, are appraised by some individuals as being undesirable and harmful or a threat. These stressors, especially when experienced for prolonged periods of time, may contribute to deterioration in both psychological and physical health (Sarafino, 1990). Wang and Patten (2001) found that work stress was associated with major depression, whilst marital dissatisfaction has been found to relate to major depression and dysthymia (Whisman, 1999). Individuals' response to stressors frequently results in physiological reactions being activated through the brain and the nervous system in the body. Corticosteroids in the concentrations elicited by heightened stress and anxiety can adversely affect the immune system by decreasing the number of antibodies produced, and reducing the size and activity of the lymph nodes. The lymph nodes are a source of lymphocytes (Sarafino, 1990), and lymphocytes play an important and integral role in the body's defenses. Chronic stress can contribute to sustained levels of corticosteroids in the blood which can result in a continued impairment of the immune system's functioning. Psychological stress or distress can also elicit changes in the amounts of epinephrine and norepinephrine produced, as well as in the levels of other neurotransmitters and neuromodulators, including vasopressin, testosterone, oestrogen, endorphins, growth hormone, insulin, and prolactin (Martin, 1996; McEwen & Seeman, 1999). As the human body's systems are developed to function in synchronized harmony, prolonged alterations in one systems functioning can affect the functioning of numerous other systems causing a

cascade effect. Stomach ulcers, high blood pressure, coronary heart disease (CHD), anxiety, and depression are all illnesses that are known to be linked to stress.

Individuals who experience persistent pain are four times more likely to suffer from a depressive or anxiety-related disorder than the general population (WHO, 2001). Long-term disabling, terminal, and/or disfiguring health conditions, such as stroke-induced paralysis, rheumatoid arthritis, HIV, cancer, cardiac disease, or diabetes, also have a strong association with depressive disorders (MacHale, 2002; WHO, 2003). For example, research has shown that compared to the general population, chronic obstructive pulmonary disease (COPD) service users experience higher levels of anxiety and panic (Brenes, 2003), as well as depression (Lambaek Mikkelsen, Middelboe, Pisinger, & Stage, 2004). This is important because the presence of anxiety and panic in COPD service users has been related to more frequent hospital admissions, longer stays (Yellowlees, Alpers, Bowden, Bryant, & Ruffin, 1987), greater use of medication (Carr, Lehrer, & Hochron, 1995), and is associated with greater restrictions on functional independence and status (Moore & Zebb, 1998). In coronary artery disease (CAD) depression has also been shown to be related to poor prognosis (Rozanski, Blumenthal & Kaplan, 1999).

Depression, a psychological state characterized by a decrease in overall coping, is considered sufficient in most cases to induce a state of poor health (Scheier & Bridges, 1995). Bruce McEwen (Gorman, 2007), a well-known neuroendocrinologist at Rockefeller University, has stated that, "We're learning that post-traumatic stress disorder (PTSD), burnout, chronic fatigue syndrome and fibromyalgia are all related in some ways". The relationship between stress (the result of perceiving stressors and coping) and psychological illnesses such as anxiety and depression is a complex one. Even more complex is the relationship between these psychological distress states and physical health. Whether because of poor self-care, lack of resources - both social and economical -, or as a result of a physiological chain reaction triggered by a genetic predisposition, the fact is that physical health is inextricably linked with psychological health.

For example, Matarrazo (in Marks, 2002) suggests that it is important for health maintenance that individuals get good rest and sleep. However, anxiety and depression are known to adversely affect sleep, and anxiety certainly hampers the body's ability to relax and rest. Poor sleep and the inability to relax and rest can increase an individual's stress, which in turn increases the number of corticosteroids in their blood, and consequently their immune functioning is adversely affected. They then become more susceptible to viral infections or

autoimmune diseases, such as multiple sclerosis (MS) or rheumatoid arthritis, and the debilitating effects of these diseases make the individual prone to anxiety and/or depression. In fact, amongst the diagnostic features of polymyalgia rheumatica and fibromyalgia, both illnesses with unclear aetiology, are: poor and unrefreshing sleep, fatigue, and varying degrees of depression.

Which comes first the physical or the psychological?

The example of stress and its effect on corticosteroids illustrates how psychological constructs such as 'perceived stress' and 'coping' can adversely affect physical health. In turn, physical ill health can negatively affect psychological well-being, reduced psychological well-being can harmfully affect health behaviours, poor health behaviours adversely affect physical and psychological well-being, and so the cycle is constructed. Recognising the added fundamental role played by individuals' socioeconomic environments, and accepting the fact that this environment colours every physical/psychological interaction, it frequently becomes very difficult to ascertain which causes which: the physical or the psychological?

The Ayurvedic tradition, developed from early traditions of thought in India, avoids a strict mind/body dualism, and instead focuses on their interaction in the causation of the human condition (in health and disease) (Ramachandra Rao, as cited in Jayasinghe, 2002). Clinical features of, for example, depression and epilepsy, are afforded aetiological roles for both mental and physical processes and interactions. The Buddhist traditions take a similar approach by stating that the "'mind' and 'body' are neither separate nor identical, not even alternatives, but inseparable....like two bundles of reeds supporting each other (Goonatilake, 1998).

Following the discussion presented, the Ayurvedic and Buddhist traditions offer a feasible solution to conceptualising the complex interactions within and around the holistic human. Unfortunately, this thesis's scope does not extend to discovering a solution to the DSM-IV's dilemma over the continued use of terms which imply a distinct mind/body dualism. But it does wish to challenge current healthcare practice characterised by dualism, and suggest that we do not get too caught up in the frequently superficial and linguistic distinctions between the mind and body at the expense of neglecting the individual as a whole and integrated being.

Are anxiety and depression perhaps "normal"?

Anxiety and depression are common health problems which occupy a lot of GP time through

being frequently accompanied by physical symptomology. Evidencing this for anxiety is the gold standard clinical anxiety outcomes scale, the Beck Anxiety Inventory (BAI). Over two thirds of the BAI's individual test items ask about physical symptom severity in order to detect the presence of mild, moderate, or severe anxiety. Despite being traditionally treated in psychology by clinical psychologists under the overarching diagnostic label of 'psychopathology', anxiety and depression are becoming common life experiences for many. Perhaps, dare I say it, even a 'normal' part of many individuals' lifespan trajectories?

Brown and Harris's (1978) study, in which they interviewed 458 women in south London, first highlighted the fact that many people may not get depressed as a result of personality problems, but rather as a result of adverse life events (stressors). Unfortunately, as discussed by Oatley (2007), an initial depressive episode can lead to "kindling", a sensitisation process gradually leading to less severe stressors triggering subsequent episodes of depression.

Once again, there is regrettably not the space here to debate the reasons for this apparent "normalising" by frequency of occurrence of anxiety and depression; or for the issues around acknowledging distress, or implications for treatment that may arise if we normalise these problems as commonly experienced life events. What I would like to use this space to emphasise is that anxiety and depression are becoming common health problems. Whether their original pathology lies within the physical, social, cultural, or psychological, the final impact is on the overall health and well-being of the individual.

The cost of anxiety and depression

Anxiety disorders and depressive illnesses impose large economic and social burdens (Berto, D'Ilario, Ruffo, Di Virgilo, & Rizzo, 2000; Simon, Ornel, VonKoroff, & Barlow, 1995b; London School of Economics, 2006). A study carried out in 1993 (Kind & Sorenson, 1993), estimated that depression alone cost £3 billion each year when lost productivity and the cost of benefits was taken into account. Of this, the cost to the National Health Service (NHS) was estimated at £420 million annually. These costs have increased sharply over the last few years and are now estimated to be more than £9 billion per year in England. Of this £9 billion, around £370 million is estimated to be the direct cost of treatment (Thomas & Morris, 2003).

The most common causes of sickness absence from paid employment in the UK are stress, anxiety, and depression. These account for approximately 60 million lost working days annually (The Sainsbury Centre for Mental Health and The Northern Ireland Association for Mental Health, 2006). The Sainsbury Centre for Mental Health suggests that the costs of work-related mental health problems are around £23.1 billion a year.

Increasingly GP consultations have a mental health component. Mental health problems are said to account for up to 40% of all GP consultations (Goldberg, 1999). Individuals who present with such symptoms tend to have multiple visits to their GP, which obviously impacts on overall available GP time. In fact the principal burden of mental health work falls to GPs, although practice nurses also report seeing large numbers of patients both formally and informally for mental health problems (Nolan, Murray, & Dallender, 1999).

Current treatment availability for anxiety and depression

Bebbington et al. (2000a) claimed that in the UK only 12.5 – 14% of those suffering from anxiety and/or depression were receiving treatment: one fifth (20%) were taking psychoactive medication, while just 8% of those were receiving psychotherapy or counselling. This means that even if there are between 6 – 7 million people in the UK at any one time who might benefit from psychotherapeutic interventions for anxiety and depression, only approximately 1%, merely 60, 000 - 70,000, are actually receiving any formal treatment. This represents a hundred-fold shortage of services (Cavanagh et al., 2006).

It is clear from the above that the most widely prescribed treatment for anxiety and depression is drug therapy. Although treatment with drugs such as antidepressants have been shown to be effective, many people do not wish to take medication, preferring therapy (Angermeyer & Matschinger, 1996; Tylee, 2001), whilst others respond badly or in some instances not at all. For service users with co-morbid physical illnesses, psychotropic medication can be problematic because of its interaction with certain medicines used to manage physical conditions. Psychotropic medication also merely serves to manage distressing symptoms without actually addressing the psychological, social, behavioural, or cognitive issues which collate to perpetuate the illness.

Whilst the National Service Framework (NSF) for Mental Health (Department of Health, 1999) has called for increased availability of psychological therapies for common mental health problems, a shortage of trained therapists (Goldberg & Gournay, 1997) means most

waiting lists for therapy are over nine months; in some areas there are simply no therapists available at all (Shapiro, Cavanagh, & Lomas, 2003; London School of Economics, 2006). These problems permeate through the system, and the long waiting times for specialised services often force service users with mental health problems to rely heavily on primary care services. This stretches these resources to their limits. It is estimated that at least 20% of service users consulting GPs have, as their principal medical condition, anxiety, depression, or mixed anxiety and depression (Fox, Acton, Wilding, & Corcoran, 2004). There are also no specific guidelines for psychological interventions for many chronic physical illnesses, and practitioners are directed to the National Institute of Health and Clinical Excellence's (NICE) anxiety and depression guidelines, which recommend cognitive behavioural therapy (CBT), instead.

Authorities and advisory bodies are focused on achieving a reduction in waiting times and improvements in waiting list management (Department of Health, 2004; Healthcare Commission, 2005). Over the last few years, a range of initiatives have been introduced in an attempt to meet these aims, including bibliotherapy, further guided self help interventions (Lovell & Richards, 2000; Richards et al., 2003), and the development of the role of the Graduate Mental Health Worker (GMHW) (Crosland, Harrington, & Papworth, 2003; Newbigging, Nixon, Playle, Lyons, & Harrison, 2005). The recent 5-year review of the NSF for Mental Health acknowledged that the availability of psychological services has increased (Department of Health, 2004), but that long waiting lists still remain in some services. The review recommended that the National Institute for Mental Health in England (NIMHE) investigate increasing the availability of "talking treatments", including exploring "self-help technologies" (p. 72).

Managing health through service user self-empowerment

A widely accepted definition of health is that of the World Health Organisation (WHO, 1948). It states that "health is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity". More recently, this statement has been modified to include the ability to lead a "socially and economically productive life." The WHO definition has however, been criticised by some (Saracci, 1997; Bircher, 2005) who argue that health cannot be defined as a state at all, but must be seen as a process of continuous adjustment to the varied demands of living, individual potential, and of the changing meanings we give to life. In order to maintain a desirable state of health, individuals need to feel empowered to deal with necessary adjustments.

French and Adams (in Marks, 2002) believe that the most significant determinate of health is an individual's socio-economic circumstances; the least significant is individual health behaviour. Their model of health education supports the ideology of self-empowerment, which they place second in the hierarchy of determinates of health. Self-empowerment approaches to health education are considered ethically more justifiable than those based solely on behaviour change. The improvement of health is initiated through developing individuals' abilities to understand and manage their health status as best possible within their own set of circumstances. Examples of the methods used are: self-help, lifeskills training, pastoral care, and the promotion of self-esteem.

One could argue that self-empowerment should be at the heart of any health intervention, and certainly the current healthcare climate's focus on increasing service user choice seems to be moving in that direction. Self-help as a self-empowering method of alleviating the distress caused by mental health problems is an initiative that is gaining increasing standing (Richardson & Richards, 2006). Self-help generally refers to the use of self help material (or groups) of varying sorts, with or without support from professionals, friends, or relatives, where the emphasis is on the fact that the individual learns to help themselves (Williams, 2003). NICE (2004ab) recently issued guidelines recommending the use of self-help techniques in the treatment of panic disorder, generalized anxiety disorder, and mild/moderate depression. This emphasis on self-help is based on the very relevant principles of increased accessibility to services and of involving service users in the delivery of their care (Lewis et al., 2003).

It is now recognized that most service users with chronic health conditions are accustomed to having to learn to help themselves by self-managing and self-monitoring their illnesses on a daily basis. Consequently, a new chronic disease paradigm is developing: the "patient-professional partnership", involving collaborative care and self-management education. Self-management education, unlike mainstream service user education, teaches problem-solving skills. It focuses on enabling service users to live the best possible quality of life with their chronic condition. Central to the idea of self-management is self-efficacy (Bodenheimer, Lorig, Holman, & Grumbach, 2002). Some level of self efficacy has to be potentially active in successful self-management or in a self help programme choice. This self-efficacy is enhanced when service users succeed in solving problems which they themselves have identified (Bandura, as cited in Marks, 2002). Individuals are expected to take a very active

role in self-help interventions, unlike with treatment via medication, or face-to-face therapy where the therapist is often expected to "fix" everything.

Alleviating anxiety and depression: alternative provision of adequate and effective treatments

It has been shown that the social, psychological, and economic costs of depression and anxiety can be substantially reduced by effective treatment (Simon et al., 2000). The most popular alternative to prescription drugs is CBT, a treatment which has been shown to be just as effective as medication in the short-term, and superior to taking medication over a long-term period (Watkins & Williams, 1998; Roth & Fonagy, 1996). For service users with co-morbid physical illnesses, CBT is also the most favoured treatment for anxiety and depression (MacHale, 2002; Jesse, 2004). However, despite the supporting evidence for the effectiveness of CBT, therapist shortages in the NHS have led to unacceptable waiting times and geographical inequity in services, necessitating a need for an alternative to face-to-face CBT (London School of Economics, 2006).

Computerised CBT may be able to assist by providing a solution to the problem. Health professionals have used computers for a number of years for assessment, history taking, record keeping, diagnosis, and service user-education. Recent years have seen the development of a variety of therapeutic programmes delivered via computer (Marks, Mataix-Cols, Kenwright, Cameron, Hirsch, & Gega, 2003; Proudfoot et al., 2003ab; Whitfield, Hinshelwood, Pashely, Campsie, & Williams, 2006), and there is an expanding evidence base for these computer-aided psychotherapies for a range of common mental health problems (Proudfoot et al., 2004; Wright et al., 2002, 2005; Kaltenthaler, Parry, & Beverley, 2004; Cavanagh et al., 2006).

In the stepped care model described by NICE (2004b) depression guidelines, guided self-help interventions, including computerised cognitive behavioural therapy (CCBT), were recommended as one choice of treatment for mild to moderate depression. CCBT programmes are also considered by the National Institute for Mental Health in England's (NIMHE) national framework care model to be suitable for the treatment of mild to moderate anxiety.

The development of computer-based interventions

Since the 1960's, there have been attempts to imitate the psychotherapeutic encounter through computer-delivered interventions. These endeavours have sought to identify the vital structural components of psychotherapy and to recreate these in computer-based programmes. Efforts to use computers in psychotherapy can be divided into four "waves" as described by Cavanagh and Shapiro (2004). The first was "client-centred or experiential" (an imitation of therapist-patient verbal interaction). These computer-based interventions were designed to ask questions in the way that a therapist might, and encouraged the users to 'discuss' their problems with the programme by answering these questions (Weizenbaum, 1966). Their responses were used to create further questions or were 'interpreted' (Colby, Watt, & Gilbert, 1966). These interventions initiated immense discussion, with the general consensus being that these programmes were very limited in contributing to any significant therapeutic interaction (Wright & Wright, 1997).

In view of these accepted limitations researchers began to focus on the adaptation of specific cognitive and behavioural techniques to computer-based programmes. The second "wave" was "simple behavioural techniques". These techniques are predominantly used in managing phobias and other anxiety disorders. They involve increased exposure to identified feared stimuli until anxiety is no longer experienced in their presence. Developers of these programmes recognised how easily this type of structured and systematic therapy could be translated in computer-based format.

The third, "wave" was 'psychoeducational and cognitive interventions'. Wagman (1980), Selmi (1982), and Colby and Colby (1990) focussed on creating problem solving and psychoeducational programmes. Although research on this "wave" is patchy, these programmes did seem to facilitate some therapeutic gains.

The fourth and final "wave" concentrated on "cognitive-behavioural" interventions. Cognitive-behavioural interventions for depression and anxiety have become increasingly important treatments because of their demonstrated efficacy (Department of Health, 2001; NICE, 2004ab). These latest computerised therapeutic programmes are designed to deliver specific active therapeutic techniques, and teach users to employ these techniques in exploring the interaction of their thinking styles, behaviour patterns and emotional states. These programmes also aim to incorporate important features of the client-therapist relationship (e.g., motivation, alliance, and empathy) in multi-sessional interventions. The sessions are

interactive and personalized using video, graphics, animations, and voiceover to engage the user. Tasks based on the material covered in the sessions are assigned after each computer session. Feedback is given during sessions to motivate and reinforce learning (Proudfoot, 2004).

Beating the Blues: a computerised cognitive behavioural intervention

Beating the Blues is an interactive multimedia system enabling service users to self-administer cognitive-behaviour therapy (CBT). It is grounded in extensive research evidence of the efficacy of CBT for depression and anxiety (Roth & Fonagy, 1996; Watkins & Williams, 1998) and has been recommended by the National Institute for Clinical Excellence (NICE, 2006) in a technological review as a treatment choice for treating mild to moderate depression in primary care.

Beating the Blues consists of 8 sessions with each session building on the skills and concepts taught in the previous one. It requires minimal therapist contact beyond the initial consultation, and therefore has the potential to be used cost-effectively. Its built-in data capture capabilities can assist with assessment, diagnosis, and the collection of outcome data. Where problems are of a sensitive nature, there is some evidence to suggest that some service users may prefer the computer to personal contact. Studies reported to date have not encountered patient opposition, and drop-out rates have not been much higher than with face-to-face therapy (McCrone et al., 2004; Proudfoot et al., 2004; Cavanagh et al., 2006; Fox et al., 2004; Hunt et al., 2006).

Current limitations of research into the use of computerised CBT

Last year Kaltenthaler et al. (2006) carried out an updated comprehensive systematic review for NICE to evaluate CCBT programmes for the treatment of anxiety, depression, phobias, panic, and obsessive-compulsive disorder. Twenty studies were identified for the clinical effectiveness review. Amongst the limitations discussed in this review, they noted that little information was identified on the optimal setting and type of service user with regard to age, gender, ethnicity and socio-economic background for CCBT. In most of the studies reviewed, recruitment was through self-referral, which they felt did not reflect usual practice in primary care settings. There were also large dropout rates in most studies, and the reasons for the high dropout rates were not explored.

In terms of recommendations for further research the review suggested that clinical efficacy, but not clinical effectiveness for *Beating the Blues* has been established, so more research into *Beating the Blues* in natural healthcare settings was desirable. The authors also felt that efforts needed to be made to include service users with co-morbidities treated in routine practice.

In addition, the literature is very thin regarding the effectiveness of *Beating the Blues* in secondary and specialist mental healthcare services. Therapeutic resources in these services are just as limited, and service users are often more chronically depressed, exhibit more comorbidity, and have poorer prognoses (Simon & Von Korff, 1995) than in primary care. This study aims to address the paucity of evidence at this level of mental healthcare by examining the impact of *Beating the Blues* in an NHS specialist CBT centre.

Service user satisfaction: an important measure and influencing factor in effective healthcare

Whilst some CCBT programmes, including *Beating the Blues*, are demonstrably clinically efficacious and effective, there may still be a number of barriers to the widespread dissemination of computer-aided psychotherapy or CCBT within NHS services. Suggested barriers include: therapists' reservations about the effectiveness of CCBT, a professional belief that service users prefer face-to-face therapies, and the service user belief that computerised self-help interventions may not be a successful form of treatment (Whitfield & Williams, 2004; Mitchell & Gordon, 2007). The limited research around the predictors of adherence, attrition, and outcome in CCBT may also form a barrier to widespread clinical uptake. A review of evidence on the efficacy or effectiveness of CCBT programmes for anxiety and depression has indicated some quantitative evidence from rates of uptake, adherence, and satisfaction feedback measures that the programmes may be acceptable and satisfactory to service users accessing the programmes in a variety of therapeutic services (Wagman & Kerber, 1984; Wright et al., 2002; Marks, Kenwright, McDonough, Whittaker, & Mataix-Cols, 2004; Proudfoot et al., 2003ab, 2004). However, further quantitative evidence is required to firmly establish CCBT's acceptability as an intervention for anxious and depressed service users. Kaltenthaler et al. (2004) also suggested that qualitative studies of users' experiences of CCBT would be informative, as the detailed information could be used to improve specific aspects of the delivery of such services.

Feedback on satisfaction and interventions' usefulness has become an important factor for service evaluation and quality improvement. This kind of feedback serves as a vital tool for progressing healthcare (Longmaid & Rider, 1995; Nelson & Wasson, 1994). From a service user care perspective, feedback can help to identify problems in the processes of care, and stimulate review and improvement of practice behaviours. Ultimately, review of practice and identification of problems should result in improved quality of care (Rider & Perin, 2002).

The adverse quality of life associated with anxiety and/or depression, combined with the large economic burden placed on national health authorities in its treatment, highlights a strong need for research to further increase understanding, accessibility, availability, and optimisation of treatment choices such as CCBT for anxiety and depression.

Summary of aims for this study

In 2001, in order to meet the demands of long waiting lists and limited service capacity being placed upon the service, a North Essex Trust NHS specialist CBT unit implemented *Beating the Blues* as part of an innovative model of care. Their aim was to develop an alternate CBT delivery model which could reduce waiting lists and meet the demands for increased service capacity in specialist CBT centres. Service users are referred from both primary and secondary care with anxiety and depression, but many also suffer from numerous co-morbid illnesses, for example: chronic fatigue syndrome, epilepsy, obsessive compulsive disorder (OCD), and bulimia. Most struggle with coping and experience high levels of stress. They are referred to the CCBT programme, *Beating the Blues,* whilst they are on the waiting list for face-to-face therapy in the hope that they will make some progress towards alleviating their anxiety and depression through increasing their coping skills.

This study assessed the effectiveness and acceptability of this intervention, comparing those who suffer from co-morbid physical illnesses, or chronic physical symptoms, against those who seem to suffer purely from psychological illnesses and a control group. Given the fact that *Beating the Blues* has been shown to alleviate anxiety and depression in previous studies completed in primary care, the expectation was that service users receiving the intervention would experience a greater change in their clinical outcome scores than those on the waiting list. Whether a difference would be found in clinical change between the two intervention groups was unknown, as there are currently no studies available which focus on the use of CCBT for anxiety and depression and service users with physical co-morbidities.

Service users' ratings for *Beating the Blues'* usefulness, relevancy, and comprehensibility will be analysed and compared for the two intervention groups. The relationships between these satisfaction scores and individuals' adherence and clinical outcomes were explored to ascertain whether or not initial *Beating the Blues* sessions' scores hold possible predictive value. A conventional content analysis of qualitative feedback received from service users regarding the *Beating the Blues* service was also conducted. This information has the potential to be very useful in improving and guiding this type of service implementation.

1.2. Methodology

Participants

From May 2001 until the end of April 2006 the NHS specialist CBT unit offered service users referred with anxiety and/or depression and assessed as appropriate (inclusion and exclusion criteria below), places on the *Beating the Blues* programme. All of the service users offered the option of *Beating the Blues* were on the waiting list for face-to-face CBT. During this 60 month period, 829 of the service users referred to the CBT service were offered *Beating the Blues;* 560 (68%) took up the offer. One hundred of these services users reported suffering from a co-morbid physical illness or physically disabling symptomology. Another 104 participants on the waiting list for *Beating the Blues* from October 2005 to November 2006 formed the initial control group for this study.

<u>Service's inclusion criteria for *Beating the Blues*</u>

- Aged 18 years and over
- Referred with mental health issues to cognitive behavioural therapist for assessment
- Assessed by CBT therapist using clinical guidelines and expert opinion as likely to benefit from *Beating the Blues*

<u>Service's exclusion criteria for *Beating the Blues*</u>

- Age below 18 years
- Active suicidal ideation
- Currently receiving psychotherapy for anxiety or depression from a psychiatrist, psychologist, therapist, or counsellor
- Drug or alcohol dependence
- Insufficient command of English to follow *Beating the Blues*
- Primary diagnosis of OCD

- Severe learning disability or organic mental illness

Due to group participant overlap affecting the independence of the 3 groups, a number of participants were removed from each group. The process for this is described in the "Procedure" section below. The adjusted group sizes were: control group, 86, physical co-morbidity intervention group, 97, and the "no physical co-morbidity reported" intervention group, 407. For the sake of clarity, in this study the "no physical co-morbidity reported" intervention group will be called the "standard intervention group".

In each of the three groups the male to female ratio was similar. There were 56 females (65.1%) and 30 males (34.9%) in the control group, 60 females (61.9%) and 37 males (38.1%) in the physical co-morbidity intervention group, and 249 females (61.2%) and 158 males (38.8%) in the standard intervention group. The mean ages for the 3 groups were: control group, 40.4 years, physical co-morbidity intervention group, 44.5 years, and the intervention group, 39.2 years of age. The age ranges for each of the groups are presented in Table 1.1. Service users' reported problem durations (experienced duration of anxiety or depression, whether cycling or continuous) ranged from 6 months to 55 years (N = 296, mean = 10.4, *SD* = 9.9). The individual groups' problem duration means and ranges can be found in Table 1.1.

Overall, the ethnic make-up of the groups was predominantly white British: control group 97.7%, physical co-morbidity intervention group 77.5%, and the intervention group 78.1% (Table 1.1 shows the numbers and percentages of the service users in different ethnic categories involved in the study). Table 1.1 also illustrates the co-morbid anxiety disorders and other psychological issues diagnosed in the 3 different groups; and the known use of psychotropic medication in each group.

Table 1.2.1 presents the co-morbid physical illnesses and/or disabling physical symptomology experienced by service users in the physical co-morbidity intervention group. In this group, 84 service users (86.6%) reported only 1 physical co-morbid issue, 10 (10.3%) reported 2, and 3 (3.1%) reported 3. The control group also had a number of service users who suffered from co-morbid physical illnesses/symptomology (11.6%). These are reported in Table 1.2.2.

Table 1.1: Participant descriptive data [1]

	INTERVENTION GROUP		CONTROL GROUP		PHYSICAL CO-MORBIDITY GRP	
Age in years: mean(*SD*) (N)	39.2 (*11.5*) (406)		40.4 (*11.3*) (85)		44.5 (*12.2*) (97)	
Age range (N)	18 – 70 (406)		19 – 70 (85)		18 – 69 (97)	
Duration of problem – years (*SD*) (N)	10.8 (*10.6*) (162)		9.9 (*9.6*) (83)		9.8 (*8.0*) (50)	
Duration of problem range – years (N)	0.5 – 55 (162)[2]		0.5 – 30 (83)		1 – 30 (50)	
Category	**Number in group**	**% of group**	**Number in group**	**% of group**	**Number in group**	**% of group**
Gender (N)	407	100%	86	100%	97	100%
Female	249	61.2%	56	61.5%	60	61.9%
Male	158	38.8%	30	34.9%	37	38.1%
Ethnic group (N)	325	80.0%	85	98.8%	79	81.4%
British	317	77.9%	84	97.7%	76	78.4%
Irish	1	0.2%	0	0 %	0	0 %
Northern European	3	0.7%	0	0 %	1	1.0%
British Asian	1	0.2%	0	0 %	0	0 %
Eastern European	0	0 %	0	0 %	1	1.0%
Chinese	1	0.2%	1	1.2%	0	0 %
Any other ethnic background	2	0.5%	0	0 %	1	1.0%
Psychotropic medication - Yes	97	23.8%	17	19.8%	31	32.0%
Psychotropic medication - No	15	3.7%	3	3.5%	3	3.1%
Other anxiety disorders[3] (N)	167	41.0%	28	32.5%	32	33.0%
Panic disorder (panic attacks)	75	18.4%	15	17.4%	14	14.4%

[1] Data percentages are reported as a % of the entire group, acknowledging the fact that there is missing case data in each group still contributes to the overall percentage.

[2] Only 6 cases had problem duration of greater than 33 years.

[3] Other specified anxiety disorders diagnosed in participant group besides generalised anxiety disorder, as reported in clinical *CareBase* case notes. A few participants suffered from more than one co-morbid anxiety disorder, but only the more dominant/problematic issue is reported in this study.

	INTERVENTION GROUP		CONTROL GROUP		PHYSICAL CO-MORBIDITY GRP	
Category	**Number in group**	**% of group**	**Number in group**	**% of group**	**Number in group**	**% of group**
Social anxiety/ agoraphobia	30	7.4%	5	5.8%	5	5.2%
Mild/Moderate OCD	29	7.1%	4	4.7%	4	4.1%
Health anxiety	14	3.4%	1	1.2%	5	5.2%
Flying/driving phobia	6	1.5%	0	0%	1	1.0%
Other phobias	12	2.9%	3	3.5%	2	2.2%
No co-morbid anxiety disorders diagnosed	246	60.4%	43	50.0%	65	67%
No other co-morbid psychological issues[4]	314	77.1%	54	62.8%	81	83.5%
Other co-morbid psychological issues (N)	76	18.7%	12	14.0%	8	8.2%
Morbid aggression/anger	18	4.4%	2	2.3%	6	6.2%
Problem drinking	10	2.5%	1	1.2%	0	0 %
Bulimia/Binge eating	12	2.9%	2	2.3%	0	0 %
Bipolar disorder	11	2.7%	4	4.7%	0	0 %
PTSD	7	1.7%	1	1.2%	1	1.0 %
Mild anorexia	6	1.5%	1	1.2%	0	0 %
Self harming (cutting/trichotillomania)	6	1.5%	1	1.2%	1	1.0 %
Mild Psychosis	3	0.7%	0	0%	0	0 %
Marijuana abuse	2	0.5%	0	0%	0	0 %
Tourette's syndrome	1	0.2%	0	0%	0	0 %
Body Dysmorphic Disorder	1	0.2%	0	0%	0	0%

[4] This represents no other co-morbid psychological issues besides generalised anxiety, and/or depression, and/or other anxiety disorders.

Table 1.2.1: Co-morbid physical illness and/or disabling physical symptomology reported

Category (N = 97[5])	**Number in group**	**Overall percentage of group**
Irritable Bowel Syndrome (IBS) or chronic diarrhoea **(Group 1 – IBS or chronic diarrhoea)**	15	15.5%
Pain problems with unclear physical epidemiology **(Group 2 – PAIN, NO INJURY))**	12	12.4%
Chronic Fatigue Syndrome or ME **(Group 3 – CFS/ME or AUTOIMMUNE)**	11	11.3%
Recurrent headaches or migraines **(Group 2)**	8	8.2%
Pain issues traceable to actual injury	7	7.2%
Asthma	7	7.2%
Recent heart attack/angina/CHD/bypass operation **(Group 4 – CARDIOVASCULAR)**	6	6.2%
Head injury	4	4.1%
Memory problems	4	4.1%
Arthritis **(Group 3)**	3	3.1%
Thyroid problems	3	3.1%
Sexual dysfunction or total loss of libido	3	3.1%
Fibromyalgia **(Group 3)**	3	3.1%
Recurrent nausea and vomiting	3	3.1%
Obesity due to overeating as coping/comforting behaviour	3	3.1%
Tachycardia **(Group 4)**	3	3.1%
Polycystic ovaries	2	2.1%
Serious eczema	2	2.1%
Extreme fatigue	2	2.1%
Bladder problems	1	1.0%
Parkinson's	1	1.0%
Eye condition	1	1.0%
Transient ischemic attacks **(Group 4)**	1	1.0%
Diabetes	1	1.0%
Renal failure	1	1.0%
Scleroderma **(Group 3)**	1	1.0%
Inner ear problems affecting balance	1	1.0%
Reduced ability to speak – possible impaired brain functioning	1	1.0%

[5] This is the number of service users in the physical co-morbidity group. Some service users suffered from more than 1 physical co-morbidity issues, so the number of issues represented is greater than 97.

Table 1.2.2: Types of co-morbid physical illness and/or disabling physical symptomology reported in control group

Category (N = 10)	Number in group	Overall percentage of group
Irritable Bowel Syndrome (IBS)	5	5.8%
Pain problems with unclear physical epidemiology	1	1.2%
ME	1	1.2%
Arthritis	1	1.2%
Multiple Sclerosis (MS)	1	1.2%
Epilepsy	1	1.2%

The CBT Specialist Service

The service receives referrals from both primary and secondary care. Its catchment population is a mixture of urban- and rural-based, majority white British middle and working class. A whole time equivalent of 4 CBT therapists work at the centre. The waiting time from referral to treatment for face-to-face CBT is approximately 10 to12 months. The average waiting time from referral to assessment is about 2 to 3 months.

In this study the waiting time following assessment for *Beating the Blues* was also approximately 2 to 3 months. Any service users referred with anxiety and depression, and placed on the waiting list for face-to-face CBT, were assessed for suitability for CCBT by a CBT therapist. If service users were considered suitable, they were offered the choice of enrolling on the *Beating the Blues* programme. In order to inform this choice, they were given an opportunity to watch the 17 minute introductory *Beating the Blues* video. A leaflet about *Beating the Blues* was also made available to all service users offered this intervention as a treatment option. It was made clear that they would remain on the waiting list for face-to-face CBT whilst using *Beating the Blues. Beating the Blues* sessions were offered in a private room in the centre with a trained administrator (part-time position) or another member of the therapeutic staff on hand a few rooms away should they have any concerns during the session. Users were greeted both before and after the sessions by a member of staff. During the session users worked alone on the programme. Once they had completed their session, they were expected to notify the trained administrator (or another member of the therapeutic staff) so that their progress report could be checked for suicidal risk indicators before they left the centre. Following completion of the *Beating the Blues* intervention, service users were

offered a follow up assessment appointment with a CBT therapist at the centre. This appointment, 6 - 8 weeks following their completion of the *Beating the Blues* programme, was used to discuss their progress and any further interventions required. Most service users took 2 to 3 months to complete *Beating the Blues*.

The computerised CBT programme

Beating the Blues is a computerised treatment package designed and developed by the Institute of Psychiatry to deliver CBT for anxiety and depression. The programme uses multimedia techniques and comprises of a 17 minute introductory video and eight approximately 1 hour interactive CBT sessions (Figure 1.1). Each session integrates both cognitive and behavioural techniques, which are designed to promote more helpful thinking styles and constructive behavioural repertoires. Each session builds on the previous one. Homework tasks are set by the programme for the service user to complete between each session. Session summaries and task templates are printed out during the session to assist with the completion of these tasks. A progress report, including mood monitoring and any suicidal intent expressed, is also printed out at the end of each session. These reports are used as clinical tools to monitor service users' moods and risk whilst they are using *Beating the Blues*.

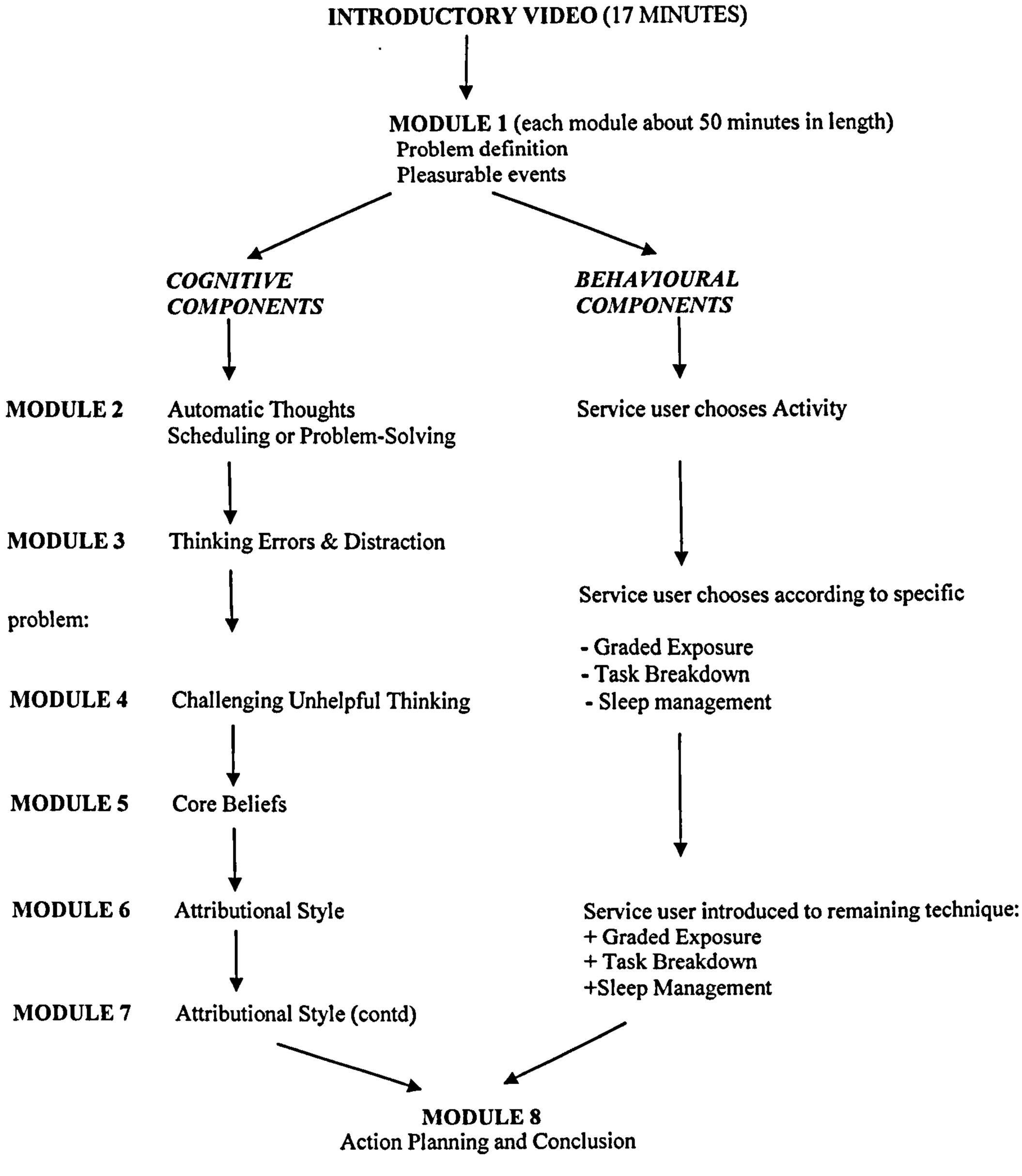
Design

The study was a naturalistic research study of an eight-session CCBT programme, *Beating the Blues*, which was offered alongside a place on the waiting list for face-to-face CBT, in an NHS CBT Specialist Centre. Three independent groups, a control group, a physical co-morbidity intervention group, and a standard intervention group, were compared in a repeated measures between-groups design using pre[6]-intervention and post[7]-intervention clinical outcomes measures.

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[6] Pre- in this study will be used to describe both time 1 (so at the assessment session) for the control group, and before starting *Beating the Blues* for the two intervention groups.
[7] Post- will be used to describe both time 2 (so before starting *Beating the Blues,* post-waiting list period) for the control group, and 6 – 8 weeks after completing *Beating the Blues* (so at the post-*Beating the Blues* assessment session) for the two intervention groups.

Figure 1.1: *BEATING THE BLUES* programme structure



Measures used

Demographic information was routinely collected for all service users before commencement of the *Beating the Blues* programme; as were clinical data using the following two measures:
i) The *Beck Depression Inventory Version II (*BDI-II*)* (Beck, Steer, & Brown, 1996) is a 21-item self-report rating inventory measuring characteristic attitudes and symptoms of depression. It is considered the "gold standard" instrument for measuring depression. High internal consistency (Beck, Steer, & Garbin, 1988), high content validity, and validity in differing between depressed and non-depressed individuals (Richter, Werner, Heerlim, Kraus, & Sauer, 1998) have been demonstrated. In accordance with Westbrook and Kirk (2005) this study employed the following cut-off points to determine clinical outcome categories: 0 -10 = non-clinical caseness, and 11 - 63 = clinical caseness.
ii) The *Beck Anxiety Inventory* (BAI*)* (Beck, Epstein, Brown & Steer, 1988) contains 21 items describing symptoms associated with anxiety. Scores range from 0–63, with lower scores reflecting lower anxiety. The BAI has demonstrated high internal reliability, and good factorial and discriminant validity (Kabacoff, Segal, Hersen, & Hasselt, 1997). The following ranges of scores were used to determine clinical outcome categories (Westbrook & Kirk, 2005): 0 -10 = non-clinical caseness, and 11 - 63 = clinical caseness.

Procedure

Clinical outcome measure scores were collected from May 2001 to April 2006 by one of the centre's administrators pre-*Beating the Blues,* and at the follow-up therapeutic assessment 6 – 8 weeks after use of *Beating the Blues.* These data were entered by the administrator into a Microsoft Excel spreadsheet, creating a new file for each year. The data in these spreadsheets were used in the collection of pre- and post-scores for this study. Further information about gender, age, ethnic groups, medication, duration of problem, and co-morbidities was collected from the NHS database, *CareBase*. *CareBase* is used by the therapists in the centre to record information gathered during assessment sessions.

The study was approved by the West Essex Local Research Committee (LREC), who felt that the initially suggested benchmarking of the study's results was not an adequate enough comparator for establishing the effectiveness of *Beating the Blues*. As the therapeutic staff and I felt that it would be unethical to increase waiting list time for an intervention that seemed to work just in order to form a control group, we formed a control group from service users on the *Beating the Blues* waiting list. Pre-clinical scores were taken at assessment and pre-*Beating the Blues,* and the difference between these scores were compared to the two

other groups' pre-*Beating the Blues* and post-*Beating the Blues* scores. Service users in the control group were not expected to wait any longer for treatment than those who were not in the control group; and all service users included in the study had been assessed as suitable for *Beating the Blues.* The West Essex LREC accepted this solution to forming a control group ethically.

Clinical measures were collected for the control group from mid-September 2005 to mid-December 2006. As there was some overlap in service users between the groups from September 2005 to April 2006, steps were taken to ensure independence between the 3 groups. All the service users starting *Beating the Blues* in the calendar months from September 2005 to April 2006 were entered into a database created with the Statistical Package for the Social Sciences (SPSS) programme. Using SPSS a random sample of 65% was selected for inclusion in the control group. If the service users included in the control group also appeared in one or both of the other two groups, they were removed from these groups. The aim of assigning nearly two thirds (65%) of this sub-sample to the control group was to prevent the control group from becoming too small in comparison with the other two groups, and adversely affecting statistical power.

Service users in the *Beating the Blues* intervention group, who had no service assessment record in *CareBase*, and therefore no diagnosis/diagnoses, were also excluded from the study's analyses. Without an assessment of their issues, it was impossible to know which intervention group to include them in. As a result, 23 service users were excluded from this study.

Analyses

The data were analysed using SPSS for Windows 12.0. Proudfoot et al. (2004) stated in their randomised control trial (RCT) of *Beating the Blues* that power calculations, based on tests of the change scores (pre-treatment to post-treatment) between groups in two previous studies (Selmi, Klein, Greist, Sorrell, & Erdman,1990; Mynors-Wallis, Gath, Lloyd-Thomas, & Tomlinson, 1995), showed that to detect a difference of 1 standard deviation in change scores at 80% power and with $\alpha = 0.05$, a total sample size of at least 200 would be needed. Using the statistical programme G*Power to calculate the power needed to demonstrate a medium effect size (0.15; Cohen, 1988) for a repeated measures analysis of variance (ANOVA) test between 3 groups, a sample size of at least 200 is predicted to produce 99% power.

Variance and normality of distribution

Levene's test was used to test for homogeneity of variance on the clinical outcome measures within each group, whilst Kolmogorov-Smirnov tests, histograms, and calculated statistics helped to ascertain whether or not the data were normally distributed. ANOVAs were used to establish if there were any differences in the mean ages and problem durations between groups. Calculations of the chi-squared, the "phi", or Cramer's V statistic were used to explore differences between groups for gender, ethnic groups, problem duration, and the use of psychotropic medication.

Clinical outcome and adherence differences between groups

In order to test for statistically significant differences between the 3 groups' pre- and post-clinical outcome measure scores, two-way repeated measures ANOVAs were performed. Intention-to-treat (ITT) analyses, whereby the last observation (pre-BDI-II and pre-BAI) for a participant was carried forward (the LOCF approach) when there were missing data through questionnaire non-response, were also carried out. This method was used to avoid losing responses from individuals who had dropped out; thereby reducing the potential bias introduced by excluding non-completers who may have found that the programme or service did not meet their needs. Frequencies and mean scores were obtained in order to describe levels of adherence in each group, and number of face-to-face follow-up treatment sessions post-*Beating the Blues*. Effect sizes were calculated using the formula: $\eta_p^2 =$ SSeffect/(SSeffect + SSerror) (Coolican, 2004). This statistic represents the proportion of the effect and error variance that is attributable to the effect.

Reliable and clinically significant change

The percentage of users in the intervention groups meeting both reliable and clinically significant change criteria was also calculated. Westbrook and Kirk (2005) suggested that, using Jacobson's (1988, 1999) clinical significance analysis, change scores for the BDI and BAI of between 9 and 11 points were needed for reliable and clinical change. Service users whose score had changed by 10 or more points from pre-*Beating the Blues* to post-*Beating the Blues* were seen to have reliably improved or deteriorated. Those who had reliably improved and whose score had had reduced to 10 or below at post-*Beating the Blues* were considered 'recovered'. Clinical significance analyses were carried out only on those patients whose pre-*Beating the Blues* scores on the BDI-II or BAI were above the normal cut-off of 10 (otherwise very difficult to show clinical 'recovery').

Co-morbid physical illness group comparisons

Finally, the services users with co-morbid physical illnesses and/or disabling physical symptomology were grouped into categories (see Table 1.2.1) based roughly on the supposed aetiology of their physical condition. "Rough(ly)" is used to describe the basis of categorization because many of the conditions were believed to have multiple aetiologies. The BDI-II and BAI scores of these categories were compared for any significant differences.

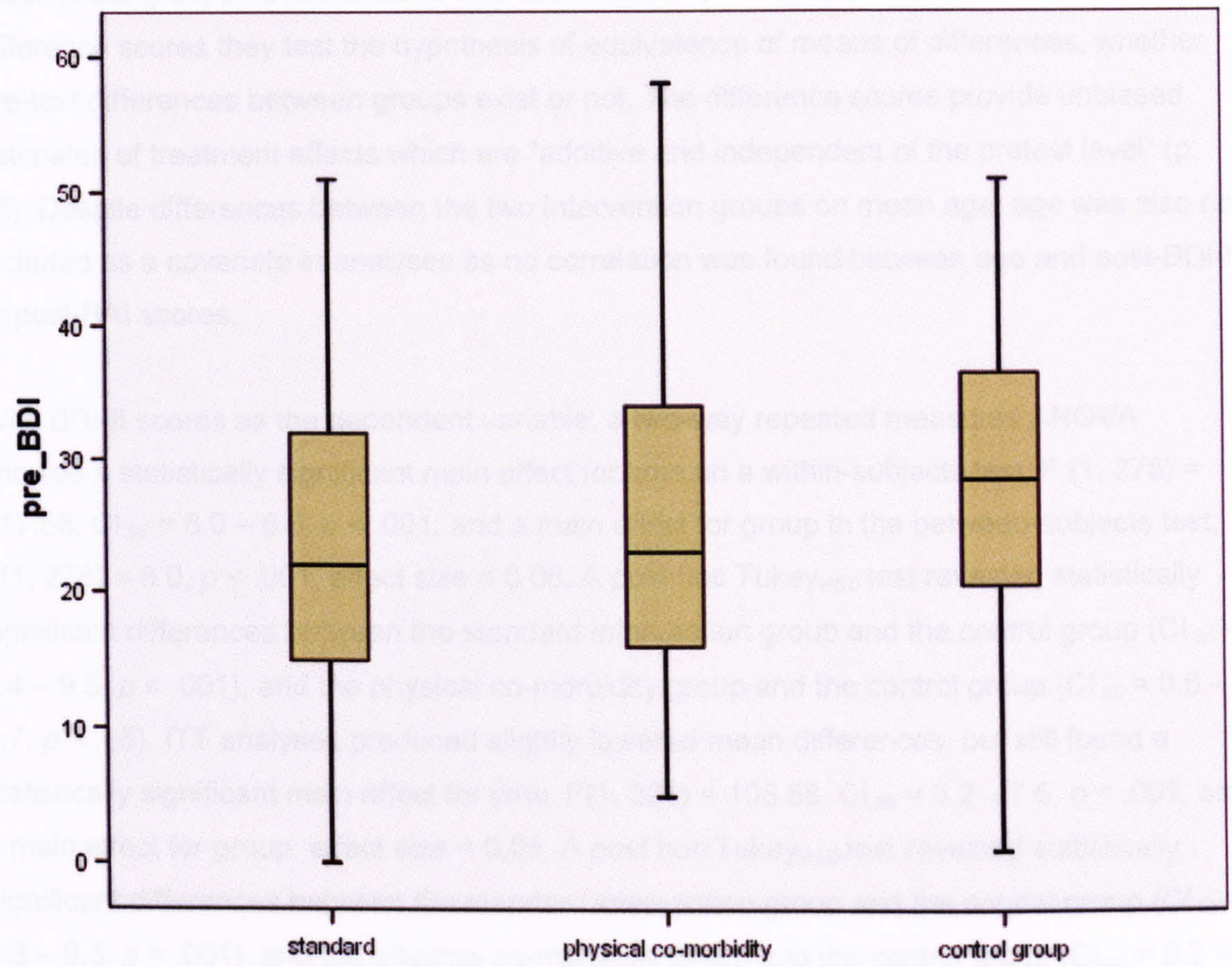
1.3. Results

Homogeneity of variance and normality of distribution

Exploration of the pre-BDI-II scores using the Kolmogorov-Smirnov test (K-S test) revealed normality of distribution for all 3 groups. Levene's test also established homogeneity of variance for all 3 groups on the pre-BDI-II and pre-BAI scores; however a non-normal distribution was revealed statistically for the standard intervention group on the pre-BAI scores. Inspection of normal Q-Q plots and histograms revealed that the pre-BAI scores were positively skewed (skewness statistic = 0.51 for the standard intervention group; 0.52 for the physical co-morbidity intervention group). Examination of histograms and the values of the two groups' skewness statistics led to the conclusion that both groups' pre-BAI scores were not normally distributed. Perhaps the standard intervention group's large sample size (215 as compared to the physical co-morbidity's group of 58) meant that the existing statistical significance in the K-S test for normality of distribution was more easily revealed. Despite the non-normality of distribution a two-way ANOVA was used to test for a difference between the intervention groups. Non-parametric tests were considered inappropriate, because the sample size was greater than 100. With large data sets non-parametric tests are advised against if the deviations from the normal distribution are minor (Motulsky, 1995), as non-parametric tests result in a loss of power.

There were no statistically significant differences found between the groups on gender, ethnic make-up, problem duration, or use of psychotropic medication. A statistically significant difference was found however, between the 2 intervention groups on age (see Table 1.1 for mean age details), and between the control group and the standard intervention group for pre-BDI-II scores ($p < .05$) (see Figure 1.2 for boxplot of pre-BDI-II scores). Exploration of these data found no extreme outliers for age or pre-BDI-II scores which may have adversely affected these results.

Figure 1.2: Pre-BDI-II scores plotted for each group



Treatment outcomes

Statistical significance and effect size

Unfortunately, there was poor collection and/or completion of the BAI amongst individuals in the control group. This meant that very few individuals in the control group had BAI scores which could be used in the study. With the randomisation described in the Procedure section above, most of these individuals were deleted from the control group, leaving only 4 individuals to form a comparative BAI control group. It was felt that this was too small a group size for meaningful statistical comparison. Comparison between all 3 groups was therefore only done using the BDI-II outcome measure. The two intervention groups were also compared on the BAI.

Although there was a difference between the standard intervention and the control groups on the pre-BDI-II mean scores, an ANCOVA with pre-BDI-II scores as the covariate was not performed. Cribbie and Jamieson (2004) state that ANCOVA should not be used to control

for large baseline differences between naturally occurring groups, as it is not realistic to assume the groups have the same true baseline. ANOVA tests suffice, because on difference scores they test the hypothesis of equivalence of means of differences, whether pre-test differences between groups exist or not. The difference scores provide unbiased estimates of treatment effects which are "additive and independent of the pretest level" (p. 38). Despite differences between the two intervention groups on mean age, age was also not included as a covariate in analyses as no correlation was found between age and post-BDI-II or post-BAI scores.

With BDI-II scores as the dependent variable, a two-way repeated measures ANOVA showed a statistically significant main effect for time on a within-subjects test, $F(1, 278) = 117.56$, $CI_{.95} = 6.0 – 8.6$, $p < .001$; and a main effect for group in the between-subjects test, $F(1, 278) = 8.0$, $p < .001$, effect size = 0.06. A post hoc $Tukey_{HSD}$ test revealed statistically significant differences between the standard intervention group and the control group ($CI_{.95} = 2.4 – 9.5$, $p < .001$), and the physical co-morbidity group and the control group ($CI_{.95} = 0.6 – 9.7$, $p < .05$). ITT analyses produced slightly lowered mean differences, but still found a statistically significant main effect for time, $F(1, 321) = 106.58$, $CI_{.95} = 5.2 – 7.6$, $p < .001$; and a main effect for group, effect size = 0.05. A post hoc $Tukey_{HSD}$ test revealed statistically significant differences between the standard intervention group and the control group ($CI_{.95} = 2.3 – 9.3$, $p = .001$), and the physical co-morbidity group and the control group ($CI_{.95} = 0.2 – 9.1$, $p < .05$). An uncontrolled pre-post effect size was also calculated for the service users who used *Beating the Blues* (so excluding the control group), as well as for the control group participants, using the formula: $(Mean_{Start}–Mean_{End})/SD_{start}$ (Shapiro et al., 1994). This effect size equalled 0.75 for completers and 0.63 for the ITT scores; whilst for the control group the effect size was 0.48 and 0.47 for ITT. Table 1.3 presents the pre-BDI-II, post-BDI-II, and post-BDI-II ITT group means, standard deviations, F statistics, and effect sizes for the two-way repeated measures ANOVA tests. Figure 1.3 plots the mean pre-post BDI-II scores for all 3 groups.

On the BAI, a main effect for time was found within-subjects, $F(1, 229) = 47.8$, $CI_{.95} = 4.1 – 7.5$, $p < .001$; but there was no statistically significant difference between groups. ITT analyses again produced similar results: $F(1, 265) = 45.9$, $CI_{.95} = 3.5 – 6.4$, $p < .001$ with no significant differences between groups. Table 1.3 shows the pre-BAI, post-BAI, and post-BAI ITT group means, standard deviations, statistical outcomes of the ANOVA tests, and effect

sizes. The pre-post effect sizes for the intervention groups were: 0.51 for completers and 0.42 for the ITT participant BAI scores.

Figure 1.4 plots the mean pre-post BAI scores for both intervention groups.

Figure 1.3: Mean BDI-II scores for all 3 groups

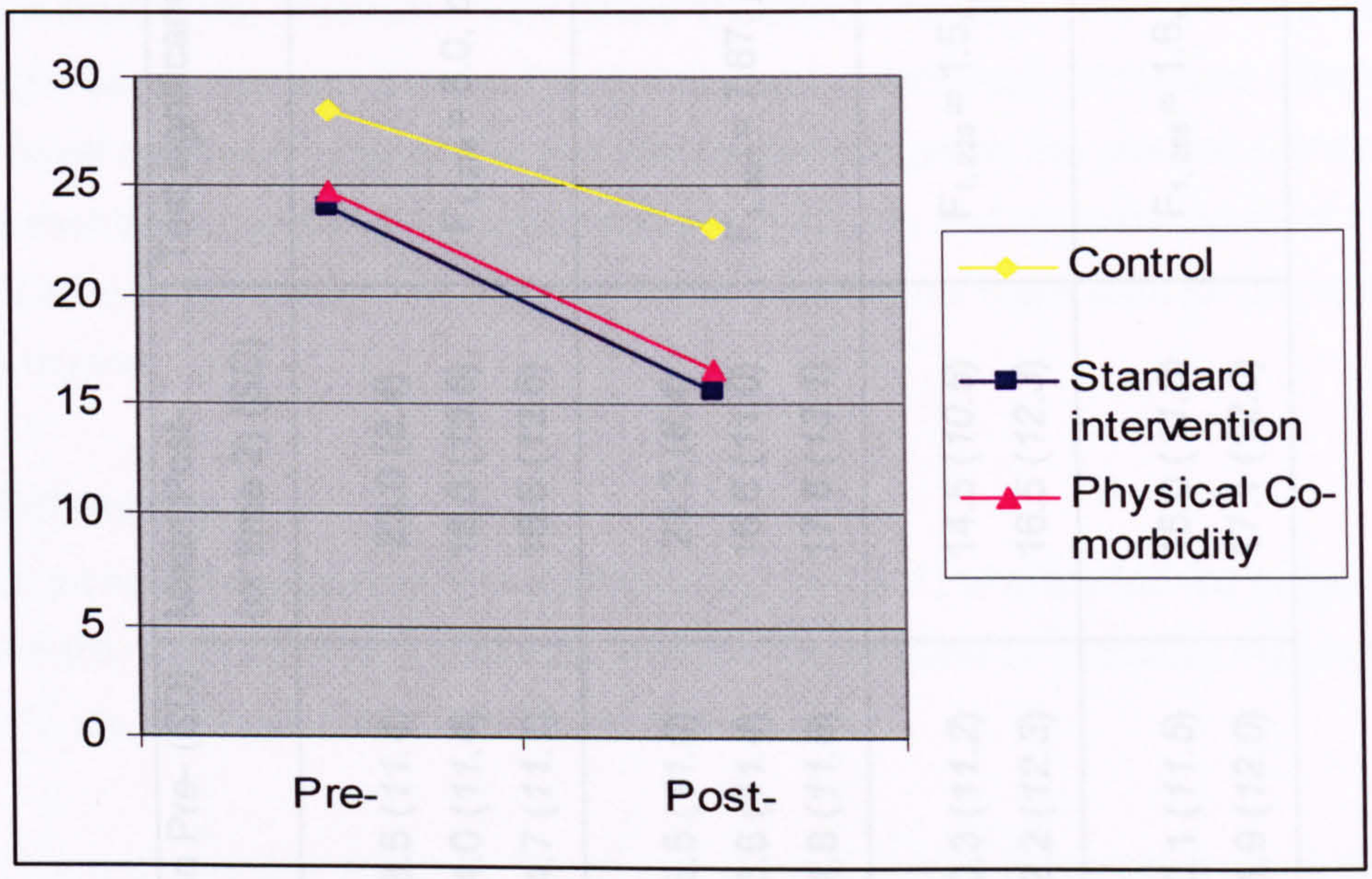


Figure 1.4: Mean pre-post BAI scores for the intervention groups

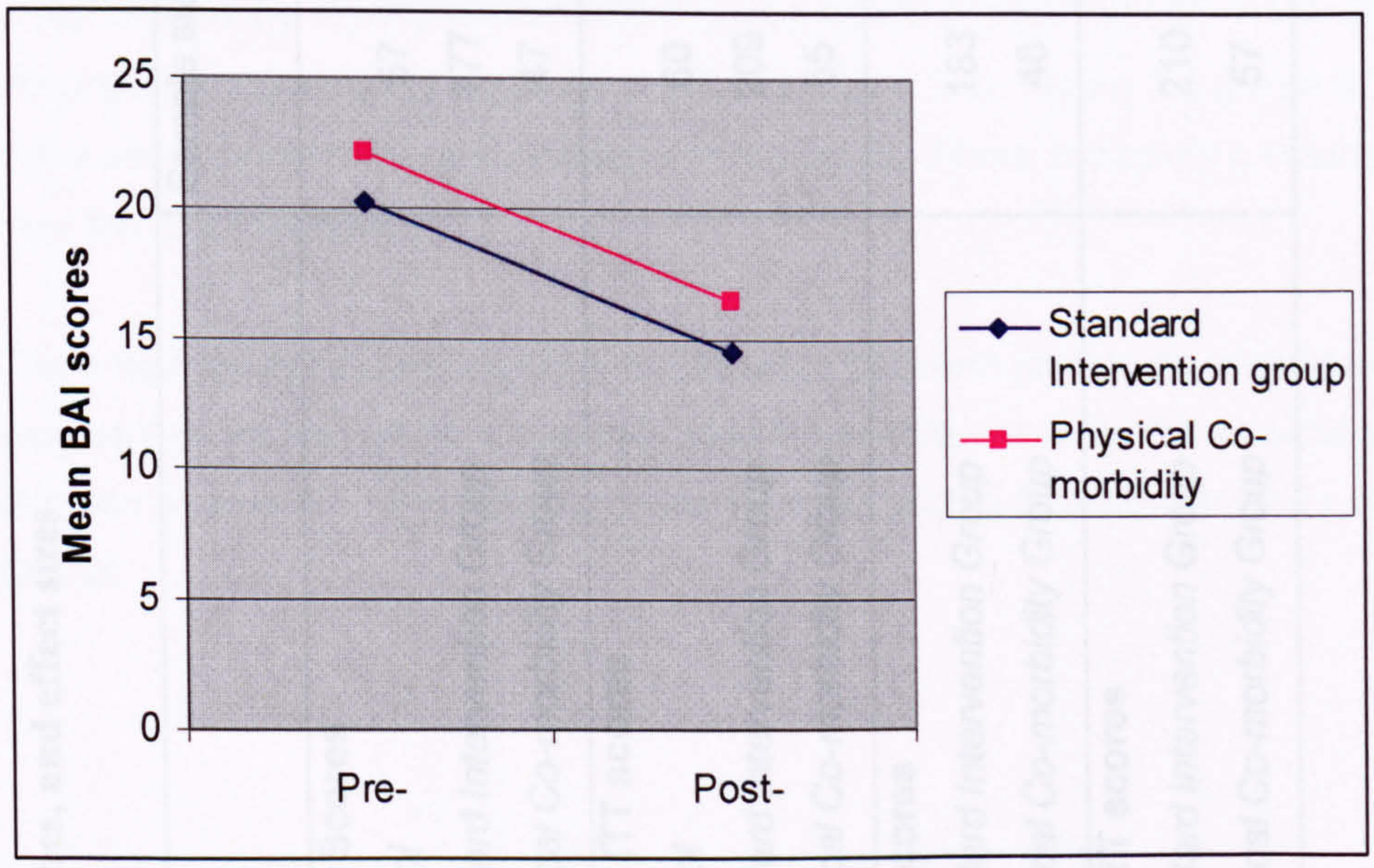


Table 1.3: Mean BDI-II and BAI scores pre- and post-*Beating the Blues* (for control group scores at time 2 pre-*Beating the Blues)*, F statistics, and effect sizes

	Sample size	Mean Pre- (*SD*)	Mean Post- (or time 2) (*SD*)	Test significance	Effect size
BDI-II Scores					
Control	57	28.5 (*11.4*)	23.0 (*8.4*)		
Standard Intervention Group	177	24.0 (*11.4*)	15.6 (*15.6*)	$F_{1, 278} = 8.0$, $p < .001$	.06
Physical Co-morbidity Group	47	24.7 (*11.1*)	16.6 (*12.6*)		
BDI-II ITT scores					
Control	60	28.5 (*11.0*)	23.3 (*8.4*)		
Standard Intervention Group	209	23.6 (*11.4*)	16.6 (*11.0*)	$F_{1, 321} = 7.67$, $p = .001$	.05
Physical Co-morbidity Group	55	24.8 (*11.6*)	17.8 (*13.1*)		
BAI scores					
Standard Intervention Group	183	20.3 (*11.2*)	14.5 (*10.5*)	$F_{1, 229} = 1.5$, $p > .05$	.01
Physical Co-morbidity Group	48	22.2 (*12.3*)	16.5 (*12.3*)		
BAI ITT scores					
Standard Intervention Group	210	20.1 (*11.5*)	15.0 (*11.0*)	$F_{1, 265} = 1.6$, $p > .05$	.01
Physical Co-morbidity Group	57	21.9 (*12.0*)	17.1 (*12.0*)		

Reliable and clinically significant change

In each group between 3 – 5% scored below the clinical cut-off on the pre-*Beating the Blues* BDI-II: the standard intervention group, 22 (5.4%), the physical co-morbidity intervention group 3 (3.1%), and the control group, 3 (3.5%). Pre-*Beating the Blues* 52 (12.8%) service users in the standard intervention group and 11 (11.3%) in the physical co-morbidity intervention group scored below the clinical cut-off for the BAI. The number of service users pre-*Beating the Blues* who were below the clinical cut-off for the BDI-II did not differ significantly between groups. There was also no statistically significant difference for non-clinical caseness between the two intervention groups on the pre-BAI scores. Table 1.4 presents the number of completers showing reliable and clinically significant change on the BDI-II and BAI outcome measures. Table 1.5 presents these data for the intention-to-treat analyses.

Adherence

Of those in the standard intervention group (N = 407) who started the programme, 284 (69.8%) completed all 8 sessions; whilst in the physical co-morbidity intervention group (N = 97), the completion rate was 70.1% (N = 68).

The mean number of sessions per user in the standard intervention group (including completers) was 6.7 sessions (*SD* = 2.2) (N = 400), and in the physical co-morbidity intervention group, 6.5 (*SD* = 2.4) (N = 96). The mean number of sessions for non-completers in the standard intervention group was 3.6 sessions (*SD* = 1.4) (N = 116), and in the physical co-morbidity group (N = 28), 3.2 (*SD* = 1.4). Figure 1.5 (page 37) illustrates how many users completed each session of *Beating the Blues.* It depicts a steady dropout rate over the first 7 sessions.

There was no statistically significant difference between groups on adherence to the programme; as well as no statistically significant differences on the variables of either age, duration of problem, or gender for those who completed *Beating the Blues,* and those who did not.

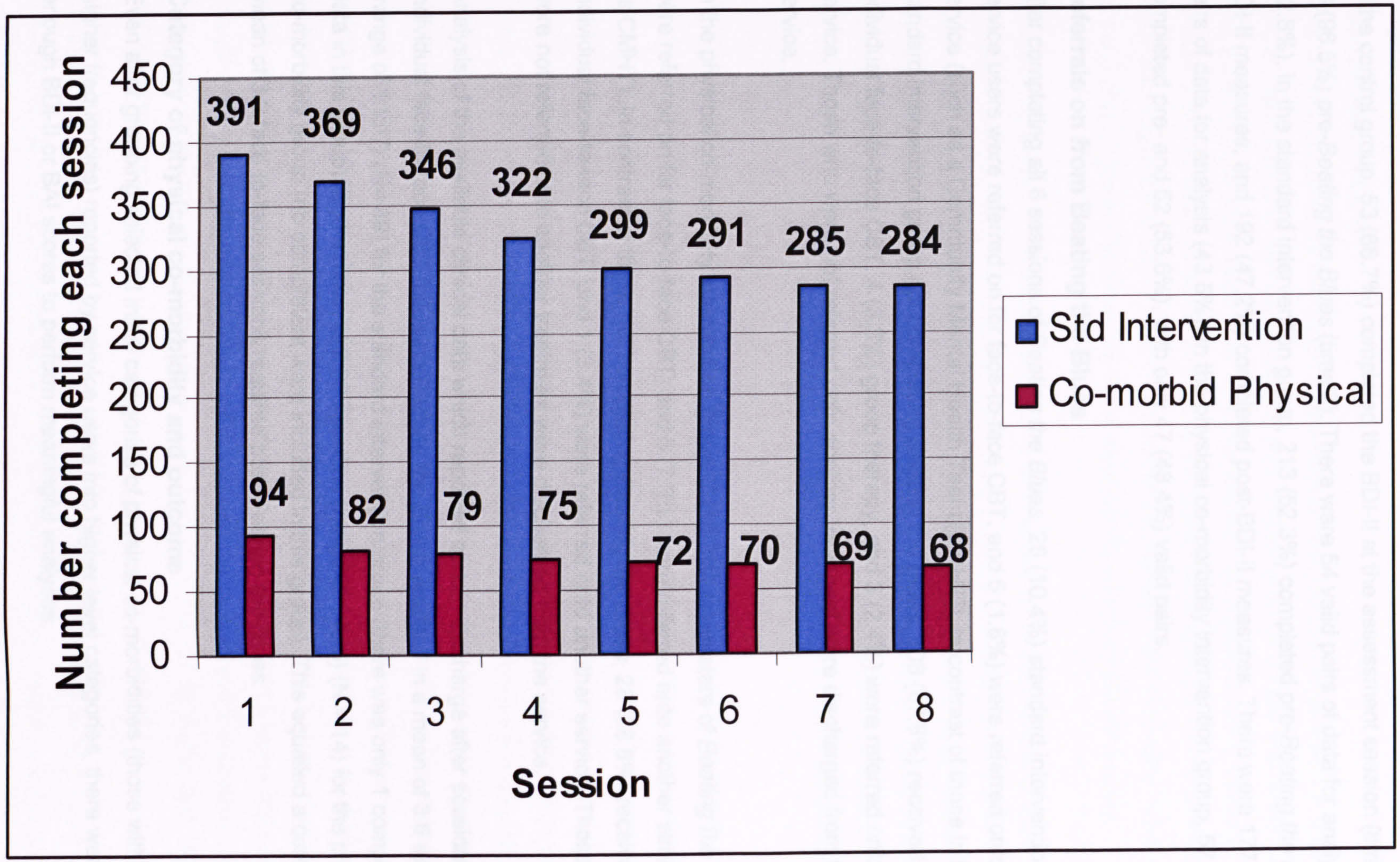
Table 1.4: BDI-II and BAI frequency and percentage of completers of both measures showing reliable and clinical change at therapy outcome (or for control group at time 2 for clinical measurement on BDI-II)

	Reliable and clinically significant improvement N (%)	Reliable improvement ONLY N (%)	No reliable change N (%)	Reliable deterioration N (%)
Outcome measure: BDI-II **Control group (N = 50)** **Std Interv. group (N = 151)** **Phys. co-morb. group (N = 41)**	**Control group:** 1 (2.0%) **Std Interv. grp:** 38 (25.2%) **Phys. co-morb. grp:** 11 (26.8%)	**Control group:** 13 (26%) **Std Interv. grp:** 36 (23.8%) **Phys. co-morb. grp:** 11 (26.8%)	**Control group:** 35 (70%) **Std Interv. grp:** 72 (47.7%) **Phys. co-morb. grp:** 18 (43.9%)	**Control group:** 1 (2.0%) **Std Interv. grp:** 5 (3.3%) **Phys. co-morb. grp:** 1 (2.4%)
	Reliable and clinically significant improvement N (%)	Reliable improvement ONLY N (%)	No reliable change N (%)	Reliable deterioration N (%)
Outcome measure: BAI **Std Interv. group (N = 138)** **Phys. co-morb. group (N = 37)**	**Std Interv. grp:** 31 (22.5%) **Phys. co-morb. grp:** 7 (18.9%)	**Std Interv. grp:** 20 (14.5%) **Phys. co-morb. grp:** 6 (16.2%)	**Std Interv. grp:** 82 (59.4%) **Phys. co-morb. grp:** 23 (62.2%)	**Std Interv. grp:** 5 (3.6%) **Phys. co-morb. grp:** 1 (2.7%)

Table 1.5: BDI-II and BAI intention-to-treat frequency and percentage of users showing reliable and clinical change at therapy outcome (or for control group at time 2 for clinical measurement on BDI-II)

	Reliable and clinically significant improvement N (%)	Reliable improvement ONLY N (%)	No reliable change N (%)	Reliable deterioration N (%)
<u>Outcome measure: BDI-II ITT</u> Control group (N = 54) Std Interv. group (N = 183) Phys. co-morb. group (N = 51)	**Control group:** 1 (1.9%) **Std Interv. grp:** 38 (20.8%) **Phys. co-morb. grp:** 11 (21.6%)	**Control group:** 13 (24.1%) **Std Interv. grp:** 36 (19.7%) **Phys. co-morb. grp:** 11 (21.6%)	**Control group:** 39 (72.2%) **Std Interv. grp:** 104 (56.8%) **Phys. co-morb. grp:** 28 (54.9%)	**Control group:** 1 (1.9%) **Std Interv. grp:** 5 (2.7%) **Phys. co-morb. grp:** 1 (2.0%)
	Reliable and clinically significant improvement N (%)	Reliable improvement ONLY N (%)	No reliable change N (%)	Reliable deterioration N (%)
<u>Outcome measure: BAI ITT</u> Std Interv. group (N = 138) Phys. co-morb. group (N = 37)	**Std Interv. grp:** 31 (22.5%) **Phys. co-morb. grp:** 7 (18.9%)	**Std Interv. grp:** 20 (14.5%) **Phys. co-morb. grp:** 6 (16.2%)	**Std Interv. grp:** 82 (59.4%) **Phys. co-morb. grp:** 23 (62.2%)	**Std Interv. grp:** 5 (3.6%) **Phys. co-morb. grp:** 1 (2.7%)

Figure 1.5: Number of *Beating the Blues* sessions completed in each group



Attrition

In the control group, 53 (68.7%) completed the BDI-II at the assessment session (time 1) and 83 (96.5%) pre-*Beating the Blues* (time 2). There were 54 valid pairs of data for analysis (62.8%). In the standard intervention group, 213 (52.3%) completed pre-*Beating the Blues* BDI-II measures, and 192 (47.2%) completed post-BDI-II measures. There were 177 valid pairs of data for analysis (43.5%). In the physical co-morbidity intervention group, 57 (58.5%) completed pre- and 52 (53.6%), with only 47 (48.4%) valid pairs.

Referrals on from Beating the Blues

After completing all 8 sessions of *Beating the Blues,* 28 (10.4%) standard intervention service users were referred on for face-to-face CBT, and 5 (1.8%) were referred onto another service (such as a Community Mental Health Team [CMHT]). In contrast of those in the standard intervention group not completing *Beating the Blues*, 108 (87.8%) received individual face-to-face CBT, 4 (3.3%) group therapy, and 3 (2.4%) were referred onto another service. Those who were not referred onto another treatment were discharged from the service.

In the physical co-morbidity intervention group, 7 (10.3%) completers of *Beating the Blues* were referred on for face-to-face CBT, and 5 (7.3%) were referred onto another service (such as CMHT). In contrast of those not completing *Beating the Blues*, 28 (96.6%) received individual face-to-face CBT, and 1 (3.4%) were referred onto another service. Those who were not referred onto another treatment were discharged from the service.

Analysis of the available clinical data which reported certain discharge after sessions of individual face-to-face CBT following *Beating the Blues*, resulted in a mean of 3.6 sessions (range of 1 to 7) (N= 89) for the standard intervention group (there was only 1 completer's data in this group); and a mean of 2.86 sessions (range of 1 to 5) (N = 14) for the physical co-morbidity group (no completers were included in this group). This equalled a combined mean of 3.2 face-to-face sessions required post-*Beating the Blues.*

Category of physical co-morbidity and outcome

Even after grouping selected initial categories of physical co-morbidities (those with the higher frequencies) reported by service users into higher level categories, there were still not enough BDI-II or BAI scores to perform meaningful analyses.

1.4. Discussion

Effectiveness of CCBT

These results demonstrate that CCBT, administered with minimal supervision in a secondary care CBT specialist unit, can be associated with greater positive clinical outcomes for service users suffering from depression than "watchful waiting". Its effectiveness in treating depression did not seem to be diminished by the presence of physical co-morbidities. The results also suggest that CCBT may be useful for the management of anxiety however, without a control group it is difficult to firmly establish its effectiveness for anxiety.

Medium effect sizes for statistically significant differences in the intervention groups' completers' pre-post BDI-II and BAI scores (using Cohen's *d* statistic, values above 0.2 are conventionally considered 'small', above 0.5 'medium', and above 0.8 'large' [Cohen, 1988]), were found. Whilst a small effect size for change over time in the control group (0.48), and for change between groups (0.06) (using the $\acute{\eta}_p^2$ statistic, a small effect is equal to 0.01, a medium effect, 0.06, and a large effect, 0.14 [Cohen, 1992]) on the BDI-II outcome measure were found.

Although all groups achieved a statistically significant effect for the BDI-II outcome measure over time, it needs to be highlighted that the effect of time in the control group may have been due to the indirect effects of medication and/or the advice and self-help material offered to the service users in their assessment session. At least one fifth (19.8%) of the control group were recorded as taking psychotropic medication. They would have been prescribed this medication by their GP, either prior to the session in which they were assessed for referral to the CBT specialist centre, or in the session from which they were referred on for further therapeutic treatment. A considerable body of evidence indicates that the largest improvement in the symptoms of depression and anxiety per unit time produced by antidepressants occurs within the first 2 to 4 weeks of treatment (Parker et al., 2000; Posternak & Zimmerman 2005; Strassen, Angst, & DeliniStula, 1997). Given the 2 to 3 month delay from referral by GP to assessment, and the further 2 to 3 month delay between accepting a place on the CCBT programme and actually starting the first session, it is likely the effects of pharmacological therapy would have become apparent during their time on the waiting list for assessment.

It is also routine practice by most of the centre's therapists to supply service users with one or two simple techniques and the titles of helpful books or useful websites in the assessment

session. This is done to encourage service users to get started on developing coping skills whilst on the waiting list. The mastering of even basic CBT techniques, such as behavioural activation, can often have a positive impact on their anxiety and/or depression (Lovell & Richards, 2000), and consequently lead to a decrease in their clinical outcome scores.

As suggested by Roth and Fonagy (1996), finding statistical effects does not necessarily mean clinically therapeutic change has been demonstrated. For this reason, reliable and clinical change was measured. The groups all achieved similar levels of reliable change on the BDI-II, with the physical co-morbidity intervention group achieving the greatest frequency of reliable change percentage-wise (26.8%). In the ITT analysis, the control group achieved the greatest frequency of reliable change (24.1%). This was surprising, but as discussed by Shapiro (1996) individuals with higher clinical scores pre-intervention frequently achieve greater change scores. The control group did have the greatest pre-BDI-II mean score. Nevertheless, aside from any medication effects, possible use of suggested self-help techniques, and the common factors of psychological treatment or anticipation of treatment arousing hope and expectation of benefit (Parloff, as cited in Shapiro, 1996), they did not actually receive a structured intervention.

Reliable and clinical change, or 'recovery' rates, amongst service users in the different groups painted a slightly different picture however. Approximately a quarter of service users who completed *Beating the Blues* in each group achieved both clinical and significant change on the BDI-II, and a fifth 'recovered' from their anxiety according to their BAI outcome scores. Roughly a fifth also attained these changes on both measures in the intention-to-treat analyses. The control group only saw 1 person, both in the completer and ITT analyses, achieve both reliable and clinical change. Despite the fact that the group's pre-BDI-II mean was slightly higher than the other two groups, and only significantly higher than the standard intervention group's, merely 1 case of clinical 'recovery' is comparably very low. This result assists in demonstrating *Beating the Blues* therapeutic strength in relation to solely pharmacological treatment or nothing. Reliable change was possible in all 3 groups, but reliable and clinical change occurred most frequently in the intervention groups.

The reliable deterioration case percentages of between 1.9% and 3.6% for all groups, completers and ITT, were low. These percentages were comparable for all 3 groups. Accepting that not all psychotherapeutic interventions will be suitable for everyone, further efforts should be directed at identifying any remarkable characteristics that separate

individuals that deteriorate from those that improve using CCBT. This knowledge would help to progress referrals to different therapeutic interventions.

Overall the take-up rate of *Beating the Blues* as a treatment choice was good (68%). Comparing these results to other UK studies, Proudfoot et al. (2004) found 67% take-up from GPs' referrals for computer-aided psychotherapy, and Marks et al. (2004) achieved an 80% take-up rate of CCBT offered to suitable clients in an RCT. In a more recent study, 60% of 606 referrals to a primary mental health team in Warrington elected to opt-in to a self-help service (Fletcher, Lovell, Bower, Campbell, & Dickens, 2005); whilst in contrast, another study discovered that only 22 out of 78 (28%) referrals to a clinical psychology service expressed interest in the self-help clinic by attending the initial screening interviews (Whitfield et al., 2006). Meyer et al. (2002) found that therapists' expectancies in face-to-face therapy positively predicted clinical outcome. It is my contention that affirmative attitudes of CCBT service providers could also massively influence uptake. As such, further research into the determinants of uptake for CCBT is warranted.

Adherence rates in this study were also high with 69.8% and 70.1% of the standard intervention group and physical co-morbidity group respectively completing all 8 sessions of *Beating the Blues*. Randomised control trials (RCTs) of computer-based treatments indicate that between 57% (Marks, Kenwright, McDonough, Whittaker, & Mataix-Cols, 2004) and 70% (Proudfoot et al., 2004) of users complete the intervention. Whilst in a recent open trial, Cavanagh et al. (2006) found that 62% of users completed all 8 of the *Beating the Blues* sessions. These completion rates compare favourably with face-to-face therapies where 35% of service users do not meet planned endings (Hughes, 1995; Watkins & Williams, 1998).

There seems to be an attitude in mental healthcare, especially in primary care, that service users with more complex presentations and/or severe anxiety and/or depression (of the kind typically referred onto specialist services, such as this specialist NHS centre) will not be motivated enough to complete *Beating the Blues*. Consequently, they are frequently not referred to the programme, even if medication is the only other viable option. These results suggest that contrary to these expectations, dissemination of CCBT may be appropriate as part of a stepped care plan in secondary and specialist CBT mental healthcare centres.

Although, experiencing very similar clinical outcomes, there is a suggestion in the follow-up referral data that those service users reporting co-morbid physical illnesses or disabling

physical symptomology may more frequently require further intervention following the use of *Beating the Blues.* For completers, the percentage of users in each group requiring follow-up face-to-face CBT were the virtually the same (10.3% and 10.4%); however, only 1.8% of the standard intervention group required referral onto another service, compared to 7.3% of the physical co-morbidity intervention group. For non-completers, 93.5% in the standard intervention group required referral either to face-to-face CBT, group CBT, or another service; whilst all non-completers in the physical co-morbidity intervention group were referred on for face-to-face CBT or to another service. There was no significant difference between the groups for the number of face-to-face sessions required after *Beating the Blues.* The means of face-to-face sessions required post-*Beating the Blues* for the intervention groups, both individually and combined, represent a significant reduction on the average number of face-to-face sessions, currently 15, for service users not accessing *Beating the Blues* at this centre.

Benchmarking reliable and clinically significant change

Westbrook and Kirk (2005) established face-to-face CBT benchmarking data through the collection of data in the NHS-based Oxford Adult Mental Health Psychology Department's specialised CBT service. Outcome data were routinely collected on at least one pre-post measure for all those who completed a course of treatment (1, 276 service users) between 1987 and 1998. In their published paper they reported that 34% of their participant sample 'recovered' (made a reliable and clinically significant change) on the BDI measure, and 31.5% 'recovered' on the BAI measure. These figures compare favourably with the current findings of 25.2% and 26.8% for the BDI-II. However, the percentages of 22.5% and 18.9% for the BAI are quite a lot lower than Westbrook and Kirk's. The percentages for completers of "reliable change only" (who had also completed both pre- and post-measures) of 23.8% and 26.8% on the BDI-II were much higher than Westbrook and Kirk's (2005) "reliable change only" percentage of 13.6%. For the BAI, Westbrook and Kirk's 18%, who had experienced "reliable change only", compared favourably with the 22.5% and 18.9% found in this study. As would be expected, this study's 'recovery' rates were lower than those for face-to-face CBT interventions; however, they still represent a desirable change in outcomes that is worth noting.

Reliable deterioration percentages of between 1.9% and 3.6% on the BDI-II and BAI for intention-to-treat and completers analyses were very similar to those reported for face-to-face CBT therapy in routine practice by Westbrook and Kirk (2005) (2.1% and 3.1%).

Study Limitations

This study suffers from a number of limitations which are frequently inevitable in a service rather than research setting. Firstly, all the measures (descriptive and clinical) are subject to significant rates of missing data. Much of the clinical outcome data were not lost due to service users' incompletion of the intervention, but due to general administrative error or non-completion by service users of pre- and/or post-outcome measures. This loss of data can still however, bias the study as it may be associated to factors related to participants.

Secondly, the generalisability of this study's outcomes is dependent on the representativeness of the consenting service users in the mental health setting described. An attempt to address this potential threat to external validity has been made by providing detailed information about the participants in the study. However, incomplete descriptive data for each group means that it is difficult to ascertain true representativeness. Information concerning prior treatment was also very limited. It was unclear how many participants had received and/or experienced successful prior treatments or CBT before. This information would be important, both for generalisability, and for comparing the 3 groups. There were no descriptive data available for those service users who chose not to use *Beating the Blues.*

Thirdly, in terms of the treatment timeline, the control group does not concur exactly with the two intervention groups. Generally, participants in the intervention groups had already been on the waiting list after assessment for 2 -3 months before receiving *Beating the Blues;* whilst the control group was measured from the time following assessment to prior to starting *Beating the Blues.* Although, this is a strategy suggested by Owens, Slade and Fielding (1996) to manage the ethical problem of withholding treatment to create a control group, the time difference can exert an effect, and could have been the reason for the higher pre-BDI-II mean score in the control group. The two intervention groups may have already experienced some improvement over time prior to starting *Beating the Blues*.

This leads into the fourth area of possible limitation, internal validity. The groups were not randomised, although all participants had been assessed as appropriate for *Beating the Blues,* then offered, and accepted this treatment. As a natural study, lacking the stricter research criteria of controlled trials, the participant group was heterogeneous, particularly in terms of the important factor of diagnosed co-morbidities. The control group was also not entirely comprised of service users either with or without physical co-morbidities. Fortunately,

the groups were very similarly matched on many of the participant factors, including psychological co-morbidities. However, the precise natures of service users' problems were not established by well-validated diagnostic interviews, but were based purely on the therapist's clinical judgments and self-reporting by service users.

Tying in with this, high scores on the BAI, which is predominantly made up of questions about unpleasant physical sensations experienced (16 of 21 questions), would mean that a person was physically very uncomfortable, and possibly physically quite disabled. However, those with high BAI scores were not always included in the physical co-morbidity intervention group. Non-structured assessment interviews also meant that there was less information on service users' use of medication than was desirable.

Fifthly, the present study also employed the LOCF method of dealing with missing data to enable intention-to-treat analyses. Although this method can guide practitioners as to the probable clinical impact for *Beating the Blues* service users, it does have a number of shortcomings (Streiner & Geddes, 2001). By assuming no improvement occurs for service users who do not complete the post-intervention outcome measures, the method may underestimate both the true extent of the change and variation in outcomes associated with the intervention. Acknowledging this limitation, the intention-to-treat analysis for the BDI-II and BAI presented should be interpreted with caution.

Sixthly, the lack of a control group on the BAI clinical measure meant that although statistically and clinically significant changes were found, *Beating the Blues* effectiveness for the treatment of anxiety cannot be firmly established.

Finally, the follow-up period for this study was only 6 – 8 weeks. Although, this is a reasonable amount of follow-up time post-intervention, the "gold standard" of follow-up periods does start at, at least 12 months. There are drawbacks to be considered in the collection of 12 plus months of follow-up data though; the major one being, the inability to control what other interventions participants receive during the follow-up period.

Implications for Health Psychology theory and practice

The finding that the intervention was effective for reducing depression in those with co-morbid physical illnesses or disabling physical symptomology, as well as for those with functional mood disorders and co-morbid psychological issues, gives support to the idea that

determining the aetiology of functional mood disorders may not be necessary for developing effective interventions. As physical and psychological factors often interact to contribute to poor health, managing service users' anxiety and depression is vital to improving their overall well-being.

Individuals experiencing poor physical health are at increased risk of suffering from common mental health problems, and individuals with mental health problems are generally much more likely to have poor physical health (The Mental Health Foundation, 2007). The health behaviour of an individual is also hugely determined by their mental health status: poor mental health and high levels of stress adversely affect health behaviours (WHO, 2001). Health behaviours such as stopping smoking, moderating alcohol intake, healthy eating, and physical activity can reduce the risks of developing serious illnesses such as cancer, heart disease, and Type II diabetes. Improved health behaviours can also assist in chronic illness and pain management. Depression and anxiety are known to be associated with: a greater reliance on unhealthy behaviours, such as drug/alcohol use and smoking, increased healthcare costs, reduced self-care, and poorer prognoses and recovery for certain illnesses (for example, coronary heart disease [CHD], diabetes, and fibromyalgia).

Research by Buchanan, Rubenstein, and Seligman (1999) discovered that face-to-face CBT, not only reduced depression, but concomitantly improved physical health and health-related behaviours. They speculated that learning the skills to manage depression simultaneously enhanced physical health by inciting participants to take a more pro-active stance towards managing their physical problems. The self managing and self empowering nature of CCBT may enable service users with physical as well as psychological difficulties to apply skills learnt to alleviate once aspect of their poor health to other of their adverse health issues.

As the emphasis on service user self-empowerment through self-help continues to grow, CCBT is an important move towards involving service users in the delivery of their own care, as well as in increasing accessibility to effective services. However, it needs to be noted that the health behaviours of individuals are also determined by the extent to which community and social contexts enable and support such behaviours. Individuals from poorer socio-economic groups may not have the power or resources to put healthy behaviours into practice (Seedat, as cited by Campbell, 2004). Validation of the social context of the individual is extremely important in ensuring that individuals do not feel inadequate or guilty in not being able to fully manage their ill-health (Campbell, 2004). The development of social

and community contexts which support the adoption of health behaviours is vital to real service user empowerment in enhancing well-being.

Future research directions

It is interesting that Cavanagh et al. (2006) in their study of the effectiveness of *Beating the Blues* in routine care found an increase in the numbers of participants experiencing reliable and clinically significant improvement (31% to 54%) on the CORE-OM at 6 months follow-up. Cavanagh et al.'s (2006) study did have a high long term follow-up attrition rate, so the results need to be interpreted with caution. However, its outcomes do highlight the fact that longer term follow-up data (longer than this study's 6 – 8 weeks) may be essential in providing further information regarding the potency and sustainability of the clinical improvements shown to be achievable through the use of *Beating the Blues* in this type of service.

Research in a specialist CBT setting with a control group on the BAI measure is desirable in order to establish how effective *Beating the Blues* is for managing anxiety at this level of healthcare. Further research into service users with specific physical co-morbidities is also required to establish how this intervention affects anxiety and depression in service users with particular types of physical symptoms and/or illnesses. More symptom or illness specific measures should be used alongside the BDI-II and BAI to establish clinical effectiveness in managing illness outcomes.

This study did not include an examination of all the adverse health behaviours that so many of the participants reported adopting in order to manage their anxiety and depression. Many detailed increased smoking and alcohol use, poor sleep, diet and/or hygiene, and increased risk-taking. Research into whether or not these improve post-*Beating the Blues* would be interesting and very useful.

In terms of adherence, future research should explore which users opt into using the *Beating the Blues* programme, and the reasons why users drop out of the programme before completion. Other factors, which have not been measured here, such as motivation levels and attitudes towards treatment in general, could play a significant role in the decision to try CCBT.

1.5. Conclusion

Lord Layard in his Sainsbury Centre lecture (September 2005), "Therapy for all on the NHS", stated: "There is a mass of suffering which is untreated and which imposes severe burdens on the economy. We have effective means of treating it, which are enshrined in NICE guidelines. But those guidelines cannot be implemented with the current resources of people and money. In particular, evidence-based psychological therapies like CBT which are in heavy demand are not adequately available."

Beating the Blues may provide an interim solution to this problem. As a second step (after the first steps of medication and watchful waiting) in a treatment programme with a diverse mix of service users, it has demonstrated positive results for the management of depression, and hopeful clinical outcomes for anxiety. Because of what we know about the intricate relationship between physical and psychological health, and psychological health and health behaviours, increasing access to effective treatments can only serve to enhance the overall well-being of those who struggle with ill-health.

As Jacobs et al. (2001) expressed in their paper examining computer-based versus traditional individual psychotherapy, there is a concern amongst therapeutic practitioners that computers are being seen as a replacement for traditional therapy, despite the clinical, legal, ethical, and practical concerns they raise. These issues have been discussed by numerous authors (for e.g., Proudfoot, 2004; Marks et al., 2007; Cavanagh, Shapiro & Zachs, 2003; NICE, 2006), and all of them reach the same conclusion: professionally evaluated CCBT programmes, if correctly implemented and managed by trained staff, can be very effective as a first/second step in mental healthcare. The *Beating the Blues* programme should never replace the mental health practitioner, but in the case of common mental health problems it can offer rapid access and clinically significant benefit as a supported self-help intervention. NICE (2006) has stated that all Primary Care Trusts must be able to offer computer-based CBT as a treatment choice for anxiety and depression by 31 March 2007. However, these interventions do not necessarily need to be limited to primary care. They also have the potential to be used effectively to increase service capacity in specialist CBT services. As long as mental healthcare practitioners refer, assess, monitor, and manage service users appropriately, always bearing in mind that *Beating the Blues* is in fact an influential therapeutic tool, many of those who had only a long waiting list times and amplified symptom severity to look forward to, will have a strengthened chance of recovery.

Chapter 2

Part 2: Service user satisfaction and acceptability of *Beating the Blues*

2.1. Methodology

Participants

The service users who used *Beating the Blues* as an intervention for their anxiety and/or depression in the previous study were included in this study. The control group participants were excluded, as participants for this part of the study needed to have used *Beating the Blues*. The 23 participants without formal diagnoses who had been excluded in the previous section of this study were included in the qualitative analyses. The physical co-morbidity intervention group consisted of 97 participants and the "no physical co-morbidity reported" (standard) intervention group, 407. There were 527 participants in total.

Measures used

Three single item rating scales were used to collect measures of *usefulness*, *relevancy*, and *comprehensibility*. These rating scales (rated from 0 to 8) are built into the *Beating the Blues* programme, and service users are asked to complete them at the end of each session. The programme obtains a measure on the first rating scale of how useful service users found the session by asking "How useful was this session?" (0 = "not at all useful", 8 = "very useful"). The second rating scale is preceded by the question "Was the session relevant to your problems?" (0 = "not at all relevant, 8 = "very relevant"). The third rating scale measures how easy the completed session was to follow ("How easy was the session to follow?"; 0 = "very easy", 8 = "very difficult"). The service user completes these rating scales by placing the computer mouse's cursor over the chosen number on the rating scale and clicking once. Overall *usefulness*, *relevancy* and *comprehensibility* scores were calculated as the mean of all 8 sessions' scores.

Service users were also asked the open-ended questions: "what particular aspects of the programme have you found helpful?" at the end of each session, and "In what way do you think the programme could be improved?" at the end of the last session. They were also given the option of adding any other comments ("Would you like to make any other comments?") at the end of individual sessions. These questions in the programme are followed by open text boxes into which users can type their comments. The programme

encourages users to provide feedback by informing them that their comments may be used to improve *Beating the Blues*.

Procedure

Service users' feedback and the 3 rating scales' scores for session 1 and the average scores calculated for all 8 sessions of the programme were collected from May 2001 to April 2006 using the *Beating the Blues* database and service users' summary reports which are generated on request by the programme.

Session 1 of *Beating the Blues* introduces service users to the programme by explaining: the concepts of anxiety and depression, their symptoms and causes, what the programme will focus on in each session, how to identify thoughts and emotions, the basic CBT model and, and how to schedule pleasurable activities. It also helps the service user to establish a clear picture of their problems and their causes.

Analyses

Content analysis of the open questions feedback

A content analysis of service users' satisfaction feedback was carried out. An adapted form of directed content analysis was used. Directed content analysis is sometimes used in situations when "existing theory or prior research exists regarding a phenomenon which would benefit from further description" (Hsieh & Shannon, 2005, p. 1281). The content analysis hoped to provide further information regarding what individuals liked and disliked about using *Beating the Blues*. Unlike other forms of content analysis, using a directed approach involves being guided by a more structured process (Hickey & Kipping, 1996). Preconceived categories are occasionally imposed on the data, and researchers begin by identifying key concepts or ideas as initial coding categories. In this research study, responses were initially organised into groups according to the open-ended questions "What particular aspects of the programme have you found helpful?", "Would you like to make any other comments (about the programme)?", and "In what way do you think the programme could be improved?". These were the initial imposed categories. The feedback from the invitation to make further comments about the programme was reviewed to ascertain whether it related to improvement of the programme or the programme's helpfulness before being placed in one of these groups with the other qualitative data for content analysis. Only

one feedback item from the invitation to make further comments was included with the helpfulness feedback, the rest was included with the improvement feedback data.

Two researchers, the main researcher and an assistant researcher, were responsible for identifying the sub-categories and main categories within these two major categories. Two researchers were used in order to reduce the bias of a single researcher. Data analysis started with the reading through of all of the satisfaction feedback entries a number of times before identifying key concepts or ideas which were used to derive the first sub-categories (Hsieh & Shannon, 2005). Next, the researchers made notes of any initial ideas and analysis. Through this process further sub-categories emerged, which could be grouped together into higher categories based on how they were related or linked. These developing categories were then used to organise the sub-categories meaningfully (Patton, 2002). At this stage, the two researchers consulted with one another on the codes and subsequent sub-categories that had emerged. These sub-categories were then organised into a smaller number of agreed upon main categories. Definitions for each category were developed. This enabled intercoder reliability tests to be carried out.

Once the analysis was complete, a sample of the entire data set was randomly selected. The sample represented about 10% of the feedback. Responses were classified as primarily relating to one of these categories by the main researcher and an independent assistant researcher. Using an online tool for calculating Cohen's unweighted kappa (as cited in Lowry, 2007), the assistant researcher's assigned categories were individually compared with the main researcher's to calculate Cohen's kappa statistic. This statistic needed to be above 0.7 for the categories to be considered valid. As the categories consisted of nominal data, Cohen's simple unweighted coefficient was the only form of kappa that could be meaningfully used.

Rating scales' variance and normality of distribution

Levene's test was used to test for homogeneity of variance on the 3 rating scale scores within each intervention group (standard and physical co-morbidity); whilst the Kolmogorov-Smirnov test (K-S test), Q-Q plots, histograms, and calculated skewness and kurtosis statistics helped to ascertain whether or not the rating scales data were normally distributed. With the standard intervention group the decision regarding whether a distribution was normal or not was mainly based on the skewness and kurtosis statistics, plots, and graphs. This followed the advice of Field (2005) who suggests that if a participant group size is

greater than 200, significance calculations are of less importance than visual assessment of the shape of the distribution and the values of the skewness and kurtosis statistics.

Satisfaction scores outcome analysis

The quantitative data were analysed using SPSS 14.0 for Windows. Both groups' rating scales scores for session 1 and overall were compared using independent t-tests and Mann-Whitney tests. Correlation analyses were used to explore the relationship between the 3 rating scales' session 1 and overall scores, the BDI-II and BAI change and outcome scores, and adherence (the number of *Beating the Blues* sessions completed). These analyses were two-tailed in order to maintain the aim of thoroughly exploring the relationships between the assigned variables without imposing *a priori* expectations, and assuming a directional hypothesis using single item rating scales which have not been validated. Because the relationships of interest were between each rating scales' session 1 and overall scores and the outcome variable of interest (for e.g. adherence), correlation analyses consisted of 3 planned comparisons each. The Bonferroni corrected cutoff for true significance level was calculated for the planned comparisons. With 3 planned comparisons for each analysis, the .05 significance level became .017, and the .01 significance level became 0.003 (Aron, Aron, & Coups, 2005).

Session 1 rating scale scores for completers and non-completers in both groups were compared using independent t-tests and Mann-Whitney tests. Possible differences between male and female participants on session 1 and overall average rating scale scores were also compared using independent t-tests and Mann-Whitney tests.

The effect sizes for the Mann-Whitney tests were calculated using the formula:

$r = \frac{Z}{\sqrt{N}}$ (Rosenthal, 1991).

The strength of significant associations in the correlation analyses were established by examining the correlation coefficients (r).

2.2. Results

Homogeneity of variance and normality of distribution

Non-normal distributions were revealed for session 1's *comprehensibility* and overall *comprehensibility* scores, as well as for overall *usefulness* scores.

Tables 2.1 and 2.2 present the skewness and kurtosis statistics for both groups' rating scale scores. The *comprehensibility* scores were positively skewed for both groups, whilst the overall *usefulness* distributions were negatively skewed.

Levene's test established homogeneity of variance for both intervention groups on all, with the exception of the overall *usefulness* scores ($p < 0.01$), rating scales' session 1 and overall scores. As the overall *usefulness* scores had already been found to have a non-normal distribution, a Mann-Whitney test was carried out to establish any differences between the 2 groups on these scores. Mann-Whitney tests were also used to establish if any differences existed between groups on the session 1's *comprehensibility* and overall *comprehensibility* scores.

Attrition

Session one

Three hundred and ninety-three (96.6%) standard intervention group participants and 94 (97.0%) physical co-morbidity group participants completed all 3 rating scales in session 1.

All sessions

Two hundred and sixty-seven (65.6%, 94.0% of completers) standard intervention group participants and 57 (58.8%, 83.3% of completers) physical co-morbidity group participants completed all 8 *usefulness* and *relevancy* rating scales; whilst 192 (47.2%, 67.6% of completers) standard intervention group participants and 40 (41.2%, 58.8% of completers) physical co-morbidity group participants completed all 8 *comprehensibility* rating scales.

Table 2.1: Standard Intervention group's descriptive statistics

	N	Minimum	Maximum	Mean	SD	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Usefulness session 1	393	.00	8.00	4.89	1.75	-.069	.123	-.393	.246
Relevancy session 1	393	.00	8.00	5.10	2.02	-.491	.123	-.314	.246
Comprehensibility session 1	393	.00	8.00	2.70	3.13	.726	.123	-1.207	.246
Overall Usefulness	268	.00	8.00	5.79	1.63	-.827	.149	.490	.297
Overall Relevancy	267	.00	8.00	5.34	1.93	-.570	.149	-.330	.297
Overall Comprehensibility	192	.00	8.00	2.84	2.31	.430	.175	-1.113	.349

Table 2.2: Physical Co-morbidity Intervention group's descriptive statistics

	N	Minimum	Maximum	Mean	SD	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Usefulness session 1	94	1.00	8.00	4.73	1.55	-.053	.249	-.010	.493
Relevancy session 1	94	.00	8.00	4.88	1.84	-.324	.249	-.318	.493
Comprehensibility session 1	94	.00	8.00	3.18	3.20	.498	.249	-1.473	.493
Overall Usefulness	57	1.00	8.00	5.73	1.97	-.579	.316	-.533	.623
Overall Relevancy	57	.00	8.00	5.29	1.89	-.498	.316	-.226	.623
Overall Comprehensibility	40	.00	8.00	2.95	2.73	.615	.374	-1.027	.733

Rating scale outcomes

Comparison of rating scale scores between intervention groups

The descriptive statistics of the individual groups' rating scale scores are reported in Tables 2.1 and 2.2. No statistically significant difference was found between groups on any of the session 1 or overall rating scale mean scores. Table 2.3 and 2.4 present the t-tests' and non-parametric Mann-Whitney tests' statistical outcomes.

Relationships between rating scale scores, BDI-II and BAI scores, and adherence

In the physical co-morbidity group two of the corresponding session 1 and overall rating scale scores were not significantly correlated: the session 1 and overall *usefulness* scores, and the session 1 and overall *relevancy* scores. The rest of the session 1 and overall corresponding rating scale scores correlated significantly in both groups. Table 2.5 and 2.6 present the parametric and non-parametric correlation analyses outcomes for the BDI and BAI clinical and change scores, number of *Beating the Blues* sessions completed, and rating scale scores for the standard and physical co-morbidity groups respectively.

Statistically significant differences were found between completers and non-completers in the physical co-morbidity group for session 1's *usefulness,* $t(92) = 2.47$, $p < .05$, and *relevancy,* $t(92) = 3.33$, $p = .001$, scores. The difference in the *relevancy* scores between completers and non-completers was emphasised in the physical co-morbidity group by the statistically significant correlation revealed between the number of *Beating the Blues* sessions completed and session 1's *relevancy* rating ($r = .35$, $p < .003$). Those service users who had higher ratings of *relevancy* in session 1 completed on average more sessions of *Beating of Blues.*

There was also a statistically significant difference found for gender in each group on session 1's *comprehensibility* rating. In the standard intervention group, the mean *comprehensibility* score for the men was 3.17 and for the women 2.41, $U = 15466.00$, $p < .01$, $r = -.13$. In the physical co-morbidity group, the mean *comprehensibility* score for the men was 2.29, and for the women 3.71, $U = 778.50$, $p < .05$, $r = -.21$.

Table 2.3: Independent Samples T-Tests for *usefulness* and *relevancy*

	t	df	Sig. (2-tailed)	Mean Difference	SE	95% Confidence Interval of the Difference	
						Lower	Upper
Usefulness session 1	.770	485	.44	.15	.20	-.23	.54
	.828	154.53	.41	.15	.18	-.21	.51
Relevancy session 1	.849	485	.40	.19	.23	-.25	.64
	.899	151.36	.37	.19	.22	-.23	.62
Overall relevancy	.178	322	.86	.05	.28	-.50	.60
	.181	83.08	.86	.05	.28	-.50	.60

Table 2.4: Mann-Whitney tests for *comprehensibility* and *usefulness*

		N	Mean Rank	∑ Ranks	Mann-Whitney U	Z	Asymp. Sig. (2-tailed)
Comprehensibility session 1	Std intervention group	393	238.87	93874.50	16453.50	-1.70	.09
	Co-morbid physical group	94	265.46	24953.50			
	Total	487					
Overall usefulness	Std intervention group	267	162.69	43601.00	7555.00	-.13	.90
	Co-morbid physical group	57	164.46	9374.00			
	Total	324					
Overall comprehensibility	Std intervention group	192	116.52	22372.00	3836.000	-.01	.99
	Co-morbid physical group	40	116.40	4656.00			
	Total	232					

Table 2.5: Standard intervention group's correlation outcomes (parametric and non-parametric) for satisfaction rating scale scores, clinical outcome scores, and the number of *Beating the Blues* sessions completed[8]

	Parametric or non-parametric	Corresponding rating scale score (session 1 or overall)	No. of sessions completed	BDI change score	BAI change score	Post-BDI	Post-BAI
Usefulness session 1	*Spearman's rho*	***.437*** **	***.081***	***.063***	***-.028***	***-.093***	***.009***
p value (N)		.000 (266)	.110 (386)	.405 (177)	.710 (183)	.203 (190)	.904 (195)
Relevancy session 1	*Pearson's r*	***.514*** **	***.068***	***.017***	***-.083***	***-.025***	***.074***
p value (N)		.000 (266)	.180 (386)	.832 (177)	.260 (183)	.733 (190)	.304 (195)
Comprehensibility session 1	*Spearman's rho*	***.380*** **	***-.006***	***.016***	***-.008***	***.114***	***.106***
p value (N)		.000 (191)	.907 (386)	.835 (177)	.910 (183)	.117 (190)	.141 (195)
Overall usefulness	*Spearman's rho*	***.437*** **	***.086***	***.102***	***.060***	***-.060***	***.009***
p value (N)		.000 (266)	.160 (267)	.216 (149)	.465 (153)	.450 (158)	.905 (162)
Overall relevancy	*Pearson's r*	***.522*** **	***.105***	***.111***	***.106***	***-.056***	***-.027***
p value (N)		.000 (266)	.088 (267)	.176 (149)	.193 (153)	.482 (158)	.728 (162)
Overall Comprehensibility	*Spearman's rho*	***.380*** **	***.025***	***-.017***	***-.136***	***.130***	***.093***
p value (N)		.000 (191)	.728 (191)	.863 (102)	.169 (104)	.179 (109)	.329 (111)

** Correlation significant at .003 level
* Correlation significant at .017 level

[8] The outcome data for the correlation analyses is reported in one table (for both Table 5 and Table 6) to enable the reader to more easily view all the results; however, as discussed in the procedure section the analyses each only consisted of 3 variables. The Bonferroni corrected cut-off was applied to determine the true significance of the associations.

Table 2.6: Physical co-morbidity group's correlation outcomes (parametric and non-parametric) for satisfaction rating scale scores, clinical outcome scores, and the number of *Beating the Blues* sessions completed

	Parametric or non-parametric	Corresponding rating scale score (session 1 or overall)	No. of sessions completed	BDI change score	BAI change score	Post-BDI	Post-BAI
Usefulness session 1	*Spearman's rho*	***.231***	***.230***	***-.186***	***-.076***	***.143***	***.140***
p value (N)		.083 (57)	.026 (93)	.220 (45)	.617 (46)	.323 (50)	.333 (50)
Relevancy session 1	*Pearson's r*	***.273***	***.350*****	***-.259***	***-.205***	***.158***	***.006***
p value (N)		.040 (57)	.001 (93)	.086 (45)	.172 (46)	.272 (50)	.967 (50)
Comprehensibility session 1	*Spearman's rho*	***.470 *****	***.073***	***.080***	***.210***	***.104***	***-.001***
p value (N)		.002 (40)	.489 (93)	.601 (45)	.161 (46)	.474 (50)	.997 (50)
Overall usefulness	*Spearman's rho*	***.231***	***.114***	***.221***	***.176***	***.094***	***.190***
p value (N)		.083 (57)	.398 (57)	.195 (36)	.297 (37)	.573 (38)	.246 (39)
Overall relevancy	*Pearson's r*	***.237***	***.073***	***-.202***	***-.052***	***.260***	***.264***
p value (N)		.040 (57)	.591 (57)	.237 (36)	.760 (37)	.114 (38)	.104 (39)
Overall Comprehensibility	*Spearman's rho*	***.470*****	***.012***	***-.021***	***.421***	***.074***	***-.073***
p value (N)		.002 (40)	.940 (40)	.917 (26)	.029 (27)	.713 (27)	.716 (27)

** Correlation is significant at the .003 level
* Correlation is significant at the .017 level

Qualitative outcomes

Seventy-eight (14.8%) participants provided responses to the open-ended question "What particular aspects of the programme have you found helpful?". Twenty-three (4.4%) participants responded to "Would you like to make any other comments (about the programme)?", and 30 (5.7%) participants provided feedback for the question "In what way do you think the programme could be improved?". Only one of the participants gave feedback for more than one of the questions.

Particular aspects of the programme that users found helpful

Three main categories, *therapeutic features*, *structure*, and *self determination,* emerged from the responses to "What particular aspects of the programme have you found helpful?".

i) Therapeutic features

This category reflects the content and impact of the programme. Individuals spoke about learning new skills and techniques, for example:

- 'The PIG (personal, internal, global) and SET (situational, external, transient) session – found really useful. Really stuck in my mind. Also helped me to stop blaming myself',
- 'Making a schedule to do a pleasurable activity',
- 'Learning how to analyse my thought processes – thinking things through and working out why I felt anxious and then generating challenges. I used the PIG and SET ideas to good effect and the downward arrow technique'.

There was also the therapeutic effect of actually doing something to help themselves, and being involved in a therapeutic intervention, for example:

- 'I was doing something constructive in order to beat my depression. It felt as if someone cared enough to help',
- 'The session helps me focus on my anxiety problems in order to be proactive and tackle it. Very useful to be given "homework" and assess my progress',
- 'knowing that am starting a helpful process that doesn't involve medication'.

The case studies contained within the programme performed the therapeutic function for some of the users of informing them that they were not alone. This was illustrated by the following extracts:

- 'Being able to see and hear about other people who had done the programme. It brought home the fact that I am not the only one going through this. It was good to hear how others had got on with the programme',
- 'Liked case studies – good to realise I'm not the only one',
- 'Knowing that I am not alone in suffering, from listening to the case studies.'

ii) Structure

This category encompasses aspects of both the *Beating the Blues* service and the programme's configuration and implementation. Examples of this category included discussing specific media features:

- 'The instructions were reasonably easy and you could go back over anything you did not understand. It used everyday words everyone could understand',
- 'good explanations, ability to repeat information, work at own pace, practical homework',
- 'the computer format. Not having to speak to anyone',
- 'the novelty of it – new approach';

As well as mention of specific implementation and service features:

- 'Timetable provided a good discipline to keep up momentum',
- 'being left alone in a quiet room',
- 'felt very relaxed using the computer, preferred interfacing with that rather than a real therapist',
- 'felt positive using it as this service more professional than my last experience elsewhere. Liked attending – disappointed when it ended.'

iii) Self determination

This category describes how participants embraced the self-help aspect of the programme, including the time and space the intervention afforded them for psychological work. Examples of this category from the feedback text included:

- 'Time to think alone, covered important issues/values',
- 'being left to try and get over my problems by myself',
- 'Working at your own pace. Being in control'.

Self determination also involves participants' discovery of aspects of themselves and their development of a greater self awareness through using *Beating the Blues.* Examples of this developing self awareness are:

- 'helped to realise that I am able to overcome these thoughts and feelings',
- 'recognising that my worth doesn't depend on the opinion of others'
- 'Realising that my irritability was a big problem.'

Programme improvement feedback

Structure, *acceptability,* and *no improvement* were the three main categories that emerged from the analysis of the improvement feedback.

i) Structure

As before, *structure* as a category reflects aspects of both the *Beating the Blues* service and the programme's configuration and implementation. Examples of feedback regarding the programme's structure are:

- 'More comprehensive summary sheets. Would like to take home more detailed notes. Sometimes difficult to answer 'yes' or 'no' – needed more options',
- 'Want case studies of real people not actors, too much homework',
- 'patronising voice',
- 'less stereotypical responses made to "what difficulties/upsets experienced". Awareness of the emotional upset of unearthing inner beliefs. Flexibility to change your mind re: a change of strategy'.

The feedback regarding *Beating the Blues* service implementation mainly focussed on therapeutic support from a clinician. Individuals desired more face-to-face therapeutic input as is evidenced by the following example extracts:

- 'Program okay, but maybe personal backup would be useful immediately before and after course',
- 'While I appreciate that there are long waiting lists and that nothing can be done about this I feel that I'm not being challenged and that the very thing that I need is someone to talk to and engage with',
- 'It would be good for the individual to have feedback, say after 4 sessions, either through the computer or to meet with the clinical advisor. Whilst the programme was good, it felt a little impersonal'.

ii) Acceptability

This category describes how relevant or useful participants found *Beating the Blues* and its components, for example:

- 'I was there for a problem after a heart attack and it was suggested that I try BtB, which I did find useful, but it would have helped a lot more if one of the case study patients had had a health problem',
- 'does not account for physical abuse',
- 'Could be useful for the right person, it's just that my problems weren't the same',
- 'the programme is not for me, I hate talking to the machine'.

iii) No improvement

This category reflects as it suggests: feedback that suggested that no improvement was necessary. Examples from the text of this type of feedback are:

- 'I don't really think it could be improved, really. It's excellent as it is',
- 'it's fine as it is',
- 'None. The programme was straightforward and explanations were given at each stage which were clear and easily understood'.

Intercoder reliability

Cohen's unweighted kappa, calculated separately for the assistant researcher's data categorisation using the 3 main categories for each feedback group, was 0.89 (CI_{95} = 0.80 – 0.92) for the helpfulness feedback, and 0.91 (CI_{95} = 0.83 – 0.94) for the improvement feedback. This provided statistical evidence of good intercoder reliability for the 3 main categories in each feedback group. No changes were made to the codings.

2.3. Discussion

Satisfaction and acceptability

The overall mean *usefulness, relevancy* and *comprehensibility* completers' scores from both intervention groups (Table 2.1 and Table 2.2) indicated that *Beating the Blues*, administered under minimal supervision, was considered to be useful, relevant, and comprehensible. Adherence rates (69.8% for the standard intervention group and 70.1% for the physical co-morbidity group) for *Beating the Blues* also supported the idea of it being acceptable to service users. This finding accorded well with previous research indicating satisfaction with computer-aided interventions. For example, in an open trial of computer-assisted therapy for

depression, service users gave the treatment mean satisfaction scores of 4.5 on a 5 point scale (5 = highest rating, Wright et al., 2002); and in an RCT focussing on the use of the *FearFighter* programme for the treatment of phobias, user satisfaction was not significantly different from that for accessing clinician-guided therapy (Marks et al., 2004). In another RCT, this time using *Beating the Blues* as the treatment intervention, service users reported significantly higher treatment satisfaction than those receiving 8 weeks of routine primary care for depression and/or anxiety (Proudfoot et al., 2004).

Relationships between satisfaction variables, outcomes, and adherence

None of the session 1 rating scale scores were related to how much participants in either group improved on clinical outcome measures; and potential programme adherence or non-adherence could also not be surmised from session 1's *usefulness, relevancy,* or *comprehensibility* ratings in the standard intervention group. The finding that initial ratings of *usefulness, relevancy,* or *comprehensibility* were not associated with intervention outcomes signifies that the majority of service users were able to make effective use of *Beating the Blues* irrespective of their initial satisfaction with the programme. In the standard intervention group, users' programme adherence also appeared to be unaffected by how useful, relevant, or comprehensible they found the initial session.

However, within the physical co-morbidity group there was a definite relationship between adherence and session 1's *relevancy* scores. This association was of medium strength (r = 0.35) (using the r statistic, values above 0.1 are conventionally considered 'small', above 0.3 'medium', and above 0.5 'large' [Cohen, 1988]). It is interesting to note that this relationship only occurred within the physical co-morbidity group. Almost everyone who used *Beating the Blues* was suffering to some extent with depression and/or an anxiety-related disorder, so all users should have found the programme relevant. It could be the case that service users in the physical co-morbidity group may also have looked for relevance with regards to their specific physical issues and the impact that these had on their daily living. Whether or not they found this relevance could have possibly influenced their session 1 *relevancy* ratings and their subsequent adherence. As found in the previous section of this study, there was no difference in adherence or number of sessions completed between intervention groups, and there was no difference found between the groups on any of mean satisfaction rating scales scores in this study. It does not appear that the physical co-morbidity group's users found *Beating the Blues* less relevant; however, they were more likely to complete added sessions if they had higher session 1 *relevancy* ratings. Acquiring more knowledge and a greater

understanding of the link between relevance and adherence may provide the opportunity for clinicians to make better use of therapeutic resources by ensuring that users access interventions that they are more likely to find relevant and therefore adhere to.

The differences between the genders for session 1's *comprehensibility* ratings were interesting to note for the fact that they also differed between groups. Men scored higher (indicating lower comprehensibility) in the standard intervention group, and women scored higher in the physical co-morbidity group. However the lack of association between *comprehensibility* and the number of sessions completed, and the small effect sizes of these differences meant that these findings were not considered significant.

Qualitative feedback

The qualitative feedback indicated four active core categories regarding both the features of *Beating the Blues* that service users found useful, and the ways in which they felt *Beating the Blues* might be improved upon: i) therapeutic features of the programme/product, ii) the structure of the programme and the service, iii) programme acceptability, iv) and self determination. These categories represent meaningful facets upon which CCBT treatments could be evaluated. They could also be used to guide implementation of CCBT services and inform necessary service changes in order to improve the quality of care provided.

Respondents found a number of the therapeutic techniques contained within *Beating the Blues* very useful for managing their anxiety and depression. They also reported that actually doing something to help themselves and being involved in a therapeutic intervention was a useful aspect of using *Beating the Blues*. Valuing doing it for themselves links in with the category of *self determination* in which service users valued being able to guide themselves, through the use of CCBT, to a greater level of self awareness. This fits with the vital intervention element of service user self-empowerment, which in the healthcare context means "to promote autonomous self-regulation so that the individual's potential for health and wellness is maximized" (Lau, 2002, p. 372). Certainly, the current healthcare climate's focus on increasing service user choice seems to be moving in that direction. Service user self-empowerment is slowly being recognised as central to the construction of healthcare interventions (Richardson & Richards, 2006).

The feedback around the usefulness of the structure of the service and the programme provided helpful information about what structural aspects service users appreciated.

However, it is the feedback regarding aspects for improvement (for both *acceptability* and *structure*) which is the more valuable information. This feedback pointed at several main areas for improvement: i) more detailed information to take away after each session, ii) a different voiceover for the programme, iii) more flexibility in the programme with regards to responses available to users, iv) real life case studies (the case studies are actually based on real life examples, so this needs to be made clear to users), and v) more therapeutic support with the programme. Good practice would also involve highlighting how the management of anxiety and depression is important for the management of physical well-being, especially with users experiencing co-morbid physical difficulties; thereby emphasising the intervention's relevance.

The feedback regarding providing more therapeutic support with the programme concurred with the findings of Mitchell and Kenneth Gordon (2007) where individuals stated a preference for CCBT to be accompanied by some form of counselling. The level of required therapeutic support (taking into account cost-effectiveness and resource availability) needs to be carefully considered as a significant part of the implementation of CCBT services. Individuals may value being empowered to help themselves, but still require guided support.

With the increasing attention from healthcare policy makers on the use of self-help materials and interventions, including CCBT programmes, for managing emotional and mental health difficulties, service users' involvement in establishing their acceptability is vital. Without service user involvement in providing service feedback, services and service interventions cannot reasonably be improved. Empowering service users by respecting and acting upon their valuable perspectives also contributes to increasing service users' involvement in their own care services development. A number of studies have demonstrated that service users who are actively involved in shaping their care have better outcomes than those who are not involved (for example, Greenfield, Kaplan, & Ware, 1985; Butow, Dunn, Tattershall, & Jones, 1994; Wagner et al., 2001a, b).

Limitations

There were a few limitations to this study, not least the research attrition rate for completers on all 8 *comprehensibility* rating scales and for the qualitative feedback questions. Whilst response rates were reasonable for service users completing the *Beating the Blues* programme, the pragmatic nature of this research did not permit extensive follow-up for

service users discontinuing with the CCBT programme. Therefore much of the service user feedback findings may be generalisable only to programme completers.

A further limitation is the fact that the 3 rating scales were only single item scales. There is the assumption that these scales measure what they purport to measure, but it could be that they do not measure exactly the constructs it is believed they do. It is interesting to note that in this study treatment acceptability was not related to outcome of CCBT as it was in Osgood-Hynes et al.'s (1998) study of a self-help part-computerised treatment for depression using a single-measure of treatment acceptability.

Care must be taken when interpreting the outcomes of correlation analyses. In a bivariate correlation causality cannot be assumed, as there may be other variables, measured or unmeasured, affecting the results. Correlation coefficients also do not statistically indicate the direction of causality. Although assumptions about the direction in which the causality operates may be made based on intuitive understanding of cause and effect in certain situations, there is no statistical evidence for which variable causes the other to change (Field, 2005).

The questions built into the programme to extract feedback about the programme could also have possibly been placed differently. The "In what way do you think the programme could be improved?" question should have come either before or after (or possibly alternately for each session) the "what particular aspects of the programme have you found helpful?" question at the end of each session. This would have allowed more non-completers to focus on thinking about improvements at the end of session when ideas for improvement may be fresh in their minds. The "would you like to make any other comments?" question is possibly not directive enough after the "what particular aspects of the programme have you found helpful?" question, leading to a bias in quantity of feedback for each question.

Future research directions

This study goes some of the way to furnishing Kaltenthaler et al. (2004) suggestions for more detailed information to improve specific aspects of the delivery of CCBT services. Further investigation into CCBT should continue to strive to identify process variables and predictors of uptake, continuation, and outcomes in CCBT. Additional qualitative feedback, especially from non-completers regarding intervention improvements, is also desirable.

2.4. Conclusion

This study demonstrates satisfaction with *Beating the Blues* amongst service users with diverse co-morbidities in a specialist NHS CBT centre. This finding, coupled with the evidence regarding the clinical impact and high uptake and adherence rates of the programme, supports its broader dissemination within healthcare services.

Chapter 3

Study 2: The psychometric properties of a service user generated outcome measure for *Beating the Blues*.

3.1. Introduction

The evaluation of healthcare services and evidence based practice is at the centre of national health policy initiatives. However, despite prevalent agreement on the need for outcome measures to be used in the evaluation of healthcare interventions or treatments, there is still very little concurrence over issues such as whose values should be incorporated into these measures or how different values should be weighted. In some specialties there are numerous measures of quality of life and little standardisation (Garratt, Schmidt, Mackintosh, & Fitzpatrick, 2002). Certain measures can also be costly to administer, entailing expertise and staff, and increase service user burden by requiring more time to complete.

Many condition specific measures have been developed and used in healthcare-based assessment and evaluation over the past 3 decades. When compared with generic measures, such as the Clinical Outcomes Routine Evaluation (CORE) measure, which theoretically can be used with all conditions, they seem to be more responsive to changes in service users' underlying states of health (Cairns, 1996). However, most condition specific measures have been constructed without direct service user consultation about their individual issues. This means that although in principle these measures may show an improvement, individual service users may still feel that their main issues of concern have not been resolved. In terms of healthcare best practice it is considered important to address the concerns and needs of individuals that seek care, and then to establish a valid method of assessing whether or not these needs and concerns have been met or resolved.

As discussed by Paterson (1996) in relation to her development of the 'patient-generated' measure, MYMOP (Measure Your own Medical Outcome Profile), treatment or intervention outcomes should belong first and foremost to service users. It is their personal experience of illness, along with the influence of chosen interventions or treatments, which needs to be integrated into the evaluation process. However, 'patient-specific' or 'patient-generated' outcome measures, which allow service users to choose and describe their own dimensions of unease or distress and then to make personal assessments accordingly, are seldom used in the healthcare evaluation process.

Among the first of the 'patient-generated' measures to be developed was the Patient Generated Index (Ruta, Garratt, & Leng, 1994). This scale asked individuals with back pain to list the five most important aspects of their lives affected by their condition, and then to score the severity of each aspect listed. Instead of suggesting symptoms that service users were expected to rate themselves against, service users chose their own symptoms for measuring their functioning and well-being. The concept of 'patient-generated' quality of life measures was developed further by Paterson's (1996) MYMOP. Its validity was confirmed by comparison with the SF-36 scale (Paterson, 1996), and it proved to be a more sensitive measure of change over time than the SF-36 (Ashworth et al., 2004). However, some of the criticism leveled at this scale has focused on the fact that it is primarily concerned with symptoms, which seems to miss the point of getting away from symptom-based assessment (Jenkinson, 1996). "Symptom" is also a term that would be used by a clinician, but not necessarily by a service user or client. Despite the fact that generic measures are said to be less sensitive than condition specific measures, MYMOP was intended to be applicable to a broad spectrum of illnesses seen in primary care, and was developed primarily for use with physical illnesses.

Ashworth et al. (2004) continued with the challenge of developing a psychometric instrument that could reflect the service user's perspective on their own psychological distress. This involved developing an outcome measurement scale which was not derived from the opinions of professional 'experts', but which was generated by service users themselves. These scales focused on what the service user considered to be the most important aspects of their quality of life rather than having these predefined for them. The scale that was developed was based on MYMOP, but was called PSYCHLOPS (Psychological Outcome Profiles).

PSYCHLOPS is a psychometric instrument that can be used as an outcome measure. It seeks the service user's perspective on their psychological distress. It asks them to describe and then score the problem that troubles them the most at the start of a therapeutic intervention. This approach in developing service user-based outcome measures ties in with the "patient as expert", "patient-professional", and empowerment perspectives, where service users build self efficacy from solving problems which they themselves identify. Unfortunately, the increasing use of service user-based measures in other fields has not been reflected in psychiatric research (Ashworth et al., 2005).

In a study done to assess the reliability and validity of PSYCHLOPS, Ashworth et al. (2005) found that PSYCHLOPS was a sensitive measure of change after therapy. Measuring the responsiveness of both the Clinical Outcomes Routine Evaluation Outcome Measure (CORE-OM) and PSYCHLOPS by using Cohen's *d,* PSYCHLOPS was also found to be significantly more responsive to change. Both internal reliability and convergent validity were demonstrated, and completion rates were high. This suggests that 'patient-generated' psychological measures may be useful as outcome measures whilst concurrently being able to focus on what is important to the service user as an indicator of positive change.

Beating the Blues is currently used in over 300 healthcare sites in the United Kingdom (UK). These sites are based within National Health Service Primary Care Trusts, Community Mental Health Trusts, and specialist CBT services. It was first tested as a potential computer-based CBT intervention for depression and anxiety in 2002 (Proudfoot et al., 2003b). Originally developed at the Institute of Psychiatry, parts of the measures built into the programme were very similar to those later developed in PSYCHLOPS. In the first session the *Beating the Blues* programme discusses the idea of pinpointing individual issues or problems. It then offers the user the opportunity to review examples of the programme's 5 case studies' pinpointed problems (screen shots of a case study's completed "questionnaire" can be found in the Appendices (Appendix A – D). Following this, the user is asked to describe 3 problems that they feel trouble them the most and that they would like to work on while using *Beating the Blues*. They are also asked "How often does it occur? (Days a week? Times a day?)", and "When? Where? What doing?". Once they have described their problems service users are requested to score on rating scales (subjective units of distress - SUDS, scoring from 0 (no distress) to 8 (extreme distress), how much each of their chosen problems distresses them. In the final *Beating the Blues* session they are again asked to rate how much each of these problems now distresses them. Screen shots of the SUDS "questionnaire", as it is viewed by the programme user, are presented in Appendix D.

"Patient summary" reports (Figure 3.1), containing the service users' descriptions of their problems and their individual problem ratings (SUDS scores) for each of the 8 sessions plotted on a graph, can be generated by the *Beating the Blues* programme on request. Usage reports (Figures 3.2.1 and 3.2.2), which are also generated on request, present these SUDS scores collated for service evaluative purposes.

Figure 3.1: *Beating the Blues* patient summary

Dummy P — Session 8 — Patient Information – Confidential

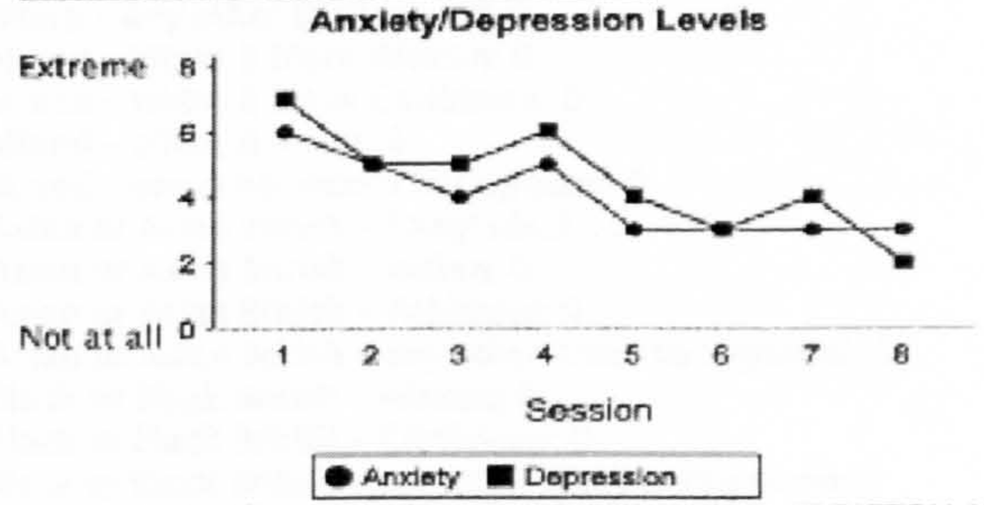
Patient Summary

Beating the Blues

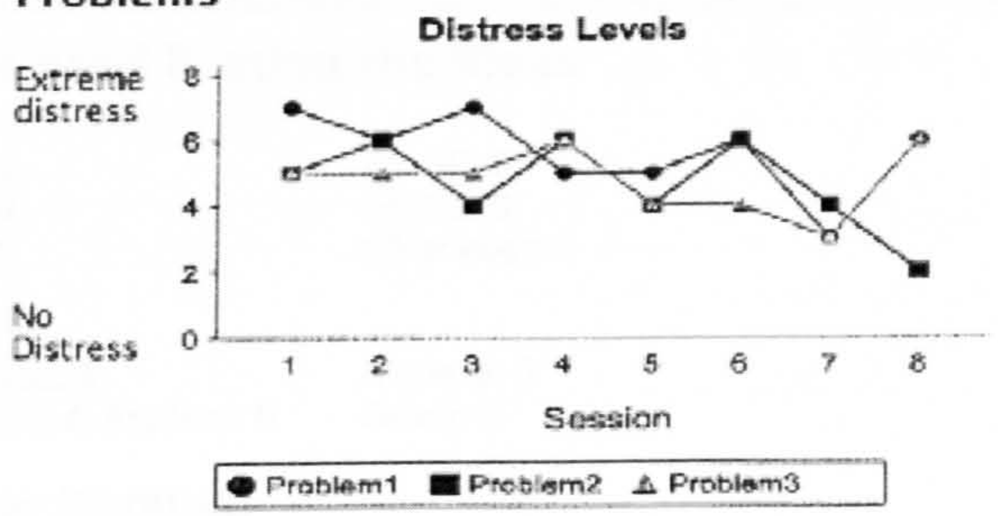
Report Date	07/06/2007
Patient's Name	Dummy Patient
Date of Birth	01/01/1970
Ethnic Origin	Black or Black British – Caribbean
Problem	Other
Problem Duration	3 to 5 years
Previous Treatment	NHS Counselling or Psychotherapy
Date Commenced	01/01/2000
Status	completed

CORE-OM Analysis

	Before	After
Well Being	2.25	1.75
Problems	2.00	1.58
Functioning	2.42	2.17
Risk	1.50	1.83
Mean	2.09	1.85
Mean Less Risk	2.21	1.86



Problems



Problem 1: I feel tired all the time.

Problem 2: I have lost the motivation to do my job.

Problem 3: I've been neglecting my son.

Feedback

	1	2	3	4	5	6	7	8	Overall
Usefulness	4.0	8.0	5.0	6.0	4.0	7.0	3.0	5.0	5.0
Relevancy	5.0	7.0	7.0	6.0	6.0	6.0	4.0	6.0	6.0
Ease of Use	2.0	3.0	4.0	5.0	5.0	7.0	7.0	4.0	6.0

PATIENT'S CURRENT RATINGS OF SUICIDAL IDEATION / INTENT ARE AVAILABLE ON THEIR PROGRESS REPORT

9

[9] This is not an actual service user's summary. It was created by staff at Ultrasis, therefore it is not reflection of true scores.

Figure 3.2.1: ***Beating the Blues*** **usage report**

Usage Report

Beating the Blues

This page contains data for ALL patients who have used Beating the Blues

Section 1 – All Patient Data:

Total Number of Users: 1

Total Number of Sessions: 1

Gender

Male: 1
Female: 0

Ethnic Group

White – British: 1
White – Irish: 0
White – any other Background: 0
Mixed – White & Black African: 0
Mixed – White & Black Caribbean: 0
Mixed – White & Asian: 0
Mixed – any other mixed background: 0
Asian or Asian British – Bangladeshi: 0
Asian or Asian British – Indian: 0
Asian or Asian British – Pakistani: 0
Asian or Asian British – any other Asian background: 0
Black or Black British – African: 0
Black or Black British – Caribbean: 0
Black or Black British – any other Black background: 0
Chinese: 0
Any other ethnic group: 0

Age

16–25: 1 | 26–35: 0
36–45: 0 | 46–55: 0
56–65:0 | 66 or over: 0

Problem

Depression: 1 | Anxiety: 0
Depression & Anxiety: 0 | Other: 0

Problem Duration

Less than 6 months: 1 | 6 months to 1 year: 0
1 to 3 years: 0 | 3 to 5 years: 0
5 to 10 years: 0 | 10 to 20 years: 0
20 to 40 years: 0 | More than 40 years: 0

Previous Treatment

None: 1
Drugs or Medication: 0
Anxiety Management Groups: 0
NHS Counselling or psychotherapy: 0
Private counselling or psychotherapy: 0
Other: 0

Throughput

Completed BtB: 0
Withdrawn from BtB: 0
Still Using BtB: 1

Figure 3.2.2: ***Beating the Blues*** **usage report continued**

Usage Report _____

Beating the Blues

This page reports on data for patients who have completed all 8 Sessions of Beating the Blues

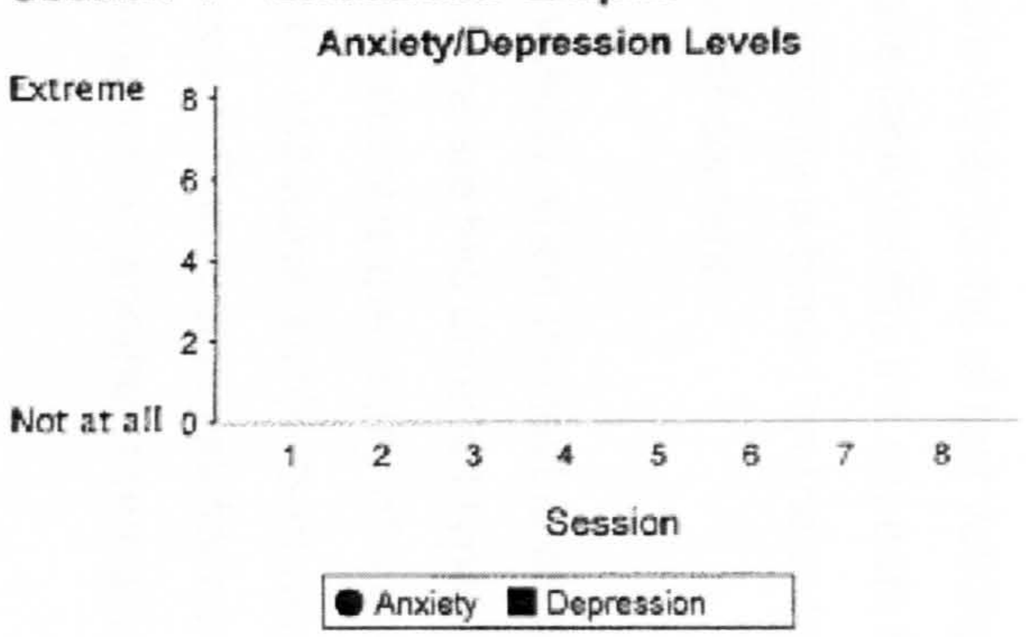
Section 2 - CORE-OM Analysis

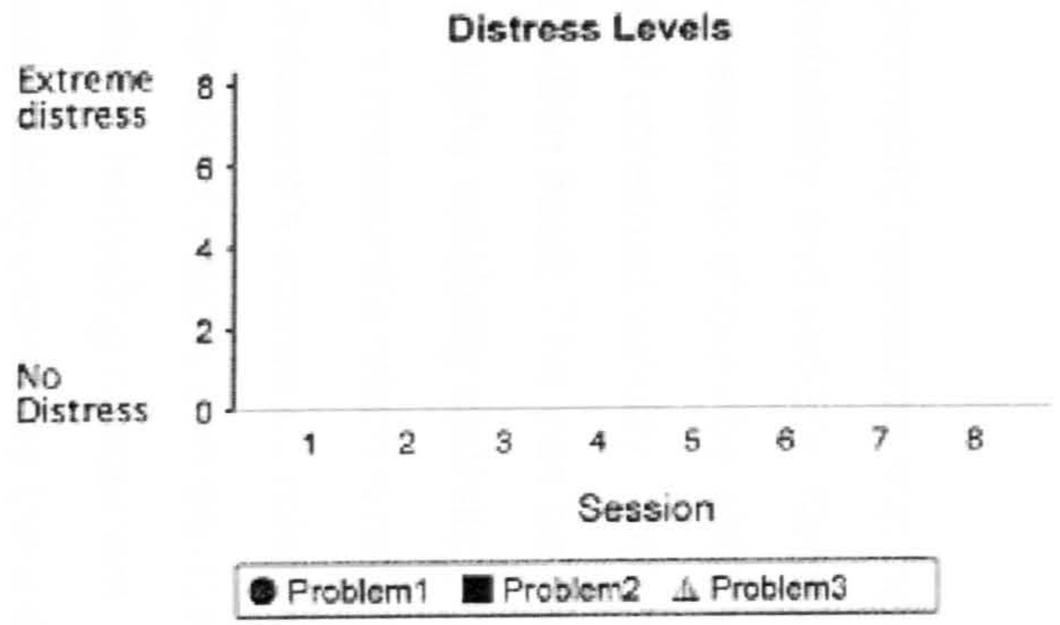
	Before	After
Total Questionnaires	0	0
Well Being		
Problems		
Functioning		
Risk		
Mean		
Mean Less Risk		

Section 3 - Feedback

	1	2	3	4	5	6	7	8	Overall
Usefulness									
Relevancy									
Ease of Use									

Section 4 - Evaluation Graphs





The reliability and validity of these SUDS scores has never been assessed despite the fact that they are now used as part of *Beating the Blues* by over 300 sites in the UK. As a service user generated measure, which has the potential to be more responsive to change than standard clinical measures, there is the possibility that the SUDS measure could be a more desirable and informative outcome measure than traditional clinical measures in guided self-help interventions.

A criticism of many of the bespoke outcome or 'psychometric' measures that have been used in research and practice is that they have unknown reliability and validity. Kline (2000) stated that at a minimum, clinical outcome or psychometric measures should be able to demonstrate internal reliability and evidence aspects of construct validity. Internal reliability refers to the extent to which a measure is consistent within itself. This can be measured via tests for internal consistency reliability. A Cronbach's alpha reliability statistic of 0.70 is considered to be the minimum acceptable criterion of a measure's internal reliability (Kline, 2000). Construct validity is a measure of whether a measure's scores correlate with other already validated measures in hypothesised ways. Construct validity can be assessed by comparing the results of several different tests for validity, including concurrent, convergent, and divergent/discriminant validity studies. Convergent validity examines the extent to which two measures which purport to be measuring the same topic correlate with one another; whilst divergent (discriminant) validity establishes the converse (McDowell & Newell, 1996). Face validity, content validity, and criterion validity are other forms of test validity which are considered to be important. A test can be said to have face validity if it appears to be measuring what it claims to measure; whilst content validity is based on the extent to which a measurement reflects the particular intended domain of content.

A measure can be said to possess criterion-related validity when the test is demonstrated to be effective in predicting indicators of a construct. There are two different types of criterion validity: predictive and concurrent validity. Predictive validity is the ability of a test or measure to predict a future event such as succeeding in certain academic subjects or mortality. The criterion measures are obtained at a time after the event. Concurrent validity compares scores on a measure with individuals' current performance on another alternative, equivalent but validated measure (Coolican, 2004).

As single item measures are generally considered to be less accurate, less valid, and less reliable than multi-item measures (McIver & Carmines, 1981; Sloan, Aaronson, Cappelleri,

Fairclough, & Varricchio, 2002), the 3 SUDS problem rating scores were combined to form the quantitative component of the SUDS measure. An analysis of service users' SUDS measure ratings pre- and post-*Beating the Blues* compared against their BDI-II and BAI clinical scores was carried out. The aim was to investigate whether similar results to those found by Ashworth et al. (2005) in terms of the reliability and validity of this type of outcome measure could be achieved. Although Ashworth et al. (2005) used the CORE-OM as the clinical measure for validation; the BAI and BDI-II were considered more suitable for this study. The SUDS measure gets the user to rate their distress around each problem. Distress as a psychological construct has been shown to have a complex relationship with well-being (Ruini et al., 2003). Well-being is measured as a dimension by the CORE-OM and by PSYCHLOPS. The psychological constructs of anxiety and depression however, are considered to have a more direct link with psychological distress, and therefore it seemed more appropriate to compare the SUDS measure with the BDI-II and BAI.

Besides the quantitative data provided by the SUDS scores, the information provided by the service users' when describing their chosen problems could help to inform practitioners about the types of problems service users consider important and desire to resolve. This information could be very useful in the development of a clearer picture of the kinds of issues users bring to work on in a self-help intervention; as well as providing details about how they assess these issues. Increasing the value placed on service users' own descriptions of their difficulties in clinical problem formulations also serves to further empower them by acknowledging the "patient as expert".

3.2. Methodology

Participants

The service users who used *Beating the Blues* as an intervention for their anxiety and/or depression in the previous study were also included in this study. The control group participants were excluded, as participants for this study needed to have used *Beating the Blues.* The 23 participants without formal diagnoses who had been excluded in the previous study were included in any analyses performed for all users who had used *Beating the Blues.* However, as before, they were not included in standard intervention group and physical co-morbidity group comparisons. The physical co-morbidity intervention group consisted of 97 participants and the "no physical co-morbidity reported" (standard) intervention group, 407. Basic demographic data for the entire *Beating the Blues* participant group is presented in Table 3.1. There were 527 participants in total.

Table 3.1: Participant descriptive data [10]

Category	**Data**	
Age in years: mean(*SD*) (N)	40.3 (*11.8*) (524)	
Age range (N)	18 – 70 (524)	
Duration of problem – years (*SD*) (N)	10.4 (*9.5*) (212)	
Duration of problem range – years (N)	0.5 – 42 (212)[11]	
Category	**Number in group**	**% of group**
Gender (N)	527	100%
Female	322	61.2%
Male	205	38.8%
Ethnic group (N)	416	78.9%
British	405	76.9%
Irish	1	0.2%
Northern European	4	0.8%
British Asian	1	0.2%
Eastern European	1	0.2 %
Chinese	1	0.2%
Any other ethnic background	3	0.6%
Psychotropic medication - Yes	128	24.3%
Psychotropic medication - No	18	3.4%

Measures used

Demographic information was routinely collected for all service users before commencement of the *Beating the Blues* programme; as were clinical data using the following measures:

i) the *Beck Depression Inventory Version II (*BDI-II*)* (Beck, Steer, & Brown, 1996),

ii) the *Beck Anxiety Inventory* (BAI*)* (Beck, Epstein, Brown & Steer, 1988),

The Subjective Units of Disturbance Scale (SUDS), also known as the Subjective Units of Distress Scale, is a scale for measuring the subjective intensity of distress being currently experienced by an individual. The individual assesses themselves by marking where they are

[10] Data percentages are reported as a % of the entire group, acknowledging the fact that there is missing case data in each group which contributes to the overall percentage.
[11] Only 5 cases had problem duration of greater than 33 years.

on the scale in terms of distress, 0 typically being not distressed at all, and 10 being very distressed. The SUD-level was developed by Joseph Wolpe in 1958 as part of his treatment of the symptoms of anxiety in which patients were helped to confront their fears. He claimed it was possible to systematically evaluate the effects of this treatment by using a SUD-level scale. Since then this scale has been used widely in therapy and research. The SUDS measure used in this study was a service user generated outcome measure. Users were asked to describe and then rate 3 of their chosen problems in terms of how much each problem distressed them. The rating scale extended from 0 to 8 (0 = "not distressed at all" and 8 = "very distressed"). Total scores were obtained by adding the individual rating scores for the three problems.

Design

The study was a longitudinal survey in which service users using *Beating the Blues* were asked to fill in the BDI-II, BAI, and SUDS measure, pre- and post-*Beating the Blues*.

Procedure

Ethical approval for the study was obtained from the West Essex Local Research Committee (LREC).

Clinical outcome measure scores were collected from May 2001 to April 2006 by one of the centre's administrators pre-*Beating the Blues,* and at the follow-up therapeutic assessment 6 to 8 weeks after use of *Beating the Blues.* These data were entered by the administrator into Microsoft Excel spreadsheets. The data in these spreadsheets were used in the collection of pre- and post-scores for this study. Further information about gender, age, ethnic groups, medication, and duration of problem was collected from the NHS database, *CareBase.* SUDS rating scale scores were collected electronically by the *Beating the Blues* programme, at the beginning of session 1 and at the end of session 8. Descriptions of the 3 problems rated by individual users, as well as how often they occurred, how long they had been occurring for, and in what situations they occurred, was collected during session 1.

Analyses

Content analysis of described problems

A qualitative content analysis of service users' described problems was carried out. A conventional, rather than a directed or summative, approach was used. The advantage of

this approach is that direct information is obtained from participants without "imposing preconceived categories or theoretical perspectives" (Hsieh & Shannon, 2005, p. 1279). Two researchers, the main researcher and an assistant researcher, were responsible for developing the initial sub-categories, higher sub-categories, and main categories. This was done in order to reduce the bias of a single researcher. Data analysis started with reading through all of the problem entries a number of times before individual words that appeared to capture key thoughts or concepts were highlighted. These words were used to derive the first sub-categories (Hsieh & Shannon, 2005). Next, the researchers made notes of any initial ideas and analysis after reading through the data. Through this process further sub-categories emerged, which could be grouped together into higher categories based on how they were related or linked. These developing categories were then used to organise the sub-categories meaningfully (Patton, 2002). At this stage, the two researchers consulted with one another on the sub-categories and subsequent categories that had emerged for them. These sub-categories were then organised into a smaller number of agreed upon main categories. Definitions for each category were developed. This enabled intercoder reliability tests to be carried out. In preparation for these tests a sample of the entire data set was randomly selected. The sample represented about 10% of the 1526 problems described. Two further assistant researchers were given the definitions of the 7 main categories and the selected sample of data, and asked to assign each of the participants' described problems to the category that they felt best represented the described problem. Two assistant researchers, rather than just 1, were recruited due to the more complex nature of the data and categories. Definitions of the categories had the potential, considering the character of the data, to be interpreted in different ways. If 2 researchers could reach agreement with the main researcher, then it was felt that the defined categories could be considered valid. Using an online tool for calculating Cohen's unweighted kappa (as cited in Lowry, 2007), the two assistant researchers' assigned categories were individually compared with the main researcher's to calculate two Cohen's kappa statistics. Both of these needed to be above 0.7 for the categories to be considered valid. As the categories were nominal, Cohen's simple unweighted coefficient was the only form of kappa that could be meaningfully used.

SUDS measure variance and normality of distribution

The quantitative data were analysed using SPSS 14.0 for Windows. Levene's test was used to test for homogeneity of variance on the SUDS measure scores within each intervention group; whilst the Kolmogorov-Smirnov test (K-S test), Q-Q plots, histograms, and calculated

descriptive statistics helped to ascertain whether or not the SUDS data were normally distributed.

Internal reliability of the SUDS measure

Internal reliability of the SUDS measure was tested by calculating Cronbach's alpha scores. A score above 0.7 is generally considered to demonstrate satisfactory internal consistency, whilst a score greater than 0.9 implies superfluous individual items may exist within a questionnaire (Nunnally & Bernstein, 1994).

Validity of the SUDS measure

The BAI, BDI-II, and SUDS measure scores were compared. All 3 measures can be said to measure psychological distress, but the BDI-II and the BAI have differing numerical scales to the SUDS measure, so comparison was based on standardized or z scores. These scores were calculated by subtracting the pre-therapy mean from the score for each observation and then dividing by the standard deviation (SD) of pre-therapy values. Standardisation of the scores results in a pre-therapy mean z score of 0 and a standard deviation of 1. As standardisation is to the pre-therapy scores, change and post-therapy scores usually show negative means, and the SD of the change scores can be above or below 1 (Ashworth et al., 2005).

Concurrent validity, a factor in determining construct validity, was tested by exploring the bivariate correlations between the pre- and post-BDI-II, BAI, and SUDS measure scores. Convergent validity, another factor in determining construct validity, was tested by exploring the bivariate correlations between the change scores for the BDI-II and BAI, and the SUDS measure. These correlation analyses were one-tailed as there was a directional hypothesis that significant positive correlations between the BDI-II, BAI, and SUDS measure scores would be found.

A further aspect of convergent validity was assessed by testing for differences between the standard and physical co-morbidity intervention groups on the SUDS measure. As the previous study found that there was no difference between these groups on either the BAI or BDI-II measures, there should be no difference for these groups on the SUDS measure either. In order to test for statistically significant differences between the 2 intervention groups' (standard intervention and physical co-morbidity) pre- and post- SUDS measure scores, a Kruskal-Wallis test was performed.

Predictive validity was evaluated via a logistic regression analysis to assess if post-SUDS or SUDS change scores could predict whether or not individuals go on to receive face-to-face or group CBT after using *Beating the Blues.* Before carrying out the regression analysis, in order to establish whether any relationship between these factors did in fact exist, post-SUDS and SUDS change scores for both groups of individuals were compared using Mann-Whitney and t-tests.

The strength of the relationships for the correlation analyses were established by using the correlation coefficients (r). The pre-post effect sizes for the entire participant group on the BAI and BDI-II measures were calculated using the formula: $r = d^{12}/(d^2 + 4)^{.5}$ (Rosenthal, 1991).

Sensitivity of the SUDS measure

A Wilcoxon's signed-rank test was used to examine differences between pre- and post-SUDS measure scores for the group as a whole. The effect size for the Wilcoxon's signed-rank test was calculated using the formula:

$r = \frac{Z}{\sqrt{N}}$ (Rosenthal, 1991).

3.3. Results

Homogeneity of variance and normality of distribution

Exploration of the pre-BDI-II and pre-BAI scores of the intervention group as a whole using the Kolmogorov-Smirnov test (K-S test) revealed a positively skewed distribution (skewness statistic = 0.52) on the pre-BAI measure. A statistically significantly non-normal distribution was also revealed for the intervention group as a whole (Figure 3.3) and the standard intervention group (Figure 3.4) on the pre-SUDS scores. Inspection of the skewness statistics, normal Q-Q plots and histograms revealed that the pre-SUDS scores were negatively skewed for both groups (skewness statistic = -1.44 for the standard intervention group; -0.67 for the physical co-morbidity intervention group). This non-normality in the standard intervention group and the entire intervention group's distribution seemed to be affected by 5 outliers which can be clearly seen in Figures 3.3 and 3.4. As the skewness statistic for the distribution of the pre-SUDS scores indicated marked skewness, which could

[12] *d* is the difference between the pre- and post-mean scores divided by the pre-scores standard deviation (Cohen, 1988).

not only be attributed to the normal variation expected in a large sample, non-parametric tests were used with the pre-SUDS scores. A statistically significantly non-normal distribution was also revealed for the post-SUDS scores for the entire intervention group; however the SUDS change scores distribution was found to be normal.

Levene's test established homogeneity of variance for both the intervention groups on the pre-SUDS measure scores, but as various plots of the distributions of these scores highlighted the marked negative skewness in distribution, a Kruskal-Wallis test was used to establish the SUDS score differences between the two intervention groups. Also for this reason, a Wilcoxon signed-rank test was chosen to investigate the differences between pre- and post-SUDS scores.

Figure 3.3: Standardised pre-SUDS, pre-BAI, and pre-BDI plotted for the entire group

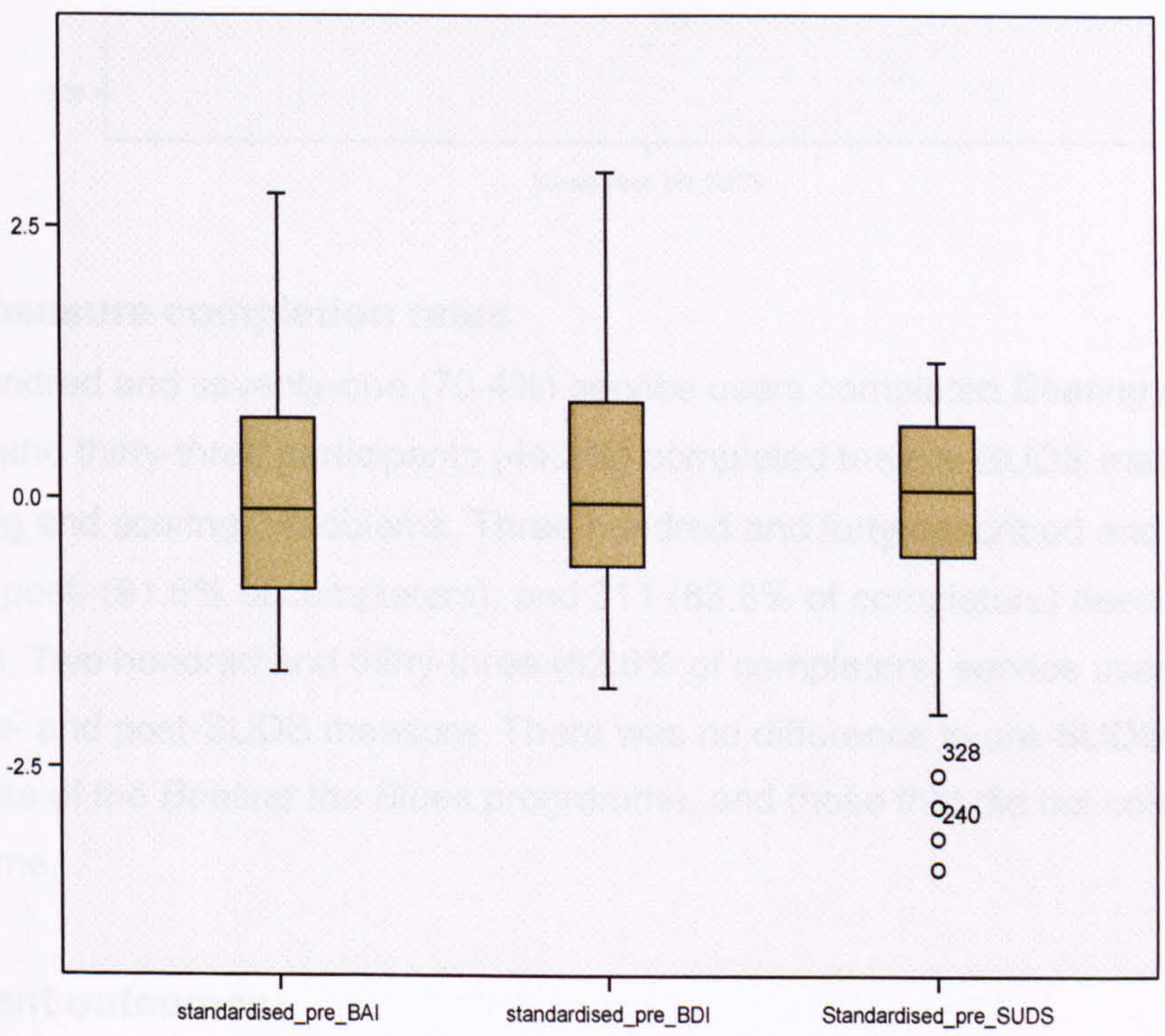
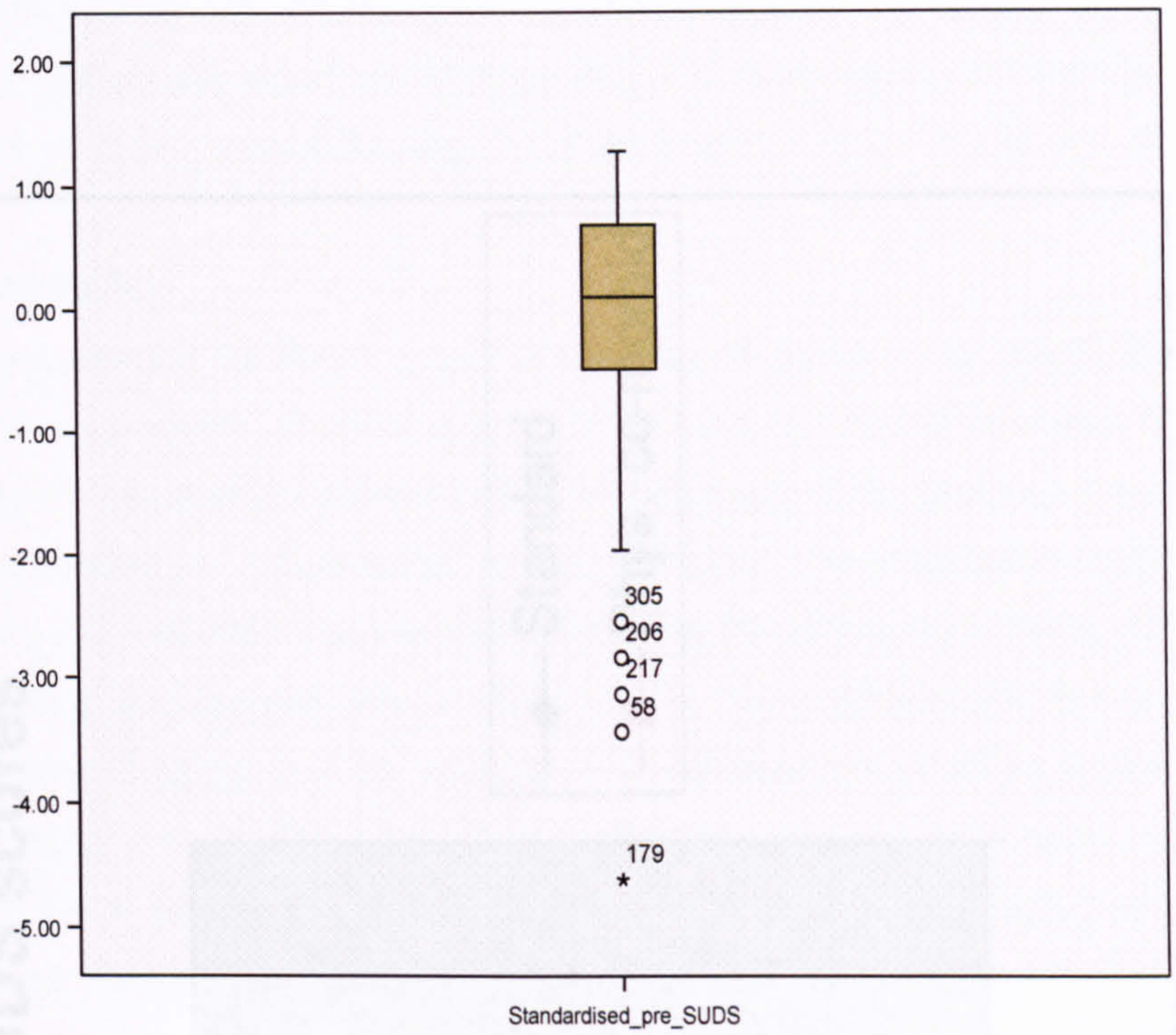


Figure 3.4: Standardised pre-SUDS scores for scores plotted for std intervention group



SUDS measure completion rates

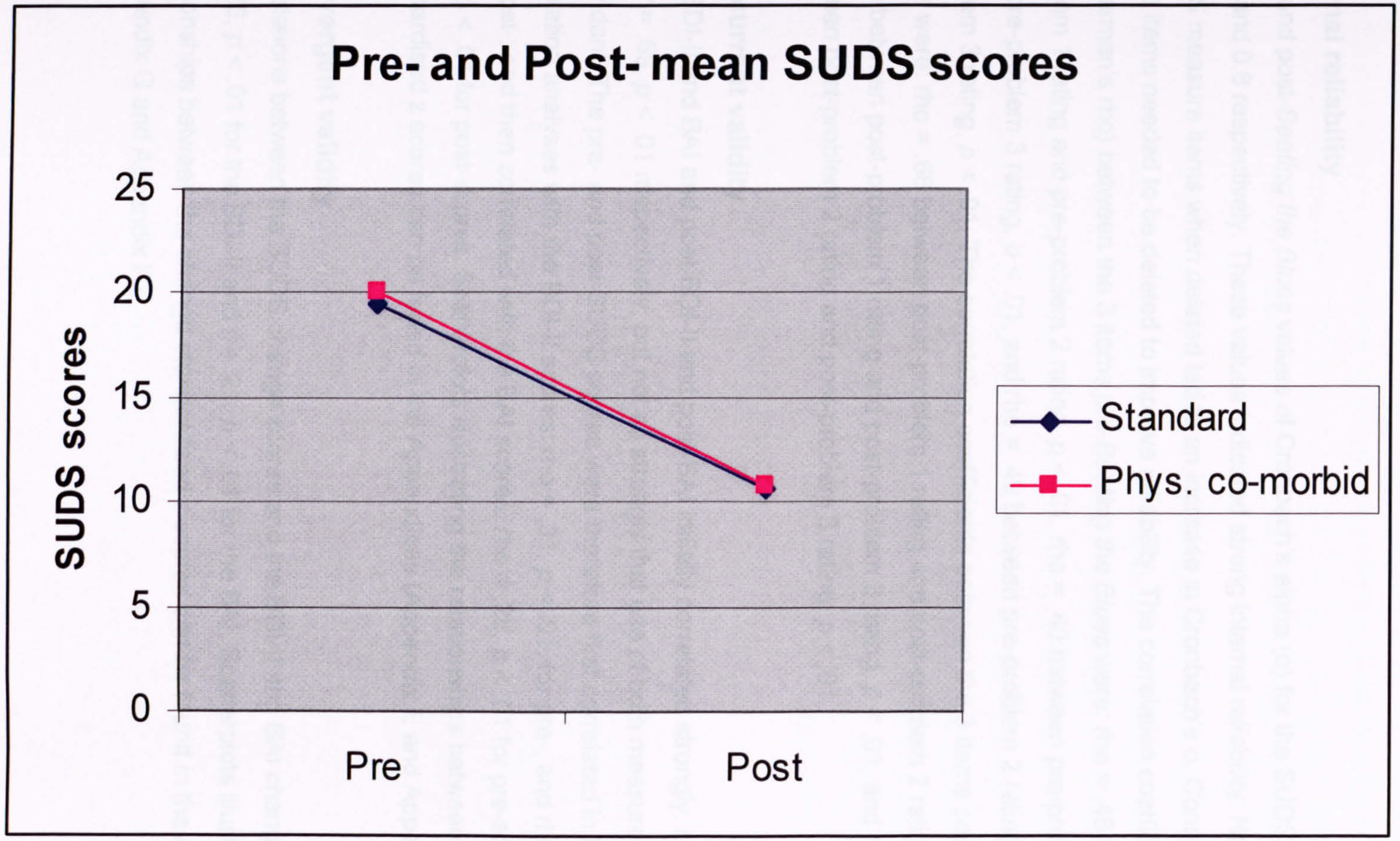
Three hundred and seventy-one (70.4%) service users completed *Beating the Blues.* Two hundred and thirty-three participants (44.2%) completed the pre-SUDS measure by describing and scoring 3 problems. Three hundred and forty described and rated 1 problem pre- and post- (91.6% of completers), and 311 (83.8% of completers) described and rated 2 problems. Two hundred and thirty-three (62.8% of completers) service users completed the entire pre- and post-SUDS measure. There was no difference in pre-SUDS mean scores for completers of the *Beating the Blues* programme, and those that did not complete the programme.

Treatment outcomes

Comparison of SUDS measure outcome scores between groups

With SUDS scores as the dependent variable, a Kruskal-Wallis test found no statistically significant difference between the physical co-morbidity and standard intervention group on the pre-, post- or change SUDS measure scores. Figure 3.5 illustrates the pre- and post-SUDS measure scores.

Figure 3.5: Pre- and Post-SUDS scores for physical co-morbidity group and standard intervention group



SUDS outcomes and effect sizes for the entire intervention group

There was a statistically significant change in SUDS measure scores from pre-*Beating the Blues* (mean = 19.65) to post-*Beating the Blues* (mean = 10), $T = 239$, $p < .01$, r = 0.84.

Internal reliability

Pre- and post-*Beating the Blues* values of Cronbach's alpha (α) for the SUDS measure were 0.73 and 0.8 respectively. These values indicated strong internal reliability. None of the 3 SUDS measure items when deleted led to an increase in Cronbach's α. Consequently, none of the items needed to be deleted to improve reliability. The correlation coefficients (Spearman's rho) between the 3 items pre-*Beating the Blues* were: rho = .46 between pre-problem 1 rating and pre-problem 2 rating, $p < .01$, rho = .40 between pre-problem 1 rating and pre-problem 3 rating, $p < .01$, and rho = .49 between pre-problem 2 rating and pre-problem 3 rating, $p < .01$. The correlation coefficients between the 3 items post-*Beating the Blues* were: rho = .66 between post-problem 1 rating and post-problem 2 rating, $p < .01$, rho = .53 between post-problem 1 rating and post-problem 3 rating, $p < .01$, and rho =.53 between post-problem 2 rating and post-problem 3 rating, $p < .01$.

Concurrent validity

Pre-BDI-II and BAI and post-BDI-II and post-BAI initially correlated strongly: r = .49, $p < .01$, and r = .69, $p < .01$ respectively; but not so strongly that use of both measures seemed redundant. The pre- and post-SUDS scores were therefore first correlated in bivariate correlation analyses with the BDI-II scores: rho = .31, $p < .01$, for pre-, and rho = .48, $p < .01$ for post-; and then correlated with the BAI scores: rho = .28, $p < .01$ for pre-scores, and rho = .35, $p < .01$ for post-scores. Scatterplots illustrating the relationships between the post-standardised z scores can be found in the Appendices (Appendix E and Appendix F).

Convergent validity

Correlations between the SUDS change scores and the BDI-II and BAI change scores were: r = .28, $p < .01$ for the BDI-II and r = .21, $p < .01$ for the BAI. Scatterplots illustrating the relationships between the change standardised z scores can be found in the Appendices (Appendix G and Appendix H).

Predictive validity

Mann-Whitney tests found a statistically significant difference on post-SUDS scores between those individuals who went on to receive either face-to-face or group CBT after using *Beating the Blues* (mean post-SUDS = 12.39) with those who did not (mean post-SUDS = 9.76), U = 4121.00, $p < .001$, r = -.24; as well as a significant difference between these two groups on their SUDS change scores, t(227) = -3.06, $p < .01$, r = -.22. The mean SUDS change scores were: i) follow-up group or face-to-face CBT = 7.44, and ii) no follow-up CBT = 9.68.

As a result of these outcomes, a forward stepwise logistic regression analysis was performed. The post-SUDS and SUDS change scores were the independent factors, and receiving or not receiving face-to-face or group CBT post-*Beating the Blues* was the binary dependent factor. The SUDS change scores were entered first. The χ^2 value was 9.42 for the first block of factor entry, and 9.91 for the second block. Neither of these χ^2 values were significant with the SUDS change scores alone accounting for only 5.5% of the variance (Nagelkerke R^2 = .055), and the addition of the post-SUDS scores as a predictive factor increasing this to just 8.4% (Nagelkerke R^2 = .084). Although, this logistic regression model was not found to be a good fit, post-SUDS scores as an independent factor was still found to be significant within the model: Exp(β) = 0.90, $p < .05$.

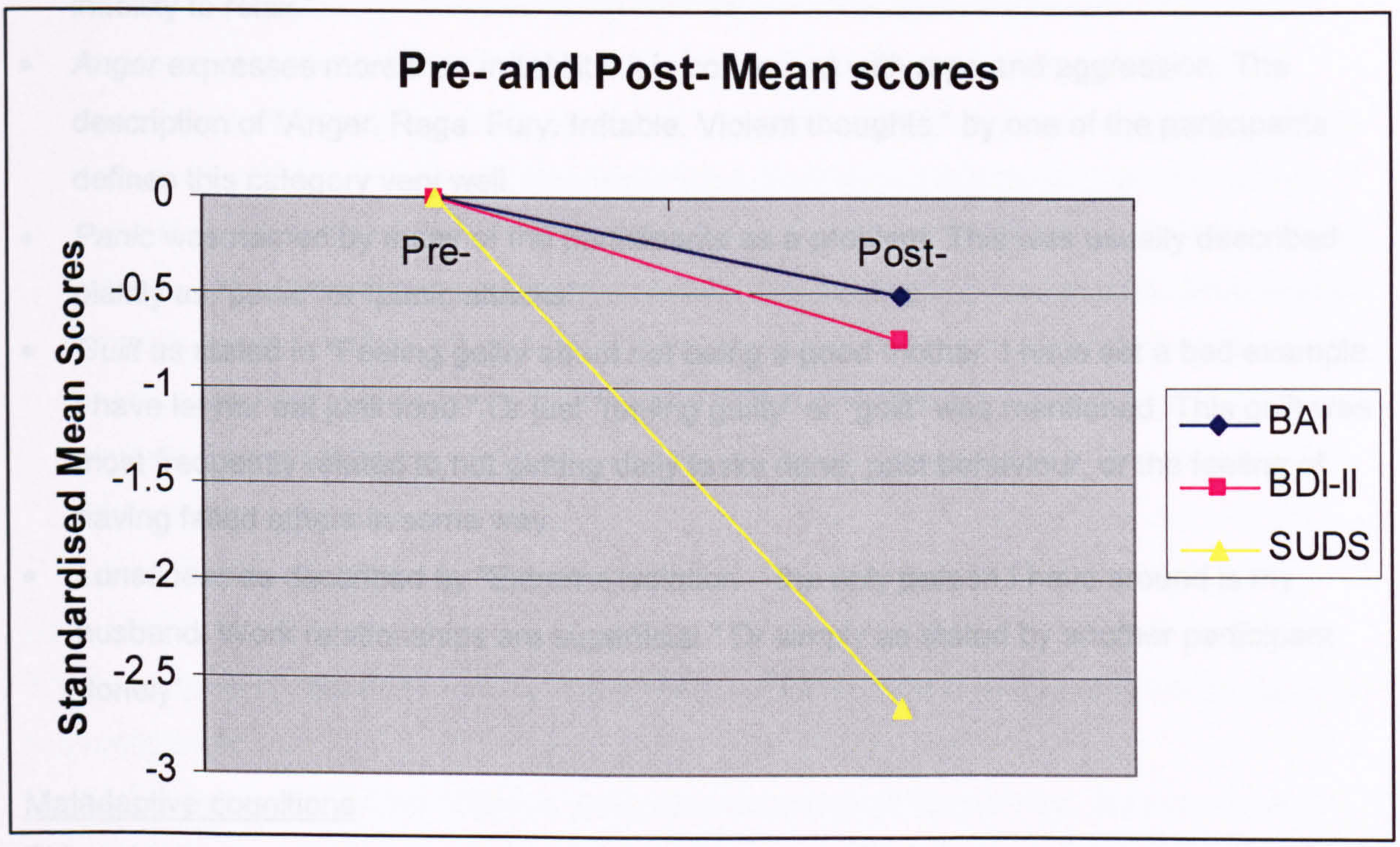
Sensitivity to change

Using the r statistic, the BDI-II pre-post effect size was 0.35 and the BAI pre-post effect size was 0.24. The pre-post effect size on the SUDS measure was 0.84. This was much larger than either of the other two effect sizes. The standardized means, standard deviations, change scores, and ranges for each measure pre- and post- are presented in Table 3.2. Pre-post effect sizes are also presented here. Figure 3.6 illustrates the change in mean standardized scores on all 3 measures pre- and post-*Beating the Blues.*

Table 3.2: Standardised z scores for all 3 measures (BAI, BDI-II and SUDS)

	N	Mean	Standard Deviation	Minimum	Maximum	Pre-Post Effect size (r)
Pre-BAI	283	0.00	1.00	-1.78	2.80	
Post-BAI	260	-0.51	0.95	-1.78	2.46	0.24
BAI change scores	241	-1.27	0.91	-3.85	1.68	
Pre-BDI-II	280	0.00	1.00	-2.10	3.01	
Post-BDI-II	254	-0.75	0.98	-2.10	2.30	0.35
BDI-II change scores	233	-1.36	0.85	-3.42	1.51	
Pre-SUDS	233	0.00	1.00	-4.62	1.28	
Post-SUDS	235	-2.66	1.51	-5.80	1.00	0.84
SUDS change scores	233	-3.14	1.55	-8.72	1.00	

Figure 3.6: Pre- and post-standardised mean scores for all 3 measures



Qualitative outcomes

The main categories originated from a number of basic sub-categories which together formed higher sub-categories, which in turn formed the main categories. Seven main categories emerged from a number of sub-categories: *negative emotional states, maladaptive cognitions, self, interpersonal relationships, occupational and financial, physical,* and *health-related behaviours.* These main categories and their corresponding sub-categories are presented in Figure 3.7.

<u>Negative Emotional States</u>

In this category although the emotional states may not have been defined as negative by a clinician due to their potential role as learning opportunities for the service user, participants had chosen to describe these when asked to express their problems. It was therefore surmised that these were negative experiences for them. Five sub-categories contributed to this main category.

- *Dysphoria* encompasses the low mood, irritability, restlessness, general anxiety, guilt, hopelessness, or despondency described by many of the participants. This was expressed by one service user in: "No motivation or interest in doing things. Everything is an effort. When I have to do things they are usually because of guilt. When I do things, they are slow and often repeated over unnecessarily"; and by another as: "nervousness, tenseness, an inability to relax."
- *Anger* expresses more than irritability; it is concerned with rage and aggression. The description of "Anger. Rage. Fury. Irritable. Violent thoughts." by one of the participants defines this category very well.
- *Panic* was named by many of the participants as a problem. This was usually described plainly as "panic" or "panic attacks".
- *Guilt* as stated in "Feeling guilty about not being a good mother. I have set a bad example. I have let her eat junk food." Or just "feeling guilty" or "guilt" was mentioned. This guilt was most frequently related to not getting daily tasks done, past behaviour, or the feeling of having failed others in some way.
- *Loneliness* as described by "Extreme isolation – the only person I have around is my husband. Work relationships are superficial." Or simply as stated by another participant "lonely".

<u>Maladaptive cognitions</u>

This category was constructed of the following 3 sub-categories:

- *Catastrophising* refers to thoughts which dwell on the most negative outcome in any situation. This includes health anxiety, where participants reported fears of suffering from a severely disabling or terminal illness whenever they experienced any bodily pain or discomfort. Examples of this from the data are: "not to feel so full of anxiety when things go wrong, and not to think the worst will definitely happen", and another "whenever I get an ache or pain I think it is very serious and I should go to the doctors or I am going to die".
- *Phobias* describes exaggerated anxiety which is object- (such as needle, insects, blood) or situation-related (such as crowds, flying, driving, confined spaces). The belief (maladaptive cognition) is usually that something bad will happen when being faced with the feared object or situation. The actual feared outcome of the phobia was not always expressed in the text data, but was deduced, drawing on the researchers' knowledge of the cognitions associated with certain specific fears, from the use of the word "fear" or "anxiety" in the phrase describing the problem. Participants' phobias were often explained by a simple statement of their fear, such as: "fear of being bitten by insects"; or "phobias". Other descriptions only alluded to the panic or fear involved, "can't travel on trains as I can't get out when I want."
- *Obsessive* as a sub-category refers to obsessive thoughts: "Obsessive morbid thoughts" and "Dealing with OCD intrusive thoughts", which can lead to compulsive behaviours such as described by: "tend to double check things such as locking the house, turning off taps, making sure the car is locked securely etc." As a sub-category it also describes certain participants' irrational belief that they and their environment must be perfect, "I feel I everything I do has to be perfect otherwise I am a failure." Everything they attempted had to be done with no mistakes or inconsistencies. Sometimes this need to do everything perfectly led to negative emotional states as described by, "feeling of hopelessness when trying to achieve what I should, when I should, and to the standard I should". This need to be perfect was also be applied to other people, often resulting in annoyance when they were unable to do things to the high standards expected: "When I do anything it must be perfect and I get really annoyed with myself if it's not. I cannot stand incompetence from other people, I get very irritated."

<u>Self</u>

Self as a category describes self evaluation and self belief, and is made up of the following 2 sub-categories:

- *Self Esteem* refers to participants' subjective appraisal of themselves. This was often expressed as a feeling, as illustrated by the extracts, "I feel like nothing" or "feeling

unworthy". In other cases, the described problem included a more obvious self evaluation: "Not feeling physically attractive enough. Not competent enough at tasks. Not having the right personality, i.e. not witty enough/fun for some people, not interesting enough"; or an outright rejection of the self: "hating myself and my life – especially the way I look (fat and ugly)". This category also includes low self-confidence in which some participants described their problem simply as "lack of confidence", or "Becoming more confident about myself and therefore being valued for what I am." It also includes the lower sub-category of *assertiveness*, which can be frequently linked to self-esteem or self-confidence.

- *Coping* encompasses individuals' evaluation of their ability to cope in relation to their view of themselves. This can be situation-specific: "I don't cope well when I feel rejected by people, or feel that people are hurting or upsetting me on purpose or inadvertently"; or just refer to general coping, such as "I worry that I cannot cope with life".

<u>Interpersonal problems</u>

This category includes problems where relationships or social interactions were described as being the cause of distress. The following 3 sub-categories contributed to this main category:

- *Familial relationships* incorporates reported poor relationships with other family members, for example, "Me and my dad can't even talk because it would end up in an argument no matter what it is about", or "being rejected by my husband's family". Participants also expressed feelings of concern over their children's behaviour, illustrated by "I have a sixteen year old son who is adopted and am having serious problems with. He causes me a lot of worry." This category also includes loss of a family member: "Dealing with bereavement. The loss of my father to cancer and his horrible (and long) painful death. The pain and sadness I feel at his loss. And anger that he has been taken from me."
- *Romantic relationships* refers to reported relationships in which the other individual in the relationship was a partner or ex-partner. Trust and communication issues were common in this category as illustrated by the following two extracts: "lack of confidence and trust in my relationship with my partner" and "My difficulty in maintaining a good and communicative relationship with Trevor"; as well as relationships ending: "My husband left me after 40 years of marriage to live with a lady he met on holiday. He died 5 months later." There was also reference to psychological and verbal abuse in these kinds of relationships. This is illustrated in the example of: "My husband's behaviour towards me, always getting on to me about every little thing I do, he has a bad temper, says horrible things to me, and loses control, I am frightened of him."

- *Social impairment* describes an individual's feeling that they are, or have become, socially inadequate. For some, this is as a result of social withdrawal as described by one participant: "Social withdrawal. I don't like being in the company of people as much as I used to. Like my own company more. Will avoid social contact whenever I can. Avoid people at work & socially. Avoid social contact". There can also be a feeling of being unable to engage socially: "Inability to socialise including answering the telephone, opening the front door, going out, etc.", especially when the individual feels they have nothing to offer, "I can't socialise, nothing to say to people", or that they can't socialise properly: "Anxiety in relationships. Spend conversations wondering what to say, how to say it, where and how to look or stand, to be acceptable, interesting, not rejected. Always think I've done it all wrong."

<u>Occupational and financial</u>

The focus in this category was on the sub-categories of *work-related* and *money worries*.

- *Work-related* as a sub-category covers general work stress when dealing with business performance and large workloads. These situations are illustrated in the following 2 extracts: "Lack of New Business performance at work" and "Stress caused by too large a workload (sometimes leading to feelings of panic)". For a number of participants attending meetings at work was particularly stressful for them: "Anxiety when attending meetings at work"; whilst managing staff or working professionally with peers was also described as a problem, for example, "Talking to a member of staff about a specific aspect of their work that needs to be improved" or "Dealing with difficult people at work - my emotions blur my logic and a general worry about being able to cope and do everything that is asked of me at work". "Looking for work" and "A concern about returning to work" were further work-related problems which emerged.
- *Money worries* as stated in the extract "money worries. Now son has reached 18 we get less benefits, though I receive IS. Don't know how I will manage all my bills in future. May not be able to run car so will lose independence." and "Worrying about my financial future. I have no job, am not trained to do anything. I am 55 and it is too late to change my past life and take up an occupation which gives me what I want most – security." Linked to this sub-category is the loss of independence and security through loss of income.

<u>Physical</u>

Physical as a main category represents any physical discomfort or illness being experienced as a problem by the participants.

- This included cognitive impairment represented by *poor memory or concentration* as described by a participant in the following statement: "Can't concentrate or focus on things as much as I used to, particularly those that are challenging or demanding on me. Feel I can't cope. Have memory problems (can't remember what I was supposed to do)." This experience of memory loss and the inability to concentrate can be distressing for individuals.
- Actual illness or injury experienced by a participant was grouped under the sub-category *Illness/Injury.* Very few participants actually stated their physical health as an issue, and when they did even fewer named their specific physical health problem. Usually they just mentioned an illness such as in: "I have a long term illness that restricts my work, social and personal life". A few participants also mentioned injuries they had suffered, such as described by one participant: "I suffered a serious injury, riding a motorcycle, at work in Aug 1998. I have had 3 lots of surgery to try to remedy my symptoms, to no avail."
- Bodily s*ensations* such as those described by: "feeling ill, shaky, sick, constant headaches, shortness of breath, achy" were grouped into this sub-category if they seemed to be as a result of psychological distress. Undetermined pain sensations, "nervousness, tenseness, with inability to relax, particularly with regard to the nerve pain down both sides of my body into my legs, feet, and toes", were also included in this category.
- Finally, *fatigue* was experienced by a huge number of participants. This extreme tiredness was perceived as disabling in preventing participants from being able to complete daily tasks, or socialise, for example: "can't do every day activities or spend as much time with the people I care about because I am too tired", or work efficiently: "Lethargy. Lack of self discipline in my work and house keeping, general tiredness and lack of motivation. Not getting up in the morning."

<u>Health-related behaviours</u>

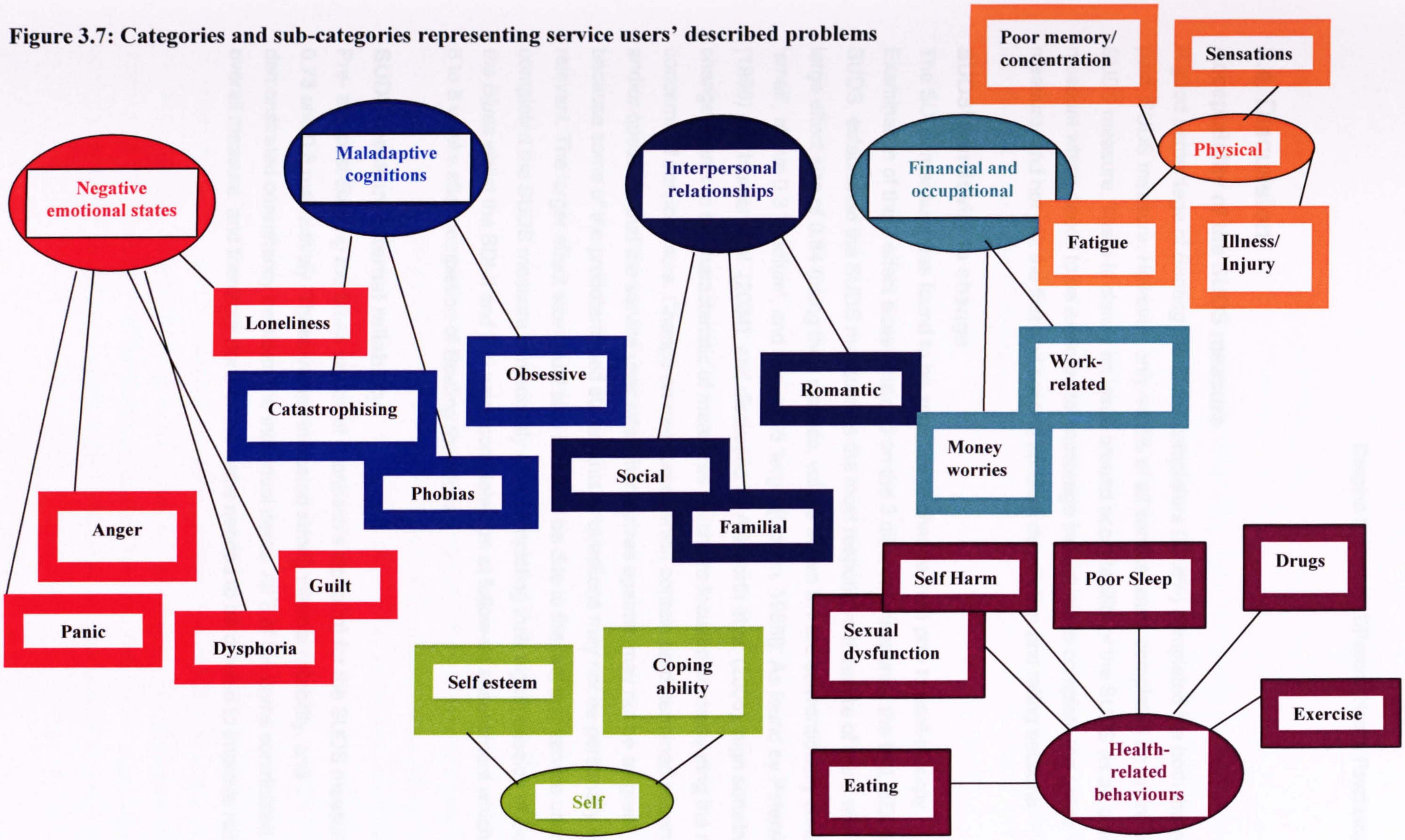
This category incorporates all reported health behaviours which were reported as representing difficulties for individuals. The six sub-categories listed below combined to create this main category.

- *Poor sleeping* as a sub-category describes difficulty with sleeping, for example, "waking every night from 2 am onwards" and "sleepless nights". Not surprisingly with the high level of fatigue experienced by the participants, sleep difficulties was a prominent issue.

- *Eating* refers to binge eating as described by: "I have a compulsive eating problem. I can go on a diet for a holiday and do really well, but when I am low or bored I binge eat, which is really bad"; as well as eating and purging "I think of food as a comfort. Think I need it to help me relax, feel less anxious and often end up over eating and being sick".
- *Drugs* as a sub-category incorporates excessive drinking to cope, for example, "I drink alcohol to numb my feelings", and the use of cannabis as a coping mechanism: "I've smoked cannabis, always really although I did stop whilst pregnant and couple years after, now I smoke it constantly do need to slow it down I know that, but I feel it does help me, it relaxes my mind". Another participant spoke about an over-reliance on drugs to cope with physical symptoms: "Concern of reliance on drugs to alleviate these symptoms and lack of sleep". Heavy smoking to cope was also included in this category. However, this health-related behaviour was only mentioned once as a problem: "chain smoking".
- *Exercise* describes how some individuals felt that a lack of energy and low motivation had stopped them exercising which may turn have impacted adversely on their levels of stress. This was expressed by one participant in the extract, "I have identified that my lack of exercise is what is causing some of my stress". Lack of activity resulting from low energy levels can have further undesirable repercussions, such as stated by another participant: "Weight: putting on pounds because of no energy."
- *Sexual dysfunction* was experienced through diminished sex drive, as illustrated by the extracts: "seem to be depressed a lot of the time, a lack of sex drive, tired most of the time" and "Extreme loss of sex drive". A few participants experienced erectile dysfunction, for example: "Impotence. I am now unable to achieve an erection."
- Some participants also engaged in *self harm*. The form this self harm took was never disclosed; only phrases such as, "Using self harm to cope" or "self harm" were used to describe the problem.

Cohen's unweighted kappa, calculated separately for the assistant researchers' data categorisation using the 7 main categories, was 0.76 (CI_{95} = 0.69 – 0.83) and 0.83 (CI_{95} = 0.76 – 0.89). This provided statistical evidence of good intercoder reliability, so no changes were made to the codings.

Figure 3.7: Categories and sub-categories representing service users' described problems



3.4. Discussion

Acceptability of the SUDS measure

A good percentage of *Beating the Blues* completers (62.8%) completed the both the pre- and post- SUDS measure. However, only 44.2% of all service users completed an entire pre-SUDS measure. There is clearly an issue around acceptability of the SUDS as an outcome measure which needs to be explored to encourage individuals to complete the entire measure, and not just the first and second problem description and rating sections.

SUDS' sensitivity to change

The SUDS measure was found to be sensitive to change from pre- to post-therapy. Examination of the 3 effect sizes obtained on the 3 different measures, the BAI, BDI-II, and SUDS, established the SUDS measure as the most responsive measure of the 3 with a very large effect size of 0.84 (using the r statistic, values above 0.1 are conventionally considered 'small', above 0.3 'medium', and above 0.5 'large' [Cohen, 1988]). As found by Paterson (1996) and Hunter et al. (2004), and discussed by Ashworth et al. (2005), high sensitivity to change seems to be characteristic of measures which are focused on measuring the named concerns of service users. Change on measures, which contain predetermined statements and/or questions that the service user rates themselves against, may not be as great because some of the predetermined statements or questions may not be personally as relevant. The larger effect size could also however be due to the fact that service users completed the SUDS measure immediately after completing their eighth session of *Beating the Blues* whilst the BDI-II and BAI were completed on at follow-up assessment which occurs 6 to 8 weeks after completion of *Beating the Blues.*

SUDS measure internal reliability

Pre- and post-*Beating the Blues* values of Cronbach's alpha (α) for the SUDS measure were 0.73 and 0.8 respectively. These values indicated strong internal reliability, and demonstrated consistency between the individual items. All 3 of the items contributed to the overall measure, and therefore none of the items needed to be deleted to improve reliability.

Validity of SUDS

Face Validity

McKensie and Marks (1999) established that a quick single-item depression scale, rated by either service user or clinician, was a reasonable rough guide to mood in anxiety disorders. Marks, along with a number of other expert clinicians, was involved in the design and development of *Beating the Blues* at the Institute of Psychiatry. The SUDS measure used in *Beating the Blues* was based on this research. Combining this with the fact that the SUDS ratings were based on service users' chosen concerns, it would appear that face validity on the SUDS measure was achieved.

Content validity

The content of the SUDS measure shifts according to the information individuals provide for rating. Service user empowerment involves taking the view of "patient as expert", and therefore it fits that content validity for the SUDS measure would to some extent have to be established by the service users as the experts. However, because the SUDS measure essentially changes according to the problems entered by individual users, the measure cannot actually be said to be fully representative of the area it is intended to cover.

Convergent, concurrent, and construct validity

Medium strength associations for all correlations on the SUDS measure's pre- and post-scores with the BDI-II and BAI indicated a degree of concurrent validity. There was a stronger association between the SUDS measure and the BDI-II, than the SUDS and BAI.

The evidence for the convergent validity from the small sizes of the correlations between the change scores for both the BDI-II and the BAI and the SUDS measure was minimal. This again may be influenced by the fact that the SUDS measure was completed immediately post-*Beating the Blues,* whilst the other two measures were not. Figure 3.6 clearly illustrates why there is a weak association between the 3 outcomes measures mean change scores. The gradient of the SUDS scores compared with the BAI and BDI-II gradients does suggest that there would still have been greater change on this measure post-*Beating the Blues.* However, this is conjecture and without evidence this cannot be definitely stated. Although overall correlations between all the pre-, post-, and change scores were significant, the scatterplots (Appendices E - H) for post-*Beating the Blues* and *Beating the Blues* change scores show a degree of disagreement. Even on the pre-measures where time was not a

factor, the correlations were not very strong: 0.31 and 0.28 for the BDI-II and the BAI respectively. In fact the strongest correlation co-efficient (rho = 0.48) found, was between the post-BDI and post-SUDS scores. This can be seen in the clustering of scores in Appendix F. Amongst the change scores the greatest divergence, which showed the weakest correlations, seems to occur in the lower left hand square of the plot. This underpins the finding that when a service user improved the SUDS measure showed a greater change in scores than the change indicated by BDI-II or BAI scores.

Despite these findings, no significant difference was found between the standard intervention group and the physical co-morbidity intervention group on the SUDS measure. This is similar to the previous study's results using the BAI and BDI-II and supports at least one aspect of construct validity.

An aspect of convergent validity was evidenced by the internal consistency between the individual items for rating problem distress. This also contributed to the evidence for the SUDS measure's construct validity.

Predictive validity

The predictive validity of the SUDS was found to be weak. Although there was definitely a relationship between the post-SUDS scores and whether or not service users continued on to receive face-to-face or group CBT after using *Beating the Blues,* its contribution as a factor to a logistic regression model was small. There may be other factors which moderate, or even mediate, the post-SUDS score's association with *Beating the Blues* follow-up treatment. One of them could, for example, be the factor of time, as follow-up assessments usually only take place at 6 to 8 weeks after completion of the *Beating the Blues* and the post-SUDS outcome measure. Unfortunately it appears that all the literature on the predictive validity of health outcome measures examines either the prediction of another outcome measures scores at a later date or differences in health behaviours (such as reduced drug taking, greater adherence to medical advice). Therefore it is not possible to determine if this weak association between post-intervention outcome scores and follow-up treatment is unusual or not.

Validity and reliability limitations

As discussed by Ashworth et al. (2005), service user generated measures, such as the SUDS, are unlikely to be able to discriminate well between individuals because their baseline

data are not truly comparable. Individual service users will frequently be scoring themselves against different problems. For this reason no true clinical cut-off scores can be calculated for use with this measure. However, although the SUDS measure's reliability is lower, it does not reduce its capacity to measure individual service users' change over time.

Although aspects of construct, concurrent, and convergent validity were shown, the evidence was not strong enough to conclude that the SUDS outcome measure is measuring a construct which is closely related to depression or anxiety. The issue of time may have adversely affected validity tests as there is certainly a relationship between these constructs; however, the pre-score correlations suggest that the SUDS measure and the BAI and BDI-II are actually measuring fundamentally different constructs. In support of this fact, previous studies with *Beating the Blues* have found a continued drop in post-BDI-II and BAI scores (Proudfoot et al., 2004), as well as in CORE-OM and Work and Social Adjustment Scale (WSA) scores (Cavanagh et al., 2006), of up to 6 months after finishing *Beating the Blues.* This underlies the idea that time as factor is not of that much importance.

The SUDS measure is also only made up of three questions, which makes it very user-friendly, but reduces its reliability. Furthermore, it is problem specific which makes it unsuitable for service users who cannot identify their most pressing problems, or can only identify one important problem. Intervention effects which are not related to the chosen problems are also not measured.

Implications of these findings

Service user involvement in all aspects of healthcare has increased over the last decade. This shift towards service user inclusion is gaining momentum (Ashworth et al., 2005), and is likely to increasingly demand service user defined or generated outcome measures.

The SUDS measure is quick and easy to complete, sensitive to change, and reasonably reliable. Its simplicity in terms of scoring makes it easy to chart the scores of individual service users over time. It is also 'patient-centred' which means it aims to measure the outcomes which the service user considers to be most important. However, it is only partially valid as a measure of anxiety and depression, measuring the essentially different construct of problem-generated distress. Clinicians, who use the results of this measure in the many *Beating the Blues* services across the UK, need to be made aware of this fact. The real

clinical value of this measure is in the rich data it provides regarding the problems service users find most distressing.

Described problems and the implications of these findings

Getting service users to describe their problems can be hugely useful in case formulation, helping to move away from diagnostic criteria and towards an increased understanding of the issues that service users experience as serious concerns. There is currently a move towards abandoning formal diagnoses, and the strong divisions between "normal" and "abnormal", in favour of a greater focus on the content of service users' experiences as they occur along a "normality" continuum. As stated by May (2007, p. 300) "the diagnostic process (can) convert someone's distress from a psychosocial problem into an individual problem – it takes the person's experience out of its social and historical context."

Central to the ways in which service users present and respond to treatment interventions are the beliefs that they hold regarding their ill-health (Halligan, 2007). The problems which service users describe as their main concerns can assist in providing information regarding those beliefs. In this study, it was interesting to note that service users described symptoms, emotional, and practical issues as problems. Often it is just an individual's symptoms that are focused on in clinical measures. Although these may enable a clinician to make a diagnosis, they do not necessarily represent the primary concerns of the service user. Although, many of the service users in this sample were suffering from disabling physical illnesses or symptoms, very few actually described their illnesses as one of their problems; and most of the unpleasant bodily sensations that were described in the sub-category *sensations* were not the reported disabling symptoms that grouped certain service users into the physical co-morbidity group in the previous study. Service users seemed to view the way these illnesses or symptoms impacted on their lives, rather than the illnesses or symptoms themselves, as problems. This is very important for clinicians to be aware of this when exploring the meaning that service users give to bodily discomfort and ill health.

A further category of interest was the *health-related behaviours*. There was a good level of awareness amongst those who reported these adverse behaviours as a problem. They knew or felt that their eating, self harming, poor sleep, drug use, or lack of exercise was an issue that needed to be dealt with. In fact, as discussed by Bentall (2004), individuals with mental health problems do not necessarily experience a deficit in thinking or understanding, but rather a bias. Quite often individuals' recognition that they are engaging in unhealthy

behaviours can contribute to their distress if they feel that they lack the resources to stop these behaviours.

Collecting descriptive information about service users' problems also has the potential to be useful for when service users are eventually able to tailor computerised interventions to fit more closely with their individual needs. Nyman and Yardley (2007) discuss how the tailoring of interventions can enhance communication leading to greater adherence to health interventions and better behavioural outcomes. This direction of development is one being considered for *Beating the Blues.* As computer-based programmes cannot have an infinite set of responses, research such as this can assist in informing responses so that they are relevant to the individuals who use the programme.

Identifying the emerging categories as unique and separate from one another was difficult as frequently the problems, thoughts, feelings, and behaviours were very closely interlinked. Adhering closely to what a service user had actually written was very important in ensuring that coding was as objective as possible. Although *coping* was only acknowledged as a sub-category, it can easily be surmised that the inability to employ constructive coping skills was one of the major reasons for individuals experiencing problems; especially in the *work-related* sub-category where stress was cited as a big issue. Computerised cognitive behavioural therapy aims to enhance service users coping skills by assisting them in identifying unhelpful thoughts and behaviours, and teaching them how to manage or change these.

Limitations of the content analysis

The ethnic diversity of the participants in this study was limited. The sample was predominantly British white working and middle-class so any generalisability beyond socio-economic and ethnic group is impossible. Problem content was also assigned to categories mainly according to words and constructed concepts. This assumed that participants possessed the ability to effectively name or describe their problems. Another limitation of conventional content analysis is that it is considered to be a purely descriptive method. It describes what is there, but may not reveal the underlying motives for observed patterns. Of course, the interpretation of the data, even at the most basic level, is also prone to bias as all the researchers will have their own perspectives and ideas which they will bring to the analyses. Intercoder reliability tests can help to some extent to neutralise this bias.

Further research directions

It appears that the BDI-II and BAI were not in fact appropriate measures for assessing the concurrent and convergent validity of the SUDS measure. As a result, the next study will examine whether or not a less disorder specific quality of life measure, the Clinical Outcomes Routine Evaluation Outcome Measure (CORE-OM), could possibly be a better clinical measure against which to assess the SUDS measure's validity. The issue of time will be addressed by ensuring that both measures (the SUDS measure and the quality of life measure) are administered at the same time points.

3.5. Conclusion

The SUDS measure could be a useful tool in providing rich data regarding service users' main problems and how these problems improve through the use of *Beating the Blues* as a guided self-help intervention. As a service user generated-measure, the SUDS measure also gives the service user a voice. This is becoming increasingly important in today's healthcare agenda. Further research is needed to firmly establish the validity of the SUDS measure, and to explore the possible range of described problems within a participant group representing a greater diversity in ethnicity and socioeconomic status.

Chapter 4

Study 3: Establishing health outcomes by evaluating quality of life: further investigation of the psychometric properties of a service user generated outcome measure for *Beating the Blues*.

4.1. Introduction

In their latest report "Improving Access to Psychological (IAPT) Therapies Outcome Framework and Data Collection" (Care Services Improvement Partnership (CSIP) Choice and Access Programme, 2007) the Department of Health, working in collaboration with CSIP and the National Institute for Mental Health in England (NIMHE), stressed the importance of incorporating tools to measure health and wellbeing into healthcare services. These measures are considered important because clinicians and policymakers want to know that services are successfully improving health and wellbeing. The importance of improving health and wellbeing ties in with the World Health Organisation's (WHO, 1948) definition of health as being "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity". Condition specific measures are useful in informing about the presence or absence of an illness or disorder, but they do not always provide information about wellbeing, functioning, or quality of life.

Approximately 25 years ago quality of life measures were almost unheard of, but today they are considered a critical tool in the evaluation of clinical research and outcomes. Essentially, they measure two things: objective functioning and subjective wellbeing (Muldoon, Barger, Flory, & Manuck, 1998). Objective functioning describes an individual's daily functioning and how much this has been impaired by an illness or improved by a health intervention. Functioning can be divided into different components: physical activity (exercise), social achievements (such as attending a social gathering), or psychological achievements (such as evaluating oneself more positively). Subjective well-being factors focus on how unwell or troubled an individual feels as a result of their illness. This includes factors such as individuals' general satisfaction with their health, pain tolerance, their psychological distress, or their sense of social involvement (Ashworth et al., 2004). Garratt, Schmidt, Mackintosh, and Fitzpatrick (2002) in their study to assess and examine the growth and availability of quality of life measures across health specialties, found references to almost 1,300 quality of life measures in the literature. Generic scales appeared more frequently than psychological

measures. In the UK, the Clinical Outcomes in Routine Evaluation – Outcome Measure (CORE-OM) (Barkham et al., 2001; Evans et al., 2002) is one of the most extensively used outcome measures for psychological interventions (Barkham et al., 2005) in both primary and secondary care settings.

The CORE–OM is a 34-item questionnaire addressing the domains of subjective well-being (4 items), commonly experienced problems or symptoms (12 items), functioning (12 items), and risk (6 items; 4 'risk to self' items and 2 'risk to others' items). The items on 'risk to self' and 'risk to others' are included to assist with risk assessment in the NHS and other healthcare sectors. Within the experienced problems or symptoms domain of the measure 'item clusters' address anxiety (4 items), depression (4 items), physical problems (2 items), and trauma (2 items). The functioning domain 'item clusters' attend to general functioning (4 items), close relationships (4 items), and social relationships (4 items). Items are scored on a five-point scale from 0 ('not at all') to 4 ('all the time').

Reviewing the qualitative outcomes from the content analysis in the previous study comparatively against the CORE-OM domain clusters, it would appear that anxiety and depression in the problems or symptoms domain are represented in the qualitative sub-categories *dysphoria* and *panic.* The same domain's 'item cluster' of physical problems could be found in the main qualitative category *physical;* and the functioning domain's 'item clusters' of 'close relationships' and 'social relationships' seem to connect with the main category of *interpersonal relationships*. The sub-categories of *exercise* and *sexual dysfunction* could be linked in as components of the 'item cluster' general functioning in the CORE-OM's functioning domain.

Based on these qualitative category and domain parallels, an analysis of service users' SUDS measure ratings pre- and post-*Beating the Blues* compared against their CORE-OM wellbeing, problems, and functioning domain scores was carried out. The domain of risk was excluded as although the sub-category *self harm* in the previous study touched on aspects of risk, suicidal ideation as a major risk factor did not emerge. However CORE-OM clinical scores, which account for the scores across all 34 items including risk, were also compared against individuals' pre- and post-SUDS scores. The CORE-OM mean scores excluding the risk domain were also correlated with the SUDS scores to establish the impact of excluding the risk domain scores.

The aim of this study was to investigate whether convergent, concurrent, and construct validity of the SUDS measure could be established by comparing it against an established measure, the CORE-OM. The SUDS measure's internal reliability and sensitivity to change will also be re-investigated in this study.

4.2. Methodology

Participants

One hundred and four service users who used an updated version of *Beating the Blues* (version 3) containing the electronic Clinical Outcomes Routine Evaluation – Outcomes Measure (CORE-OM) were included in this study. These participants all used *Beating the Blues* between October 2005 and November 2006. Sixty-six (63.5%) participants were female, and 38 (36.5%) were male. The average age of the group was 39 years of age. Eighty-six (82.6%) participants reported their ethnicity as British white. Further demographic details for the participants are presented in Table 4.1.

Table 4.1: Participant descriptive data [13]

Category	**Data**	
Age in years: mean(*SD*) (N)	39.1 (*11.7*) (104)	
Age range (N)	18 – 70 (104)	
Duration of problem – years (*SD*) (N)	8.9 (*9.1*) (94)	
Duration of problem range – years (N)	0.5 – 35 (94)	
Category	**Number in group**	**% of group**
Gender (N)	104	100%
Female	66	63.5%
Male	38	36.5%
Ethnic group (N)	88	84.6%
British White	86	82.6%
British Asian	1	1%
Chinese	1	1%

[13] Data percentages are reported as a % of the entire group, acknowledging the fact that there is missing case data in each group which contributes to the overall percentage.

Table 4.1 continued: Participant descriptive data

Category	Data	
Psychotropic medication - Yes	27	26%
Psychotropic medication - No	5	4.8%
Previous treatment: (N)	100	96.2%
None	5	4.8%
Drugs and Medication	80	76.9%
NHS counselling or psychotherapy	12	11.5%
Anxiety Management Groups	3	2.9%

Fifteen of the service users (14.4%) partaking in the study had physical co-morbidity and/or disabling physical symptomology reported in their *CareBase* clinical notes. Table 4.2 presents the types of co-morbid physical illnesses and/or disabling physical symptomology experienced.

Table 4.2: Co-morbid physical illness and/or disabling physical symptomology

Category (N = 15)	Number in group	Overall percentage of group
Irritable Bowel Syndrome (IBS)	5	4.8%
Pain problems with unclear physical epidemiology	2	1.9%
ME	2	1.9%
Extreme fatigue	2	1.9%
Arthritis	1	1.0%
Multiple Sclerosis (MS)	1	1.0%
Epilepsy	1	1.0%
Asthma	1	1.0%

Measures used

i) Demographic information was routinely collected for all service users before commencement of the *Beating the Blues* programme.

ii) The CORE-OM outcomes and previous treatment data were collected electronically as part of the *Beating the Blues* programme. CORE-OM clinical scores were computed as the mean of the completed items multiplied by 10. Clinical scores therefore can range from 0 to 40. This is done so that clinically meaningful differences are represented by whole numbers (Mullin, Barkham, Mothersole, Bewick, & Kinder, 2006). Service users who have benefited from using *Beating the Blues* show a decrease in CORE-OM scores.

iii) The SUDS measure as described in the previous study was also used.

Design

The study was a longitudinal survey in which service users using *Beating the Blues* were asked to fill in the CORE-OM and SUDS measure, pre- and post-*Beating the Blues*.

Procedure

The CORE-OM pre- and post-*Beating the Blues* scores were collected electronically along with the SUDS rating scale scores at the beginning of session 1 and at the end of session 8. These data were then extracted and entered into an SPSS database for analysis. Further information about gender, age, ethnicity, medication, and duration of problems was collected from the NHS database, *CareBase*.

Analyses

The quantitative data were analysed using SPSS 14.0 for Windows. The CORE-OM wellbeing domain scores, problems domain, functioning domain scores, mean less risk scores, and overall clinical scores were compared with the SUDS measure scores. As the CORE-OM and the SUDS measure have differing numerical scales, comparison was based on standardized z scores.

Kolmogorov-Smirnov tests (K-S tests), Q-Q plots, histograms, and calculated descriptive statistics were used to establish whether or not the SUDS and CORE-OM data were normally distributed.

Internal reliability of the SUDS measure was tested by calculating Cronbach's alpha scores. Although internal reliability had already been shown in the previous study, this study incorporated a number of new participants. It was therefore important to re-establish internal

reliability of the SUDS measure with this particular participant sample in order to be able to confidently use the total of the 3 rating scale scores to ascertain the measure's validity against the CORE-OM.

Concurrent validity was tested by exploring the bivariate correlations between the pre- and post- scores for the CORE-OM clinical scores and the SUDS measure scores. These correlation analyses were one-tailed as there was a directional hypothesis that significant positive correlations between the CORE-OM and SUDS measure scores would be found. The strength of statistically significant associations was established by examining the correlation coefficients (r). Convergent validity was investigated by examining the significance and strength of the bivariate correlations between the pre-, post-, and change scores for the CORE-OM domains of wellbeing, problems, functioning, the 'mean less risk' scores, the CORE-OM clinical change scores, and the SUDS measure. Failure to correlate with the CORE-OM would suggest invalidity.

Paired t-tests were used to establish the differences between pre- and post-SUDS measure scores, and pre- and post-CORE-OM well-being, problems, and mean scores for the group as a whole. Uncontrolled pre-post effect sizes were calculated to establish the magnitude and direction of the treatment's effect, and the SUDS measure's sensitivity to this effect. The pre-post effect sizes for the entire participant group on the SUDS scores and CORE-OM problems domain scores, wellbeing domain scores, and overall clinical scores were calculated using the formulas: $Mean_{pre}–Mean_{post}/SD_{pre}$ initially to obtain Cohen's *d* (Cohen, 1988) and then this was converted to r using the formula $r = d/(d^2 + 4)^{.5}$ (Rosenthal, 1991) so that the effect sizes were easily comparable with those from the previous study.

The percentage of service users meeting both reliable and clinically significant change criteria was also calculated. In accordance with the benchmarking data study carried out by Mullin, Barkham, Mothersole, Bewick, and Kinder (2006), reliable improvement was noted when users evidenced a decrease of 5 or more on the CORE-OM clinical score following intervention. Reliable deterioration was recorded when users' post-intervention CORE-OM clinical scores increased by 5 from pre-intervention. Reliable and clinically significant improvement was registered when a user improved by 5 or more in the CORE-OM clinical score and moved from above the clinical cut-off to below it. Connell et al. (2007) established that a CORE clinical score of 10 (10 and below non-clinical) is the cut-off between the clinical

population and a sample drawn from the general population. This clinical cut-off was applied to the present data.

The standard intervention and physical co-morbidity group's outcomes were not compared via statistical tests in this study as only 15 of the participants' clinical notes reported physical co-morbidity or disabling physical symptoms. The size of this group was considered too small for analyses (beyond descriptive statistics) based on this group to be statistically meaningful.

4.3. Results

Normality of distribution

Exploration of the pre-CORE-OM and pre-SUDS participant scores found that none of the scores' distributions varied significantly from a normal distribution.

Attrition and acceptability

Seventy (67.3%) service users completed *Beating the Blues.* Fifty-six (53.8%) of the entire participant sample completed the pre-SUDS measure by describing and scoring 3 problems. Seventy service users described and rated 1 problem pre- and post- (100% of completers), and 66 (94.3% of completers) described and rated 2 problems. Forty-five (64.3% of completers) service users completed the entire pre- and post-SUDS measure. There was no difference in pre-SUDS mean scores for completers of the *Beating the Blues* programme, and those that did not complete the programme, $t(54) = 0.86$, $p = .40$. There was also no difference in the pre-CORE-OM wellbeing, problems, functioning, 'mean less risk', and clinical scores for those who completed the programme and those who did not.

Treatment outcomes

CORE-OM outcomes

A statistically significant difference was found between the pre- and post-CORE OM wellbeing, problems, functioning, clinical, and 'mean less risk' scores. The results of these t-tests and pre-post effect sizes are presented in Table 4.3 below. The pre-post effect sizes are also presented. Large effect sizes were found on all pre-post CORE-OM domain and clinical scores, except for the functioning domain where a medium effect size was found ($r = 0.47$).

Table 4.3: Paired Samples T-Tests for all pre- and post- outcome measures (standardized z scores)

	Paired Differences				t	df	Sig. (2-tailed) & Effect Size
Pre-Post Pairs	Mean	Standard Deviation	95% Confidence Interval of Difference				
			Lower	Upper			
Pre-Post CORE-OM Wellbeing	1.23	1.08	0.97	1.48	9.52	69	.000 r = 0.55
Pre-Post CORE-OM Problems	1.27	0.98	1.04	1.51	10.82	69	.000 r = 0.56
Pre-Post CORE-OM Functioning	1.06	0.98	0.83	1.30	9.08	69	.000 r = 0.47
Pre-Post CORE-OM Clinical score	1.22	1.03	0.97	1.46	9.88	69	.000 r = 0.53
Pre-Post CORE-OM 'mean less risk'	1.25	0.99	1.02	1.49	10.62	69	.000 r = 0.54
Pre-Post SUDS	3.44	1.59	2.96	3.91	14.54	44	.000 r = 0.87

Reliable change was made by 46 (64.8%) of the completers of *Beating the Blues* with only 1 service user reliably deteriorating. Thirty-five (49.3%) of the services users 'recovered', achieving both reliable and clinically significant change.

SUDS outcomes

There was a statistically significant change in SUDS measure scores from pre-*Beating the Blues* (mean = 20.06) to post-*Beating the Blues* (mean = 9.56), t(44) = 14.54, $p < .001$. A pre-post effect size of r = 0.87 was found. The t-test results using the SUDS standardized z scores can also be seen in Table 4.3.

Internal reliability

Pre- and post-*Beating the Blues* values of Cronbach's alpha (α) for the SUDS measure in this sample were 0.70 and 0.73 respectively. These values indicated good internal reliability. Cronbach's α did not increase when any of the 3 individual items were deleted. This indicated that none of the items needed to be deleted to improve reliability. The correlation coefficients (Pearson's r) between the 3 items pre-*Beating the Blues* were: r = .44 between pre-problem 1 rating and pre-problem 2 rating, $p < .01$, r = .34 between pre-problem 1 rating and pre-problem 3 rating, $p < .01$, and r = .49 between pre-problem 2 rating and pre-problem 3 rating, $p < .01$. The correlation coefficients between the 3 items post-*Beating the Blues* were: r = .50 between post-problem 1 rating and post-problem 2 rating, $p < .01$, r = .49 between post-problem 1 rating and post-problem 3 rating, $p < .01$, and r = .53 between post-problem 2 rating and post-problem 3 rating, $p < .01$.

Concurrent and convergent validity

The strongest correlations between the pre-SUDS scores and the pre-CORE-OM scores, were for the pre-SUDS and the pre-wellbeing domain scores (r = .50, $p < .01$), and the pre-SUDS and pre-'mean less risk' scores (r = .50, $p < .01$). The pre-functioning, pre-problems, and pre-clinical CORE-OM scores also correlated significantly with the pre-SUDS scores. Table 4.4 presents the correlations between the pre-SUDS and pre-CORE-OM scores.

Table 4.4: Correlations between the SUDS and CORE-OM scores[14]

	Pre-SUDS (N = 56)
Pre-CORE Wellbeing (N = 104)	.500 (**)
p value	.000
Pre-CORE Problems (N = 104)	.485(**)
p value	.000
Pre-CORE Functioning (N = 104)	.427(**)
p value	.000
Pre-CORE 'mean less risk' (N = 104)	.502(**)
p value	.000
Pre-CORE Clinical score (N = 104)	.415(**)
p value	.000
	Post-SUDS (N = 45)
Post-CORE Wellbeing (N = 70)	.606(**)
p value	.000
Post-CORE Problems (N = 70)	.650(*)
p value	.000
Post-CORE Functioning (N = 70)	.509(**)
p value	.000
Post-CORE 'mean less risk' (N = 70)	.641(**)
p value	.000
Post-CORE Clinical score (N = 70)	.643(**)
p value	.000

** Correlation is significant at the .01 level (1-tailed).

[14] The outcome data for the correlation analyses is reported in one table (for both Table 4 and Table 5) to enable the reader to more easily view all the results together; however, as discussed in the procedure section these were bivariate analyses. Therefore the significance level of .01 is a true significance level.

The correlations between the post-SUDS scores and the post-CORE-OM scores highlighted stronger associations between the post-scores than the pre-scores. The strongest relationship was between the post-SUDS and post-CORE-OM problems domain scores (r = .65, $p < .01$). Table 4.4 presents the correlations between the post-SUDS and post-CORE-OM scores. Correlations between the SUDS change scores and the CORE-OM change scores were also all significant, but the strengths of the relationships were marginally weaker (r values ranged from .32 to .43 – the correlation outcomes for the change scores can be see in Table 4.5).

Table 4.5: Correlations between the SUDS and CORE-OM change scores

	SUDS change score (N = 45)
CORE Wellbeing (N = 70)	.413(**)
p value	.000
CORE Problems (N = 70)	.430(**)
p value	.000
CORE Functioning (N = 70)	.318(*)
p value	.000
CORE 'mean less risk' (N = 70)	.412(**)
p value	.000
CORE Clinical score (N = 70)	.377(**)
p value	.000

** Correlation is significant at the .01 level (1-tailed).

* Correlation is significant at the .05 level (1-tailed).

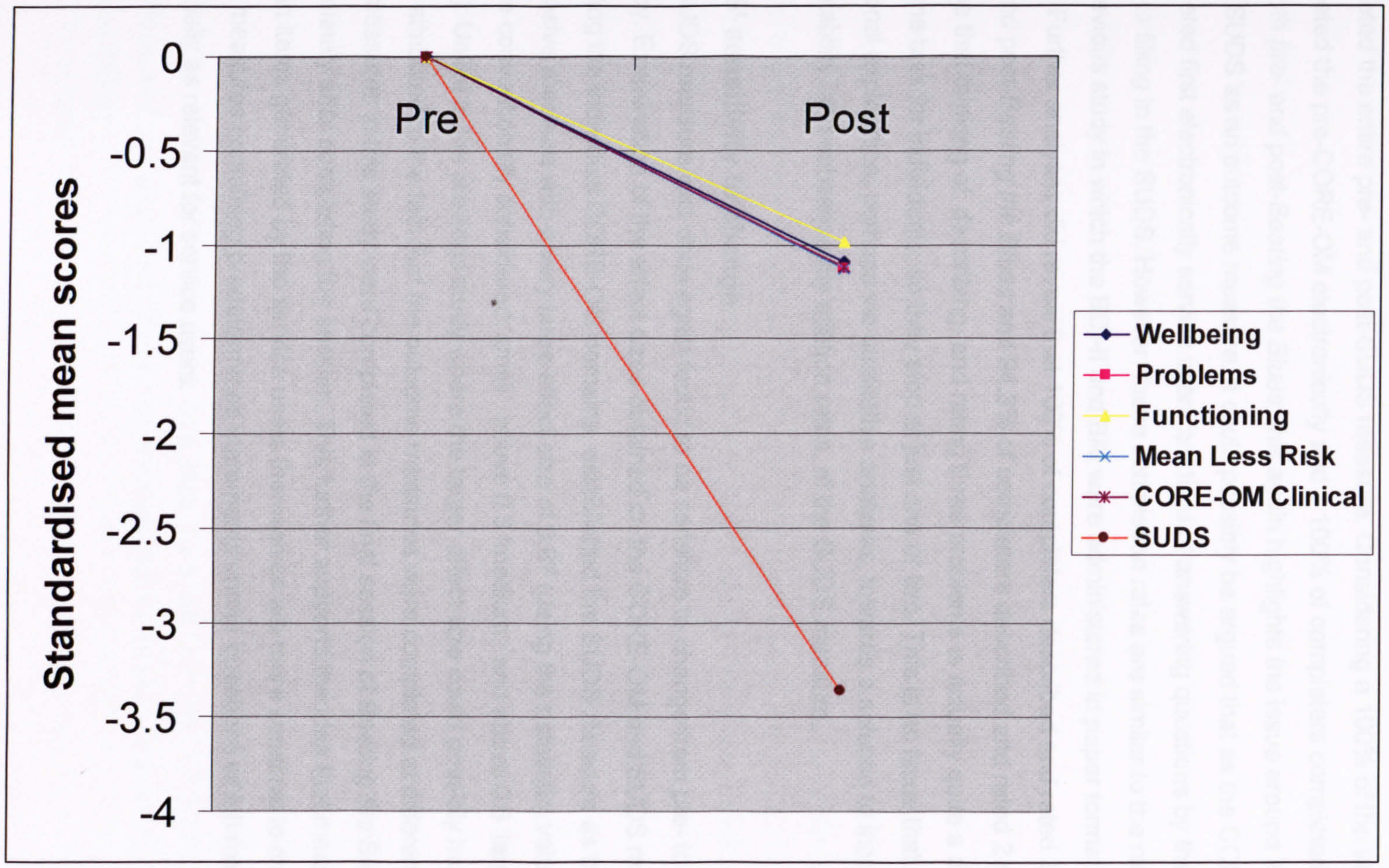
Sensitivity to change

Using the r statistic, the CORE-OM pre-post effect sizes ranged from 0.47 to 0.56. The pre-post effect size on the SUDS measure was 0.87. This was much larger than any of the other effect sizes found. The standardized means, standard deviations, change scores, and ranges for each measure pre- and post- are presented in Table 4.6. Pre-post effect sizes are also presented here. Figure 4.1 illustrates the change in mean standardized scores on the CORE-OM domains and the SUDS measure pre- and post-*Beating the Blues*.

Table 4.6: Standardised z scores for CORE-OM and SUDS scores

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-CORE Wellbeing	104	-2.56	1.87	.00	1.00
Pre-CORE Problems	104	-2.47	2.06	.00	1.00
Pre-CORE Functioning	104	-2.22	2.26	.00	1.00
Pre-CORE 'Mean less Risk'	104	-2.42	1.81	.00	1.00
Pre-CORE Clinical	104	-2.27	2.11	.00	1.00
Pre-SUDS	56	-2.56	1.36	.00	1.00
Post-CORE Wellbeing	70	-2.55	1.56	-1.09	0.93
Post-CORE Problems	70	-2.46	.95	-1.13	0.78
Post-CORE Functioning	70	-2.32	2.12	-0.99	0.79
Post-CORE 'Mean less Risk'	70	-2.48	1.57	-1.13	0.80
Post-CORE Clinical	70	-2.39	1.60	-1.12	0.79
Post-SUDS	45	-6.16	-0.27	-3.36	1.56
CORE Wellbeing (change)	70	-3.44	1.27	-1.33	1.07
CORE Problems (change)	70	-3.17	1.06	-1.18	0.98
CORE Functioning (change)	70	-3.87	0.68	-1.26	0.98
CORE 'Mean less Risk' (change)	70	-3.72	0.72	-1.32	0.99
CORE Clinical (change)	70	-3.59	0.26	-1.48	0.86
SUDS (change)	45	-6.81	0.05	-3.05	1.59

Figure 4.1: Pre- and Post-standardised mean z scores for CORE-OM and SUDS scores



4.4. Discussion

Acceptability of the SUDS

Just over half (53.8%) of the entire participant sample completed the pre-SUDS measure by describing and scoring 3 problems, whilst forty-five (64.3% of completers) service users completed the entire pre- and post-SUDS measure. Considering a 100% of the service users completed the pre-CORE-OM electronically and a 100% of completers completed the CORE-OM both pre- and post-*Beating the Blues,* this again highlights the issue around acceptability of the SUDS as an outcome measure. It could possibly be argued that as the CORE-OM is completed first electronically service users are tired of answering questions by the time they come to filling in the SUDS. However, these completion rates are similar to the rates found in the previous study in which the BDI-II and BAI were administered in paper format at different times. Further analyses did reveal that 100% of completers described and rated 1 problem pre- and post-*Beating the Blues* and 94.3% of completers described and rated 2 problems. It may be that thinking of, describing, and rating three problems is actually quite a difficult or tiresome task for individuals, so they stop at just one or two. This is an issue that will need additional exploration, perhaps via qualitative analyses, towards a solution to increasing acceptability, and subsequently attrition rates, of the SUDS measure.

SUDS' sensitivity to change

The SUDS measure was once again found to be sensitive to change from pre- to post-therapy. Examination of the effect sizes obtained on the CORE-OM and SUDS measures, including the individual CORE-OM domains, established the SUDS measure as the most responsive measure with a very large effect size of 0.87 (using the r statistic, values above 0.1 are conventionally considered 'small', above 0.3 'medium', and above 0.5 'large' [Cohen, 1988]). Unlike in the previous study where the larger effect size could possibly have been partly attributed to the fact that the outcome measures were completed at different times, both measures in this study were completed in the final session of *Beating the Blues* immediately after completing the session. This further supports the idea that measures which contain items generated by the service users themselves are more sensitive to change than those measures containing predetermined statements and/or questions which may not be personally as relevant for service users.

SUDS measure internal reliability

Pre- and post-*Beating the Blues* values of Cronbach's alpha (α) for the SUDS measure were 0.70 and 0.73 respectively. These values indicated good internal reliability, and demonstrated consistency between the individual items. All 3 of the items contributed to the overall SUDS measure, and therefore none of the items needed to be deleted.

Validity of SUDS

Concurrent validity

The significant medium correlation (r = 0.42) between the pre-SUDS and pre-CORE-OM clinical scores and the significant large correlation (r = 0.64) between the post-SUDS and post-CORE-OM clinical scores provided evidence of the SUDS measure's concurrent validity.

Convergent validity

Correlations revealed significant medium to large strength associations between the pre-SUDS and pre-CORE-OM scores, indicating a good degree of convergent validity. The associations were strongest between the pre-SUDS measure and the pre-wellbeing domain and pre-'mean-less-risk' domain scores. The correlations between the post-SUDS and post-CORE-OM scores were also all significant with large r values. The strongest associations were between the post-SUDS scores and the post-problems and 'mean less risk' domain scores. Interestingly, there was only a noticeable difference in the strength of association between the clinical scores, the 'mean-less-risk' scores, and the SUDS scores in the pre-scores and change scores correlations. Post-*Beating the Blues* both these associations yielded large r values. The exclusion of the CORE-OM risk domain did appear to strengthen the pre- and change score correlations. For the most part, those individuals who are deemed suitable for *Beating the Blues* are assessed as being low risk; and those users who complete the *Beating the Blues* programme have post-risk scores of close to zero (mean = 0.13, SD = 0.27), so these scores have very little influence over the final clinical score. This may be why the correlations were stronger for the pre- and change scores, and would imply that the risk 'items cluster' was, as hypothesised, not particularly relevant to the SUDS measure. In fact, the separation of CORE-OM risk items into a separate scale from the CORE-OM has already been discussed and supported through research carried out by Lyne, Barrett, Evans, and Barkham (2006).

Medium strength significant correlations were found between the SUDS measure change scores and the CORE-OM change scores. Figure 4.1 illustrates how the change scores differ between the SUDS measure and the CORE-OM clinical scores. However, as the strength of the association was medium in size it can be assumed that convergent validity with the CORE-OM has been demonstrated. Convergent validity was also demonstrated by the moderate correlations between the change scores on the SUDS and the CORE-OM's domains; as well as by the strong correlations between the pre- and post-SUDS and CORE-OM domain outcome scores.

Once again the internal consistency between the individual items for rating problem distress supported another aspect of convergent validity, and contributed to the overall evidence for the SUDS measure's construct validity.

Validity and reliability limitations

Once again, the limited reliability of the SUDS measure as a service user generated measure enabling individual service users to score themselves against their own relevant personal problems needs to be acknowledged. Individual outcome scores between service users may not be truly comparable, but pre- and post-SUDS scores for individuals will be able to provide valuable information about changes over time. However the strong correlations that were found between the SUDS and the CORE-OM scores do suggest that some covariance across service users existed. This provides empirical evidence that service users' SUDS scores can be reasonably compared even if each service user is rating different aspects or causes of psychological distress (Ashworth et al., 2005). Another possible limitation on this measure's reliability is the fact that it is only made up of 3 items. If a measure contains too few items it can adversely affect reliability. Further limitations on reliability remain the same as those mentioned in the previous study's discussion.

In terms of validity, next to its previously established face validity, the SUDS measure's concurrent and convergent validity have been demonstrated in this study, contributing to confirmation of the SUDS' construct validity. However, there is still a necessity to establish discriminant validity through the concurrent administration of a measure which claims to measure the opposite construct of the SUDS measure. Demonstrating discriminant validity would increase the confidence with which the SUDS measure could be accredited with complete construct validity, and further satisfy the minimum requirement of an outcome

measure being able to demonstrate internal reliability and evidence aspects of construct validity (Kline, 2000).

Implications of these findings for Health Psychology

The Department of Health is placing increasing pressure on all healthcare services to evaluate their work (CSIP Choice and Access Programme, 2007). Healthcare outcome assessment is an essential aspect of reforming healthcare provision successfully. For a long time the UK's National Health Service (NHS) has recorded outcome based on measures of activity and process, such as waiting times and number of service users treated. However there is now a move towards recognising the importance of service users' health outcomes, including what effect they will have on their overall wellbeing, functioning, and the length of their life. Responding to this need (and further to the outcome implications discussed in the previous SUDS reliability and validity study), the SUDS measure, when employed within the *Beating the Blues* programme, has the potential to be used with individuals suffering from any number of co-morbidities to ascertain at the very least their levels of wellbeing (strong correlations on both pre- and post-scores). The strong significant associations between the CORE-OM 'mean-less-risk' scores and the SUDS measure scores also suggests that SUDS could be considered to measure factors pertaining to individuals' quality of life (such as wellbeing and functioning). As the measure is not condition-specific but service user generated, it focuses on the aspects of ill health that are relevant to the user; it can therefore be utilised to provide information on wellbeing and quality of life changes for service users using *Beating the Blues* with a broad range of health problems.

Further research directions

Future research should seek to ascertain discriminant validity through the concurrent administration of a measure which purports to measure the opposite of the SUDS measure. Research into establishing predictive validity of the SUDS measure is also important for criterion validity to be attained.

Fitzpatrick, Davey, Buxton, and Jones (1998) suggested 8 criteria for selecting a service user-based outcomes measure: appropriateness, reliability, validity, responsiveness, precision, interpretability, acceptability, and feasibility. Future studies need to explore: interpretability (in terms of change scores and their comparability), acceptability of the SUDS measure to practitioners, reasons for non-completion amongst service users, discriminant

validity, predictive validity, and the SUDS measure's feasibility in different healthcare services and with different ethnic and socio-economic groups.

4.5. Conclusion

Viewed against Fitzpatrick et al.'s (1998) 8 criteria the SUDS measure can be described as an appropriate, reliable, responsive, precise, feasible, and partially valid measure. It also appears to be acceptable to service users. However, traditional methods of evaluating psychometric measures may need to be reviewed if service user generated measures are to be increasingly incorporated into clinical evaluation. Alternatively, the emphasis could be on using these measures as a potential tool to successfully incorporate the service user perspective into more comprehensive evaluations of their wellbeing and quality of life. Further creative research, coupled with possible consequent changes to the SUDS measure, is desirable to ensure that all of the 8 criteria suggested by Fitzpatrick et al. (1998) are met.

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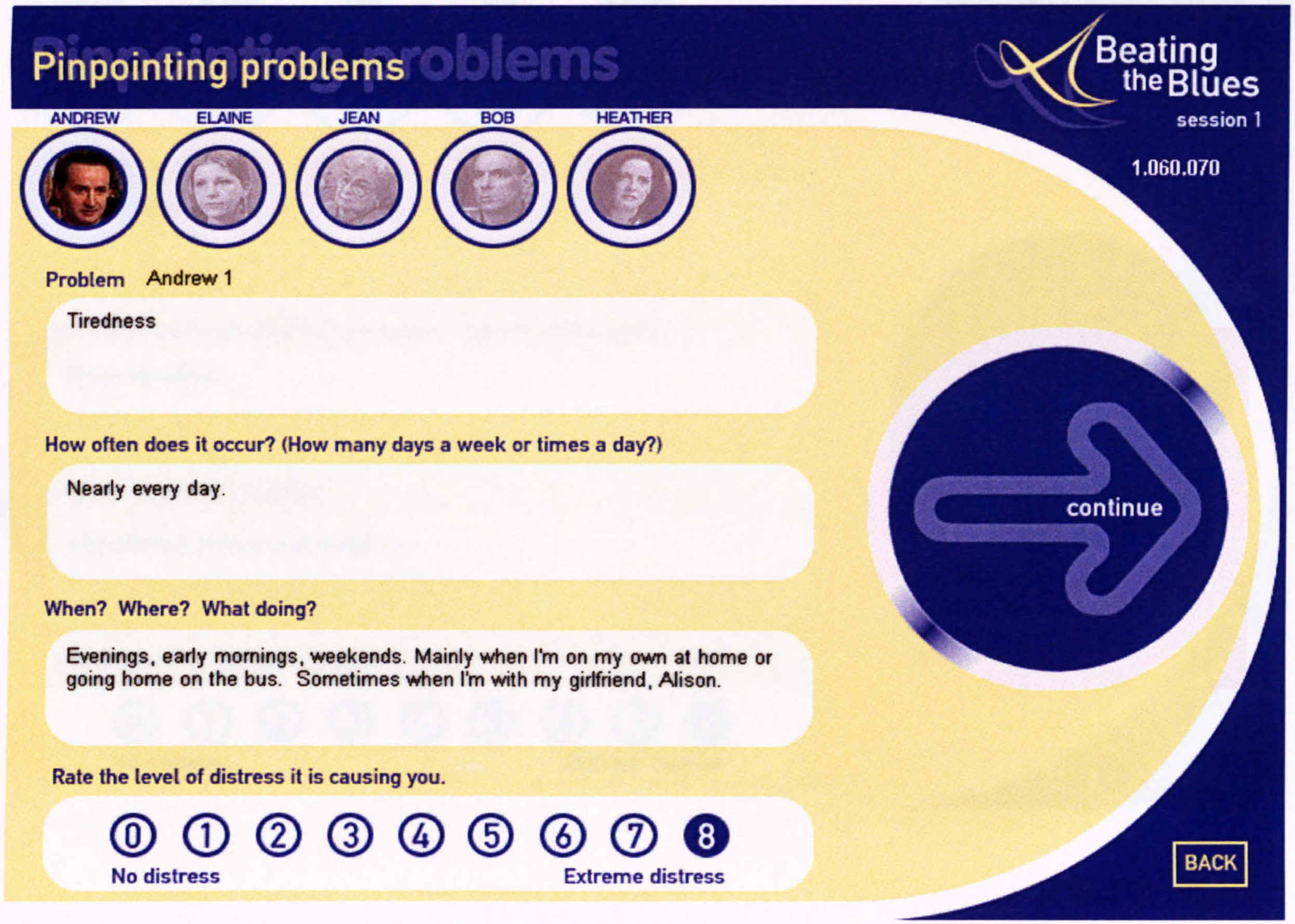
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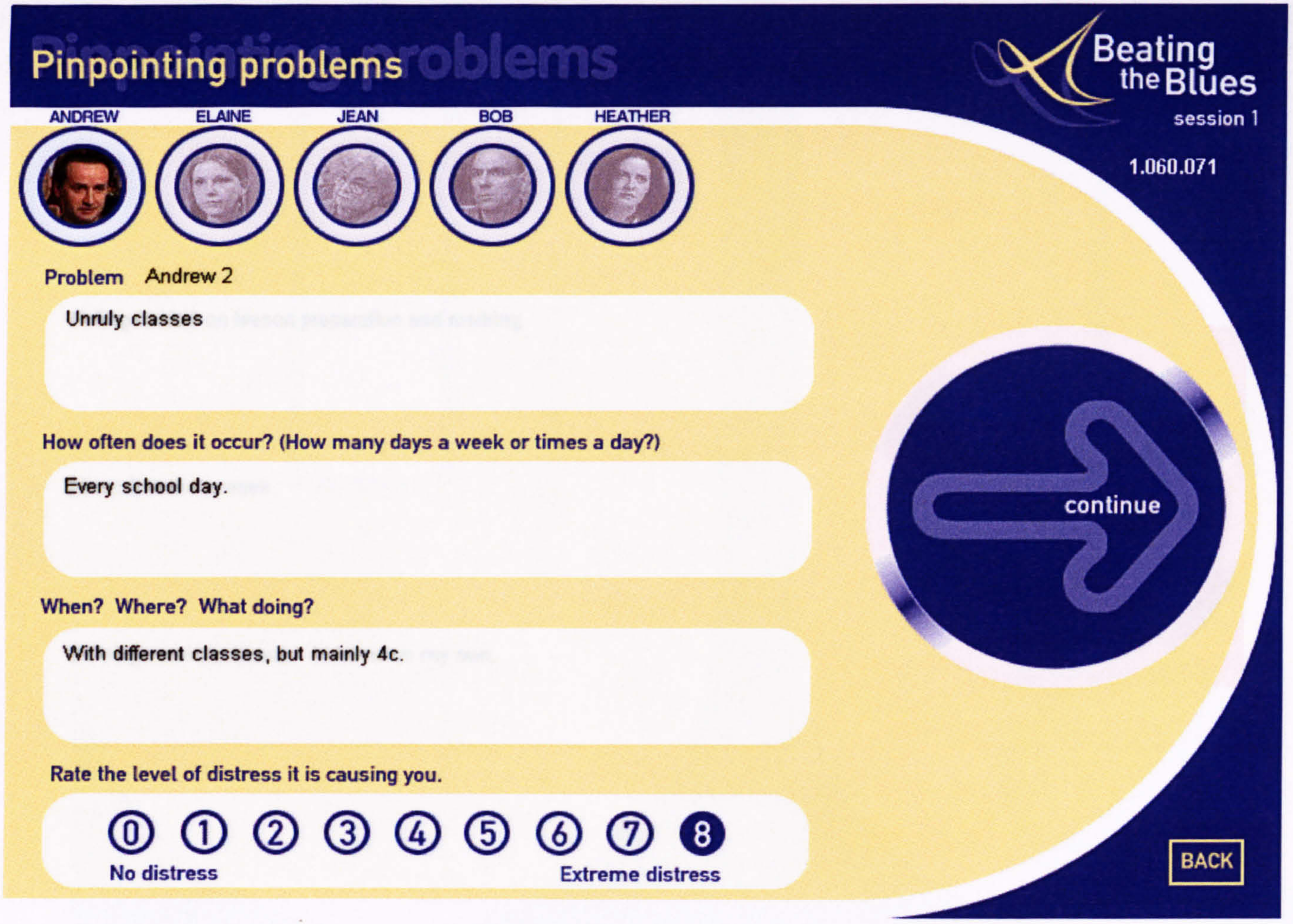
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Appendices

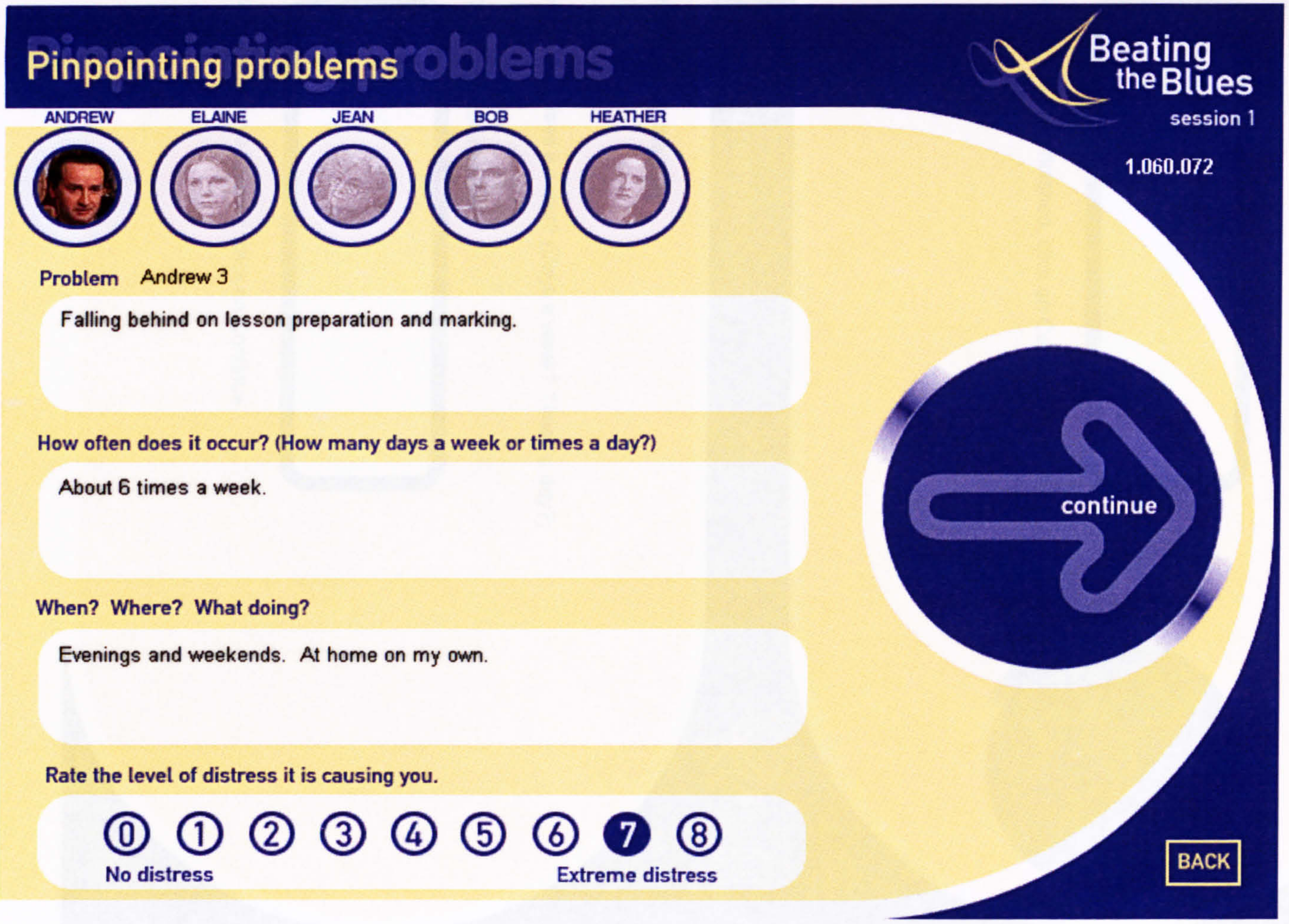
Appendix A: Screen shot of an example of a case study's first chosen problem



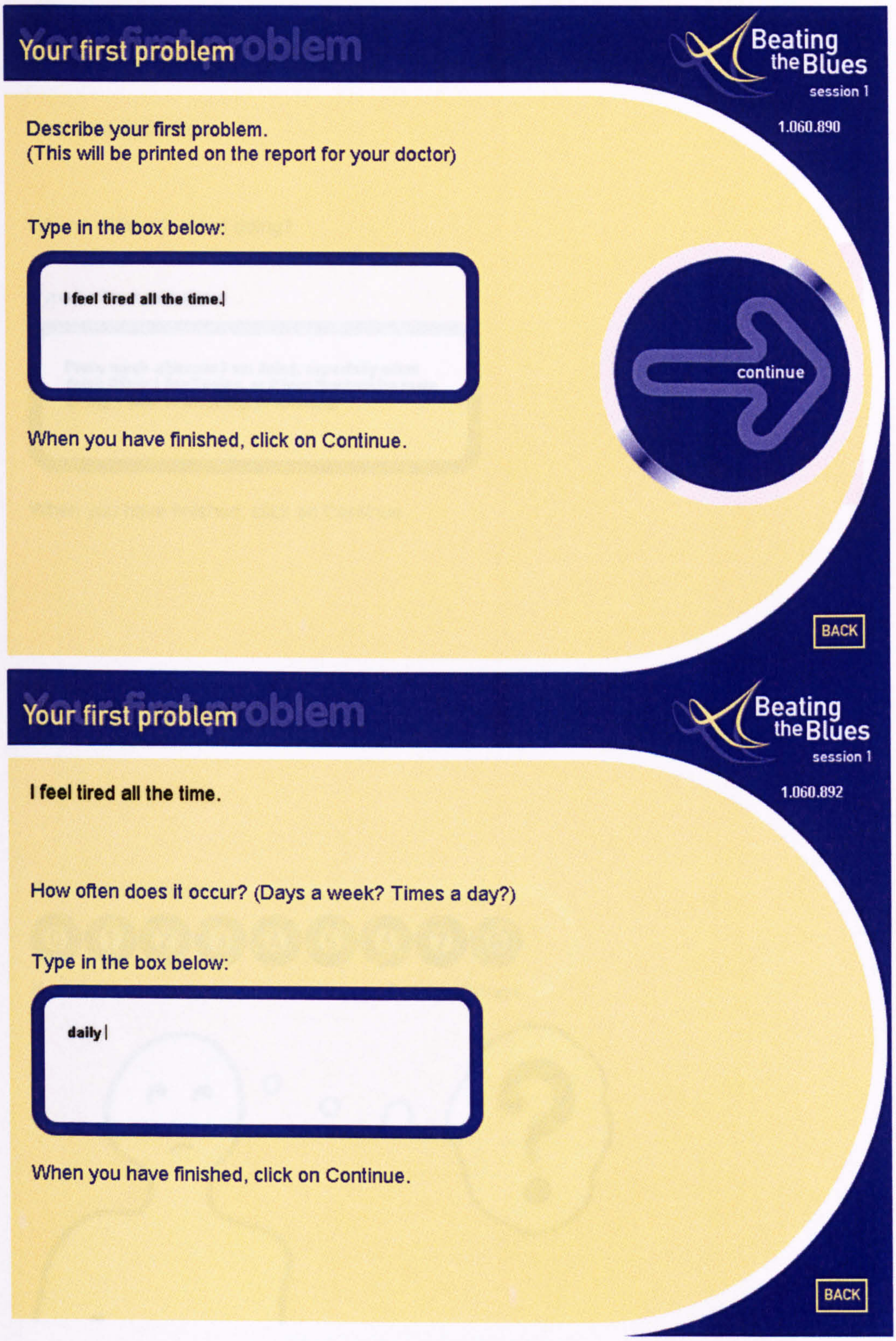
Appendix B: Screen shot of an example of a case study's second chosen problem



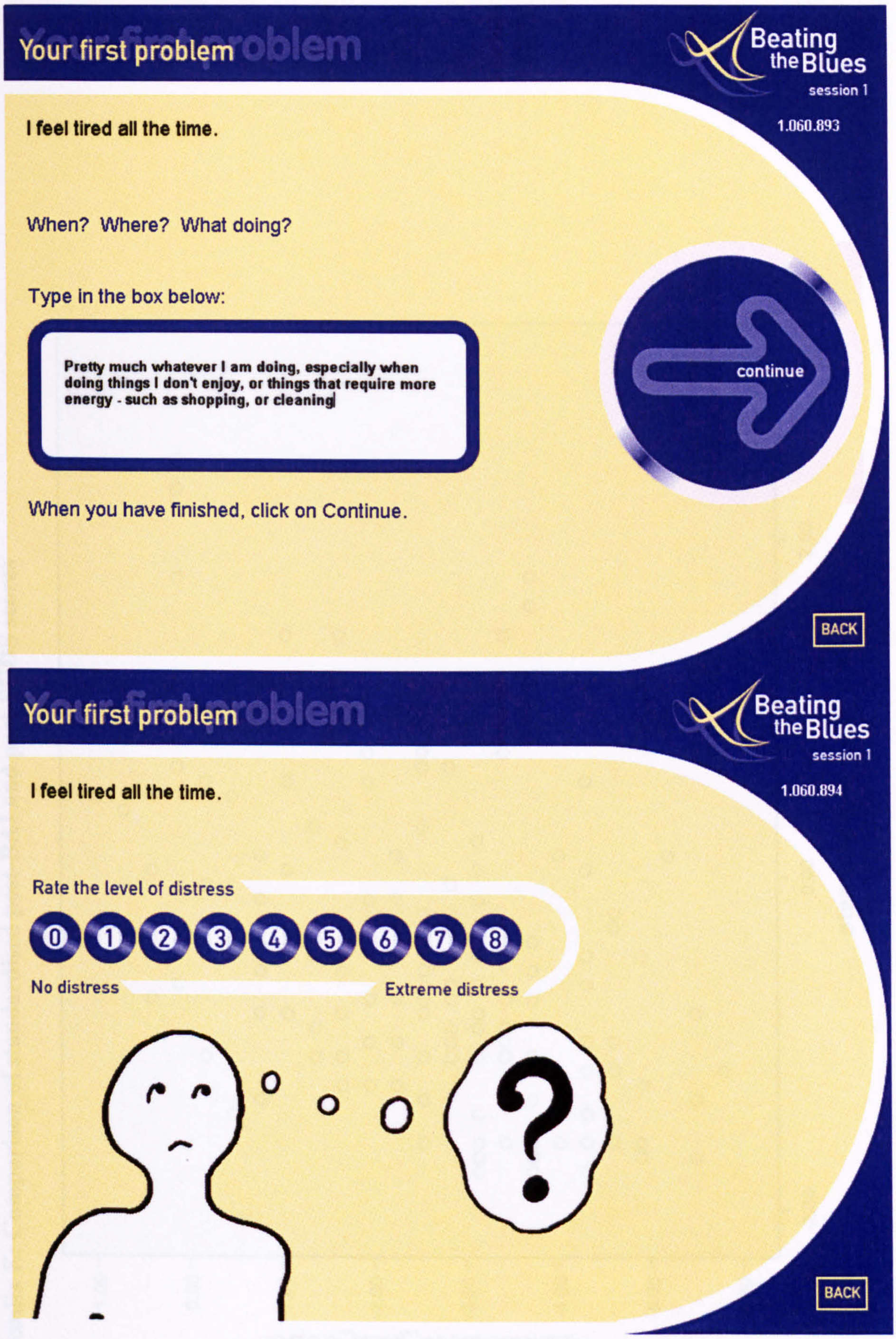
Appendix C: Screen shot of an example of a case study's third chosen problem



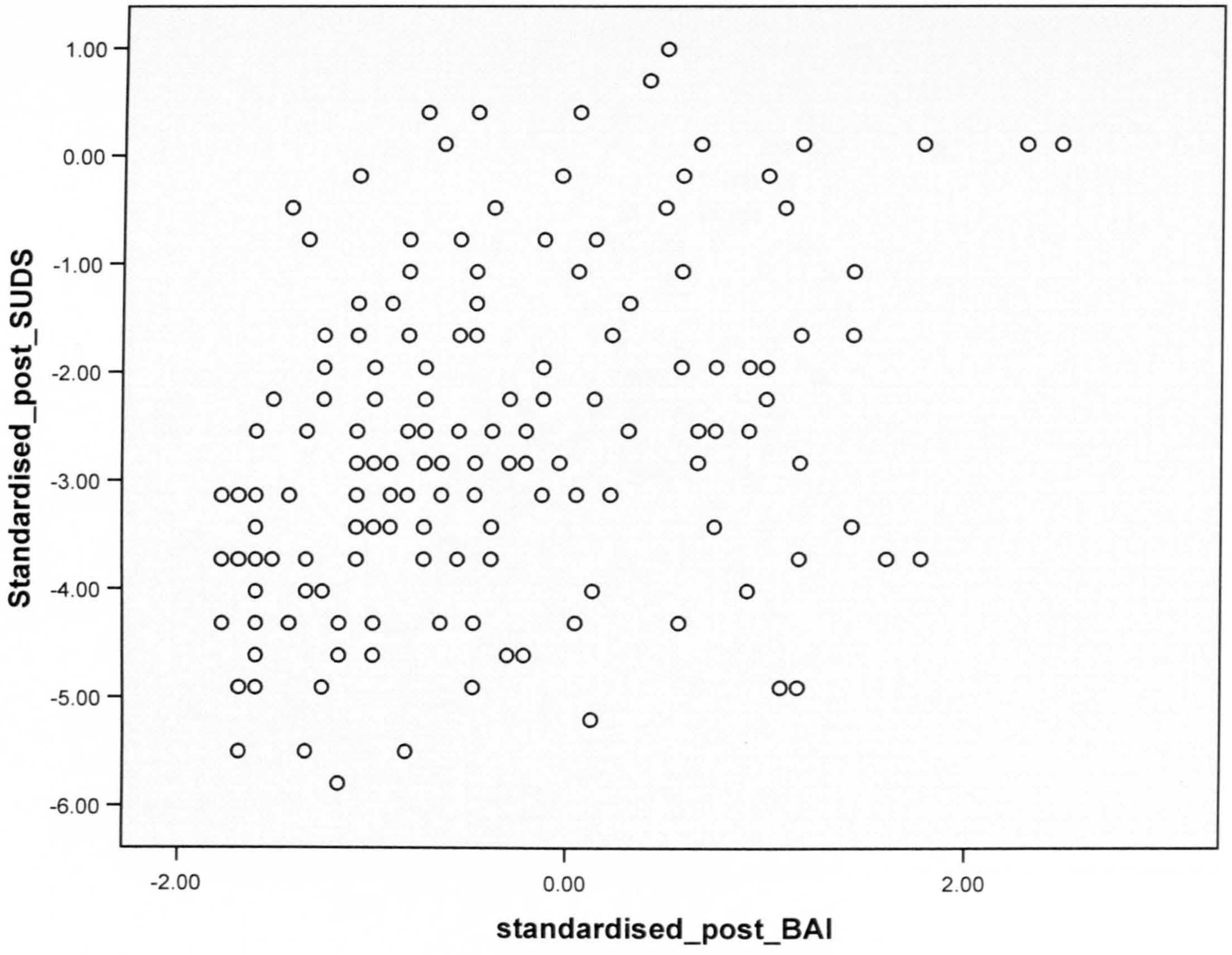
Appendix D: Screen shots of programme's SUDS measure questionnaire



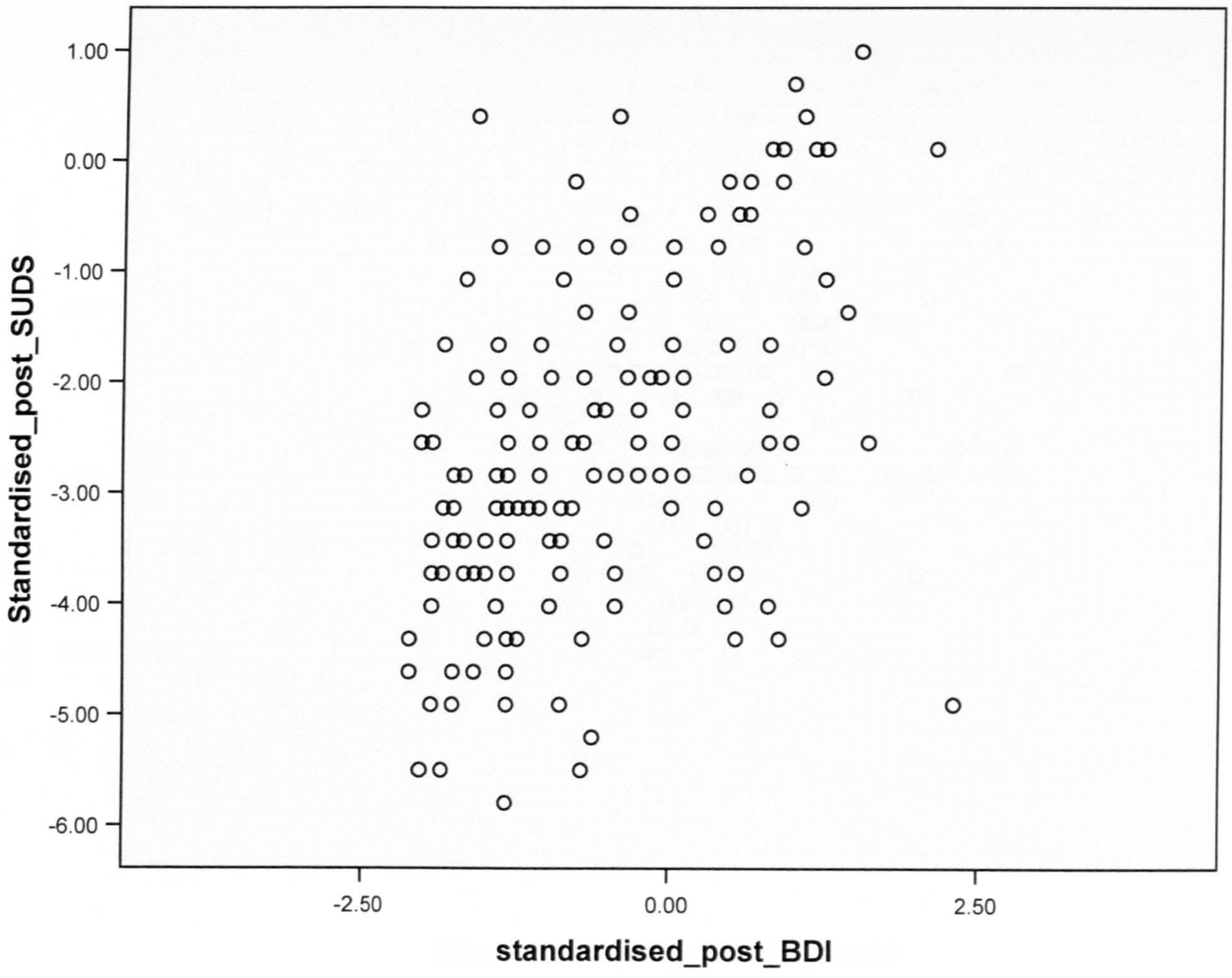
Appendix D continued: Screen shots of programme's SUDS measure questionnaire



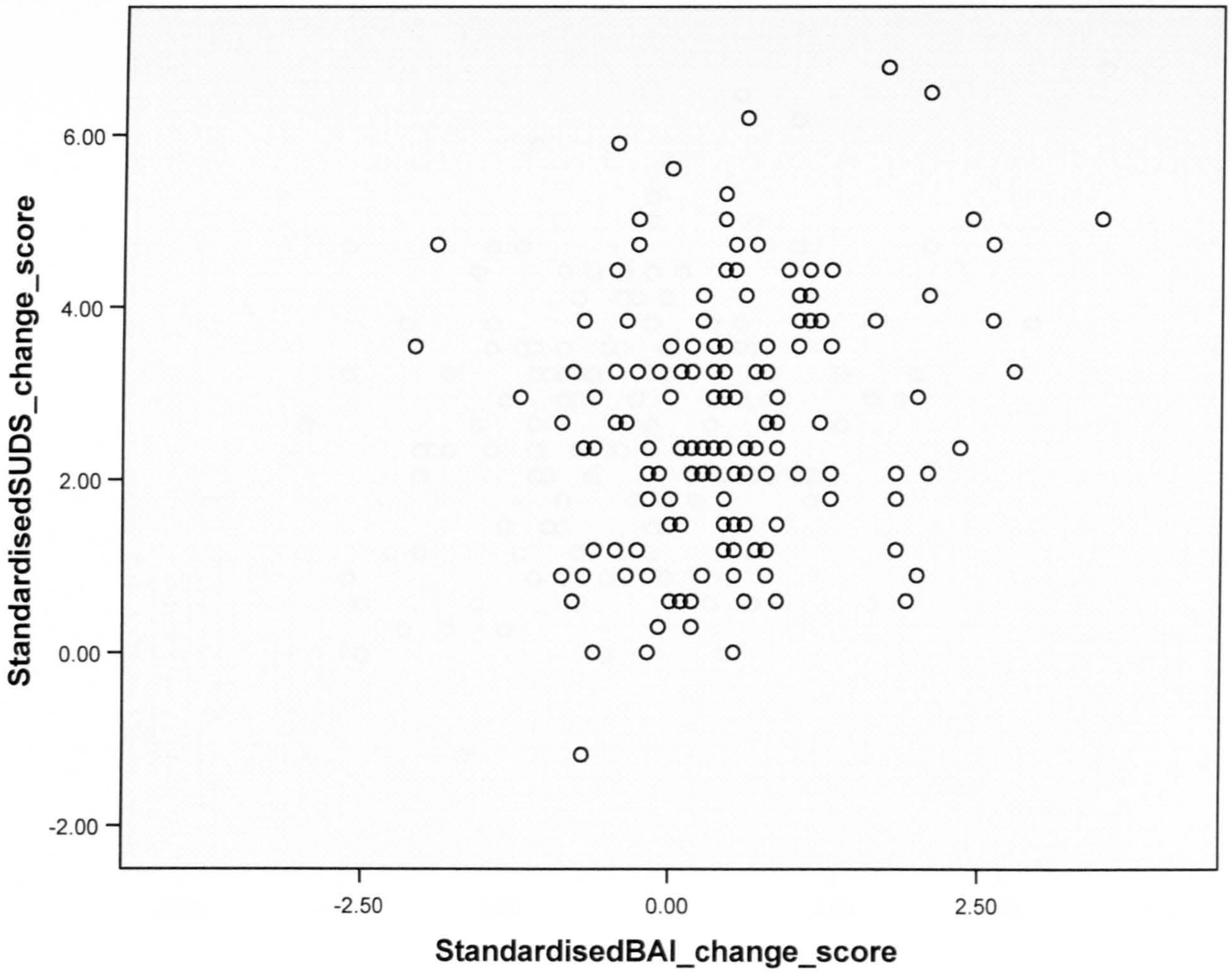
Appendix E: Comparison of standardised post-BAI and post-SUDS scores



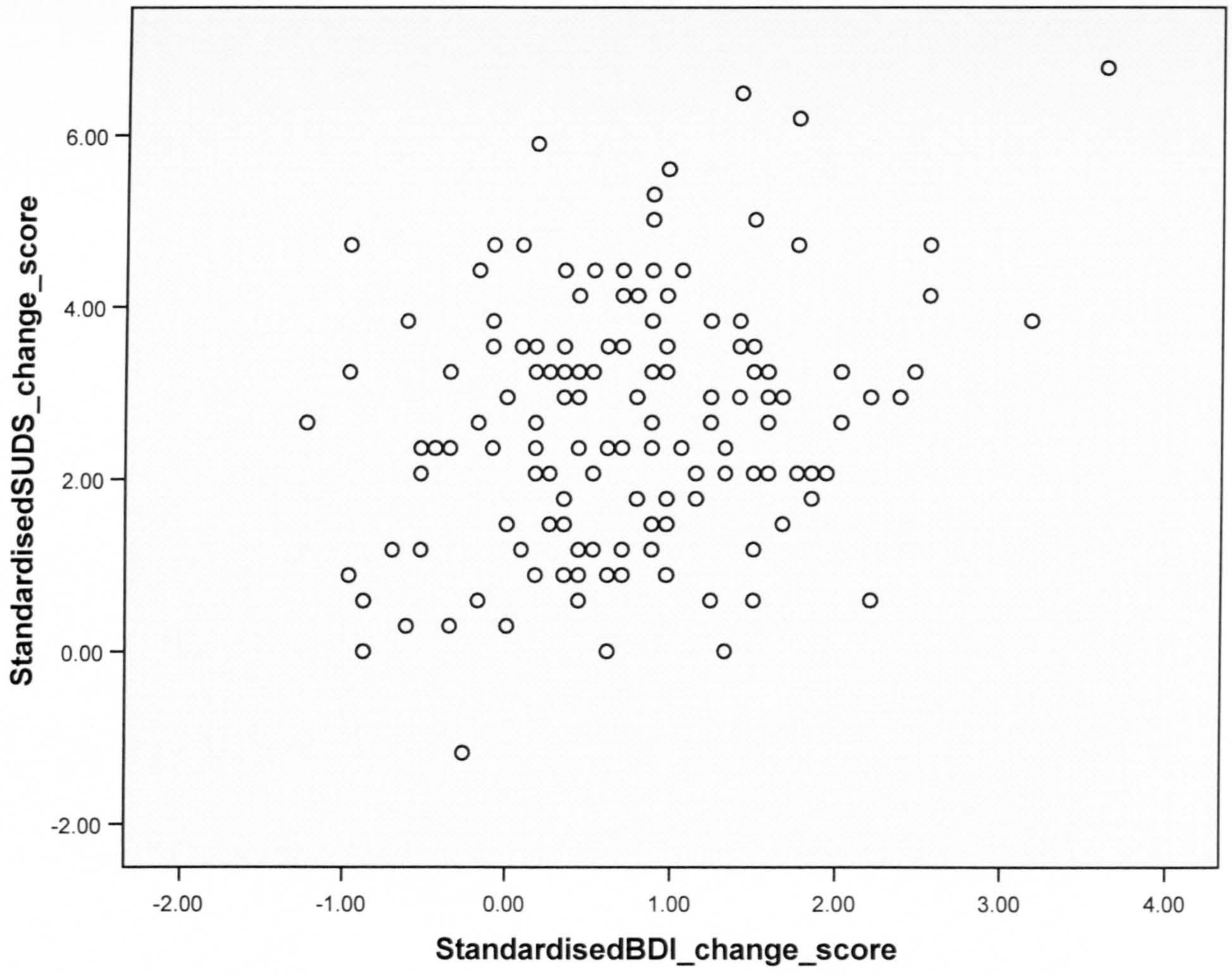
Appendix F: Comparison of standardised post-BDI and post-SUDS scores



Appendix G: Comparison of change in standardised BAI and SUDS scores



Appendix H: Comparison of change in standardised BDI and SUDS scores



Section C: Professional Practice

UNIT 1 - GENERIC PROFESSIONAL COMPETENCE

Unit 1 – Generic Professional Competence

* For the purposes of this case study, I have sought the express permission of any named person, service, or company to mention them by name. This document is otherwise completely confidential.

Summary of professional practice from October 2004 – September 2006

From October 2004 until December 2005, I worked for Ultrasis plc, a company responsible for the development and implementation of interactive healthcare programmes. I was employed as a full-time Programme Psychologist. My main responsibilities were: designing and delivering training in primary and secondary mental healthcare to university students and healthcare professionals nationally, directing and supporting a range of healthcare professionals in the implementation of computerised CBT for the management of stress, anxiety, and depression in primary and secondary healthcare, writing up research proposals and reports, presenting at national conferences and healthcare meetings, analysing national data, providing national and individual site data feedback and support, and training and managing psychology assistants.

During October 2004 - May 2005, I also worked part-time for the National Centre for Eating Disorders (NCFED), providing professional support and guidance to clients with eating distress/disorders. I also worked with clients who were very overweight or obese in order to reduce their weight using CBT techniques, NLP strategies, and nutritional and exercise advice and guidance. With NCFED I was also responsible for providing education on the issues surrounding eating disorders and obesity to sufferers' significant others and the public as a whole. This was achieved through the delivery of educational sessions and training to parents, teachers, and school pupils. Further to this role, I facilitated monthly Eating Disorder Association (EDA) support groups for those experiencing eating distress.

From December 2005, I changed roles within Ultrasis from employee to consultant. In this role my main responsibilities included: designing and delivering training in primary and secondary mental healthcare to university students and healthcare professionals nationally, developing research and service evaluations, and supporting Ultrasis employees and healthcare professionals in the implementation of computerised CBT for the management of stress, anxiety, and depression in primary and secondary healthcare. The primary difference between this role and my previous role as full-time Programme Psychologist is that I am currently much more involved in the development of research projects. Initially, I was also responsible for training new staff in the development and delivery of workshops and training sessions. This responsibility lay less with me as the company expanded nationally. My consultancy work involves two different contractual agreements: one focussing on delivering

training and assisting with the implementation of *Beating the Blues* and the *Relief Series* nationally, and the other focussing on the development and delivery of two research projects. One of the research projects is based in primary care and I am part of a team developing and managing the research project. The research focuses on how staff and service users have responded and adapted to the introduction of computerised CBT as a form of treatment for anxiety and depression in primary care. The other research project is based in a secondary/tertiary mental healthcare CBT service, and I am responsible for leading this particular piece of research. This research examines the use of *Beating the Blues* with service users diagnosed with anxiety and/or depression and frequently also struggling with physical and psychological co-morbidities.

I had initially started a research project linked with another operative project I was involved with: the implementation of *Beating the Blues* to be managed by the newly created role of the Graduate Mental Health Worker nationally. Unfortunately this project struggled to get off the ground, and as a result my doctoral research focus has shifted.

Unit 1.1 - Implement and maintain systems for legal, ethical and professional standards in applied psychology

1.1a - Establishing and maintaining systems for the security and control of information

Undertaking research, client assessments, service audits, and delivering group and individual interventions, has developed my ability to establish and maintain systems for the security and control of information. Obtaining ethical approval for my research allowed me to closely examine how service user data was stored and safe-guarded for the purposes of research.

I have established and implemented comprehensive systems and security procedures for the collation, storage, and retrieval of confidential information by keeping all NCFED clients' assessments and therapy-related notes in a locked drawer; and by protecting any data files or client reports on computers or laptops using individual passwords on top of a password for the computer or laptop. Research questionnaires containing potentially sensitive information are securely stored to safeguard confidentiality and names are coded to ensure anonymity.

I obtain necessary permission and written consent from clients prior to undertaking research and ensure that they are fully informed of procedures. I also obtain explicit agreement from clients outlining the scope of confidentiality in terms they comprehend, ensuring that any

explanations regarding anonymity, data protection, confidentiality, research or intervention methods, and consent are delivered for clear understanding. I also ensure that there is the time and space available for clients to ask questions should further clarity be required. When working as a facilitator in the EDA support group, I strove to construct a safe space for attendees by explaining the importance of maintaining group members' anonymity and complete confidentiality. Clients, with whom I did sessions as an NCFED practitioner, were also assured of complete confidentiality as part of the therapeutic relationship. I did however make sure that they understood that should they seem to be at definite risk to themselves or others, I may need to contact further professionals for support; and that I occasionally I may also need to discuss their cases with my supervisor. In supervision, I would however, maintain their total anonymity.

I reassure clients participating in research that they can withdraw from the research at any time, and that in doing so their medical care will not be affected. Where necessary, I debrief clients after they have participated in research, and I always ensure they have the opportunity to ask any questions regarding the research. I learnt about the ethical issues of conducting research through completing detailed ethics applications under NHS guidelines. This process taught me about the importance of: comparison/control groups in demonstrating the effectiveness of a delivered treatment, data sharing and data storage of NHS service user details in a research study, and providing potential participants with every detail of the way in which the study is to be performed. For example, who accesses the data, where the data is to be stored, and any conflict of interest affiliations amongst the researchers.

1.1b - Ensuring compliance with legal, ethical, and professional practices for self and others

I have established and implemented comprehensive systems for maintaining and monitoring my professional practice through having regular supervision with my supervisor - a Chartered Health Psychologist - , undertaking courses, attending conferences, seeking feedback from clients, colleagues, and other health professionals, reflecting on my own practice, and thinking of ways in which I can further develop (e.g. through observing other health professionals undertaking group work and individual assessments, or reading relevant instructive literature). Maintaining regular communication with colleagues working within the profession of psychology and other disciplines also facilitates my professional development.

Being responsible for training and managing the psychology assistants who have worked for Ultrasis plc, as well as training and assisting psychology assistants, healthcare workers, and graduate mental health workers nationally in implementing *Beating the Blues* requires me to

inform relevant individuals within multidisciplinary teams about their roles and responsibilities within these services. For example, making sure individual responsibilities with regards to risk management of *Beating the Blues* service users are clear, or defining work roles for psychology assistants and ensuring that they do not work outside their professional capacity or competency.

I have learnt to identify issues that might affect legal, ethical, and professional practice, and where necessary I have remained impartial, sought advice, and kept information confidential. For example, if a client comments negatively on a colleague's professional conduct; objectively I will seek advice; or if, when I am reviewing a research paper for academic reasons (sent to me in confidence), a client asks a question which has direct relevance to the research paper I am reviewing, I will not share the paper's details. I will however, encourage the authors to share their research findings as soon as possible if they report findings which require immediate attention and/or action in clinical practice.

1.1c - Establishing, implementing, and evaluating procedures to ensure competence in psychological practice and research

I have clearly defined boundaries for my professional practice. I am aware of my limitations, and I will not hesitate to refer clients should their problems surpass my professional abilities. The issues I have identified that I felt unable to work with in the past were: possible borderline personality disorder with OCD, severe anorexia or bulimia (including BMI of below 17.5), and issues around bereavement. I identified these issues through a combination of observation (severe anorexia is visible, borderline personality disorder becomes apparent during rapport-building in sessions), direct questions about behaviours and beliefs, and psychological measures such as the EAT-26. I will always explain to clients why it is I feel unable to work with them.

I have learnt to identify the strengths and weaknesses of staff carrying out psychological work. For example, within primary care mental health services, health professionals such as graduate mental health workers are competently trained to deliver brief interventions for depression and anxiety, and to assess, offer support, and manage risk for the *Beating the Blues* intervention. Receptionists in these services are not trained to give psychological assistance, and sometimes need to be trained to review *Beating the Blues* progress reports for risk when no other staff member is available. Their training needed to include a section describing exactly what CBT was and how it is used by therapists to work with service users struggling with anxiety and depression. They were also trained to understand where their responsibilities ended in their new role, and to know where to access any further training information they required. I was also aware that some of the psychology assistants who

worked for Ultrasis plc were more adept at assisting with training or statistical analysis and report writing than others. If appropriate, I ensured that extra training was provided to the necessary staff to improve their areas of professional weakness. If training could not be provided, I would ensure that identified assistants were not assigned tasks which they were incapable of performing.

Attending training courses (e.g. motivational interviewing, obesity management, depression masterclass), communicating with other qualified health practitioners, and attending conferences (e.g. with the National Institute for Mental Health in England [NIMHE], the BPS Division of Eating Disorders group, National Prison Mental Health framework) ensures that my capabilities, qualifications, and competences are kept up-to-date. I keep all my certificates of attendance filed together for reference. I also continually monitor the strengths and weaknesses in my current practice through reflection and supervision, and where critical weaknesses are identified, I seek ways to address them both personally and professionally.

Unit 1.2 - Contributing to the continuing development of oneself as a professional applied psychologist

1.2a - Establishing, evaluating and implementing processes to develop oneself as a professional health psychologist

Reflecting on professional experiences and using service evaluation measures (e.g. training evaluation or satisfaction questionnaires) with clients, whilst maintaining communication with clients and colleagues, helps me to identify my strengths and weaknesses and accordingly, any professional development needs. For example, I became aware during the course of delivering support and training to clients implementing the National Institute for Health and Clinical Excellence's (NICE) guidelines for depression in primary care that I was not fully familiar with all types of assessment or measurement scales that were employed clinically. As a result, I made a point of finding out what scales were used, and how they were used. During year one of my Stage II professional practice, I also became conscious of the fact that I was weak at the planning stage of projects; I liked to take action almost immediately. I managed to secure a place on a course, Service User Leadership Development, which had as one of its twelve modules "Project management". This stressed the importance of planning in delivering a successful project, and taught me useful tools for the planning process.

I actively seek and pursue opportunities to enhance and advance my professional performance, through observing and consulting with other health professionals, undertaking applicable courses, and attending relevant conferences. I have experience of identifying and

assessing potential work-related threats to my physical and emotional well-being through evaluation of clients' risk levels, and monitoring my own physical and emotional ability to deal with my professional, educational, and personal life simultaneously. When in 2005 my workload became too great, I recognised the signs of stress and distress in myself, and sought advice and support from colleagues, friends, and my supervisor. Having established a plan of action, I discussed my feelings with my manager and supervisor at work, whilst concurrently ensuring I was eating adequately and utilising stress management techniques (yoga, structured sleep patterns, cognitive reframing) to try and overcome these challenges.

1.2b - Eliciting, monitoring and evaluating knowledge and feedback to inform practice

Using evaluation and satisfaction forms with clients to encourage feedback, as well as organising evaluation meetings with my work supervisor and manager, and seeking constructive feedback from colleagues and my supervisor, has enabled me to recognise required improvements and make appropriate revisions to my professional practice. In situations where discontent about my practice has been expressed, I have made an effort to rectify the situation by discussing it with the relevant individual/group, and working towards a solution which will eliminate the unease. For example, recently a primary care counsellor and supervisor to a group of Graduate Mental Health Care Workers (PCGMHWs) in a London PCT contacted me because she, and her team of PCGMHWs, felt annoyed by an e-mail I had sent in response to their request about the evaluation of the *Beating the Blues* and PCGMHWs service in their PCT. She felt I had blamed the PCGMHWs for the lack of data supplied to me by them – despite their working very hard to implement the evaluation's protocol - , and that I had not honoured my commitment to feedback on the outcome of this national evaluation. On receipt of this e-mail I did feel annoyed that they expected an overall evaluation of users' data for their service from me when they had not supplied me with any data to work with. I felt pressurised by them to produce something from nothing. However, I reviewed my initial e-mail, and recognised that my use of the particular adjective "dismal" in relation to the overall results may have allowed them to become aware of my frustration at their request for an evaluation outcome in the face of inadequate data being supplied to me for such an evaluation. I apologised for this sentiment, acknowledged their powerlessness with regard to how many service users opted to use the *Beating the Blues* service, and expressed gratitude for their commitment. I assured them that when I had enough data I would inform them of the outcome, and that I had not been negligent in this respect. I also assured the supervisor that I would keep them up to date with any new research that could help to inform their practice, and thanked them for their e-mail. She was satisfied with this response, and expressed appreciation for my communication, saying she would pass my e-mail onto the PCGMHWs as I had requested.

Having regular supervision with both my work supervisor and my academic supervisor has enabled me to discuss any challenges or difficulties I am experiencing with clients, particular projects, or service/training development issues. Through being open to feedback and discussion around issues of best practice, I have further developed my skills in negotiation and diplomacy, and I have established respected and valued relationships with my clients and colleagues.

1.2c - Organising, clarifying and utilising competent consultation and advice

Having access to multidisciplinary teams, and regular meetings with psychology peers, in addition to receiving regular supervision enables me to identify, seek, utilise, and evaluate competent consultation and advice. For example, if I struggle to deliver in a particular area of practice, I always seek out advice and consultation from a colleague or suitably qualified individual, chosen by myself because of their professional experience and competence. In addition, I have developed my practical and medical knowledge regarding eating disorders and depressive medication through reading and attending conferences. I feel that in particular acquisition of medical knowledge in relation to the areas I am working in is very important, as it is vital for working effectively with service users. If there is anything I am unsure about I clarify with appropriate sources so that I am successfully able to integrate necessary new material into my own practice.

1.2d - Developing and enhancing oneself as a professional health psychologist

I regularly evaluate opportunities to extend and develop my professional competence through searching for and choosing study days and conferences that I feel would be beneficial for me to attend; for example, attending: a Depression Masterclass, the Faculty for Eating Disorders conference days, and "Delivering an Intervention" study day at City University. I am conscious of ensuring that my qualifications, capabilities, and views of myself as a psychologist are not misrepresented by explaining to health professionals and clients that I am a trainee Health Psychologist and not a Clinical Psychologist. This is a frequent issue due to the fact that there are greater numbers of Clinical Psychologists practising in health settings in the NHS. Health Psychologists are new to the health system, and therefore not many individuals are familiar with what we do. I regularly up-date my records with additional qualifications and competences I have achieved.

1.2e - Incorporating best practice into one's own work.

I actively seek sources of new and emerging knowledge and best practice through being a network member of the World Federation for Mental Health (WFMH), the London Development Centre, the BPS Special Group in Coaching Psychology, the BPS Sports Psychology Division, the Eating Disorder Association (EDA), the National Centre for Eating

Disorders (NCFED), the BPS Faculty for Eating Disorders, and the National Institute for Mental Health in England (NIMHE), receiving their regular email updates, and attending their meetings. In addition, reading selected recent articles in peer-reviewed journals helps to increase my knowledge. I also frequently have discussions with colleagues about recent developments in CCBT. Being aware of best practice models in this field is extremely important for me at present, as I am constantly delivering training to clients and presenting at conference days.

Unit 1.3 - Providing psychological advice and guidance to others

1.3a - Assessing the opportunities, needs and context for giving psychological advice

I have demonstrated competence in providing psychological advice and guidance to others through my clinical and professional practice. I am able to recognise, and where appropriate use, opportunities to offer advice on psychological issues, such as providing advice and training to health professionals on the role that health behaviours can play in managing anxiety and depression. I am also able to offer advice to my colleagues on training techniques for delivering training to diverse groups of health professionals, and advise those who wish to make certain health-related behaviour changes, such as eating more healthily, reducing alcohol intake, increasing exercise, on how to go about doing so. In addition, I research literature and other data appropriate to the needs and content of the advice and assess their applicability through preparing for meetings, presentations, and individual face-to-face sessions.

I have often offered advice on how health behaviours can influence anxiety and depression during training sessions when individuals are usually seeking to learn about ways in which to assist service users. Further to this, I have developed booklets on the ways in which exercise and diet can help to manage anxiety and depression. I have made these available to service users through health professionals that I work with, and to health professionals that I have met through membership mental health and psychology networks.

1.3b - Providing psychological advice.

The psychological advice I provide for clients, both healthcare professionals and service users, within the mental healthcare services is based on up-to-date, relevant, and accurate information. Advice is given within the appropriate activity cycle so that clients are not overloaded with more information than they may not be ready to usefully receive. Advice also needs to take into account, where appropriate, individuals' lifestyle and culture. Immediate feedback from the clients is very important in determining the continued level and content of advice given.

When working with NCFED and EDA clients, initial assessment of their own and their carers' understanding of eating disorders was important. Advice was then presented in a comprehensive and appropriate manner in order to dispel any misconceptions. Similarly, in presenting advice to health professionals regarding the management of depression and anxiety, it is necessary to ensure that any misconceptions that could lead to prejudices or unsuitable care are addressed. In addition, I remain constantly aware of the potential impact advice can have on the family/healthcare professional/carers and the role that this plays in rehabilitation and recovery. For example, identifying and dispelling the fears and misconceptions of carers early on in rehabilitation process will help prevent them becoming too 'overprotective' and reinforcing the 'sick role' of the patient.

If I wish to use copyrighted or confidential material to disseminate advice, I ensure that I obtain the necessary permission from the relevant individual/group.

1.3c - Evaluating the outcome of advice.

Training and therapeutic support sessions in group and individual settings are monitored, and the content of psychological advice is adjusted in response to feedback. By gauging trainees' reactions and responses to workshop material, reinforcing any information that clients appear to find more challenging, and explaining concepts in different ways, especially when explaining the protocol of research projects, advice can be tailored to need. Evaluating the impact of psychological advice is undertaken by assessing service users' behaviour and mood change over time, the impact of any training delivered, and by evaluating the effectiveness of *Beating the Blues* service implementation.

Unit 1.4 - Providing feedback to clients

1.4a - Evaluating feedback needs of client groups

I have been aware, both in the therapeutic feedback situation and in the client feedback service situation, of using appropriate counselling and communication skills to develop, monitor, and deliver the feedback. Therapeutically, I was able to identify the feedback needs of clients through assessing the severity of their eating disorders and the stage of change they were in, and then selecting stage/time-appropriate feedback. This sensitivity was different to that required when working with service development clients implementing *Beating the Blues.* In this context, feedback needs were focussed on evaluation of the *Beating the Blues* in terms of service user usage. Awareness of when feedback would be constructive in the development of the service was very important.

1.4b - Preparing and structuring feedback

Preparation of individual *Beating the Blues* service's feedback requires me to structure and organise the feedback's content to in order to facilitate understanding of the feedback. Generally this feedback is delivered via reports which are then discussed in a follow-up meeting. I use tables and graphs to supplement and highlight the worded explanations in the reports, and try to keep the analyses of the data fairly simple. Depending on the service's needs, extra analyses can be performed, and these are explained both in the reports and the meetings.

In individual sessions with eating disordered clients, I ensured that I tailored my feedback at a level appropriate for the individual client. Certain clients were very well-informed, others misinformed, and some understood very little about their own maladaptive behaviours. Throughout I focussed predominantly on not overloading the clients with too much information and being clear about the main message that I wanted to get across, such as, for example, the link between events, and their thoughts and behaviours in sustaining disordered eating.

Identifying the role of others in the client system (e.g. family/carers/managers/supervisors) in reinforcing feedback and providing positive support to clients in the adoption of self-management strategies or service improvement delivery techniques, is a central feature of the feedback process. For example, with eating disordered clients it is important to recognise possible negative aspects of support individuals/systems, such as carers becoming too 'overprotective', as well as highlighting the psychological issues involved in the carer's role.

1.4c - Selecting methods of communicating feedback

In order to deliver feedback, training, and health psychology messages and knowledge, I have developed skills in selecting the appropriate communication media and formats of delivery to meet the needs of clients. I am also aware of considering the purposes for which the feedback is to be used. For example, I am able to decide on the main messages I would like conveyed in a therapeutic session where the aim is to encourage clients to share their thoughts, behaviours, and feelings. A tone of support, understanding, and non-judgemental collaboration would be very important when providing feedback in this type of context. Occasionally, it has been inappropriate for me to provide feedback, for example, in situations where the requested information is incomplete or unavailable, or where I am not personally qualified to provide the required feedback. This often occurs when clients are discussing the use of CCBT with me. For example, there has been no research done on whether "normal"

range depressed or anxious clients are adversely affected by the use of CCBT as a therapeutic tool, or if CCBT can be used to treat post-natal depression. This is feedback that I am often asked for, and in response I explain why I am unable to provide the requested feedback. In addition, where confidentiality may be compromised by the provision of feedback, feedback is not given. For example, if a parent requested feedback from a session I had conducted with her adult daughter, I would have explained why providing this feedback would be inappropriate.

1.4d - Presenting feedback to clients

My experience and competence in presenting feedback to clients in individual and group settings, as well as to small and large audiences of health professionals, has increased substantially in the last two years. Maintaining continuous sensitivity to clients' responses and needs, and continually 'reflecting in action' helps me to monitor training, feedback, and therapy sessions, and adapt appropriately to any new or unpredictable situations. Assessing clients' levels of knowledge enables me to deliver feedback messages in suitable formats and at appropriate levels.

Working with eating disordered clients required that I was sensitive to the ambivalence that relinquishing their eating disordered behaviours may produce, and was therefore aware of providing information relevant to their current stage of change. Monitoring and evaluating the degree of clients' understanding, assimilation, and acceptance was done by recapping on previous sessions and providing homework tasks. In presenting feedback to clients on their *Beating the Blues* service development, feedback needs to be presented in the time allocated. Evaluating feedback processes is achieved by reflecting on training sessions and meetings, monitoring completion of evaluation questionnaires, and facilitating discussions on client views of services.

Personal and Theoretical Reflections

While reflecting on my professional practice, I also considered the health psychology approaches and models I have found useful. I have applied models of health behaviour and behaviour change when designing interventions for eating disorders (see Case study optional competency Unit 5.1); and in delivering training on the introduction of *Beating the Blues* into the NICE (2004) stepped care model for the treatment of depression.

Health psychology theory also provided essential instruction for the successful management of anxiety and depression. While the traditional biopsychosocial model of health psychology can be applied with both eating disordered and depressed and anxious clients, particularly on an individual level, I have also found other approaches relevant and interesting. The

transthereotical model (Prochaska & DiClemente, 1982) has been very useful in informing me about meeting my clients, whether in therapy, in training, or in change/intervention management, at the relevant stage. Techniques gleaned from motivational interviewing have assisted me to encourage clients to move to the next stage in the cycle of change, but I have also developed the ability to respect and tolerate stages which seem to consist of inaction for periods of time.

McDermott (2002) proposed that health psychology should strive to promote well-being and prevent illness, adopting a positive psychology agenda. He initially proposed this positive psychology agenda in order to establish health psychology as apart from clinical psychology, and in doing so allow health psychology a separate working niche. However, in 2004 the BPS Special Group of Coaching Psychology was established. Anthony M. Grant (2006) defines coaching psychology as "*...the systematic application of behavioural science to the enhancement of life experience, work performance and well-being for individuals, groups and organizations who do not have clinically significant mental heath issues or abnormal levels of distress.*" Coaching psychology has also adopted a positive psychology agenda. In the *Coaching Psychologist* in December 2006, Kasia Szymanska even suggests a number of appropriate strategies which may be suggested in the coaching context if a client seems to be suffering from mild to moderate depression. The first is exercise (a health behaviour espoused by health psychologists), then teaching the client to identify their negative thinking patterns, challenge these patterns, and replace them with more realistic ways of thinking (basic cognitive therapy valued by counselling and clinical psychologists), and finally asking the client to use self-help texts and/or self-help CDs, for example, 'Beating the Blues' available at www.ultrasis.com and 'Overcoming depression' at www.calipso.co.uk (self-help options offered as a treatment choice to the service user: an option for all those working in mental health services).

So, although there is no doubt that striving to promote well-being and prevent illness, and adopting a positive psychology agenda is a very important goal for health psychology, it is not necessarily going to emphatically "clarify the scope and identity of health psychology" and "secure its future" (McDermott, 2002, p. 45). There will always be overlap between the different divisions and subdivisions psychology. As such, perhaps the focus should shift from divisional training to the identification of the necessary professional competence and experience allowing individuals to work in specific areas of practice. I still believe that Health Psychologists can also make a valuable contribution to promoting a positive agenda with individuals who suffer from, or have suffered from, illnesses or disability. The World Health Organisation in 1946 defined health as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." During my practice, I have come

to accept that "complete physical, mental, and social well-being" has different definitions and levels of desirability for different individuals. I believe it is our responsibility as Health Psychologists to promote amongst our colleagues and ourselves a more holistic view of our clients, whilst encouraging and supporting desirable behaviour change.

I have also further developed my awareness of the influence that cultural background and age can have on all aspects of health and ill-health, and I think it is essential that Health Psychologists be aware of the working frameworks that individuals' dominant cultures and stages of lifespan provide. Interestingly, the academic health behaviour models, which are used to explain the adoption and maintenance of health behaviours, rarely include age per se as a contributing factor. Perhaps Health Psychologists need to more frequently take into account the role of age and the effect it has on behaviour, attitude, motivation, intention, and control beliefs (Murphy & Bennett in Penny, Bennett, & Herbert, 1994). This is very important as evidence from the Global Burden and Disease study (Murray & Lopez in Marks, Murray, Evans, & Willig, 2000) suggests that health trends will be determined mainly by the ageing of the world's population. In Western society people are living longer, but increasingly, detrimental lifestyle patterns and health behaviours are contributing to present levels of mortality and morbidity (Schomer, Wadlow, & Dunne, 1996).

Finally, on a more personal note, during my development over the past two years I have come to realise the importance of awareness of word usage and self-review in communication, especially with e-mail messages, in order to avoid misunderstandings and incorrect perceptions of the tone of such messages. The "Service User Development Course" modules also highlighted how words such as "patient" and "treatment" can often serve to strengthen power imbalances rather than neutralise them.

As a Health Psychologist, I will continue to take the time to search for and identify opportunities to further my communication skills and my professional development, as well as continue to utilise supervision for that same purpose. The discipline of completing logbooks in a structured format will certainly help me with my online BPS CPD logbook completion and reflection in years to come. I will ensure that I maintain the habit of reflecting on my own practice in order to achieve the best standards of practice that I can. I feel that my research and practical experience over the last two years has enabled me to demonstrate generic professional competence as a Health Psychologist.

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UNIT 3 – Consultancy

Unit 3 – Consultancy Competence

* For the purposes of this case study, I have sought the express permission of the contact client and the primary client to be able to mention them by name. This document is confidential and anyone who reads it for purposes of examination must at all times abide by the points laid out in the BPS code of conduct regarding confidentiality.

Description of the work: The contact client (Ultrasis), the client who initially contacted me (Schein, 1999), had requested that I deliver training on the implementation of the *Beating the Blues* programme to Primary Care Graduate Mental Health Workers (PCGMHWs) employed by the primary client, Bristol South and West Primary Care Trust (B&SW PCT). Bristol South and West Primary Care Trust were identified as being the primary client as they were the individual(s) who ultimately owned the issue being worked on (Schein, 1999). *Beating the Blues* (BtB) is a computer-based CBT programme specifically designed for the treatment of depression and anxiety. The National Institute for Clinical Excellence (NICE) in their technological review recommended that BtB be used as a treatment of choice for managing anxiety and depression in primary healthcare.

Research shows that treatment for depression and anxiety is very important in improving both individuals' mental health and their adoption of certain health behaviours. With well-being essentially being a symbiotic relationship between mental and physical health, both physical and mental problems need to be addressed when dealing with any mental health issues. This ensures the best possible treatment outcomes for patients.

For example, healthy eating is a desirable health behaviour in terms of the positive effect it can have on our physical health as well as our mental state (Marks, Murray, Evans, & Willig, 2002). However, despite the positive effects that balanced eating can have on mood, depression can often adversely affect eating behaviour by contributing to the consumption of a poor diet (Rogers, 2001). In a study by Bonnet et al. (2005), presence of depression in hypertensive patients was significantly associated in both men and women with unhealthy diet, as well as with inactivity in men. They concluded that even minor forms of depression may impact on adhesion to health behaviours. Additionally, Katon and Ciechanowski (2002) in a study on depression and chronic illnesses concluded that depressive symptom severity is associated with poorer diet and medication regimen adherence, functional impairment, and higher health care costs in primary care diabetic patients.

The field of psychoneuroimmunology also continues to demonstrate how mental ill health can adversely impact upon physical well-being and more specifically, on immune functioning.

Setting and participants: The training took place in Bristol in a meeting room at the Bristol Royal Infirmary Hospital on 20/02/06 from 2pm – 4:30pm. Four Primary Care Graduate Mental Health Workers (PCGMHWs) and their commissioning manager attended the training.

Unit 3.1 – Assessment of requests for consultancy

Unit 3.1a – Identify, prioritise and agree expectations, needs and requirements of clients

I was contacted by Ultrasis regarding whether or not I would be available to carry out a training session on a certain date for one of their clients, Bristol South and West PCT (BS&W PCT). I interviewed the particular individual who had made the request via telephone, and elicited the contact client's expectations and needs for this piece of consultancy. The desired outcome of the training meeting would be that the PCGMHWs and their commissioning manager felt competent and motivated to implement a successful *Beating the Blues* service. We agreed that the commissioning manager, who initially was not invited to attend, needed to be invited to attend the training to ensure that she fully understood what implementing the programme entailed.

I decided to interview the PCGMHW liaising with me about the training session regarding the level of staff attendance, as I was concerned that there seemed to be no PCGMHW mentors or supervisors attending the training. She assured me that their commissioning manager was to act as their overall supervisor. After the training session, they would deliver brief training themselves to their onsite mentors, who were General Practitioners (GPs) at the practices where they were individually based. They were expected to largely develop and manage the *Beating the Blues* service themselves, guided by the commissioning manager, and each other. The contact client's priority was to get the primary client's *Beating the Blues* service up and running as soon as possible. This meant empowering the primary client with the knowledge and support for establishing the programme as an integral part of their primary mental health care service. I decided that as part of the training I would attempt to elicit any potential barriers that the PCGMHWs foresaw in the implementation of *Beating the Blues*. I would then pass this information onto the contact client (Ultrasis) so that they could intervene at the appropriate level if required.

The contact client (Ultrasis) also expected me to establish a good relationship with the primary client (BS&W PCT's PCGMHWs), and to negotiate the final needs, requirements, and expectations of the primary client for this piece of consultancy.

Again via telephone, and using e-mail, I interviewed the PCGMHWs and their supervisor to establish their learning expectations, needs, and requirements. My main aim was to be able to prioritise these within the time allocated to the training meeting, and in doing so maximise the potential effect of the consultancy. They stated that it would be helpful to know the following things about *Beating the Blues*: "how the programme is run", "what we need to do with patients before and after each session", "how we tackle the question regarding suicidal ideation", and "any problems you anticipate may occur". They had already seen the programme demonstrated briefly in another PCT, but still felt that they required much more detail about the programme.

I assessed the requirements of the contact client (Ultrasis) as being realistic, and agreed to complete this piece of consultancy work for them in the time allocated. Any extra time required would need to be negotiated.

Unit 3.1b – Review psychological literature and other information sources for relevant advice, research findings, research methods and interventions

Having worked with *Beating the Blues* as a product and a service, it was part of my job to be aware of the literature and research surrounding computerised CBT (CCBT). Prior to the training I summarised the research literature I was aware of, and sent e-mail requests to experts in the field to send me any further pertinent literature. A final research summary (see Appendix A) was sent to the PCGMHWs and their commissioning manager a few days before the training, so that they could review it and look up any of the references for further information if they so desired.

I also reviewed the successful implementation of *Beating of Blues* at a number of primary and secondary care sites nationally, and I discussed with a handful of PCGMHWs, who had already implemented *Beating the Blues*, what they felt was important for the implementation of CCBT in primary care. I re-examined feedback reports I had created for other primary care sites in order to ensure that I had a good idea of the programme data across different primary care services. This preparation enabled me to answer any questions and present clear recommendations about *Beating the Blues* delivery. In order to maintain confidentiality I was not able to allow the trainees to have copies of any of these reports or databases, but where possible – when

express permission had been granted – I was able to pass on contact details of individuals who were willing to share further information or advice.

Unit 3.2 – Plan Consultancy

Unit 3.2a – Determine aims, objectives, criteria, theoretical frameworks and scope of consultancy

The aims and objectives for the consultancy were identified, developed (see previous Unit), and recorded. This was done in the form of the training presentation (which was sent to both the contact client and primary client before the training for review) (see Appendix B), and in an e-mail to the contact client for final agreement (see Appendix C).

Schein (1999) talks about the expert model where the client decides that they have neither the time nor the necessary skills to "fix" an identified "problem" so they call in an expert. They request that the expert manages the "problem" and provides a solution. This was a very appropriate implementation framework for this piece of consultancy as the contact client (Ultrasis) had called me in to act as the expert in providing training to the primary client. The contact client identified the solution (training) to the "problem" (untrained staff implementing *Beating the Blues*) and I, as the expert consultant, was expected to provide it.

In providing the actual solution (the training), I wanted to be effective and efficient as possible. I reviewed different training theories for information on learning styles and corresponding teaching styles. I had attended a seminar in March 2005 at City University which had focussed on the theories of Dr Peter Honey - regarded as an expert on learning -, and their application in making people more effective in the work place. The learning styles presented were developed by Peter Honey and Alan Mumford - based upon the work of Kolb. They identified four distinct learning styles or preferences: Activist, Theorist; Pragmatist, and Reflector. Honey and Mumford (1986) recommend that, in order to maximise one's own personal learning, each learner ought to: understand their learning style, and seek out opportunities to learn using that style.

Interestingly however, they also state that to be an effective learner, individuals should also develop the ability to learn in other styles as well. By implication, trainers need to be aware of the fact that not everyone learns in the same style, and therefore that their training delivery style needs to vary according to their audience. However if, as a consultant, I do not have the time to assess everyone's learning style then Felder's (1996) paper on the principles and applications of four learning style models (Felder-Silverman, Kolb, and models based on the Myers-Briggs

Type Indicator and the Herrmann Brain Dominance Instrument) concludes that the choice of a model is almost irrelevant: teaching designed to address all dimensions on any of the models is likely to be effective. All of the models lead to more or less the same instructional approach. In response to this information, I focused on thinking about the possible individual differences amongst the learners/trainees, and worked towards creating a training session that would be varied and interesting for all the trainees attending the session.

The scope for this piece of consultancy was very focussed. I had been asked to organise, develop, and deliver a 2 - 2 ½ hour training session to PCGMHWs and their commissioning manager in Bristol. Possible constraints were: the amount of time I had for the training (not much time for in-depth exploring of implementation), the room space - which was not apparently shut off completely from the main corridor -, and the availability of a data projector.

The outcome criteria for the training were: to carry out the training in the named location in the allocated time, to obtain a score of 6 or 7 on each of the assessment questions (see Appendix D), to obtain a score of 8 or more on the evaluation measures (Appendix E), to supply any requested extra learning material within 2 weeks of the training session, and to write a final report to the client, which they deem to be satisfactory, within 1 week of the training.

Unit 3.2b – Produce implementation plans for the consultancy

I produced a consultancy plan (Appendix F) documenting the identified training needs and requirements, resources, time-scales, actions and expected outcomes. This, along with a budget (Appendix M), was submitted to the contact client for review and agreement. The contact client communicated that they were satisfied with the budget and the plan, so no changes were made.

Unit 3.3 Establish, develop, and maintain working relationships with clients

Unit 3.3a – Establish contact with clients

The contact client (Ultrasis) contacted me via e-mail requesting that I carry out the training on an agreed date. This date and time was confirmed with the primary client (Bristol South & West PCT). I agreed that I would submit my consultancy plans and final consultancy presentation to the contact client prior to delivering the training. They would then be able to review the plans and request any changes immediately. This was negotiated and agreed via telephone. I

emphasised that I was contactable via e-mail and mobile phone should they wish to raise concerns at any stage prior to delivery of the training session.

As no storage of information was required, and discussion of individual staff members, patients, or specific sensitive company information was not part of the consultancy, issues around confidentiality did not need to be addressed. Obviously in discussing particular clinical examples in training to enhance learning, I always maintain the confidentiality and anonymity of service users, and different healthcare services and centres. Only if express permission has been given to discuss a particular healthcare service by name, would I do so. I made a point of reminding the contact client of this, emphasising that as a member of the British Psychological Society (BPS), I adhere to the BPS's professional guidelines and ethical codes of conduct.

Unit 3.3b – Develop and maintain consultancy contracts with clients

I discussed with the contact client (Ultrasis) the options for a working relationship with this particular piece of consultancy. The expectation from the contact client was that I would submit my training plans and the training presentation to them, and then make any amendments required on receiving their feedback prior to the training session. I would also be available on e-mail and via mobile phone to discuss any issues which may arise. After the training session I would deliver a report on the session, and then follow up on any actions laid out in the plan. I would communicate any further post-training correspondence with the trainees (primary client) to their account manager. I also assured the contact client that I would establish contact with the primary client, and ascertain their specific needs and desired learning outcomes for the training to ensure that their expectations were also met.

The contact client did express concern that as the primary client's commissioning manager had mentioned she would only be arriving in the second half of the training session, she may need to request another meeting to fully fulfil her training needs. The contact client was keen to avoid the expense of another session. They therefore suggested that while I was training the PCGMHWs, perhaps the contact client's account manager could simultaneously do some individual work with the commissioning manager. We discussed the logistics of this with regards to room space, and the quality of my training versus information from the account manager, and decided that she should be given the chance to listen to what I had to present (as well as the discussions and questions from the PCGMHWs), and then offered the option of a follow-up telephone call from the account manager to clarify any specific issues.

A working agreement in the form of a consultancy plan (Appendix F) was drawn up, and submitted to the contact client for review prior to the training.

Unit 3.3c – Develop and maintain working relationships with the clients

Working relationships appropriate to the contact client's (Ultrasis) needs, as well as the primary client's (BS&W PCT) needs, were discussed and negotiated. It was agreed that I would carry out all of the communication with the primary client from the point at which I was introduced via e-mail as the consultant trainer. I would continue to communicate with the trainees after the training session to follow up on any further related training needs. It was clearly articulated that management of the primary client's needs after completion of the training consultancy, would be handed over to Ultrasis's account manager. Communication of these roles was negotiated via telephone calls, and between myself and the account manager immediately after the training session – in a face-to-face discussion. A final report (Appendix G) for review and feedback was submitted to the client (Ultrasis). As this was a short consultancy, regular reviews were not necessary. The communication that did take place was consistent with what had been agreed in the consultancy plan (Appendix F).

Unit 3.3d – Monitor and evaluate working relationships and practices with clients

I used an assessment form and a separate evaluation form to monitor and evaluate the consultancy. These were submitted with the consultancy plan for review (Appendices D & E) prior to the training. After the training, these were interpreted as part of the follow-up report (Appendix G) to the contact client (Ultrasis).

Unit 3.4 – Conduct consultancy

3.4a – Establish systems or processes to deliver the planned advice, research, interventions or activities

I put together a proposed plan (Appendix F) for the training along with an evaluation (Appendix E) and a separate assessment form (Appendix D). Once these were submitted and reviewed by the contact client (Ultrasis), I forwarded the training presentation for review to the primary client (BS&W PCT's GMHWs). I wanted to establish whether or not the training presentation had the potential to meet their desired training outcomes. I was concerned that we would not have enough time to complete the full training required, and so as part of my plan (Appendix F) I suggested to the contact client that I send demonstration disks and a research literature review to the primary client ahead of the training session. The contact client agreed to supply the

demonstration disks for this purpose. The roles and responsibilities of the contact client's staff were laid out in the consultancy plan (Appendix F). These were to be agreed upon prior to the training.

On the day of the training session, I contacted the Bristol Royal Infirmary department providing the training room, to confirm that the room would be available for the time required; and to confirm that there were enough chairs and a table available in the room for the actual training session. After a discussion with the department's administrator regarding my concerns about the open room space booked for the training, I was able to secure a more suitable separate training room. I also established that I would need to arrange tea, milk, and biscuits for the training tea break.

I ensured that the training presentation was on my laptop, and that I had an extra copy on my memory stick as a backup option. I printed out copies of the training presentation, the evaluation forms, and the assessment forms (Appendices B, D & E) for the trainees. I also printed out a copy of NICE's final technological appraisal (quick reference guide) (Appendix H), and ensured that I had laminated copies of the programmes patient report (Appendix I), patient summary (Appendix J), and examples of session patient printouts (Appendices K).

I made it clear that in order to maintain correct levels of confidentiality I would always respect the confidentiality and anonymity of patients, as well as that of different healthcare services and centres, when discussing particular clinical examples in training to enhance learning. Only if express permission had been given to discuss a particular healthcare service by name, would I do so.

Unit 3.4b – Implement the planned advice, research, interventions or activities

The training took place at and on the agreed place and date. I started the session by briefly reviewing the site's safety procedures, and establishing that everyone understood these fully in the event of an emergency. This was followed by reviewing the trainees' desired learning outcomes, and asking them to focus on making sure that these were achieved during the session. During the training session I encouraged questions throughout, and I facilitated discussion in areas where it was felt further discussion and information was needed.

As none of the trainees had completely reviewed the demonstration disks or read the research literature summary, I briefly touched on the information contained in these 2 items. This was

done to ensure that they would be able to follow the training presentation without experiencing any confusing gaps. I did however, encourage them to review the material as soon as possible, and direct any questions arising from their review to myself on the contact e-mail or mobile number supplied.

Unit 3.4c – Close the consultancy

I wrote up a final report (Appendix G) for the contact client (Ultrasis) documenting the outcomes of the consultancy in relation to its objectives. In this report I discussed the fact that the commissioning manager may not have had adequate training, and how this could be addressed. I also promised to follow up on the PCGMHW who had scored lower in the assessment than the agreed objectives, and had also evaluated the training below the desired objective levels. I assured the contact client that I would make sure that this trainee was given any extra training and knowledge that he felt he required via telephone and e-mail. The final report (Appendix G) was e-mailed to the contact client for their review and feedback. This report included recommendations for improvements to the training and necessary follow-up actions. Receipt of the report was acknowledged, and I was thanked for my role in the training.

Unit 3.5 – Monitor the process of consultancy

Unit 3.5a – Review the consultancy

The assessment and evaluation forms were collected and reviewed. The trainees scored 6 or 7 on all the assessment questions, except for the questions: "Do you understand how to facilitate *Beating the Blues* as an intervention for anxiety and depression in primary healthcare?" and "Do you feel you have increased your knowledge around tackling the barriers to implementation?". One of the trainees (the PCGMHW who had been leave during the week prior to the training session) scored only 5 for both questions. Scores of 8 or more were achieved on 2 of the evaluation forms for all of the questions. On 1 of the evaluation forms however, scores of only 6 for all 3 of the questions were obtained. This evaluation form was completed by the same PCGMHW who had scored 5 on the 2 questions cited above.

I have e-mailed the low scoring PCGMHW to ascertain why his training needs were not met, and I will endeavour to supply him with any further information that he requires (using e-mail and telephone), ensuring that he is ultimately satisfied with the level of training received. I also requested information about any suitable improvements to the training that he would recommend (in order to improve the evaluation scores he had assigned).

The contact client reported that they felt that their needs and expectations had been met within the consultancy (Appendix L).

Unit 3.5b – Implement changes identified by the monitoring process

There were no real changes necessary during the consultancy. The only change that occurred after the consultancy plan was agreed, was a room change, but as the training was still in the same department, it was not a change that I felt was worth documenting. The monitoring process did however alert me to the fact that one of the trainees needed extra input after the training.

Unit 3.5c – Review client expectations, needs, and requirements within the consultancy

The needs and requirements of the contact client (Ultrasis) were reviewed in the week prior to the training session to ensure that any necessary changes could be made and established. I ensured that the contact client was clear about the fact that I would be monitoring the training session during the session to fulfil the requirements of the primary client (BS&W PCT). I also communicated with them regarding the content of the training session, and reviewed this regularly during the training session to allow for changes in their needs, or additions to their requirements.

Although the training session was brief in duration, the trainees had received a copy of the training presentation a few days prior to the training (once it had been reviewed as satisfactory by Ultrasis) for their personal review. Initially, the training was due to take place in a venue on the outskirts of Bristol. I managed to negotiate a more central location, and notified both clients (Ultrasis and BS&W PCT) of this immediately via e-mail. As the BS&W PCGMHWs were very happy to attend the training at the new suggested location, I confirmed the booking of the venue. The new training venue was recorded in the consultancy plan (Appendix F).

Unit 5.3d – Implement quality assurance and control mechanisms

A consultancy plan (Appendix F) was drawn up documenting the actions and targets for the consultancy. This plan, along with the training presentation (Appendix B) and the assessment (Appendix D) and evaluation forms (Appendix E), was sent to the contact client (Ultrasis) 6 days prior to the training session for their agreement and feedback. Once the training presentation (Appendix B) was agreed with the contact client it was sent - 5 days prior to the training session - to the primary client for their review and agreement prior to training. Any changes – of which

there were none - would have been identified, documented, and then communicated to all the trainees attending the training, as well as to the relevant contact client's staff. As agreed, the outcomes from the monitoring and evaluation procedures were included in the final consultancy report, and e-mailed to the contact client's relevant staff members within a week of the training session for their review and feedback.

Unit 3.6 - Evaluate the impact of the consultancy

Unit 3.6a – Identify evaluation needs and design evaluation

Ideally for this kind of consultancy work, the evaluation needed to be short, reliable, and informative. The sample was very small, consisting of only 4 trainees (with only 3 present for the entire training session). The purpose of the evaluation was to provide information about whether or not the trainees' desired learning outcomes had been met, and whether or not they felt competent and knowledgeable in the chosen learning areas. Time-consuming assessments would have been inappropriate for such a brief training session, and so I chose to design 2 short forms: one for assessment and one for evaluation of my training. This style of assessment and evaluation has been used very successfully in past training sessions I have delivered. The assessment form (Appendix D) was designed to contain all the desired learning outcomes in 4 questions, with an extra question on the NICE guidelines for depression. I had identified the NICE guidelines as a very important part of providing comprehensive training. These 5 questions were answerable on a rating scale, with 0 being "having no understanding at all", and 7 "understanding completely". A final space was left under the question: "Is there any other information which you feel you require for the successful implementation and facilitation of *Beating the Blues*", for trainees to add any of their further thoughts or needs. The evaluation form (Appendix E) also used a rating scale format for answering the first 3 questions, and then asked trainees to write down any further thoughts they had on improving the training, as well as any further identified training needs. The rating scale style was used because it is quick for trainees to complete, providing feedback almost immediately.

Unit 3.6b – Implement planned evaluation

Once the evaluation and assessment forms were completed by the trainees, the data was analysed. As agreed with the contact client in negotiation of the consultancy outcomes, each trainee was treated as an individual separate from the group in the analysis. It was very important that every PCGMHW felt as if their desired learning outcomes had been met, improving the probability of successful implementation of *Beating the Blues* (the final outcome

desired by the contact client [Ultrasis]). The evaluation design for this type of consultancy work had been reviewed and discussed on previous occasions by both my academic supervisor and my consultancy supervisor. The amendments for the evaluation of this training session were not design-, but content-related. The conclusions drawn from the results were written up in a report (Appendix G) which was submitted to the contact client for review.

Unit 3.6c – Assess the outcomes of the evaluation

A final report (Appendix G) presenting the conclusions, recommendations, and priorities, was written up. This report was submitted to the contact client (Ultrasis) for review. Dr Kaye Dalton also requested an afternoon appointment 2 days after the training session to discuss the training presentation and its potential use by others, including herself, within the contact client organisation. Further actions were decided upon from the information gathered via the formal evaluation, as well as via a more informal evaluation done by myself through observation during the session. Required further actions were written up as recommendations in the final report (Appendix G).

Personal Reflections

In preparation for this consultancy, I reviewed all my notes from the consultancy-focussed seminars I had attended, sought supervision and consultation from trusted sources, reviewed the Stage 2 Health Psychology handbook, and prepared myself psychologically by identifying clearly for myself the role of the consultant in different projects. This preparation meant that I could be clear about my own goals at every stage of the consultancy.

In this particular consultancy obtaining clarity around the training needs was not difficult, but identifying the needs of the contact client was a challenge. I would have liked to have be able to employ the Process Model's (Schein, 1999) methodology of exploration and scoping, but the contact client had employed me as the expert, so rather than negotiate, I set the parameters of the consultancy and looked to the contact client for agreement. As it was a fairly short term consultancy – although part of a much larger contract – the actions involved needed to be very focussed and were extremely time dependant. This meant that I needed to chase both the contact client and the primary client to ensure that pre-training actions took place before the training session. Developing and maintaining a relationship simultaneously with essentially two different clients was demanding. Ideally their desired training outcomes needed to correspond. There were small differences in their needs, and I worked to match these by ensuring that I communicated (with consent) their needs and desired outcomes to each other. Part of this

communication was negotiation to create a match in needs, and the establishment of goals. As a psychologist, goal setting is a skill I feel very comfortable with.

Because the self is involved in consulting, I found that I needed to frequently step back and reflect to ensure that I was totally aware of my role in the development of the consultancy, as well as how this role may impact on both clients. Although I was employed in an expert capacity by the contact client, I tried to remain aware, especially during the training session, of the fact that I did not have to remain in this role. On occasions it seemed more appropriate to adopt the process model, and work together with the primary client in achieving their desired learning outcomes and solutions in their own areas of practice.

Two skills in particular have been vital to me as a new consultant - listening and self-confidence. As I listened during preparation and delivery of the training, I realised that my clients were providing me with valuable insight into how I could be helpful to them, what they needed in terms of challenges and support, and what was truly important to them. In addition, once I realised that my years of education and clinical work were directly applicable to consulting, my confidence improved. My increased confidence was apparent to my clients and allowed them to trust me in delivering the training and guiding their clients.

Many of the interviewing and diagnostic skills that I have learned in past clinical work can also be easily transferred to consulting work. Realising that I have these skills to my advantage has further increased my confidence, serving as a building block upon which I can advance my consulting skills. Another set of skills, which my work and academic experience has enabled me to develop, is the ability to work with a diversity of individuals. This is extremely important in providing me with the capacity to effectively harness relationships with my clients.

As I continue to work as a consultant, I look forward to increased development personally and professionally. It is a challenging skill set to develop, as the work is constantly shifting and changing, continually demanding professional and personal vigilance in order to be able to offer clients quality consulting.

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ultrasis
interactive healthcare

Research Summary for Beating the Blues

6th Jan 2006

This document provides a summary of research completed and in progress for Beating the Blues.

Published Papers

1) Development and initial testing of Beating the Blues

Proudfoot, J., Swain, S., Widmer, S., Watkins, E., Goldberg, D., Marks, I., Mann, A. &.Gray, J.A. (2003b). The development and beta-test of a computer-therapy program for anxiety and depression : hurdles and preliminary outcomes. *Computers in Human Behavior,* **19,** 277-289.

Abstract
This paper describes the development and beta-test of an eight-session computer therapy program for anxiety and depression, 'Beating the Blues'. Developed by a multi-functional team, the program uniquely combines multi-media interactive computer technology with empirically-validated cognitive-behavioral therapy (CBT) techniques and crucial non-specific aspects of therapy. The paper describes how the project proceeded through its development phase, the unexpected hurdles that occurred and the lessons learnt. As an integral part of the development, the program was beta-tested with 20 patients. Despite the small numbers and the fact that the eight sessions were completed at an accelerated rate, feedback was positive. Patients reported it was helpful, easy to use, and of those who had had previous treatment for their problems, the majority indicated it compared at least as well as other forms of therapy. The beta-test
also highlighted where changes were needed to the program. These were implemented prior to release of the program for the next phase of testing. Lastly, the beta-test indicated that the program had sufficient promise for it to be evaluated formally by randomized controlled trial.

2) RCT of Beating the Blues in Primary Care Services: Cohort I

Proudfoot, J., Goldberg, D., Mann, A., Everitt, B., Marks, I. & Gray, J. (2003a). Computerized, interactive, multimedia cognitive behavioural therapy reduces anxiety and depression in general practice: a randomised controlled trial', *Psychological Medicine*, **33,** 217-227.

TEXT BOUND INTO THE SPINE

Appendix A

Abstract

Background. Cognitive-behavioural therapy (CBT) brings about significant clinical improvement in anxiety and depression, but therapists are in short supply. We report the first phase of a randomized controlled trial of an interactive multimedia program of cognitive-behavioural techniques, Beating the BluesTM (BtB), in the treatment of patients in general practice with anxiety, depression or mixed anxiety/depression.

Method. One hundred and sixty-seven adults suffering from anxiety and/or depression and not receiving any form of psychological treatment or counselling were randomly allocated to receive, with or without medication, BtB or treatment as usual (TAU). Measures were taken on five occasions: prior to treatment, 2 months later, and at 1, 3 and 6 months follow-up using the Beck Depression Inventory, Beck Anxiety Inventory and Work and Social Adjustment Scale.

Results. Patients who received BtB showed significantly greater improvement in depression and anxiety compared to TAU by the end of treatment (2 months) and to 6 months follow-up. Symptom reduction was paralleled by improvement in work and social adjustment. There were no interactions of BtB with concomitant pharmacotherapy or duration of illness, but evidence, on the Beck Anxiety Inventory only, of interaction with primary care practice. Importantly, there was no interaction between the effects of BtB and baseline severity of depression, from which we conclude that the effects of the computer program are independent of starting level of depression.

Conclusions. These results demonstrate that computerized interactive multimedia cognitive behavioural techniques under minimal clinical supervision can bring about improvements in depression and anxiety, as well as in work and social adjustment, with and without pharmacotherapy and in patients with pre-treatment illness of durations greater or less than 6months. Thus, our results indicate that wider dissemination of cognitive-behavioural techniques is possible for patients suffering from anxiety and/or depression.

3)RCT of Beating the Blues in Primary Care Services – Cohort I & II combined analysis

Proudfoot, J., Ryden, C., Everitt, B., Shapiro, D., Goldberg, D., Mann, A., Tylee, A., Marks, I., & Gray, J. (2004). Clinical effectiveness of computerized cognitive behavioural therapy for anxiety and depression in primary care. *British Journal of Psychiatry, 185,* 46-54.

Following randomisation of a further 107 participants (in addition to the 167 reported upon above: cohort I) from four additional general practice groups, analysis of the expanded sample confirmed the efficacy of *Beating the Blues* within sub-samples based on clinical, demographic and setting variables. The program's efficacy was unaffected by

concurrent drug treatment, duration of pre-existing illness, severity of existing illness or treatment setting. However, in relation to anxiety, significant benefits of using *Beating the Blues* were found only for patients with more severe illness at outset (those scoring 18 or more on the Beck Anxiety Inventory on entry to the study). Of 128 patients commencing *Beating the Blues* in the combined sample, 89 (70%) completed all eight sessions of the programme and the post-treatment outcome measures, suggesting that patients are as likely to persist with computerized as traditional treatment approaches. On completing the programme, patients reported significantly higher treatment satisfaction than those receiving a comparative 8 weeks of usual care.

4) Cost effectiveness of Beating the Blues

McCrone, P., Knapp, M., Proudfoot, J., Ryden, C., Cavanagh, K., Shapiro, D., Ilson, S., Gray, J., Goldberg, D., Mann, A., Marks, I.M. & Everitt, B (2004) Cost-effectiveness of Computerised Cognitive Behavioural Therapy for Anxiety and Depression in Primary Care. *British Journal of Psychiatry. 185,* 55-62.

McCrone *et al.* present an analysis of the cost effectiveness of offering *Beating the Blues* in general practice settings (N=274). In the context of the superior clinical outcomes of *Beating the Blues*, no significant differences were found in healthcare service costs between the two groups, indicating the computer treatment is a cost-effective intervention. Moreover, patients receiving *Beating the Blues* evidenced a significant cost advantage in terms of practitioner certificated days' absence from work. Further, cost-utility analysis revealed benefits at a highly competitive cost per Quality-Adjusted Life Year.

5) Service Development in Primary Care

Fox, E., Acton, T., Wilding, B. & Corcoran, S. (2004) Service development report: an assistant psychologist's perspective on the use of computerised CBT in a GP practice in Barnet. *Quality in Primary Care, 12,* 161-165.

Fox et al (2004) present their experience of implementing a Beating the Blues service within a primary care setting. The pilot service, which was managed locally by an assistant psychologist, received 62 referrals, in a ten month period, of whom 56 were suitable for the program. 39 of these patients attended an initial appointment with the service, and 27 of these completed all eight interactive sessions of Beating the Blues. The paper goes on to discuss the local and personal experience of the authors in implementing the program.

6) Service Development in a Community Mental Health Team

S. Van Den Berg, D.A Shapiro, D. Bickerstaffe, & K. Cavanagh (2004) Computerized cognitive-behaviour therapy for anxiety and depression: a practical solution to the shortage of trained therapists. *Journal of Psychiatric and Mental Health Nursing, Vol 11,Issue 5, p 508*

Computerized cognitive–behaviour therapy (CCBT) programmes have been developed to help meet the enormous need for evidence-based psychological treatment of common mental health problems in the context of a severe shortage of trained therapists to meet that need. Randomized controlled trials have confirmed the efficacy of such programmes. We present the experience of a community mental health team (CMHT) resource centre with one such programme, *Beating the Blues*, together with outcome data on a small sample of its clients. We conclude that experience and data, taken together, demonstrate the practical benefits of CCBT in routine practice.

7) Computerised therapies for common mental health problems: review and meta-analysis

Cavanagh, K & Shapiro, DA (2004) Computer treatment for common mental health problems. *Journal of Clinical Psychology*, **60**, 239-251.

This paper presents a review of the development of computer treatment programs over 4 decades and reports a small meta-analytic study demonstrating large effect sizes in favour of computer treatments for anxiety and depression for pre- /post- treatment outcomes and usual care/waitlist comparators.

Manuscripts not yet published

Further, as yet, unpublished studies will provide further evidence of the broad applicability of Beating the Blues in primary and secondary care

1)Open-trial Beating the Blues in Primary and Secondary Care

Manuscript accepted for publication in British Journal of Clinical Psychology

Cavanagh, K., Shapiro, D., Van den Berg, S., Swain, S., Barkham, M. & Proudfoot, J. The effectiveness of computerised cognitive-behavioural therapy in routine primary care.

Appendix A

This open study supports the results of the randomised controlled trials and indicates that the findings of the RCTS can be generalised to routine care environments.

2) Open-trial Beating the Blues in Primary and Secondary Care: treatment expectations, acceptability and satisfaction

Manuscript submitted for publication

Cavanagh, K., Shapiro, D., Van den Berg, S., Swain, S., Barkham, M. & Proudfoot, J. Computerised cognitive-behavioural therapy in routine primary care: acceptability and satisfaction

This study presents an analysis of post-therapy feedback data on i)features of the program, ii) satisfaction with the treatment and iii) the overall helpfulness of the treatment when Beating the Blues is used in routine care. Overall patient's rated all three aspects of the therapy very positively.

3) Randomised Controlled Trial : Predictors of response

Manuscript submitted for publication

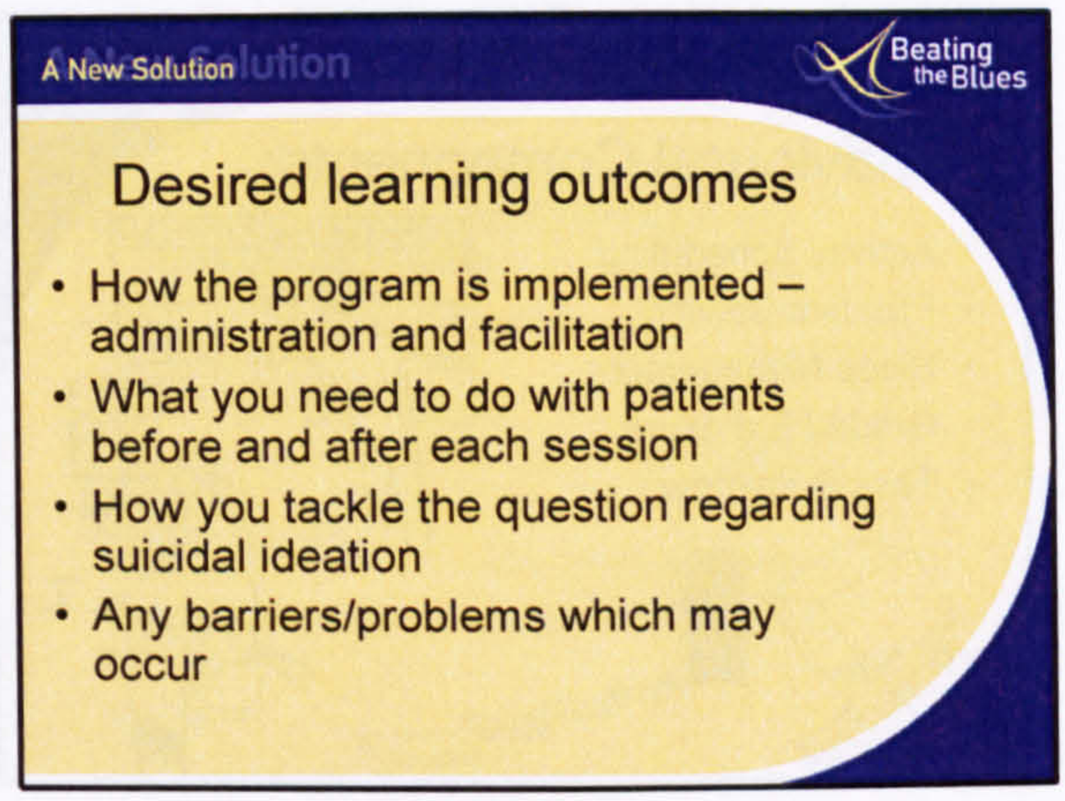
Ryden, C., Proudfoot, J., Shapiro, D.A., Goldberg, D., Marks, I,. Tylee, A, Gray, J
Predictors of response to computerised cognitive therapy: randomised controlled trial

This study presents an analysis of whether patient characteristics are determinants of responses to CCBT

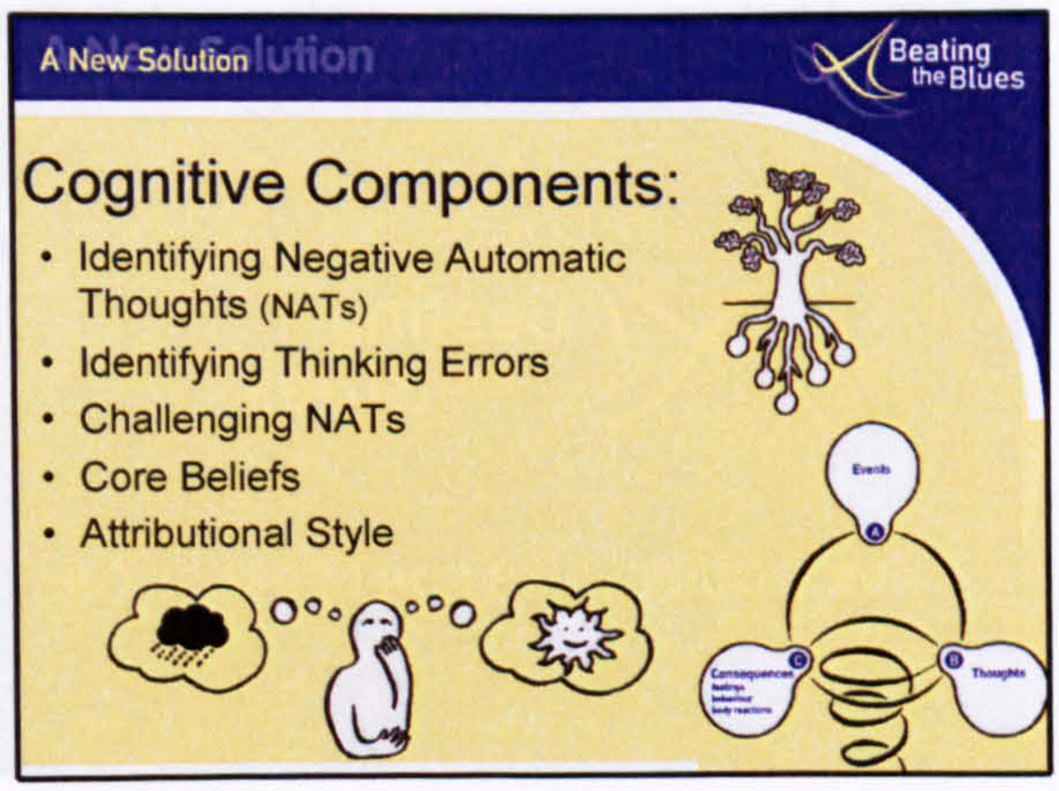
Appendix B

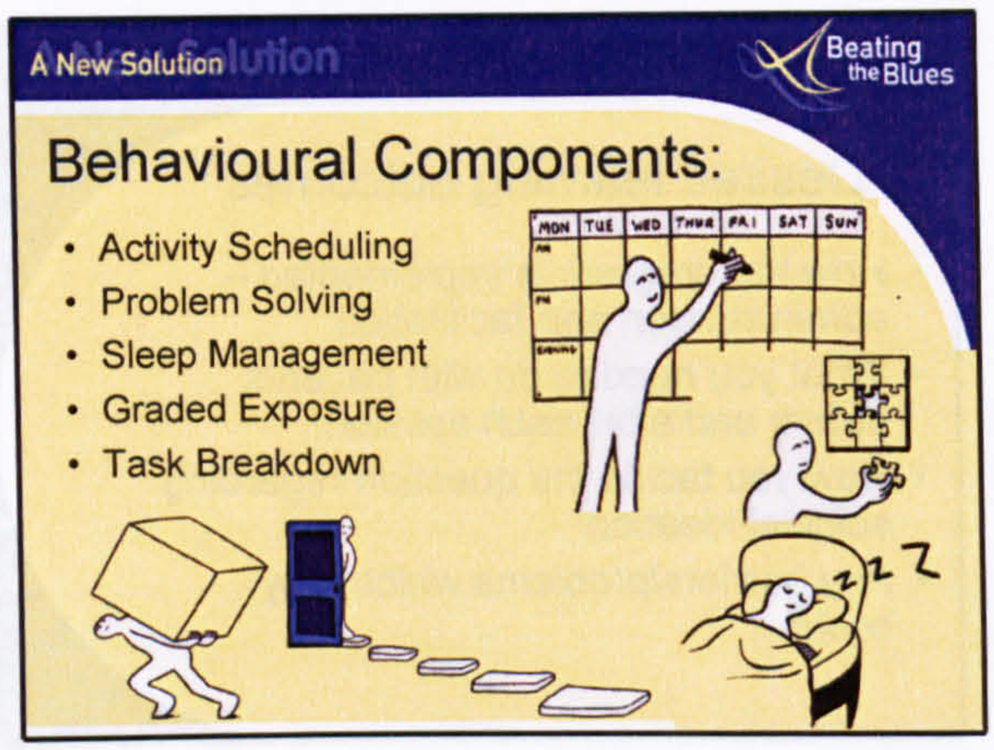
Beating the Blues

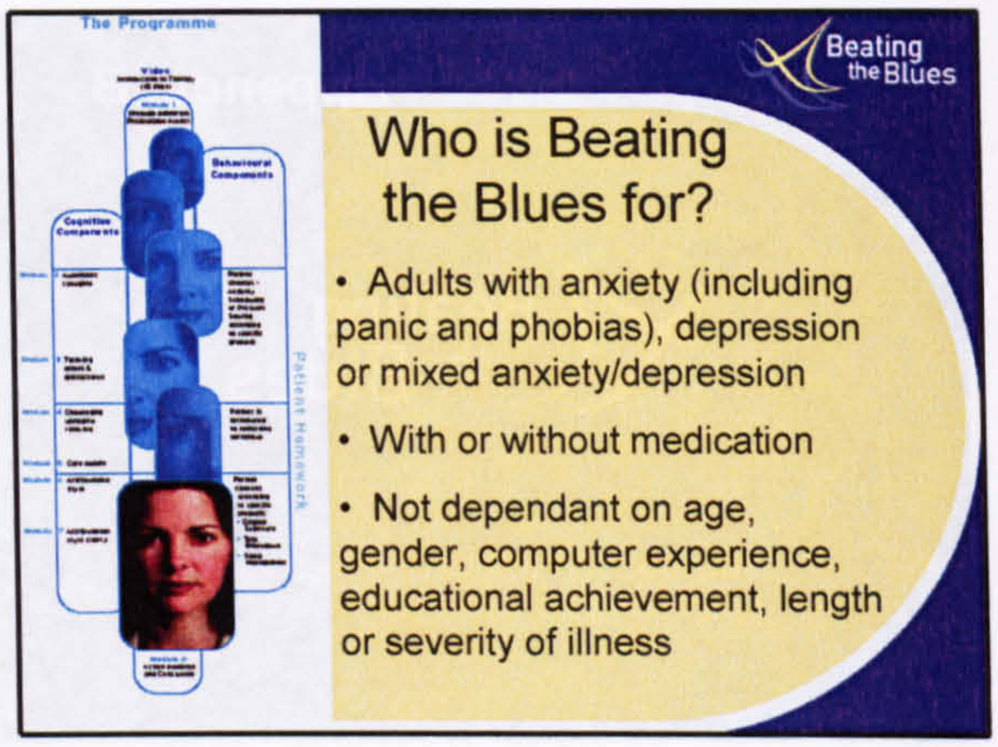
Introduction to Beating the Blues
Despina Learmonth (Ultrasis Ltd)

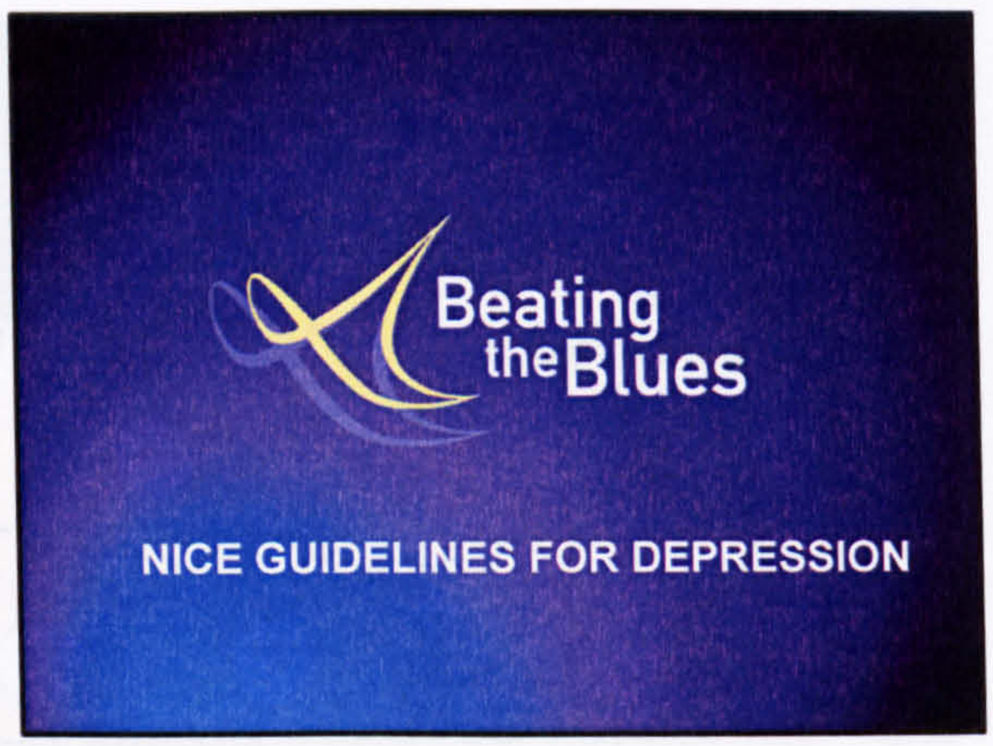


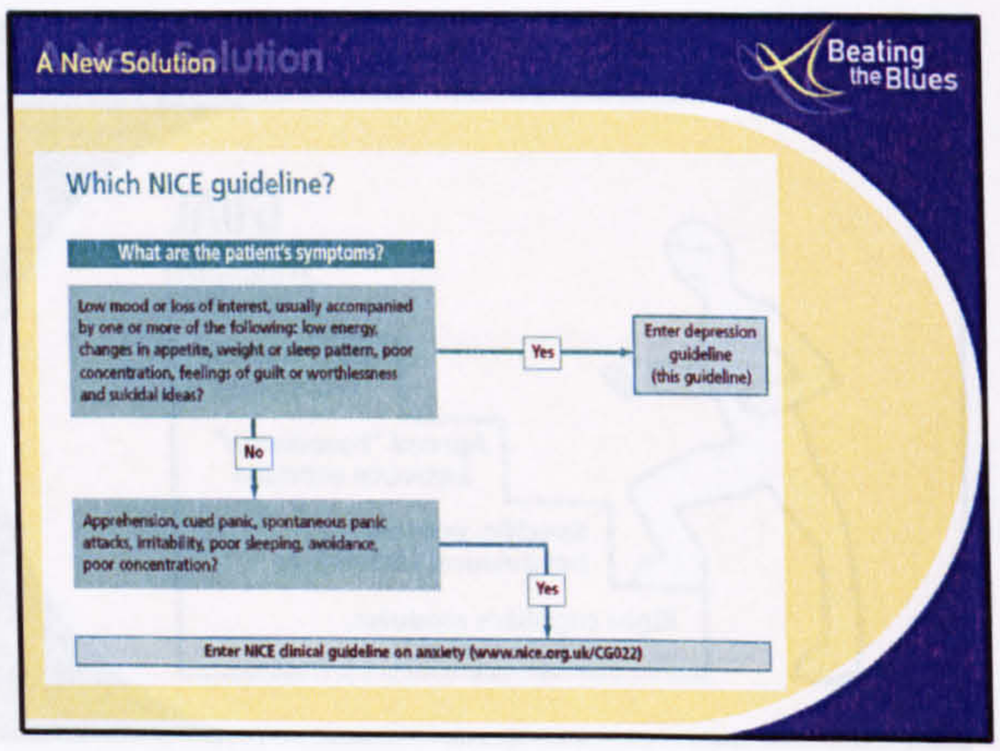





A New Solution
Beating the Blues
Behavioural Components:
• Activity Scheduling
• Problem Solving
• Sleep Management
• Graded Exposure
• Task Breakdown
MON TUE WED THUR FRI SAT SUN


The Programme
Beating the Blues
Who is Beating the Blues for?
• Adults with anxiety (including panic and phobias), depression or mixed anxiety/depression
• With or without medication
• Not dependant on age, gender, computer experience, educational achievement, length or severity of illness


Beating the Blues
NICE GUIDELINES FOR DEPRESSION


A New Solution
Beating the Blues
Which NICE guideline?
What are the patient's symptoms?
Low mood or loss of interest, usually accompanied by one or more of the following: low energy, changes in appetite, weight or sleep pattern, poor concentration, feelings of guilt or worthlessness and suicidal ideas?
Yes
Enter depression guideline (this guideline)
No
Apprehension, cued panic, spontaneous panic attacks, irritability, poor sleeping, avoidance, poor concentration?
Yes
Enter NICE clinical guideline on anxiety (www.nice.org.uk/CG022)

A New Solution

Beating the Blues

The stepped care approach

Step 1: Recognition in primary care and general hospital settings

Step 2: Treatment of mild depression in primary care

Step 3: Treatment of moderate to severe depression in primary care

Step 4: Treatment of depression by mental health specialists

Step 5: Inpatient treatment for depression

	Who is responsible for care?	What is the focus?	What do they do?
Step 5:	Inpatient care, crisis teams	Risk to life, severe self-neglect	Medication, combined treatments, ECT
Step 4:	Mental health specialists, including crisis teams	Treatment-resistant, recurrent, atypical and psychotic depression, and those at significant risk	Medication, complex psychological interventions, combined treatments
Step 3:	Primary care team, primary care mental health worker	Moderate or severe depression	Medication, psychological interventions, social support
Step 2:	Primary care team, primary care mental health worker	Mild depression	Watchful waiting, guided self-help, computerised CBT, exercise, brief psychological interventions
Step 1:	GP, practice nurse	Recognition	Assessment

Step 2

A New Solution

Beating the Blues

Step 1: Recognition of depression in primary care and general hospital settings

- In primary care and general hospital settings, screen patients with:
  - a past history of depression
  - significant physical illnesses causing disability
  - other mental health problems, such as dementia.
- Bear in mind the potential physical causes of depression and the possibility that depression can be caused by medication.
- Use two screening questions, such as:
  - "During the last month, have you often been bothered by feeling down, depressed or hopeless?" *and*
  - "During the last month, have you often been bothered by having little interest or pleasure in doing things?"

A New Solution

Beating the Blues

Step 2: Treatment of mild depression in primary care

Watchful waiting

- In mild depression, if the patient does not want treatment or may recover with no intervention, arrange further assessment – normally within 2 weeks.

Sleep and anxiety management

- Consider advice on sleep hygiene and anxiety management.

Exercise

- Advise patients of all ages with mild depression of the benefits of following a structured and supervised exercise programme. Effective duration of such programmes is up to 3 sessions per week of moderate duration (45 minutes to 1 hour) for between 10 and 12 weeks.

Guided self-help

- For patients with mild depression, consider a guided self-help programme that consists of the provision of appropriate written materials and limited support over 6 to 9 weeks, including follow up, from a professional who typically introduces the self-help programme and reviews progress and outcome.

A New Solution

Beating the Blues

NICE technology appraisal

www.nice.org.uk → Technology appraisals →

Appraisals in development → Depression and anxiety - computerised cognitive behaviour therapy (CCBT) (review)

↓

Appraisal Consultation Document: Computerised cognitive behaviour therapy (CCBT) (review)

NICE's preliminary recommendation is that all patients with mild or moderate depression are offered CCBT as a choice for treatment within the stepped-care approach for the management of depression in primary and secondary care.

A New Solution

Beating the Blues

Administering Beating the Blues

-First appointment

-Logging patients onto Beating the Blues

-Second appointment, and onward & upwards!

-Administrative functions

A New Solution

Beating the Blues

1st Appointment

- Patient to view Introduction to Therapy Video
  - Emphasise no computer experience is necessary
  - Beating the Blues has been shown to very effective in treating anxiety and/or depression
  - Talk about other healthful behaviours
- End of Session
  - Book 2nd appointment

A New Solution

Beating the Blues

Logging on

- Note the name and date in exactly the same way as they type it in on the patient diary
- Encourage patients to use mothers maiden name as password
- Emphasise confidentiality
  - Looking away
  - Encryption
- Emphasise that they don't need any computer experience
- Patients can repeat modules if they wish
- Helpers location must be made clear in case of any questions

A New Solution

Beating the Blues

2nd Appointment

- Beginning of session
  - Give the patient a "patient diary" for storing:
    - Session summaries
    - Weekly projects
    - Weekly progress reports
  - Make sure the patient is at ease with the computer
  - Sit with the patient as they Log in for the first time
- End of Session
  - Make a copy of the weekly progress report for your files
  - Book 3rd appointment

A New Solution

Beating the Blues

3rd-9th Appointment

- Booking the patient in and out
- Necessary outcome measures
- Print off progress reports for your files

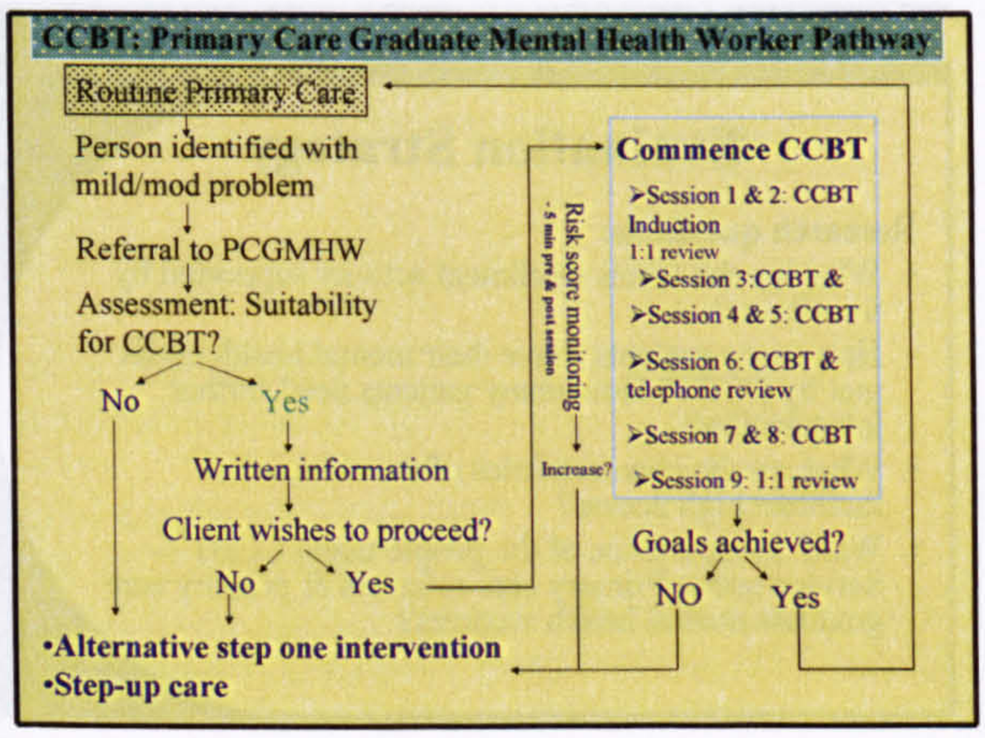
A New Solution

Beating the Blues

Outcome Measures



- **PHQ – 9**
- **HADS**
- **CORE – OM** (in electronic format as part of ***Beating the Blues***)



A New Solution

Beating the Blues

Assessment: Suitability for CCBT?

The following have no correlation to clinical outcomes:

- Gender / Age
- Previous computer experience
- Education achievements
- Length of illness

A New Solution

Beating the Blues

Check patient does not meet any of the exclusion criteria

- Active suicidal ideas
- A current or lifetime diagnosis of psychosis or organic mental disorder such as dementia
- Current alcohol or drug dependence

A New Solution

Beating the Blues

Explain & give information re: CCBT

- **Highlighting the following:**
- BtB is a computerised cognitive-behaviour therapy program based on well-established effective techniques.
- Consists of eight therapy sessions of approximately one hour and three questionnaire sessions with regular review sessions
- Patients do NOT need to have any experience of computers, but will be given introduction to the programme
- Follow-up with written information

A New Solution

Beating the Blues

The purpose of CCBT reviews

- Monitor symptom severity & level of risk
- Check progress with the programme
- Identify any problems that may have arisen since initial assessment
- Identify obstacles to continuing to use CCBT
- Final review – assess progress towards goals
- Step-out / up if needed at any stage
- Inform primary care team of progress.

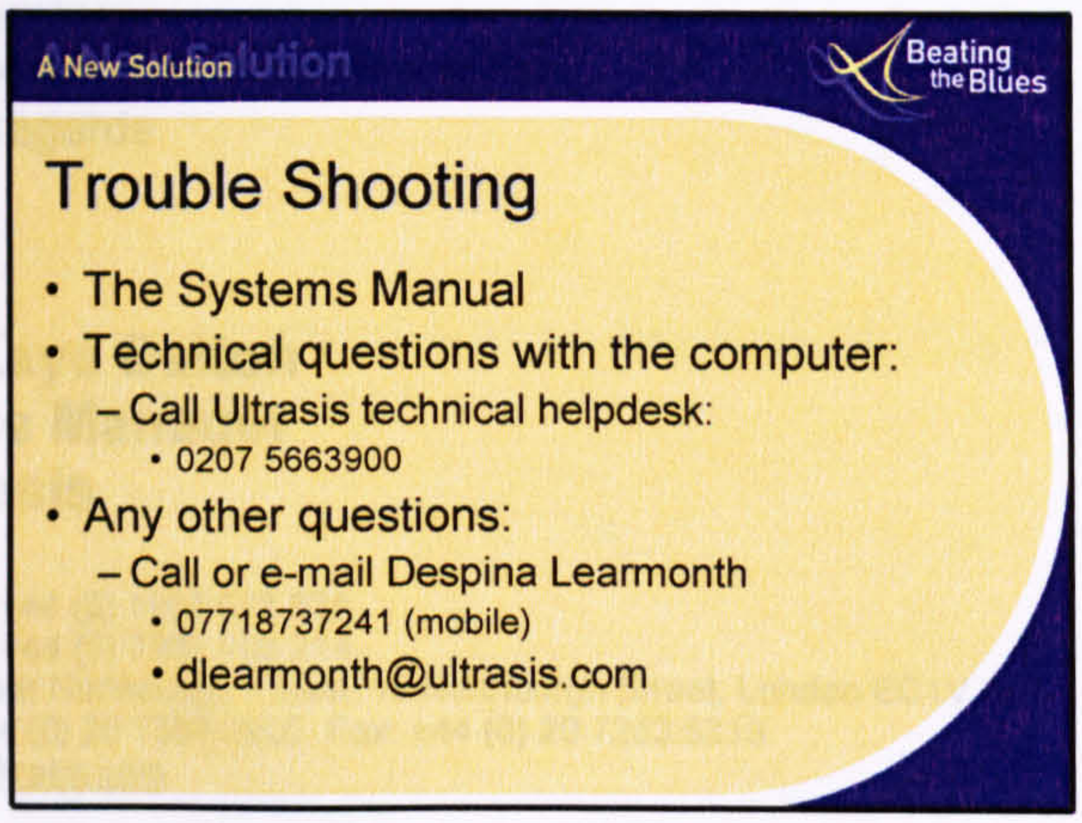
A New Solution

Beating the Blues

Evaluation Strategy

Research questions:

- What are the levels of clinical activity supported by the clinics?
- How many patients' have their mental health needs met by CCBT? How many patients need further intervention?
- What are the characteristics of the clinics that facilitate high access?
- What is experience of the people using CCBT – Service users; Primary care referrers & primary care graduate mental health workers?


A New Solution
Beating the Blues
Trouble Shooting
• The Systems Manual
• Technical questions with the computer:
– Call Ultrasis technical helpdesk:
• 0207 5663900
• Any other questions:
– Call or e-mail Despina Learmonth
• 07718737241 (mobile)
• dlearmonth@ultrasis.com

Appendix C

Despina Learmonth

From: Kaye Dalton
Sent: 17 February 2006 16:22
To: Despina Learmonth
Subject: RE: Training consultancy with Bristol South and West PCT

Hi Despina
Thank you that looks fine to me.
Kind regards
Kaye

Dr Kaye Dalton
Sales Manager
Ultrasis

Direct: +44 (0) 1995 672 835
Mobile +44 (0) 7930 406 214
2nd Floor Northburgh House, 10 Northburgh Street, London EC1V 0AT
Tel: +44 (0) 20 7566 3900 Fax: +44 (0) 20 7253 5313
www.ultrasis.com

From: Despina Learmonth
Sent: 15 February 2006 20:42
To: Kaye Dalton
Subject: Training consultancy with Bristol South and West PCT

Hi Kaye,

So just to finalise agreement:
The aims and objectives for this piece of consultancy are:

- to deliver training to the PCGMHWs and their commissioning manager on Monday 20/02 in Bristol
- to train them in the implementation of BtB – administration and facilitation of the programme
- to establish good relations with them as a consultant for Ultrasis, and ensure that they feel able to voice any concerns or enquiries to me at the training
- to feedback to yourself the outcomes of the training session

Do you have anything you would still like to add?

Thank you.
Warm regards,

Despina Learmonth
Programme Psychologist
Ultrasis
Direct: +44 (0) 20 7566 3908
Mobile: 07718737241
2nd Floor Northburgh House, 10 Northburgh Street, London EC1V 0AT
Tel: +44 (0) 20 7566 3900 Fax: +44 (0) 20 7253 5313
www.ultrasis.com

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Beating the Blues Training Assessment

On a scale of 0 to 7, please can you assess yourself on the following questions:

1) Do you understand why *Beating the Blues* was developed, and how the intervention works?

0 1 2 3 4 5 6 7
Not at All — Completely

2) Do you understand how to facilitate *Beating the Blues* as an intervention for anxiety and depression in primary healthcare?

0 1 2 3 4 5 6 7
Not at All — Completely

3) Do you understand how to deal with suicide risk when working with *Beating the Blues?*

0 1 2 3 4 5 6 7
Not at All — Completely

4) Do you feel you have increased your knowledge around tackling the barriers to implementation?

0 1 2 3 4 5 6 7
Not at All — A lot

5) Do you understand the basic NICE guidelines for treating depression, and do you feel you will be able to use these to guide and strengthen your clinical practice?

0 1 2 3 4 5 6 7
Not at All — Completely

Is there any other information which you feel you require for the successful implementation and facilitation of *Beating the Blues* (please write below, continue overleaf if extra writing space required)

Name: Dated:

Signed: E-mail:

ultrasis

EVALUATION OF THE BEATING THE BLUES GMHW TRAINING

1. What are your general reactions to the training?

1	2	3	4	5	6	7	8	9	10
Didn't meet my needs				Worthwhile					Valuable and useful to my work

2. Did you find the training presentation easy to follow?

1	2	3	4	5	6	7	8	9	10
Not easy				Satisfactory					Very easy

3. Do you feel the presentation met your training needs?

1	2	3	4	5	6	7	8	9	10
Poorly met				Partially met					Fully met

4. Do you feel any part of the training could be improved upon, and if yes, which part and how?

Yes / No

Comments

_____

_____

_____

_____

5. Can you suggest other topics that would be useful to your work?

_____

_____

_____

Any further general comments

_____

_____

_____

_____

_____

_____

Name:_____ (Optional) Date:_____

Thank you for your feedback.

Please return this form to:

Despina Learmonth

Programme Psychologist

Ultrasis

2nd Floor

Northburgh House

10 Northburgh Street

London

EC1V 0AT

Or this evaluation form can be completed electronically and e-mailed to me on-line at:
dlearmonth@ultrasis.com

Appendix F

Bristol South and West Primary Care Graduate Mental Health Workers Training

Commissioned by: Dr Kaye Dalton (Ultrasis)

Service being provided: Training of Primary Care Graduate Mental Health Workers in the administration and implementation of *Beating the Blues*

Costs: Consultancy fee (as negotiated in contract), and travel expenses to and from Bristol
(See attached invoices)

Training session content: Implementation, administration, and facilitation of *Beating the Blues* for the treatment of anxiety and depression in primary care

Date and time for training to take place: 20/02/06; 2pm – 4:30pm

Location for training: Bristol Royal Infirmary (BRI)

Resources:

- 4 *Beating the Blues* demo disks
- literature summary for trainees
- Powerpoint training presentation
- training room with chairs for trainees to sit on and a table to place laptop on
- laptop computer with good sound
- power point for laptop computer plug
- copy of *Beating the Blues* for demonstration purposes installed on laptop computer
- paper copies of training presentation for trainees

Attending: 3 Primary Care Graduate Mental Health Workers, their Commissioning Manager (and supervisor), and their account manager from Ultrasis

Aims and objectives of the training:

1) PCGMHW's and their commissioning manager feel competent and motivated to implement a successful *Beating the Blues service* (primary client Ultrasis)

2) Information about "how the programme is run", "what we need to do with patients before and after each session", "how we tackle the question regarding suicidal ideation", and "any problems you anticipate may occur" (secondary client, BS&W's PCGMHWs)

Expected training outcomes:

a) agreed training presentation to be carried out at named location, date, and time
b) an achieved score of 6 or 7 on each of the assessment questions
c) an achieved score of 8 or more on the evaluation measures
d) the provision of any extra requested learning material within 2 weeks of the training session (this is a necessity as the time allocated for the training may be insufficient to fully meet all desired outcomes)
e) a final report to the client (Ultrasis), which they deem to be satisfactory, within 1 week of the training.

Actions in preparation for the training:

- Despina to prepare training presentation and send final copy to client (Ultrasis) and PCGMHW representative for review at least 5 days prior to the training.
- Despina to ensure that BtB demo disks for each PCGMHW attending the training are sent out at least 5 days prior to the training for attendees to watch in preparation for the session. Ultrasis to supply disks.
- Despina to send out literature summary to PCGMHWs for their review at least 5 days prior to the training. Again this is to ensure good preparation in order to maximise the impact of the training in the brief time allotted.
- Despina to ensure that all resources named above are available for training purposes
- Despina to submit this document to Dr Kaye Dalton (Ultrasis) for agreement prior to the training session.
- Despina to confirm availability of the room at the BRI for the named date and time, and to communicate this to the trainees.

Actions post-training:

- Despina to submit final report to Dr Kaye Dalton and Ian Chapman for review and follow-up.
- Dr Kaye Dalton or Ian Chapman to follow up any further implementation issues outside training needs.
- Despina to provide any extra requested learning material within 2 weeks of the training session.

CONSULTANCY OUTCOMES REPORT for training session with Bristol South and West Primary Care Graduate Mental Health Workers

The pre-agreed training presentation was carried out at the Bristol Royal Infirmary on the 20/02/06 at 2pm. The training was attended by 3 Primary Care Graduate Mental Health Workers (PCGMHW) and their commissioning manager. Your colleague and the account's new manager, Ian Chapman, also attended the training. The training lasted 2 ½ hours.

Unfortunately, despite having sent the demo disks and research literature summary ahead of the training, none of the trainees had managed to read or review either completely. One of the trainees had in fact been away on leave in the previous week so had not even started to look at the material in preparation for the training (this may be why his scores were lower than those of the other 2 trainees – reported below).

The commissioning manager arrived towards the end of the training session, and therefore was not present for much of the session. I did not ask her to fill in an evaluation or assessment form. I have attached copies of the assessment form and evaluation form that I used for the training.

Evaluation and assessment:

The trainees scored 6 or 7 on all the assessment questions, except for the questions: "Do you understand how to facilitate *Beating the Blues* as an intervention for anxiety and depression in primary healthcare?" and "Do you feel you have increased your knowledge around tackling the barriers to implementation?". One of the trainees (the PCGMHW who had been leave during the week prior to the training session) scored only 5 for both questions. I have e-mailed him regarding this, and I will endeavour to supply him with any further information that he requires (using e-mail and telephone), ensuring that he is ultimately satisfied with the level of training received.

Scores of 8 or more were achieved on 2 of the evaluation forms for all of the questions. On 1 of the evaluation forms however, scores of only 6 for all 3 of the questions were obtained. This evaluation form was completed by the same PCGMHW who had scored 5 on the 2 questions cited above. In the e-mail to him I also requested information about any suitable improvements to the training that he would recommend (in order to improve the scores he had assigned).

The individual comments on the evaluation forms (in response to the questions in bold below) were as follows:

Do you feel any part of the training could be improved upon, and if yes, which part and how?

"Yes, Maybe a good idea to get problems other PCGMHWs have faced and their solutions, Q & A."

"No, Difficult to know now – will see after trying to implement and run the programme with patients"

"No, very useful. Appreciated clinical perspective as well as Ultrasis. Felt covered all aspects."

Any further general comments:

"Well run, all my questions answered well."

Scores on first 3 questions:

1) 8	2) 9	3) 9
1) 9	2) 10	3) 10
1) 6	2) 6	3) 6

No further training material was requested during the training session.

I have supplied all of the trainees with my contact details should they have any further clinical or research questions.

Recommendations:

I would suggest that Ian Chapman as the account manager organises a follow-up meeting with the commissioning manager in the next 4 weeks. As she is to act as the PCGMHWs' supervisor, it is very important that she feels confident in directing and assisting the implementation of *Beating the Blues.* She has a copy of the demo disk and the research literature summary which she has said she will review. For future trainings a more successful method to ensure that trainees actually listen to the demonstration disks and read the summary of the research literature needs to be developed. This is only important where training sessions are shorter in length, and the extra information covered on the disk and in the research literature summary cannot actually be covered in the session. As suggested above by one of the trainees, a few slides presenting examples of real life problems faced by PCGMHWs in the implementation of *Beating the Blues* would also improve the training. If there are any further recommendations arising from my communication with the contacted PCGMHW, I will amend this report, and send it through for your final review.

APPENDIX H

Issue date: February 2006
Review date: September 2008

National Institute for Health and Clinical Excellence

Quick reference guide

Computerised cognitive behaviour therapy for depression and anxiety (review)

NOTE: This guidance replaces Technology Appraisal Guidance No. 51 issued in October 2002.

The Institute reviews each piece of guidance it issues.

The review and re-appraisal of the use of computerised cognitive behaviour therapy (CCBT) for depression and anxiety has resulted in a change in the guidance. In 2002, CCBT was not recommended. In this new guidance two CCBT packages have been recommended: Beating the Blues for the management of mild and moderate depression and FearFighter for the management of panic and phobia.

1 Guidance

This review concerns five specific packages for the delivery of computerised cognitive behaviour therapy (CCBT) accessed via a referral from a general practitioner (GP): three for depression (Beating the Blues, COPE and Overcoming Depression), one for panic/phobia (FearFighter) and one for obsessive-compulsive disorder (OCD) (OCFighter, previously known as BTSteps).

This guidance should be read in the context of the clinical guidelines on depression, anxiety and OCD.

1.1 Beating the Blues is recommended as an option for delivering cognitive behaviour therapy (CBT) in the management of mild and moderate depression.

1.2 There is insufficient evidence to recommend the use of COPE and Overcoming Depression as a clinically or cost-effective option for the management of depression, except as part of ongoing or new clinical trials that are designed to generate robust and relevant data on the clinical effectiveness of these specific CCBT packages.

1.3 FearFighter is recommended as an option for delivering CBT in the management of panic and phobia.

1.4 OCFighter (previously known as BTSteps) is not recommended as an option for delivering CBT in the management of OCD.

1.5 People currently using OCFighter, whether as routine therapy or as part of a clinical trial, should have the option to continue on therapy until the person, or the GP and/or specialist, consider it appropriate to stop.

2 Implementation

This appraisal is supported by the following implementation tools available on our website (www.nice.org.uk/TA097):

- a national costing report, which estimates the overall resource impact associated with implementation
- a local costing template: a simple spreadsheet that can be used to estimate the local cost of implementation.

Suggestions for audit to measure compliance locally can be found in the full guidance (see 'Further information').

Technology Appraisal Guidance 97

This guidance is written in the following context

This guidance represents the view of the Institute, which was arrived at after careful consideration of the available evidence. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. This guidance does not, however, override the individual responsibility of healthcare professionals to make appropriate decisions in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Further information

Quick reference guide

This has been distributed to healthcare professionals working in the NHS in England and Wales (see www.nice.org.uk/TA097distributionlist). It is available from www.nice.org.uk/TA097quickrefguide

For printed copies, phone the NHS Response Line on 0870 1555 455 (quote reference number N0979).

Full guidance

This contains the following sections: 1 Guidance; 2 Clinical need and practice; 3 The technology; 4 Evidence and interpretation; 5 Recommendations for further research; 6 Implications for the NHS; 7 Implementation and audit; 8 Related guidance; 9 Review of guidance. The full guidance also gives details of the Appraisal Committee, the sources of evidence considered and suggested criteria for audit. It is available from www.nice.org.uk/TA097guidance

Information for the public

Information for people with depression and anxiety, their families and carers, and the public is available from www.nice.org.uk/TA097publicinfo

For printed copies, phone the NHS Response Line on 0870 1555 455 (quote reference number N0980).

Related guidance

For information about NICE guidance that has been issued or is in development, see the website (www.nice.org.uk).

Depression: management of depression in primary and secondary care. *NICE Clinical Guideline* No. 23 (2004). Available from: www.nice.org.uk/CG023

Anxiety: management of anxiety (panic disorder, with or without agoraphobia, and generalised anxiety disorder) in adults in primary, secondary and community care. *NICE Clinical Guideline* No. 22 (2004). Available from: www.nice.org.uk/CG022

Obsessive-compulsive disorder: core interventions in the treatment of obsessive-compulsive disorder and body dysmorphic disorder. *NICE Clinical Guideline* No. 31 (2005). Available from: www.nice.org.uk/CG031

Depression in children and young people: identification and management in primary, community and secondary care. *NICE Clinical Guideline* No. 28 (2005). Available from: www.nice.org.uk/CG028

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National Institute for Health and Clinical Excellence
MidCity Place, 71 High Holborn, London WC1V 6NA; www.nice.org.uk

N0979 1P 30k Feb 06

TEXT BOUND INTO THE SPINE

Progress Report

Beating the Blues

Report Date	03/05/2005
Patient's Name	Dummy Patient
Date of Birth	01/01/1970
Date Commenced	01/01/2000
Current Session	completed

Problems

How much is each of your problems distressing you now? (0-8)

Problem 1: I feel tired all the time. (6)

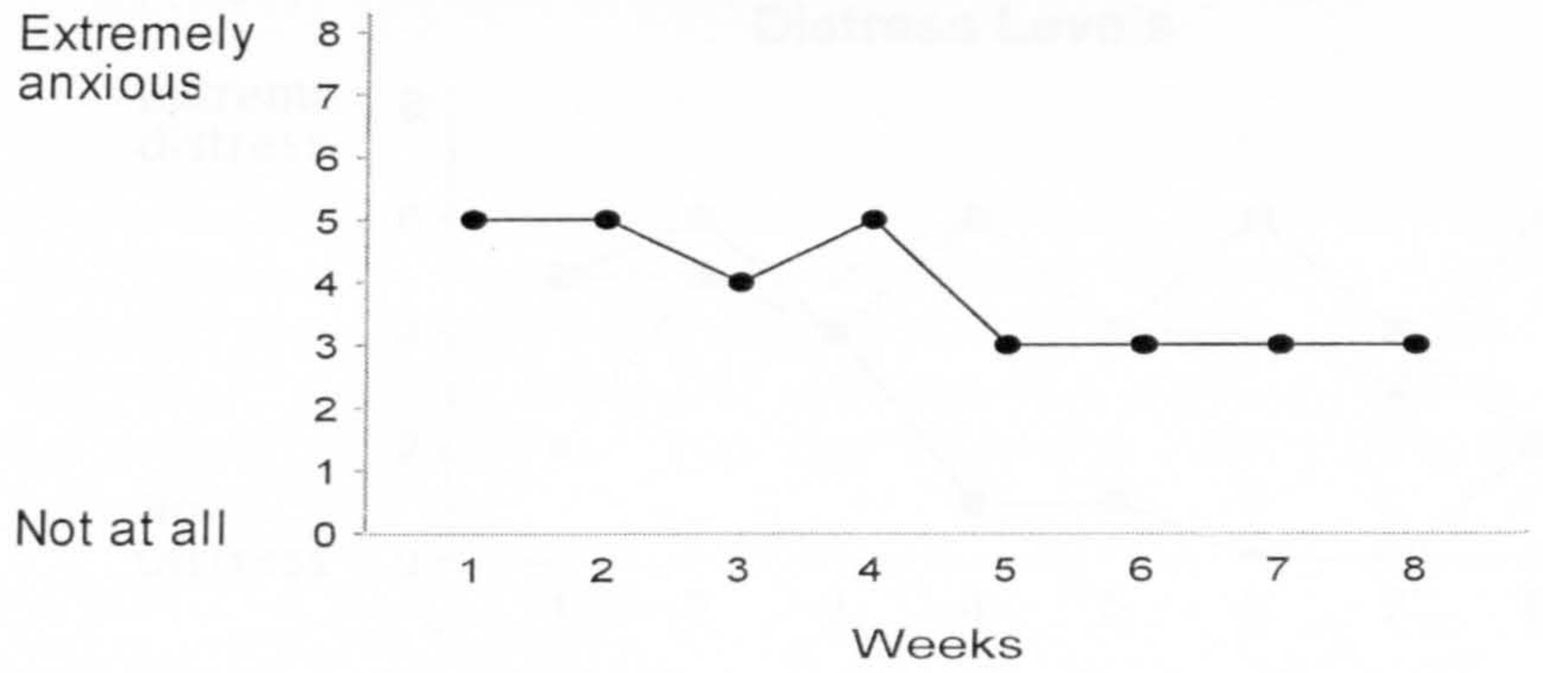
Problem 2: I have lost the motivation to do my job. (2)

Problem 3: I've been neglecting my son. (6)

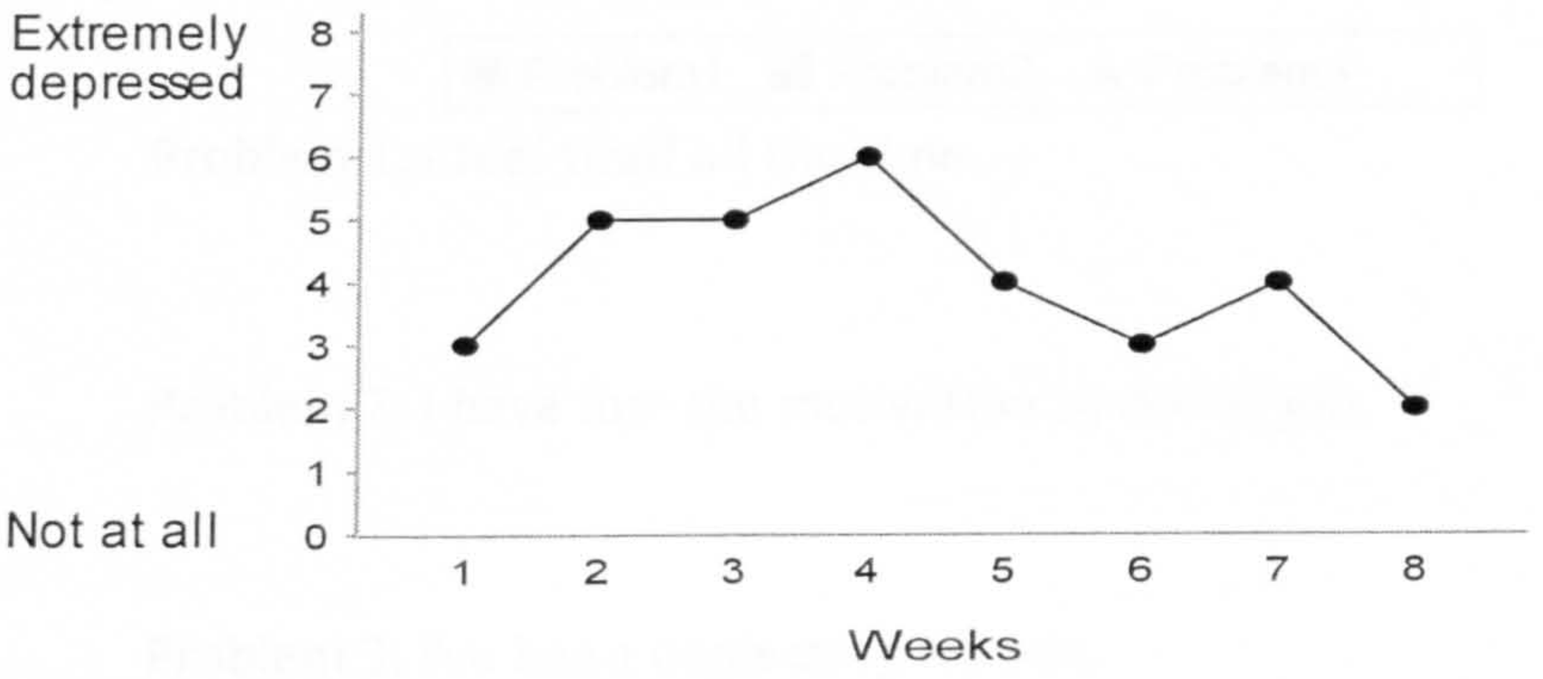
Upsets and Disappointments

None

Anxiety



Depression



Suicide

Have you had any thoughts of suicide in the last week? no

Changing Unhelpful Thoughts

Negative Automatic Thoughts (NAT's) make us feel upset, miserable and guilty. But we do not have to be victims of our thinking. With practice, we can change unhelpful thoughts using the Four Challenging Questions. It's like taking our thoughts to court and cross examining them.

Summary Session 4

1. Am I making any Thinking Errors?

- Black and White Thinking
- Jumping to Conclusions
- Magnifying (Catastrophising)
- Overgeneralising
- Should Statements

2. What is the evidence for and against my thoughts?

Here we ask 'What are the facts?' Finding evidence to support our NAT's is easy when we're depressed or anxious, because our mood makes us notice them. But we have to ask ourselves, 'Is there 100% EVIDENCE to support them?' We also need to ask; 'Is there any evidence AGAINST my thoughts?' Sometimes it can be difficult to notice evidence against our NAT's because when we're anxious or depressed, we tend to ignore information that goes against them.



But this means we get a very one-sided (and often pessimistic) view of the situation. It's important to remember that thoughts are not facts, they're ideas or hunches – and they can be distorted. That's why we need to check the evidence.

3. What are alternative ways I can look at it?

Typically, there's not just one way of looking at a situation – many different things affect it. But when we're depressed and anxious, we tend to seize on one view without thinking about alternative ones. To beat the blues, we need to learn to look for other ways of seeing the situation. A way to do this is to imagine your thoughts as a pie. Your first thought (the NAT) is one slice of the pie. It is one possible view of the situation. Then you look for other alternative views to fill up the other slices of the pie.



Just thinking about the alternative ideas will make you feel better. But you need to go on and check out the evidence for and against each one of them. This is where the next challenging question comes in.

4. If my thoughts are true, what actions can I take?

Here you work out some ways to check your alternative ideas, or if the evidence shows your initial thought (the NAT) was true, ways to deal with the situation.

The Five Column Thought Record

It's easiest to use the 4 Challenging Questions on a Thought Record. Challenge your thoughts in the 4th column, and note the new feelings and their strength in the 5th column. (See the example of Jean's Thought record.)

Jean's Thought Record

Beating the Blues

A. Event or Situation	B. Thoughts (0-100%)	C. Feelings (0-100%)	D. Challenge Unhelpful Thoughts	E. New Feelings (0-100%)
My neighbour ignored me.	She must think I'm not worth bothering with. (80%)	Sad (60%) Lonely (80%)	THINKING ERRORS Jumping to conclusions	Sad (30%) Lonely (40%)
			EVIDENCE FOR My neighbour didn't stop to talk to me. AGAINST She didn't say I wasn't worth bothering with. She's always talked to me in the past. Just because she didn't stop this time doesn't mean she won't ever talk to me again.	
			ALTERNATIVES Maybe she was too busy to stop and talk. Maybe she had something on her mind. Maybe she was rushing for a bus. Maybe she didn't have her contact lenses in and didn't recognise me. Maybe she's got the wrong impression about something I said.	
			ACTION Ask her why she seemed distracted. Ask other people if they know if anything is the matter with her.	

Summary
Session 4

Beating the Blues

Problem Solving Technique

You've been working on the Problem Solving Technique which consists of 7 stages:

1. State the problem clearly.
2. Set clear and achievable goals.
3. Come up with some different solutions.
4. Find the information you need.
5. Decide on one of the solutions.
6. Work out the steps to get the solution, and start working on them.
7. Check your progress.

You've chosen a solution to follow, broken it into steps, and started working on the first steps. Now you need to check your progress, and then go onto the next step.

Activity Scheduling

Activity Scheduling helps you to break the cycle of depression and stress. If you have little energy or interest in anything, it will get you going again. On the other hand, if you've got so many things to do that you feel agitated and rushed, and you don't have time to do the things you enjoy, this technique will teach you how to get control over the things you need to do.

The first step is to find out what you are doing – or not doing – during the week, and the effect this has on your mood. Most people aren't aware of which activities make them feel better or worse. The Activity Record will help you do this.

Next week, we'll look at the activities that have an impact on your mood, and I'll teach you how to change your activity to reduce depression and stress.

Activity Worksheet

Beating the Blues

What activities make you feel better or worse?	
I feel better when…	I feel worse when…

Thought Record _____

Beating the Blues

A. Event or Situation	B. Thoughts (0-100%)	C. Feelings (0-100%)	D. Challenge Unhelpful Thoughts	E. New Feelings (0-100%)
			THINKING ERRORS	
			EVIDENCE	
			ALTERNATIVES	
			ACTION	

Despina Learmonth

From: Kaye Dalton
Sent: 23 February 2006 15:23
To: Despina Learmonth
Subject: RE: Consultancy feedback report for your review

Dear Despina
Thank you for the feedback on the training which was very useful.
I will also suggest to Ian that he follows up and arranges a meeting with the Primary Care Workers.
Thank you very much for your support
Kind regards
Kaye

Dr Kaye Dalton
Sales Manager
Ultrasis

Direct: +44 (0) 1995 672 835
Mobile +44 (0) 7930 406 214
2nd Floor Northburgh House, 10 Northburgh Street, London EC1V 0AT
Tel: +44 (0) 20 7566 3900 Fax: +44 (0) 20 7253 5313
www.ultrasis.com

From: Despina Learmonth
Sent: 22 February 2006 18:47
To: Kaye Dalton
Subject: Consultancy feedback report for your review

Dear Kaye,
Please review the report attached. If you have any questions or require any further information, please do not hesitate to contact me. Your feedback would be appreciated.
Warm regards,

Despina Learmonth
Programme Psychologist
Ultrasis
Direct: +44 (0) 20 7566 3908
Mobile: 07718737241
2nd Floor Northburgh House, 10 Northburgh Street, London EC1V 0AT
Tel: +44 (0) 20 7566 3900 Fax: +44 (0) 20 7253 5313
www.ultrasis.com

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Despina Learmonth

From: Ian Chapman
Sent: 25 February 2006 19:28
To: Despina Learmonth
Subject: RE: Ian?

Dear Despina,
I found the training session very informative with your knowledge of the subject matter exemplary.
I found your presentation style to be informal and relaxed which was conducive to the environment and the level of attendance.
I was able to obtain some further knowledge on the product and disease areas discussed which will aid me in my future with the company and managing accounts such as Bristol.
I found the GMHW;s to be very attentive and they all appreciated the time and the effort you made towards the meeting.
Whilst the commissioning manager did arrive late I am positive that by the time the meeting adjourned she was fully up to speed with the outcomes that were reached.
Many regards,
Ian Chapman
Sales Manager
Ultrasis Plc.

From: Despina Learmonth
Sent: 25 February 2006 18:02
To: Ian Chapman
Subject: Ian?

Despina Learmonth
Programme Psychologist
Ultrasis
Direct: +44 (0) 20 7566 3908
Mobile: 07718737241
2nd Floor Northburgh House, 10 Northburgh Street, London EC1V 0AT
Tel: +44 (0) 20 7566 3900 Fax: +44 (0) 20 7253 5313
www.ultrasis.com

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→ further evidence of communication regarding consultancy

Despina Learmonth

From: Despina Learmonth
Sent: 25 May 2006 17:28
To: Despina Learmonth
Subject: training

-----Original Message-----
From: Kaye Dalton <kdalton@ultrasis.com>
To: Despina Learmonth <dlearmonth@ultrasis.com>
Sent: Mon Feb 13 11:11:37 2006
Subject: RE: training

Hi Des

The training will consist of one session with the graduate worker discussing implementation and one session with the commissioning manager bringing her up to speed
BtB

20th Feb available time for grad workers 10-4 comm. Manager 3pm

24th Feb available time grad workers 12.30-5, commiss man morning 10-12 ish

Are these dates good for you

k

Dr Kaye Dalton

Sales Manager
Ultrasis

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Tel: +44 (0) 20 7566 3900 Fax: +44 (0) 20 7253 5313 www.ultrasis.com
<http://www.ultrasis.com>

From: Despina Learmonth
Sent: 11 February 2006 20:04
To: Charlie Martin
Cc: Kaye Dalton
Subject: RE: training

Charles, I am away on that day. I have marked all my holidays on my calendar. So it would need to be later or earlier. Kaye, do you want me to negotiate?

From: Charlie Martin
Sent: 10 February 2006 18:04
To: Despina Learmonth
Cc: Kaye Dalton
Subject: RE: training

Hi Des,

Can you do this please/

C

From: Kaye Dalton
Sent: 10 February 2006 17:31
To: Charlie Martin
Subject: training

Hi Charlie

Bristol SW PCT would like some training could we please use Despina to cover this

They want this asap but can only do Fridays and the first they can do is 3rd March. As this is a Friday it is very difficult for me to do

Cheers

kaye

Dr Kaye Dalton

Sales Manager
Ultrasis

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: → further evidence of communication regarding consultancy

Despina Learmonth

From: Despina Learmonth
Sent: 14 February 2006 18:05
To: Parsons Rachel (Bristol South and West PCT)
Cc: Kaye Dalton
Subject: RE: Beating the Blues Training

Attachments: BtB_training meeting PCGMHW Avon.ppt



BtB_training
eeting PCGMHW Av.

Dear Rachel,
I have attached the presentation slides for Monday. Please could you review it and then print out enough copies for everyone (I find 3 slides a page is best for legibility and space to write own comments) attending the training session.
Thank you, and see you Monday.
Any questions before then please just e-mail or call me.
Sincere regards,
Despina.
Ps Kaye, any of your own comments on training slides layout also appreciated!

-----Original Message-----
From: Parsons Rachel (Bristol South and West PCT) [mailto:rachel.parsons@nhs.net]
Sent: 14 February 2006 10:54
To: Despina Learmonth
Cc: Akhtar Parveen; Jessica Bezance; Neil Hutton
Subject: RE: Beating the Blues Training

Dear Despina,
2pm until 4pm would be fine. I was not able to book a room at King square house but Parveen's PA has managed to book a room at the Bristol General Hospital in meeting room 1 on the ground floor.
It would be helpful to know the following things about beating the blues:

How the program is run
What we need to do with patients before and after each session.
How we tackle the question regarding suicidal ideation.
Any problems you anticipate may occur.

We have already seen Beating the blues briefly run at swindon but any other information you could give us would be a great help.

Many Thanks Rachel Parsons
Rachel Parsons
Primary Care Mental Health Worker
Gaywood House Surgery
North Street
Bedminster
Bristol BS3 3AZ
Tel: 0117 9661412

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This e-mail is confidential and privileged. If you are not the intended recipient please accept our apologies; please do not disclose, copy or distribute information in this e-mail or take any action in reliance on its
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Despina Learmonth

From: Despina Learmonth
Sent: 14 February 2006 14:32
To: Parsons Rachel (Bristol South and West PCT)
Cc: Akhtar Parveen; Jessica Bezance; Neil Hutton
Subject: RE: Beating the Blues Training

Dear Rachel,
I have a room that can be available at the BRI in the Orthopaedic Department on Monday from 2pm - 4pm. If this would suit you, we can use this room. It is not a completely closed room, but can certainly be used for training.
I will have 4 demo disks set out to you immediately at the address below (unless you specify otherwise) for you each to look at before the training meeting. This may also help to focus your thoughts on further questions for the training session.
Sincere regards,
Despina.

-----Original Message-----
From: Parsons Rachel (Bristol South and West PCT) [mailto:rachel.parsons@nhs.net]
Sent: 14 February 2006 10:54
To: Despina Learmonth
Cc: Akhtar Parveen; Jessica Bezance; Neil Hutton
Subject: RE: Beating the Blues Training

Dear Despina,
2pm until 4pm would be fine. I was not able to book a room at King square house but Parveen's PA has managed to book a room at the Bristol General Hospital in meeting room 1 on the ground floor.
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Any problems you anticipate may occur.

We have already seen Beating the blues briefly run at swindon but any other information you could give us would be a great help.

Many Thanks Rachel Parsons
Rachel Parsons
Primary Care Mental Health Worker
Gaywood House Surgery
North Street
Bedminster
Bristol BS3 3AZ
Tel: 0117 9661412

****
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Despina Learmonth

From: Despina Learmonth
Sent: 16 February 2006 15:58
To: Ian Chapman
Subject: RE: Bristol

Department of Orthopaedic Surgery
Level 5
Bristol Royal Infirmary
Upper Maudlin Street
Bristol
2pm until about 4:30pm.

Thanks.
Des.

-----Original Message-----
From: Ian Chapman
Sent: 16 February 2006 12:53
To: Despina Learmonth
Subject: Bristol

Hi Des,
Hope you're good buddy.
Kaye has asked if I would attend trainig in Bristol Monday.
Can you just send me details, address, time etc.
Also, would you like me to pick you up from anywhere as I will probably drive down.
Regards,
E

Training Consultancy for Ultrasis

2nd Floor, Northburgh House, Northburgh Street, EC1V 0AT

Budget for Bristol South and West *Beating the Blues* Training

Name of Consultant: **Despina Learmonth**

DESCRIPTION OF ITEMS INCLUDED IN BUDGET:

Week Starting Date:		**Amount (£)**
20/02/06	Consultant Trainer's rate per training session	150.00
20/02/06	Travel to Bristol to deliver training (244 miles @ £0.4 per mile)	97.60
20/02/06	Tea, coffee, milk, sugar and biscuits for training tea break	6.50
20/02/06	Printing of training material @ £0.05 per sheet (45 sheets)	2.25
	Total Amount :	256.35

UNIT 4 – Training (first case study)

Despina Learmonth DPsych. (Health Psychology) 2007

Training Competence (Unit 4) – first case study

Setting: The training took place at the University of Manchester's School of Nursing on the 26 April 2005. The training seminar ran from 9:30am until 4pm.

Target audience/Trainees: Forty Primary Care Graduate Mental Health Workers (PCGMHWs) enrolled on the postgraduate course at Manchester University, whilst working under close supervision in one of the regional Primary Care Trusts.

Description of the work: The training seminar focussed on introducing computerised cognitive behavioural therapy (CCBT) and the National Institute for Clinical Excellence's (NICE) guidelines on depression to the PCGMHWs, as well as discussing how the programme *Beating the Blues* could be implemented successfully within their primary care practice. Many of the primary care trusts (PCTs) in the North West had received a year licence for the CCBT programme, *Beating the Blues,* supplied by the Work Force Federation. This meant that many of the students would have immediate access to *Beating the Blues* as a therapeutic tool in their work. Their task would be to assist with the implementation and successful running of the programme. My task was to ensure that they were adequately trained and resourced to do so.

UNIT 4.1 – Plan and design training programmes that enable students to learn about psychological knowledge, skills and practice

Unit 4.1a – Assess training needs

I reviewed the successful implementation of *Beating of Blues* at a number of primary and secondary care sites nationally. I also discussed with a handful of PCGMHWs who had already implemented *Beating the Blues* what they felt was important for the implementation of CCBT in primary care. Along with the Head of the PCGMHW course, I reviewed the current training provision and levels of knowledge in the target group, and I requested that she circulate a learning outcomes form (Appendix A) to the attending PCGMHWs for completion prior to the session. In addition, I re-examined the training feedback which I had received from other university training sessions, and where requests were made for further content, I evaluated how appropriate and feasible it would to include these requests in this training day. In exploring how these training needs could be met, I realised that both information giving and involving the trainees in considering and discussing aspects of the topic would be best. This would allow them to take the information I supplied, and then integrate it into their experience and practice

through discussion with their peers. The desired learning outcomes for the training session were as follows:

a) enhanced understanding of why *Beating the Blues* was developed, and how the it works;

b) understanding the main *Beating the Blues* RCT results;

c) understanding how to facilitate *Beating the Blues* as an intervention for anxiety and depression in primary healthcare;

d) increased awareness of the main barriers and benefits to the implementation of *Beating the Blues* in primary mental healthcare;

e) increased knowledge and perceived competence in tackling barriers to implementation;

f) understanding the basic NICE guidelines for treating depression, and feeling competent in using them to guide and strengthen personal clinical practice;

g) increased knowledge of best assessment and outcome measures to use in service evaluation

Unit 4.1b – Identify training programme structure and content

Having reviewed sections of the PCGMHW postgraduate course content, the learning objectives for the entire course, and previous feedback from training sessions involving PCGMHW as trainees, I submitted my proposed training plan to the Head of the PCGMHW course at Manchester University for review. Whilst reviewing the content that needed to incorporate, I took into account that the structure of the training programme needed to fit into a normal university teaching day, and that I would be presenting in a classroom at the School of Nursing with only a projector, laptop, pre-prepared handouts, and desks and chairs available as resources.

Unit 4.1c – Select training methods and approaches

It was recognised that a number of the PCGMHWs were unfamiliar with what computerised CBT (CCBT) was exactly, and that they also needed more information about CBT, and how it could be used in behaviour and mood change interventions. Therefore, in determining the aims, learning objectives, and assessment criteria for the training session, it was decided that initially a didactic approach would be used to deliver certain required information about CBT, CCBT, and *Beating the Blues*. Then, in order maximise learning, individuals were asked to use this information to develop their own ideas and opinions in groups. These discussions were initiated by myself as primary trainer, and I encouraged feedback to the whole group so that all ideas were shared for learning. I also enabled a few individual PCGMHWs (as many as time would allow for) to interact with the programme, and played a patient introductory video (Appendix B) to continue to engage interest and thereby promote learning.

Unit 4.1d – Produce training materials

I evaluated and selected available materials from previous training sessions, and produced extra learning materials where necessary to meet specific learning needs. These extra slides and handouts focussed on: the NICE guidelines, and how they would guide primary care practice in treating individuals with anxiety and depression; the Clinical Outcomes Routine Evaluation – Outcome Measure (CORE – OM) as a clinical evaluation tool (accompanied by a discussion of the Hospital Anxiety and Depression Scale [HADS] and the Patient Health Question [PHQ – 9] as routinely used evaluation and assessment measures in practice); and models of implementation based on the role of the primary care graduate mental health worker. See Appendix C for training presentation layout, and Appendices D and E and F for examples of the outcome measures mentioned above.

Unit 4.1e – Use appropriate media to deliver training materials

I used Microsoft Powerpoint to develop my presentation, and Windows Media Player to play the patient introductory video on the presentation screen. I ensured that handouts of all my presentation were made available for the day, so that individuals did not have to concentrate on writing down my presentation, but instead could concentrate on my explanations and any extra information given. The university provided a presentation screen and a projector, I supplied my own laptop.

Unit 4.2 – Deliver training programmes encompassing psychological knowledge, skills, and practices

Unit 4.2a – Implement training methods & Unit 4.2b – Facilitate learning

I spent the night at a hotel in Manchester to ensure that I would arrive early and be able to set up the room before the trainees arrived at 9:30m. I also met with the course co-coordinator before the start of the session to check that we had all the handouts required for the session, and that we agreed on break-times expected. In preparation for this session I had reread the important research and popular practice in this area of primary care. The non-content focus of the training was on keeping trainees engaged with the material, and supporting and facilitating learning. Where necessary I re-explained concepts or situations, and responded effectively to questions as they arose during training. Examples of the kinds of questions I dealt with are, "do I need to be available during the session in case the patient needs me for anything", and "how do I manage the situation if the patient's progress report shows that they have expressed suicidal intent?" My previous training experience combined with attending training workshops and

reviewing training feedback has allowed me to develop the necessary skills required for presenting training sessions which potentially maximise trainees' development. I was comfortably able to answer most of the questions trainees have regarding *Beating the Blues,* and I presented the material clearly and coherently using multimedia tools to maintain interest and focus. I allowed plenty of time during the session for interactive learning, and ensured that after each of these interactive sessions, there was clear feedback and summarising from the members of the group to the group as a whole. I constantly monitored the trainees' reactions during the training to pace the training appropriately, ensuring it was neither too slow nor too fast, whilst scheduling adequate breaks. At the end of the training, I provided contact details for follow-up questions or further information provision to individuals.

Unit 4.3 – Plan and implement assessment procedures for training programmes encompassing psychological knowledge, skills and practices

Unit 4.3a – Identify assessment methods

After attending a 2 day workshop in March 2005 on the planning, designing, assessing, and evaluation of training sessions, I had constructed my method of assessment for this workshop. To keep it simple, but in line with university methods (after consultation with Head of Primary Care Graduate Mental Health Worker course), I had chosen to place each learning outcome on a Likert-type rating scale (Appendix G).

Unit 4.3b – Select assessment methods

This method was selected for its cost-effectiveness, ease of use, and speed of completion and evaluation.

Unit 4.3c – Establish the availability of resources for the procurement of assessment procedures

For the training session, the assessment sheets were handed out at the end of the session, and the trainees were given a maximum of 10 minutes to fill them in. I was completely competent to perform and evaluate the assessments for the delivered training as I am very familiar with the use of Likert-type scales and how to interpret them.

Unit 4.3d – Produce assessment materials

I created a bespoke assessment for this particular training, as training sessions on this subject matter have only ever been delivered and assessed by me. The assessment exercise was

based on the desired learning outcomes and aims of the session. These were clearly defined at the beginning of the training session.

Unit 4.3e – Ensure fair appreciation of assessment methods

Trainees swapped sheets so they could mark each other's assessment forms at the end of the session. If trainees scored poorly in assessment, I offered them the option of receiving my training disk via post, or of attending further courses run later in the year. Final assessment will occur in their professional practice by their individual supervisors and course lecturers.

Unit 4.3f – Produce relevant records of progress and outcome

The results of the individual assessments, and the overall assessment means, were put together into an excel worksheet (Appendix H) for submission to the course co-coordinator (see relevant date in Training practice log for individual completed assessments). The course lecturers rated attendance of the whole training session as denoting completion of the training, so an attendance register was sent around in the morning and in the afternoon. This will be kept as part of the course module attendance records for determining final awarding of the post-graduate Graduate Mental Health Worker Diploma.

Unit 4.4 – Evaluate training programmes encompassing psychological knowledge, skills, and practices

Unit 4.4a – Evaluate training programme outcomes

The postgraduate mental health worker diploma is a new national course, so clinical supervisors were invited to attend this session in order to ensure that certain standards of clinical mental health care delivery were appropriately and accurately conveyed. The initial evaluation of the training session was done via standard paper format asking trainees to rate the training (Appendix I). Results of the feedback from the evaluation can be seen in Appendix J (see relevant date in Training practice log for completed evaluations). The main evaluation of the training will be whether or not the trainees can translate what they have learnt into practice. In reviewing the few months since training, those PCGMHWs that have had the opportunity to use *Beating the Blues* in practice have managed to eventually overcome all the barriers to implementation and set up a good service. Now perhaps a few of the other staff in the practice need training on how to make appropriate use of this service! Unfortunately, a few are still struggling to get the hardware to load the programme onto.

Unit 4.4b – Identify factors contributing to training programme outcomes

I have written this report to reflect and summarise the training delivered, and the feedback received.

Unit 4.4c – Identify improvements for the design and delivery of training for implementation in future programmes, and <u>Reflection on training experience</u>

I am learning to take more time in training to be aware of non-verbal responses to the training's content, taking appropriate action if required. Unfortunately, due to facility- and time-constraints, I have still not been able to set up a situation in which everyone can log on to *Beating the Blues* individually, and do an entire session during the actual training. However, I did make it clear that a version was available in the university library for individuals to go through. This obviously needs to be re-emphasised in future trainings, and possibly it would be best to encourage individuals who have access to the resource of the *Beating the Blues* programme to do a session themselves before the training session. This was a big group, varying hugely in enthusiasm, ideas, opinions, and clinical experience. I had to ensure that I adhered closely to time allocation, so that there was enough time for discussion and questions, whilst not seeming too restrictive, and thereby adversely affecting the creative and sharing learning experience. My knowledge-base and ability to adapt to different environments is improving with each new training session, and my confidence in delivering the training has as a result also increased.

I am also learning, from the feedback and issues discussed in the training sessions, more about the obstacles faced by those working in mental health in the NHS.

Reviewing the individual assessment forms told me that trainees seemed to understand the main areas of the presentation; however, in future I need to ensure that everyone understands the section on the NICE guidelines, and the section around barriers, benefits, and implementation of *Beating the Blues*, as these seem to be the lower scoring areas. Trainees provided their names and e-mail addresses on the assessment sheets. I will consult with their course co-ordinator as to whether or not it is appropriate for me to contact them (or send them my training CD) if it appears from their scores that they have misunderstood a section. I could offer brief training sessions to ensure that everyone is at the same level, especially for those PCGMHWs who will actually be implementing *Beating the Blues* in their surgeries or healthcare centres. I will use the evaluation feedback to inform the development of future trainings of a similar nature, and I will continue to seek feedback, develop new skills, acquire resources, and undertake trainings that would improve my training delivery.

BEATING THE BLUES TRAINING – LEARNING OUTCOMES

Please take a few moments to think about what you would like to take away for this session today? Do you have any specific questions, which you would like answered? What are your desired learning outcomes?

How will you know if these learning outcomes have been met?


Beating the Blues
INTERACTIVE MULTIMEDIA THERAPY
Programme Introduction
ultrasis
interactive healthcare
www.ultrasis.com
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Appendix B

Appendix C

Beating the Blues

Introduction to Beating the Blues
Despina Learmonth (Ultrasis Ltd)

Beating the Blues

Presentation Summary

- Background to CCBT
- Information on Beating the Blues
- Research on Beating the Blues
- Extracts from the Programme
- Afternoon workshops
- Implementation model & evaluation

dlearmonth@ultrasis.com
0207 5663900

Beating the Blues

Computers in Therapy – the beginnings

- Seems to have started with "Eliza"
- Joseph Weizenbaum (1966) wrote this first client interaction programme at Mass Institute of Technology in Boston
- Brief extract of interaction
- Many "Eliza" implementations can be found on eecs.nwu.edu:/pub/eliza



Beating the Blues

Beating the Blues

- Computerised cognitive behavioural therapy (CBT) for anxiety and depression
- Making effective psychological therapies more available and accessible
- Developed by Dr Judy Proudfoot (Institute of Psychiatry) and colleagues at the Institute of Psychiatry in conjunction with Ultrasis plc





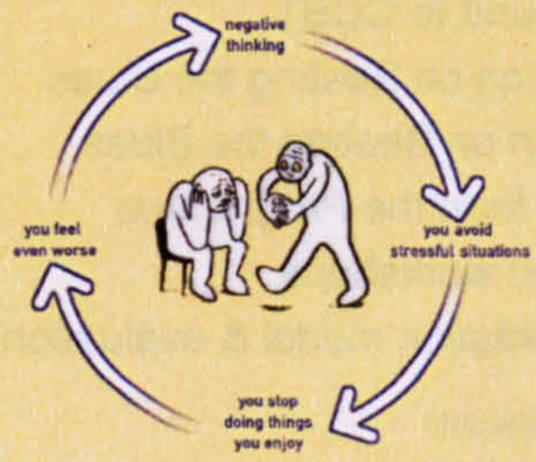




A New Solution

Beating the Blues

What is Cognitive Behavioural Therapy (CBT)?



What we do

Beating the Blues

session 1

1.090.005

What we do (our activities)



What we think (the way we interpret events)



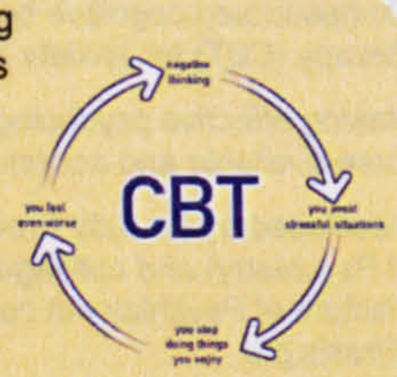
BACK

A New Solution

Beating the Blues

Breaking the cycle

- Identifying and challenging unhelpful thinking patterns and beliefs
- Changing behaviours
  - Problem solving
- Task breakdown
- Activity scheduling
- Graded exposure
- Sleep management

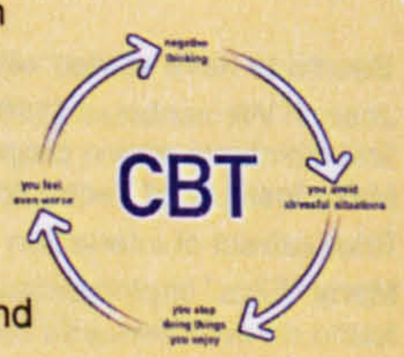


A New Solution

Beating the Blues

Breaking the cycle

- With or without medication anxious and depressed patients can benefit from CBT
- As helpful as anti-depressant medication, and even better at preventing relapse



A New Solution

Beating the Blues

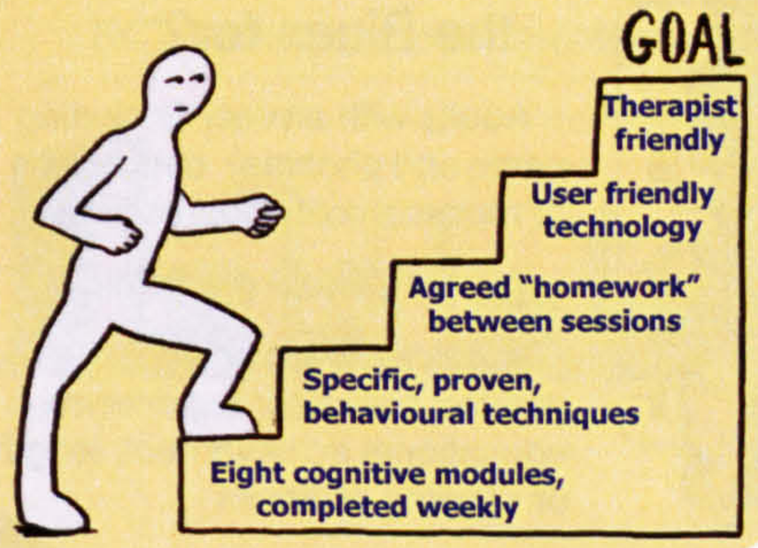
Advantages of Beating the Blues

- Time efficient, Cost effective
- Increased number of depression free days
- Improved efficiency at work
- Confidential
- Avoids psychiatric label
- Easy to use



Step by Step to Better Health

Beating the Blues



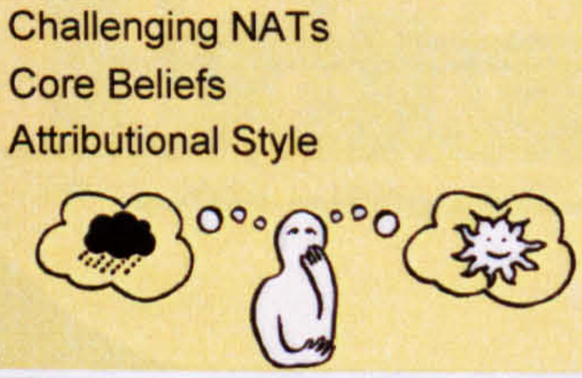
A New Solution

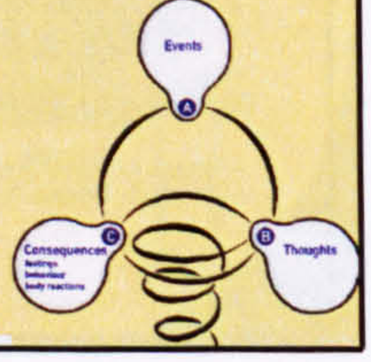
Beating the Blues

Cognitive Components:

- Identifying Negative Automatic Thoughts (NATs)
- Identifying Thinking Errors
- Challenging NATs
- Core Beliefs
- Attributional Style





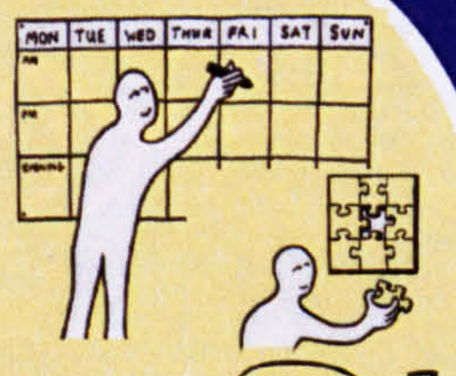


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Beating the Blues

Behavioural Components:

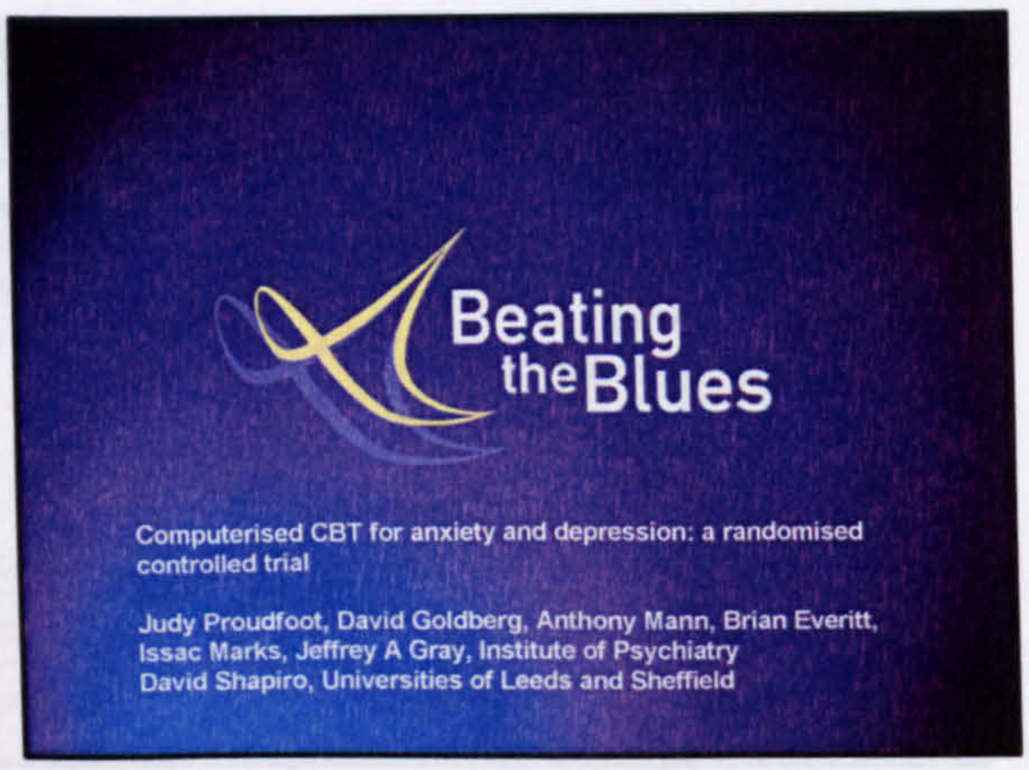
- Activity Scheduling
- Problem Solving
- Sleep Management
- Graded Exposure
- Task Breakdown

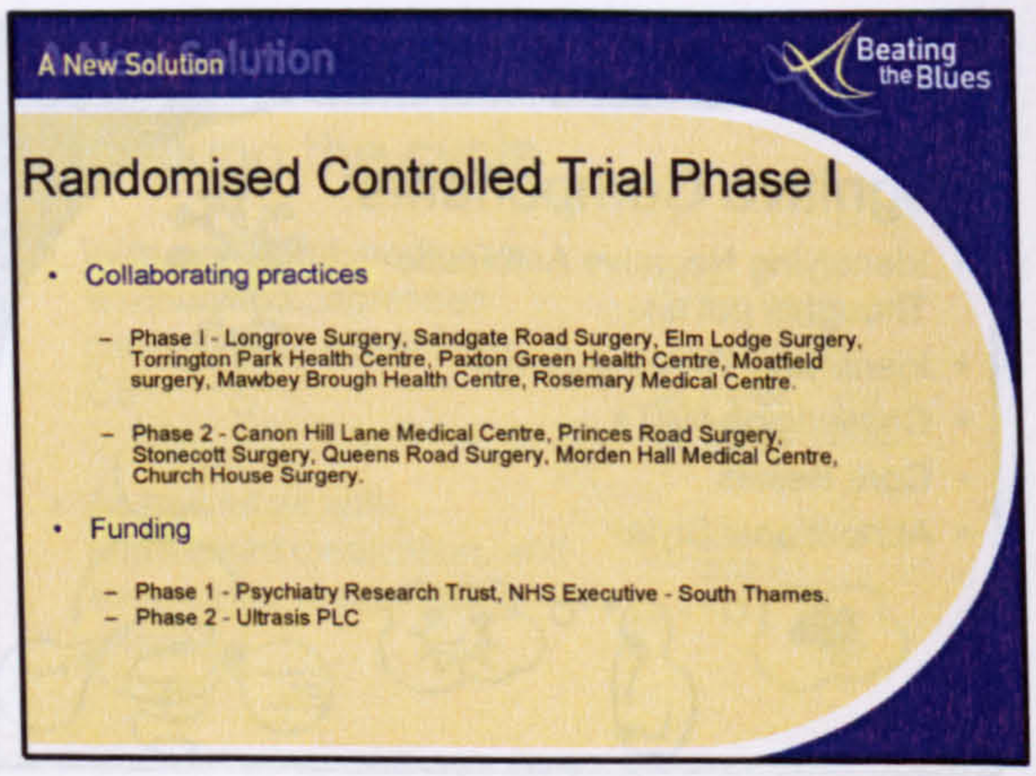





The Programme
Beating the Blues
Who is Beating the Blues for?
• Adults with anxiety (including panic and phobias), depression or mixed anxiety/depression
• With or without medication
• Not dependant on age, gender, computer experience, educational achievement, length or severity of illness


Beating the Blues
Introductory Video


Beating the Blues
Computerised CBT for anxiety and depression: a randomised controlled trial
Judy Proudfoot, David Goldberg, Anthony Mann, Brian Everitt, Issac Marks, Jeffrey A Gray, Institute of Psychiatry
David Shapiro, Universities of Leeds and Sheffield


A New Solution
Beating the Blues
Randomised Controlled Trial Phase I
• Collaborating practices
– Phase I - Longrove Surgery, Sandgate Road Surgery, Elm Lodge Surgery, Torrington Park Health Centre, Paxton Green Health Centre, Moatfield surgery, Mawbey Brough Health Centre, Rosemary Medical Centre.
– Phase 2 - Canon Hill Lane Medical Centre, Princes Road Surgery, Stonecott Surgery, Queens Road Surgery, Morden Hall Medical Centre, Church House Surgery.
• Funding
– Phase 1 - Psychiatry Research Trust, NHS Executive - South Thames.
– Phase 2 - Ultrasis PLC

A New Solution

Beating the Blues

RCT phase I: *Beating the Blues* vs primary care treatment as usual

- 167 patients; 7 GP practices in south east England
- Patients with depression and/or anxiety disorder(s)
- Randomly assigned to Treatment as Usual (TAU) or treatment as usual plus 8 weekly sessions of Beating the Blues
- Exclusions

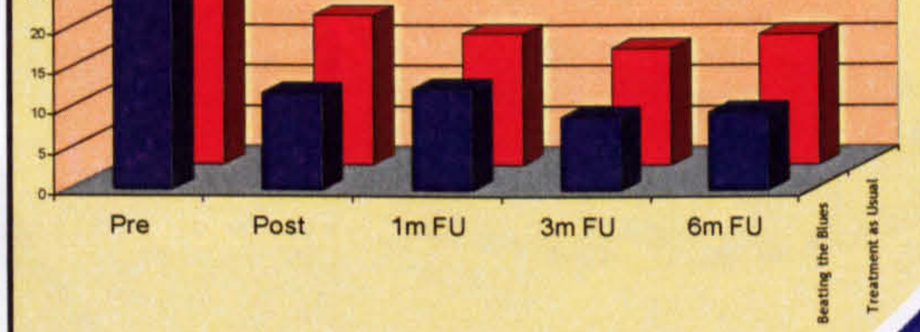
- Outcome measures:
  - Beck Depression Inventory
  - Beck Anxiety Inventory
  - Work and Social Adjustment Scale
  - Health Service Usage

- Pre, Post, 1 month, 3 month and 6 month follow-up

A New Solution

Beating the Blues

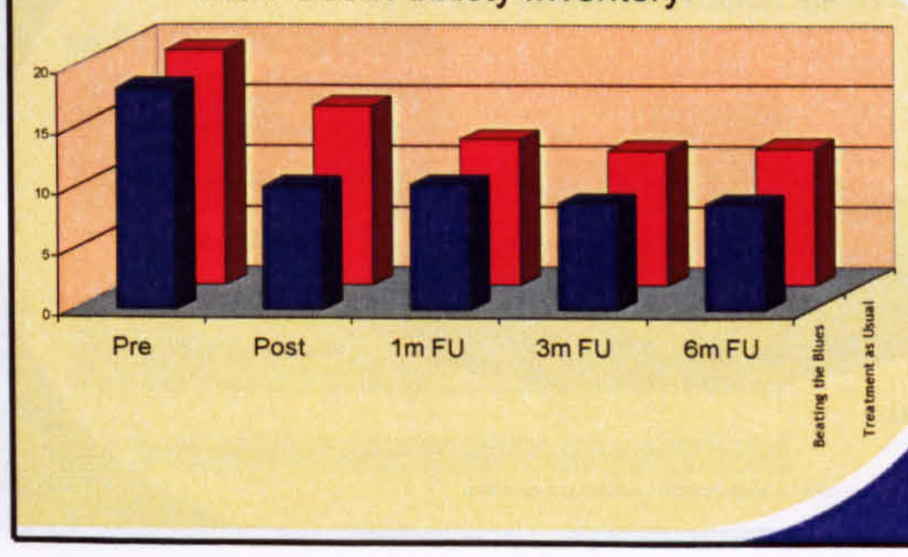
RCT Beck Depression Inventory



A New Solution

Beating the Blues

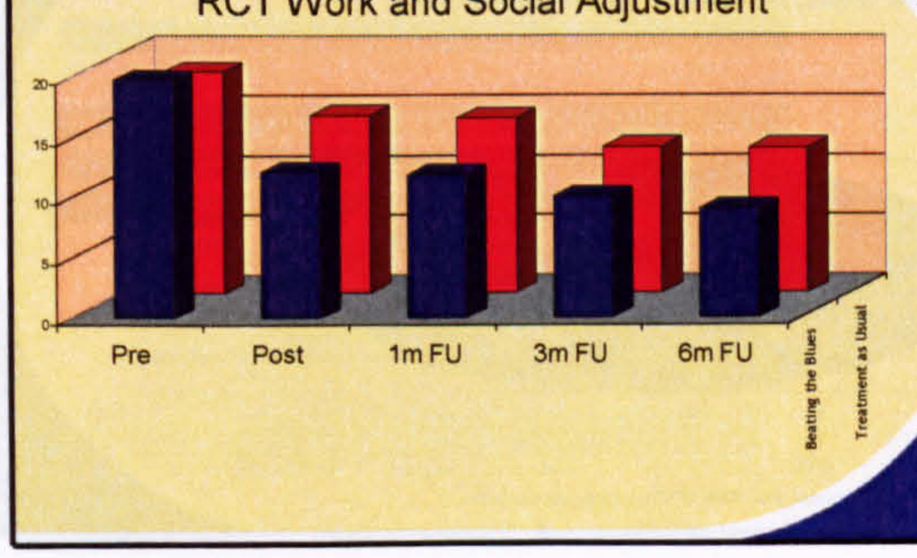
RCT Beck Anxiety Inventory



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Beating the Blues

RCT Work and Social Adjustment

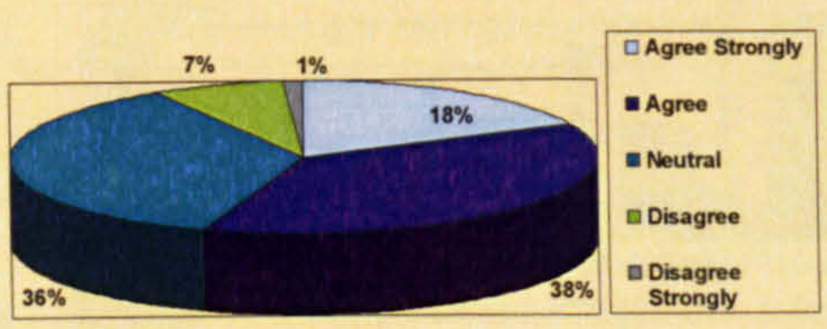


A New Solution

Beating the Blues

Program Experience*

I feel the course will have a long lasting effect:



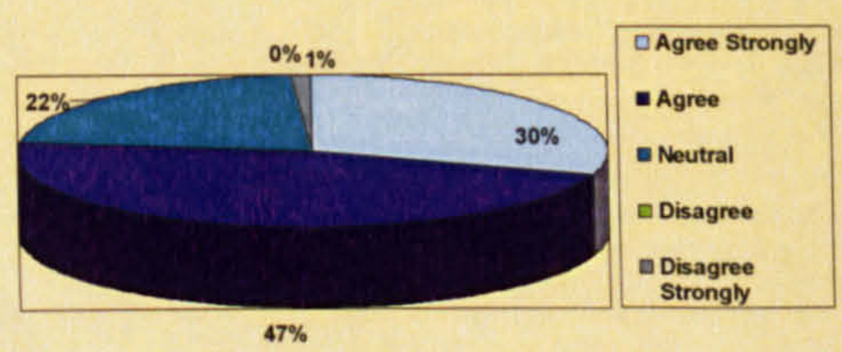
*Cavanagh, Shapiro, *et al* (2004) CCBT credibility and satisfaction

A New Solution

Beating the Blues

Program Experience*

I would recommend the program to other users:



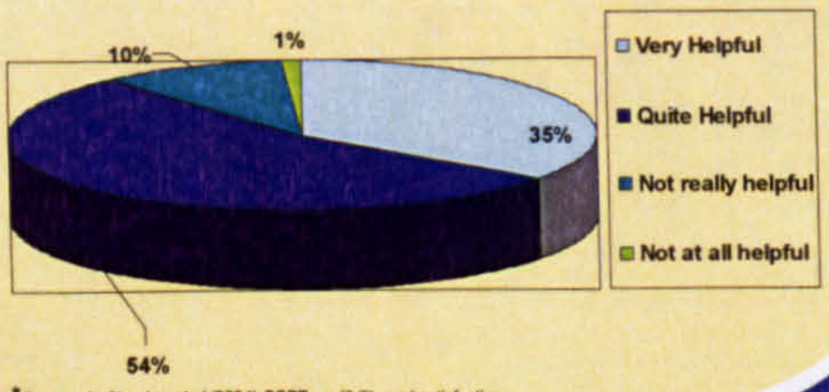
*Cavanagh, Shapiro, *et al* (2004) CCBT credibility and satisfaction

A New Solution

Beating the Blues

Overall Rating of BtB*

How helpful did you find the program overall?



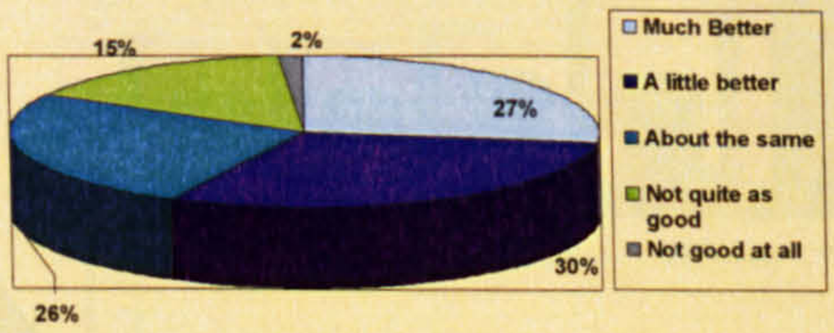
*Cavanagh, Shapiro, *et al* (2004) CCBT credibility and satisfaction

A New Solution

Beating the Blues

Comparison of BtB*

How did BtB compare with previous treatments?



*Cavanagh, Shapiro, *et al* (2004) CCBT credibility and satisfaction

A New Solution

Beating the Blues

RCT Summary

- Significant improvements in anxiety, depression and functioning
- More powerful than usual primary care
- Maintained at 6 month-follow up
- Additive effects of antidepressant /anxiolytic medication and ***Beating the Blues***
- *Supporting the idea that computerised CBT is of real benefit to patients with anxiety and depression*

Beating the Blues

NICE GUIDELINES FOR DEPRESSION

A New Solution

Beating the Blues

Which NICE guideline?

What are the patient's symptoms?

Low mood or loss of interest, usually accompanied by one or more of the following: low energy, changes in appetite, weight or sleep pattern, poor concentration, feelings of guilt or worthlessness and suicidal ideas?

Yes → Enter depression guideline (this guideline)

No

Apprehension, cued panic, spontaneous panic attacks, irritability, poor sleeping, avoidance, poor concentration?

Yes

Enter NICE clinical guideline on anxiety (www.nice.org.uk/CG022)

A New Solution

Beating the Blues

The stepped care approach

Step 1: Recognition in primary care and general hospital settings

Step 2: Treatment of mild depression in primary care

Step 3: Treatment of moderate to severe depression in primary care

Step 4: Treatment of depression by mental health specialists

Step 5: Inpatient treatment for depression

	Who is responsible for care?	What is the focus?	What do they do?
Step 5:	Inpatient care, crisis teams	Risk to life, severe self-neglect	Medication, combined treatments, ECT
Step 4:	Mental health specialists, including crisis teams	Treatment-resistant, recurrent, atypical and psychotic depression, and those at significant risk	Medication, complex psychological interventions, combined treatments
Step 3:	Primary care team, primary care mental health worker	Moderate or severe depression	Medication, psychological interventions, social support
Step 2:	Primary care team, primary care mental health worker	Mild depression	Watchful waiting, guided self-help, computerised CBT, exercise, brief psychological interventions
Step 1:	GP, practice nurse	Recognition	Assessment

Step 2

A New Solution

Beating the Blues

Step 1: Recognition of depression in primary care and general hospital settings

- In primary care and general hospital settings, screen patients with:
  - a past history of depression
  - significant physical illnesses causing disability
  - other mental health problems, such as dementia.
- Bear in mind the potential physical causes of depression and the possibility that depression can be caused by medication.
- Use two screening questions, such as:
  - "During the last month, have you often been bothered by feeling down, depressed or hopeless?" and
  - "During the last month, have you often been bothered by having little interest or pleasure in doing things?"

A New Solution

Beating the Blues

Step 2: Treatment of mild depression in primary care

Watchful waiting

- In mild depression, if the patient does not want treatment or may recover with no intervention, arrange further assessment – normally within 2 weeks.

Sleep and anxiety management

- Consider advice on sleep hygiene and anxiety management.

Exercise

- Advise patients of all ages with mild depression of the benefits of following a structured and supervised exercise programme. Effective duration of such programmes is up to 3 sessions per week of moderate duration (45 minutes to 1 hour) for between 10 and 12 weeks.

Guided self-help

- For patients with mild depression, consider a guided self-help programme that consists of the provision of appropriate written materials and limited support over 6 to 9 weeks, including follow up, from a professional who typically introduces the self-help programme and reviews progress and outcome.

A New Solution

Beating the Blues

NICE technology appraisal

www.nice.org.uk → Technology appraisals →

Appraisals in development → Depression and anxiety - computerised cognitive behaviour therapy (CCBT) (review)

↓

Appraisal Consultation Document: Computerised cognitive behaviour therapy (CCBT) (review)

NICE's preliminary recommendation is that all patients with mild or moderate depression are offered CCBT as a choice for treatment within the stepped-care approach for the management of depression in primary and secondary care.

A New Solution

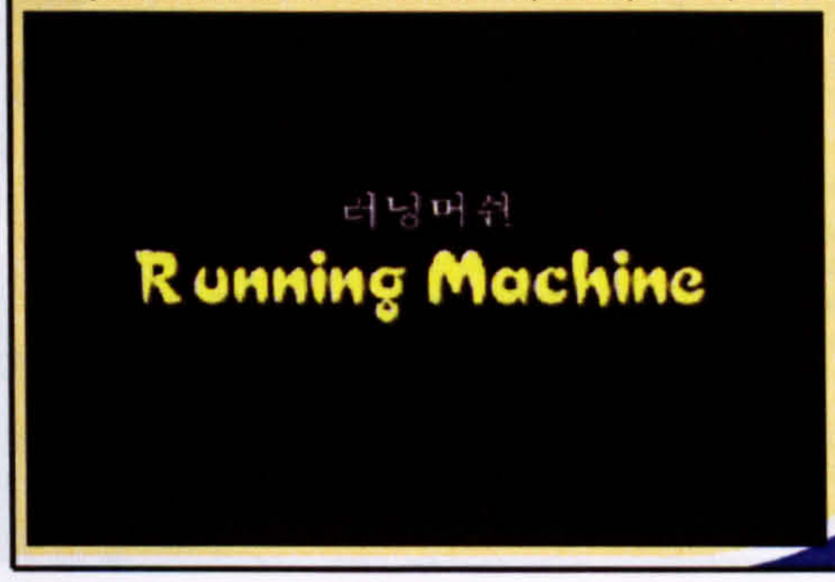
Beating the Blues

Further advice

- Diet?
- Alcohol?
- Drugs?
- Any of our own ideas?

Beating the Blues

Why first-time exercisers should be possibly be supervised.



Beating the Blues

Own ideas

- Carer, finances
- Housing
- Employment
- Support network
- Signposting
- drug interventions
- Relationships
- Social activities
- Environment
- Medication
- How to deal with sense of failure
- Risk management

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Beating the Blues

Administering Beating the Blues

-First appointment

-Logging patients onto Beating the Blues

-Second appointment, and onward & upwards!

-Administrative functions

Beating the Blues

1st Appointment

- Patient to view Introduction to Therapy Video
  - Emphasise no computer experience is necessary
  - Beating the Blues has been shown to very effective in treating anxiety and/or depression
  - Talk about other healthful behaviours
- End of Session
  - Book 2nd appointment

A New Solution

Beating the Blues

Logging on

- Note the name and date in exactly the same way as they type it in on the patient diary
- Encourage patients to use mothers maiden name as password
- Emphasise confidentiality
  - Looking away
  - Encryption
- Emphasise that they don't need any computer experience
- Patients can repeat modules if they wish
- Helpers location must be made clear in case of any questions

A New Solution

Beating the Blues

2nd Appointment

- Beginning of session
  - Give the patient a "patient diary" for storing:
    - Session summaries
    - Weekly projects
    - Weekly progress reports
  - Make sure the patient is at ease with the computer
  - Sit with the patient as they Log in for the first time
- End of Session
  - Make a copy of the weekly progress report for your files
  - Book 3rd appointment

A New Solution

Beating the Blues

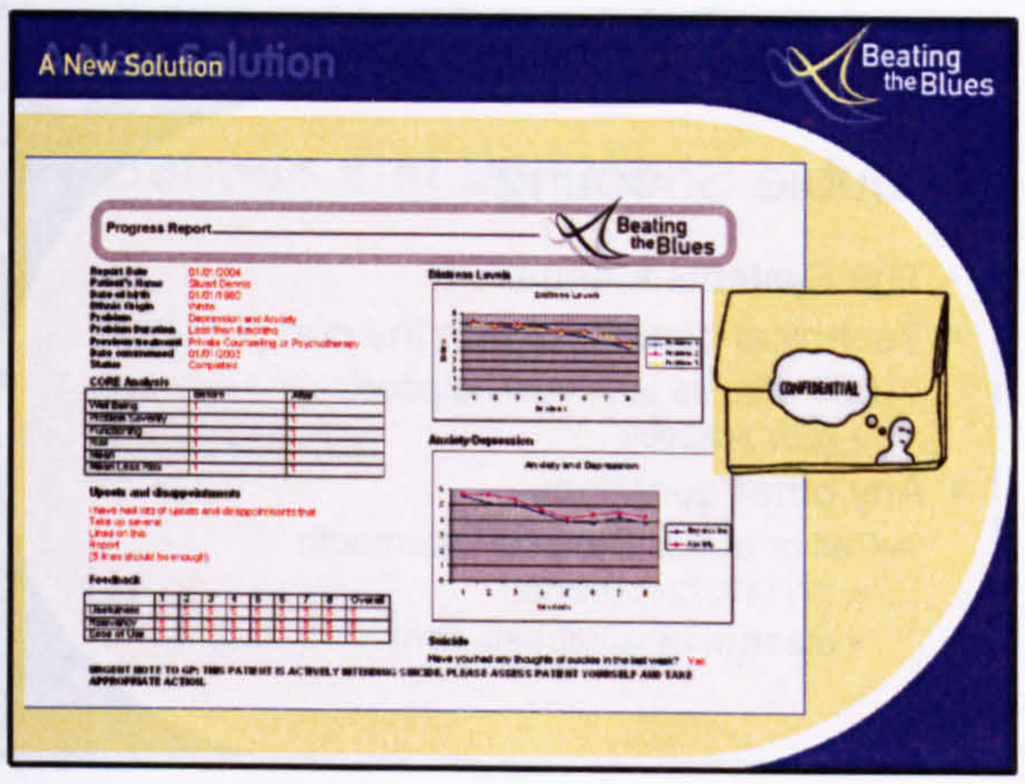
Session 1: Getting Started	• Helps you to establish a clear picture of your problems and their causes. • Video clips are shown of people with similar problems to your own. • Teaches some useful ways of dealing with anxiety and depression.
Session 2: Goal Setting & Automatic Thoughts	• Helps you to set your goals for therapy. • Shows the links between your feelings and what you do, think and say. • Helps you to tap into your thoughts and the effect they have on you. • Offers you a choice of two new ways to help you deal with your individual problems.
Session 3: Common Thinking Distortions in Anxiety & Depression	• Shows how our thinking often becomes twisted when we are stressed, anxious or depressed, which makes us even more upset. We describe this pattern as a 'thinking error'. • This session teaches you how to check your thoughts for such 'thinking errors'.
Session 4: Changing Unhelpful Thinking	• Teaches you how to change any unhelpful thoughts you may have. • Introduces another technique for dealing with your particular problems.
Session 5: Inner Beliefs	• Looks at helping you to find out more about your beliefs to check whether they are helpful or not. • Teaches you how to change unhelpful beliefs in order to feel better and stay better.
Session 6: Inner Beliefs (continued) and Attributional Style	• Looks at the reasons we give for events in our lives. Some types of reasons lead to feelings of low self-esteem and hopelessness. Other reasons boost self-esteem and well-being.
Session 7: Attributional Style (continued)	• Continues the work you started in the last session on 'reasons'. • Each of us has learned a particular way of explaining things and this session helps you to check your particular way. • You will learn new thinking habits and further ways to deal with your particular problem.
Session 8: Conclusion and Coping with Setbacks	• In this last session, you review all that you have learnt in the programme and check your progress on dealing with your problems. • Helps you to set goals for the coming months. • Helps you to plan what to do in case you face a setback in the future.

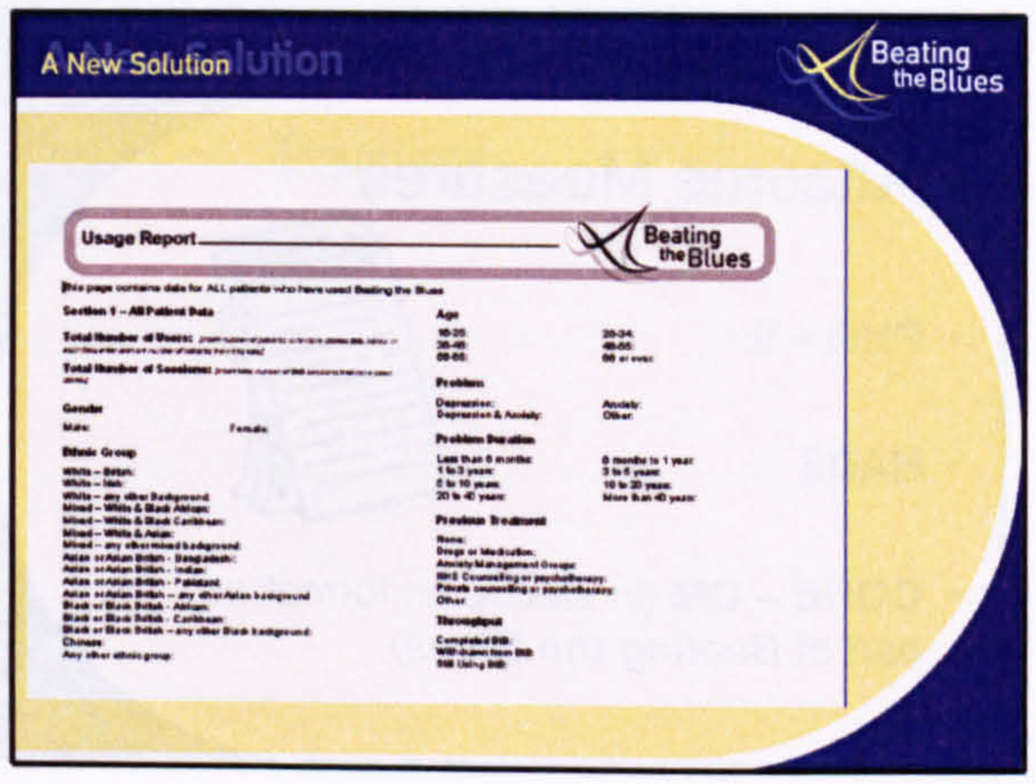
A New Solution

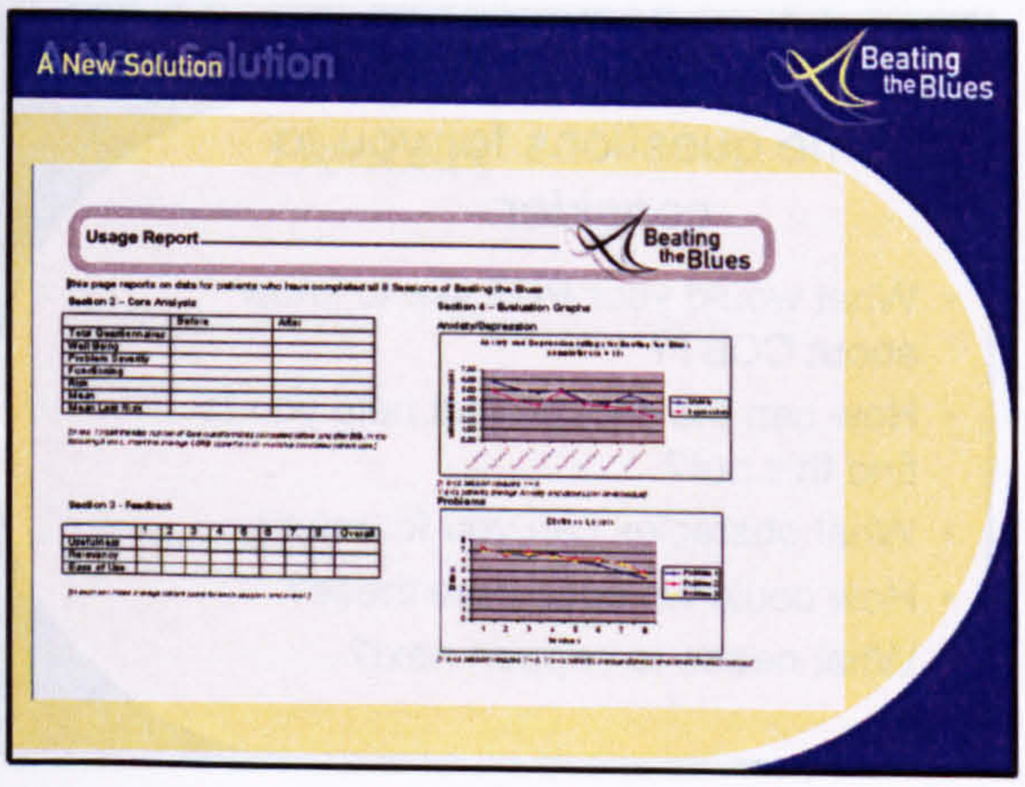
Beating the Blues

3rd-9th Appointment

- Booking the patient in and out
- Necessary outcome measures
- Print off progress reports for your files


A New Solution
Beating the Blues
Progress Report
Beating the Blues
CONFIDENTIAL
Upsets and disappointments
Feedback
Suicide


A New Solution
Beating the Blues
Usage Report
Beating the Blues
Section 1 – All Patient Data
Age
Problem
Problem Duration
Previous Treatment
Gender
Ethnic Group
Throughput


A New Solution
Beating the Blues
Usage Report
Beating the Blues
Section 2 – Core Analysis
Section 3 - Feedback
Section 4 – Evaluation Graphs
Anxiety/Depression
Problems


Clinical Outcomes in Routine Evaluation
Beating the Blues
USER CONSENT
I have read the information provided and I agree to the fair and lawful processing of personal information for the purposes of analysis and research in line with the Data Protection Act 1998.
I understand that the CORE System Trustees and Ultraxis plc will not have access to any personal data provided (e.g. name, address, date of birth) which makes the information identifiable to me and that I will not be identified in any way in anything that is written or reported about the research.
Signed By
Date
Appendices
Page 46 of 49

A New Solution

Beating the Blues

Outcome Measures



- **PHQ – 9**
- **HADS**
- **CORE – OM** (in electronic format as part of ***Beating the Blues***)

A New Solution

Beating the Blues

Trouble Shooting

- The Systems Manual
- Technical questions with the computer:
  - Call Ultrasis technical helpdesk:
    - 0207 5663900
- Any other questions:
  - Call or e-mail Despina Learmonth
    - 07718737241 (mobile)
    - dlearmonth@ultrasis.com

Beating the Blues

Workshop: benefits and barriers to implementation?

best practice protocol for achieving desired results?

A New Solution

Beating the Blues

Some questions for you to consider:

- What would your PCT like to know about CCBT?
- How can the pilot project help you to find this out?
- What obstacles can you foresee?
- How could we overcome these?
- What needs to happen next?

A New Solution

Beating the Blues

Barriers and Benefits

A New Solution

Beating the Blues

Barriers

A New Solution

Beating the Blues

Benefits

A New Solution

Beating the Blues

Benefits

A New Solution

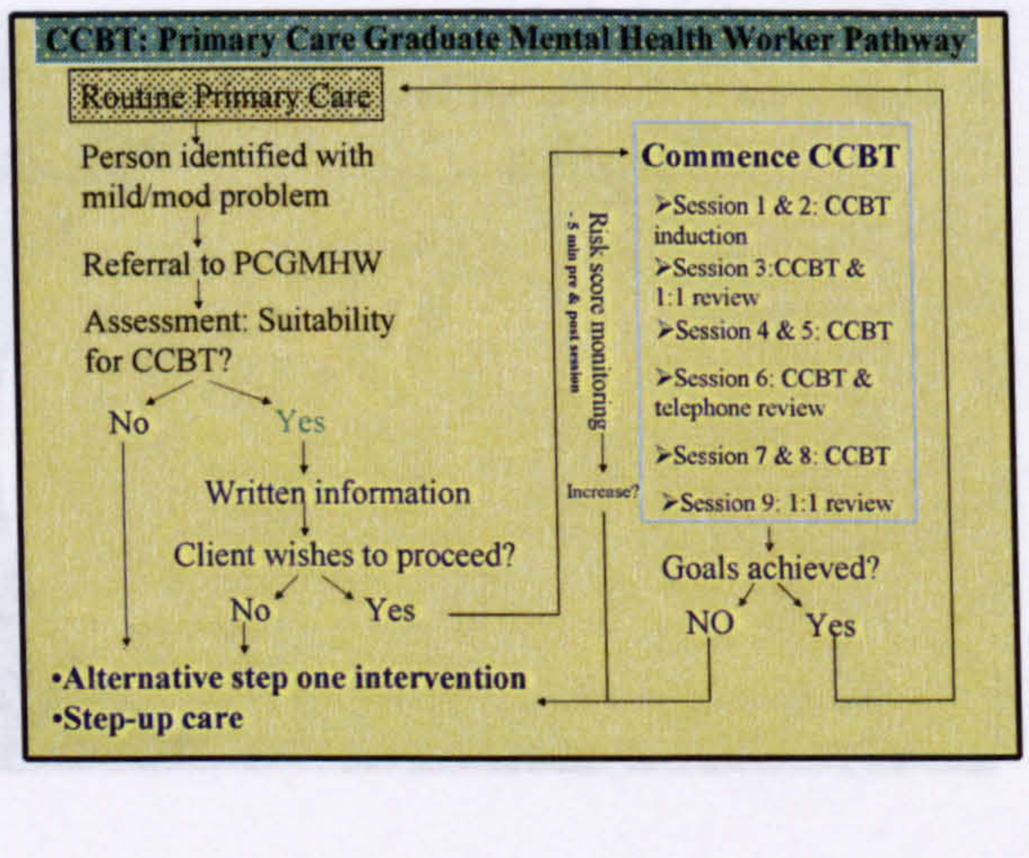
Beating the Blues

Resolving barriers

A New Solution

Beating the Blues

Resolving barriers



A New Solution

Beating the Blues

Assessment: Suitability for CCBT?

The following have no correlation to clinical outcomes:

- Gender / Age
- Previous computer experience
- Education achievements
- Length of illness

A New Solution

Beating the Blues

Check patient does not meet any of the exclusion criteria

- Active suicidal ideas
- A current or lifetime diagnosis of psychosis or organic mental disorder such as dementia
- Current alcohol or drug dependence

A New Solution

Beating the Blues

Explain & give information re: CCBT

- **Highlighting the following:**
- BtB is a computerised cognitive-behaviour therapy program based on well-established effective techniques.
- Consists of eight therapy sessions of approximately one hour and three questionnaire sessions with regular review sessions
- Patients do NOT need to have any experience of computers, but will be given introduction to the programme
- Follow-up with written information

A New Solution

Beating the Blues

The purpose of CCBT reviews

- Monitor symptom severity & level of risk
- Check progress with the programme
- Identify any problems that may have arisen since initial assessment
- Identify obstacles to continuing to use CCBT
- Final review – assess progress towards goals
- Step-out / up if needed at any stage
- Inform primary care team of progress.

A New Solution

Beating the Blues

Evaluation Strategy

Research questions:

- What are the levels of clinical activity supported by the clinics?
- How many patients' have their mental health needs met by CCBT? How many patients need further intervention?
- What are the characteristics of the clinics that facilitate high access?
- What is experience of the people using CCBT – Service users; Primary care referrers & primary care graduate mental health workers?

SCORING THE CORE - OM

Total Score and Total Mean Score

Key points in the scoring of the CORE Outcome Measure are as follows:

- Each item within the CORE Outcome Measure is scored on a 5-point scale ranging from 0 (not at all) to 4 (most or all the time).
- The **total score** is calculated by adding the response values of all 34 items.
- The minimum score that can be achieved is 0 and the maximum 136.
- The **total mean score** is calculated by dividing the total score by the number of *completed* item responses (normally 34).

However, in the case of **missing data**, the mean score can be calculated for the non-missing items. For example, if two items have not been responded to, the total score is divided by 32 (see below). We do not recommend re-scaling the total or non-risk scores if more than three items have been missed. Similarly we do not recommend re-scaling dimension scores if more than one item is missing from a dimension.

The measure is problem scored, that is, the higher the score the more problems the individual is reporting and/or the more distressed they are. This makes scores on the "well-being" dimension a bit counter-intuitive but they are kept this way for consistency with the other dimensions.

Dimension Scores

The four dimensions of the CORE Outcome Measure can be identified by the letter adjacent to the column of boxes labelled "office use only" at the far right hand side of the measure. These are shown in Table 2 below. These boxes are for immediate hand scoring if required. Thus to gain a total score for the "Well-being" dimension, first write the values of the responses in the allocated boxes, then total the scores of the four boxes marked 'W' and write this score in the box marked "W" at the foot of the measure. The **mean scores for each dimension** are calculated by dividing the total scores by the number of *completed* item responses for each dimension; for "Well-being" the score would normally be divided by four, if one 'well being' item has been omitted, score should be divided by three.

Risk Items

These items cover suicidal ideation and harm to self and others. Where an individual scores more than '0' on any item marked 'R' (Risk), this should be flagged for further attention by the clinician. To calculate the mean total score minus risk items ('All minus R') first calculate the total score, minus the risk score, and then calculate the mean score by dividing this score by the number of completed item responses marked 'W', 'P' or 'F' (normally 28).

Table 2 - Identifiers and score ranges for dimensions of the CORE Outcome Measure

Identifier	**Dimension**	**No of items**	Total Score Range	Mean Score Range
W	Well Being	4 items	0 - 16	0 - 4
P	Problems or Symptoms	12 items	0 - 48	0 - 4
F	Functioning	12 items	0 - 48	0 - 4
R	Risk	6 items	0 - 24	0 - 4
	Total Score	34 items	0 - 136	0 - 4

Client Number _____ Date _____

CLINICAL OUTCOMES IN ROUTINE EVALUATION.

You will be presented with 34 statements about how you have been OVER THE LAST WEEK. Please read each statement and think how often you felt that way last week. Then circle the number which is closest to this.

Copyright MHF and CORE System Group.

OVER THE LAST WEEK

1. I have felt terribly alone and isolated

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

2. I have felt tense, anxious or nervous

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

3. I have felt I have someone to turn to for support when needed

0	1	2	3	4
Most or all of the time	Often	Sometimes	Only occasionally	Not at all

4. I have felt O.K about myself

0	1	2	3	4
Most or all of the time	Often	Sometimes	Only occasionally	Not at all

5. I have felt totally lacking in energy and enthusiasm

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

6. I have been physical violent to others

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

7. I have felt able to cope when things go wrong

0	1	2	3	4
Most or all of the time	Often	Sometimes	Only occasionally	Not at all

8. I have been troubled by aches, pains or other physical problems

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

9. I have thought of hurting myself

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

10. Talking to people has felt too much for me.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

11. Tension and anxiety have prevented me doing important things.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

12. I have been happy with the things I have done.

0	1	2	3	4
Most or all of the time	Often	Sometimes	Only occasionally	Not at all

13. I have felt disturbed by unwanted thoughts and feelings.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

14. I have felt like crying

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

15. I have felt panic or terror.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

16. I made plans to end my life.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

17. I have felt overwhelmed by my problems.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

18. I have had difficulty getting to sleep or staying asleep.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

19. I have felt warmth or affection for someone.

0	1	2	3	4
Most or all of the time	Often	Sometimes	Only occasionally	Not at all

20. My problems have been impossible to put to one side.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

21. I have been able to do most things I needed to.

0	1	2	3	4
Most or all of the time	Often	Sometimes	Only occasionally	Not at all

22. I have threatened or intimidated another person.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

23. I have felt despairing or hopeless.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

24. I have thought it would be better if I were dead.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

25. I have felt criticised by other people.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

26. I have thought I have no friends.

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

27. I have felt unhappy

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

28. Unwanted images or memories have been distressing me

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

29. I have been irritable when with other people

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

30. I have thought I am to blame for my problems and difficulties

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

31. I have felt optimistic about my future

0	1	2	3	4
Most or all of the time	Often	Sometimes	Only occasionally	Not at all

32. I have achieved the things I wanted to

0	1	2	3	4
Most or all of the time	Often	Sometimes	Only occasionally	Not at all

33. I have felt humiliated or shamed by other people

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

34. I have hurt myself physically or taken dangerous risks with my health

0	1	2	3	4
Not at all	Only Occasionally	Sometimes	Often	Most or all of the time

Hospital Anxiety and Depression Scale (HADS)

Instrument designed to detect the presence and severity of mild degrees of mood disorder, anxiety and depression.

Questions relating to anxiety are indicated by an 'A' while those relating to depression are shown by a 'D'. Scores of 0-7 in respective subscales are considered normal, with 8-10 borderline and 11 or over indicating clinical 'caseness'.

Instructions: Doctors are aware that emotions play an important part in most illnesses. If your doctor knows about these feelings he or she will be able to help you more. This questionnaire is designed to help your doctor know how you feel. Read each item and place a firm tick in the box opposite the reply which comes closest to how you have been feeling in the past week. Don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought out response.

I feel tense or 'wound up':	**A**	**I feel as if I am slowed down:**	**D**
Most of the time	3	Nearly all of the time	3
A lot of the time	2	Very often	2
Time to time, occasionally	1	Sometimes	1
Not at all	0	Not at all	0

I still enjoy the things I used to enjoy:	**D**	**I get a sort of frightened feeling like 'butterflies in the stomach':**	**A**
Definitely as much	0	Not at all	0
Not quite so much	1	Occasionally	1
Only a little	2	Quite often	2
Not at all	3	Very often	3

I get a sort of frightened feeling like something awful is about to happen:	**A**	**I have lost interest in my appearance:**	**D**
Very definitely and quite badly	3	Definitely	3
Yes, but not too badly	2	I don't take as much care as I should	2
A little, but it doesn't worry me	1	I may not take quite as much care	1
Not at all	0	I take just as much care as ever	0

APPENDIX E

I can laugh and see the funny side of things:	**D**
As much as I always could	0
Not quite so much now	1
Definitely not so much now	2
Not al all	3

Worrying thoughts go through my mind:	**A**
A great deal of the time	3
A lot of the time	2
From time to time but not too often	1
Only occasionally	0

I feel cheerful:	**D**
Not at all	3
Not often	2
Sometimes	1
Most of the time	0

I can sit at ease and feel relaxed:	**A**
Definitely	0
Usually	1
Not often	2
Not at all	3

I feel restless as if I have to be on the move:	**A**
Very much indeed	3
Quite a lot	2
Not very much	1
Not at all	0

I look forward with enjoyment to things:	**D**
A much as I ever did	0
Rather less than I used to	1
Definitely less than I used to	3
Hardly at all	2

I get sudden feelings of panic:	**A**
Very often indeed	3
Quite often	2
Not very often	1
Not at all	0

I can enjoy a good book or radio or TV programme:	**D**
Often	0
Sometimes	1
Not often	2
Very seldom	3

Appendix F

PHQ-9 MONITORING TOOL

The Patient Health Questionnaire (PHQ) is a brief 9-item patient self-report questionnaire specifically developed for use in primary care and used extensively in the United States. The PHQ-9 has acceptable reliability, validity,sensitivity and specificity as an assessment tool for the diagnosis of depression in primary care. The questionnaire can also be used to monitor progress with possible scores ranging from 0 to 27 with higher scores indicative of increasing severity.

PATIENT NAME ..... DATE.....

1 Over the last 2 weeks, how often have you been bothered by any of the following problems?
Read each item carefully, and circle your response.

A Little interest or pleasure in doing things

Not at all **Several days** **More than half the days** **Nearly every day**

B Feeling down, depressed, or hopeless

Not at all **Several days** **More than half the days** **Nearly every day**

C Trouble falling asleep, staying asleep, or sleeping too much

Not at all **Several days** **More than half the days** **Nearly every day**

D Feeling tired or having little energy

Not at all **Several days** **More than half the days** **Nearly every day**

E Poor appetite or overeating

Not at all **Several days** **More than half the days** **Nearly every day**

F Feeling bad about yourself, feeling that you are a failure, or feeling that you have let yourself or your family down

Not at all **Several days** **More than half the days** **Nearly every day**

G Trouble concentrating on things such as reading the newspaper or watching television

Not at all **Several days** **More than half the days** **Nearly every day**

H Moving or speaking so slowly that other people could have noticed. Or being so fidgety or restless that you have been moving around a lot more than usual

Not at all **Several days** **More than half the days** **Nearly every day**

I Thinking that you would be better off dead or that you want to hurt yourself in some way

Not at all **Several days** **More than half the days** **Nearly every day**

2 If you checked off any problem on this questionnaire so far, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not Difficult at All **Somewhat Difficult** **Very Difficult** **Extremely Difficult**

RECOMMENDED CATEGORIES FOR RESPONSE AND MONITORING WITH THE PHQ-9

SCORE	SEVERITY	CLINICAL PATHWAY
< 10	Mild depression	Watchful waiting or step 2
10 – 14	Moderate depression	Step 2 or 3
15 - 19	Moderate to severe depression	Step 3 or 4
> 20	Severe depression	Step 4 or 5

Definition of improvement

Improved A reduction of 2 or more points on the baseline score

Not improved Drop of 1 point or no change or increased score

Definition of remission

A PHQ-9 score of less than 5 is the eventual goal of acute phase treatment. When this goal is achieved, patients enter the continuation phase of treatment. Changes of treatments within steps and stepping up are considered for patients who do not reach their goal.

APPENDIX G

Beating the Blues Training and Workshop Assessment

On a scale of 0 to 7 please can you assess yourself on the following questions:

1) Do you understand why *Beating the Blues* was developed, and how the intervention works?

0 1 2 3 4 5 6 7
Not at Completely
All

2) Do you understand the main *Beating the Blues* RCT results?

0 1 2 3 4 5 6 7
Not at Completely
All

3) Do you understand how to facilitate *Beating the Blues* as an intervention for anxiety and depression in primary healthcare?

0 1 2 3 4 5 6 7
Not at Completely
All

4) Do you understand the barriers and benefits to the implementation of *Beating the Blues?*

0 1 2 3 4 5 6 7
Not at Completely
All

5) Do you feel you have increased your knowledge around tackling the barriers to implementation?

0 1 2 3 4 5 6 7
Not at A lot
All

6) Do you understand the basic NICE guidelines for treating depression, and do you feel you will be able to use these to guide and strengthen your clinical practice?

0 1 2 3 4 5 6 7
Not at Completely
All

Name: Dated:

Signed: E-mail address:

Assessment results - Appendix H

Do you understand why Beating the Blues was developed, and how the intervention works?	Do you understand the main Beating The Blues RCT results?	Do you understand how to facilitate Beating The Blues as an intervention for anxiety and depression in primary healthcare?	Do you understand the barriers and benefits to the implementation of Beating The Blues?	Do you feel you have increased your knowledge around tackling the barriers to implementation?	Do you understand the basic NICE guidelines for treating depression, and do you feel you will be able to use these to guide and strengthen your clinical practice?	**Individual trainee's averages**
6	6	4	5	6	5	5.33
7	5	6	6	7	4	5.83
6	3	6	7	5	6	5.50
5	6	6	6	6	4	5.50
6	5	7	6	6	5	5.83
6	6	6	7	7	6	6.33
7	5	7	7	6	6	6.33
6	6	5	6	5	6	5.67
5	5	3	7	3	6	4.83
7	7	5	7	6	5	6.17
5	5	5	5	5	5	5.00
5	5	3	4	4	2	3.83
5	5	5	6	6	5	5.33
6	6	7	7	7	7	6.67
6	5	5	3	4	7	5.00
7	5	5	7	6	7	6.17
6	7	6	4	6	6	5.83
6	6	6	6	6	6	6.00
7	5	6	6	6	6	6.00
7	6	7	7	7	7	6.83
6	6	6	6	7	6	6.17
7	7	7	7	7	6	6.83
6	6	6	6	7	7	6.33
5	6	5	5	4	4	4.83
2	4	6	6	5	6	4.83
5	6	4	4	5	5	4.83
3	6	3	6	4	6	4.67
6	6	6	6	7	7	6.33
5	5	5	6	5	6	5.33
7	7	6	7	6	7	6.67
7	6	6	5	6	6	6.00
7	5	6	6	6	7	6.17
7	7	7	5	7	5	6.33
7	6	6	6	5	6	6.00
6	5	6	6	6	5	5.67
Average scores for each assessment question:						
5.91	**5.63**	**5.57**	**5.89**	**5.74**	**5.71**	

EVALUATION OF THE BEATING THE BLUES GMHW TRAINING

1. What are your general reactions to the training?

1	2	3	4	5	6	7	8	9	10
Didn't meet my needs				Worthwhile					Valuable and useful to my work

2. Did you find the training presentation easy to follow?

1	2	3	4	5	6	7	8	9	10
Not easy				Satisfactory					Very easy

3. Do you feel the presentation met your training needs?

1	2	3	4	5	6	7	8	9	10
Poorly met				Partially met					Fully met

4. Do you feel any part of the training could be improved upon, and if yes, which part and how?

Yes / No

Comments

_____

_____

_____

_____

5. Can you suggest other topics that would be useful to your work?

_____

Any further general comments

Name:_____ (Optional) Date:_____

Thank you for your feedback.

Please return this form to:

Despina Learmonth

Programme Psychologist

Ultrasis

2nd Floor

Northburgh House

10 Northburgh Street

London

EC1V 0AT

Or this evaluation form can be completed electronically and e-mailed to me on-line at:
dlearmonth@ultrasis.com

APPENDIX J - 22/04/2005

What were your general reactions to the training?	Did you find the presentation easy to follow?	Did you feel the session met your training needs?	If your training needs were poorly met, why did you feel this was so?	Do you feel any part of the training could have been improved upon?	If yes, which part?	Can you suggest any other topics that will be useful to your work?	Any other general comments?
10	10	10					Really enjoyed the day
10	10	10					
10	10	9					
					Can we have feedback of the overall evaluations after data collated?	more detail on licenses	
8	8	8					
9	8	8					
9	10	10					
					More examples - mock runs of actual treatments	Getting this into libraries, local centres etc	Excellent presentation
10	10	10		Yes			
9	8	8					
7	9	9					
8	9	6					
9	10	8					
8	7	8					
8	8	7					
					possible all have a workshop using the program		
10	10	10		yes			
9	9	9					
8	9	8					
9	10	10					
						would have been more useful to have individually gone through the package(Beating The Blues)	
3	6	5					
9	9	8					
					would have been good if all could have a go. Written materials/leaflets would have been good to enable us to become more familiar		
9	7	8		yes			
						letting our managers know how it works	
7	7	7					
8	9	9					
					I don't fully understand how to implement it step by step		
7	7	7		yes			
					knowing which people exactly would benefit from this service - would the service benefit more those who had previous experience of counselling to cope with difficult emotional issues, or can anyone access it if they experience depression or anxiety (without difficult emotions being tackled)		
10	6	10		yes			
					it could explain the difference between GPCMHW's face to face contact and beating The Blues		
5	10	10		yes	opportunity to play with the program would be useful although I appreciate this is dependent on resources		
8	8	7		yes			
7	9	8					
					Go through each session too quick to have an idea what it involves. We have done some, but will be more helpful to go one by one		The trainer was excellent, very good tone of voice, confident and made the subject attractive and not boring at all
9	10	9		yes			
10	9	9					
7	8	8					
8	9	9					
							very good in terms of 'interaction' between MHW's and lecturer. Will find this useful tool in terms of interventions used for anxiety and depression
10	10	10			found the training very helpful and user friendly		
6	7	6					
Average scores for category: (between 1 - 10)	Average scores for category: (between 1 - 10)	Average scores for category: (between 1 - 10)					
8.30	**8.67**	**8.42**					

UNIT 4 – Training (second case study)

Despina Learmonth DPsych. (Health Psychology) 2007

Training Competence (Unit 4) – second case study

Setting: The training took place at the Horsham Salvation Army Centre on the 15 March 2006. The training seminar ran from 11:30am to 2 pm.

Target audience/Trainees: Thirty primary care based trainees attended the session. All of the trainees worked for Horsham and Chanctonbury Primary Care Trust (PCT) in primary healthcare. They were a diverse group, consisting of general practitioners, nurses, administrative staff, and primary care counsellors. I was supported in the training by the Horsham and Chanctonbury PCT service development manager.

Description of the work: The training seminar's focus was: to review the National Institute for Health and Clinical Excellence's (NICE) guidelines on depression, and to discuss how the programme *Beating the Blues* could be implemented more successfully within their primary care practices. Most of the primary care practices in Horsham and Chanctonbury PCT had received their licence for the CCBT programme, *Beating the Blues,* in May last year. A few practices had already implemented *Beating the Blues* successfully as a therapeutic tool in their practices; but there were many practices where uptake had been very poor. My task was to ensure that the trainees were provided with a structured space in which to begin exploring what had worked, and what had not worked during the last 9 months in the implementation of *Beating the Blues.* Along with the service development manager, I was also expected to provide any extra information required to assist them in improving their implementation of *Beating the Blues.*

UNIT 4.1 – Plan and design training programmes that enable students to learn about psychological knowledge, skills and practice

Unit 4.1a – Assess training needs

Firstly, I reviewed the desired learning outcomes and agenda (Appendix A) sent to me by the service development manager. This was developed from her own experiences of working with the practices. She had established the training meeting with me because she felt that the practices in her PCT still had these learning needs. Secondly, I checked the previous training presentation that this group had received (Appendix B) in May last year to make sure that I was aware of what material had already been covered.

In exploring how the specified training needs could be met, I realised that both information giving and involving the trainees in discussions would be best. This would allow them to take the information I supplied, and then integrate it into their experience and practice through discussion with their peers. I wanted them to formulate their own solutions to the issues and problems raised.

I also re-reviewed the successful implementation of *Beating of Blues* at a number of primary and secondary care sites nationally, and created a slide presenting the best implementation model for discussion within the session.

The desired learning outcomes for the training session were as follows:
a) emphasising the benefits of *Beating the Blues* in a hope that Horsham and Chanctonbury PCT could achieve full implementation within multi-disciplinary teams in the practices;
b) to achieve a full understanding of NICE guidelines for treating depression, and increase feelings of competence in using them to guide and strengthen personal clinical practice;
c) to get practices thinking about how they could get *Beating the Blues* working efficiently across "the patch" (to encourage practices to identify what support they need to get *Beating the Blues* implementation rolling);
d) to increase knowledge, and as a result feelings of competence, around tackling the issues and barriers to the implementation of *Beating the Blue*;
e) increased understanding of the advantage of using Primary Care Counsellors alongside *Beating the Blues;*
f) and increased understanding of what makes a *Beating the Blues* service effective.

Unit 4.1b – Identify training programme structure and content
Having reviewed the previous training presentation delivered to this group, as well as the desired learning objectives for this training session, I submitted my proposed training plan/presentation (Appendix C) for review to one of my colleagues and the Horsham and Chanctonbury PCT service development manager. Whilst preparing the content for the training session I kept in mind that the structure of the training programme needed to: fit into the allocated 2 and ½ hour slot, focus on the proposed agenda (sent to me by the service development manager), and be presented in a hall at the Horsham Salvation Army Centre with only a projector, laptop, pre-prepared handouts, and desks and chairs available as resources.

Unit 4.1c – Select training methods and approaches

In order to achieve the specific aims and learning objectives of the session, I recognised that although initially a didactic approach would be used to deliver certain required information about NICE and *Beating the Blues* implementation, an interactive style of delivery would be more suited to most of the session. Trainees would be asked to use any new information, as well as knowledge that they already possessed, to develop their own ideas and solutions in groups. These discussions would be initiated by myself as primary trainer, and I would encourage feedback to the whole group so that all ideas were shared for learning.

In planning a more interactive session, with a focus on working towards solutions, I used techniques from a seminar on "Presentation and Facilitation", which I had attended a month previously. I was aware that some of these techniques, such as Process Mapping, were already used regularly in the National Health Service (NHS) for facilitating solution-focused training within services. This meant that many of the trainees would probably already be comfortable with this technique of drawing together information. It would also assist in their developing ownership of the issues.

Instead of only focussing on "What is working" and "What is not working", I felt that it would be more constructive to expand on this exploration of positives and negatives by using a SWOT analysis. This would hopefully maximise learning by allowing all staff involved the chance to identify opportunities offered by the service, and threats to the service, as well as weaknesses and strengths.

Finally, it was very important to include an exercise focussing on eliciting solutions from the trainees. This was done by asking the trainees to develop an action plan in groups for resolving at least two of the weaknesses or threats discussed in the SWOT analysis.

During the session, due to time constraints, I allowed for the fact that the group exercises would not necessarily be completed in full detail. The aim was mainly to get the trainees discussing ideas and issues, and thinking about how to resolve them in a focussed and constructive way.

After discussing methods of assessment with both a colleague and the service development manager, it was decided that the best method of training assessment would be observation of an increase in *Beating the Blues* referral and completion rates in the months following training. A baseline measure of these was collected prior to the training. In 3 months time, this data will

be collected again, and a comparison will be made to see if the training had an impact on successful implementation and use of *Beating the Blues.*

Unit 4.1d – Produce training materials

I evaluated and selected available materials from previous training sessions, and produced extra learning materials where necessary to meet specific learning needs. These slides and handouts focussed on: the NICE guidelines and how they would guide primary care practice in treating individuals with anxiety and depression; a guideline to assessment and appropriate referral (accompanied by a copy of the Patient Health Question [PHQ – 9] as routinely used in assessment in practice); an implementation model using primary care counsellors to manage the service; and an updated research summary. (See Appendix D for the contents of the training pack given to each trainee).

Unit 4.1e – Use appropriate media to deliver training materials

I used Microsoft Powerpoint to develop my presentation, and provided extra A3 pages for writing down the points for group discussions. A3 flip chart stands, chairs, and tables were supplied by the Horsham Salvation Army Centre. I ensured that handouts of my training presentation (Appendix C) were made available for the day, and trainees were also supplied with trainee packs (Appendix D) containing further material relevant to the training. Horsham and Chanctonbury PCT provided a presentation screen and a projector, and I supplied a laptop and speakers.

Unit 4.2 – Deliver training programmes encompassing psychological knowledge, skills, and practices

Unit 4.2a – Implement training methods & Unit 4.2b – Facilitate learning

I arrived at the Horsham Salvation Army Hall an hour before the training was due to begin so that I could set up the hall appropriately. I had also organised to meet with the service development manager an hour beforehand at the hall so that we could do a final review of how the session would be run. During this time we also checked that we had all the handouts required for the session, and we agreed on break-times expected. We distributed trainee packs to all the seats, and set up the presentation equipment, being careful to tape down any extension power leads in order to comply with Health and Safety regulations.

In preparation for this session, I had reread the important research and popular practice in this area of primary care. I started the session by presenting the learning aims for the session, and inviting the trainees to add any aims that they felt may have been relevant to them. I encouraged them to feel comfortable with reviewing these aims throughout the session, and asking me to add to them at any point during the session. All the trainees had an agenda in their packs (Appendix D), but I also presented an outline of the training presentation (Appendix C) continually throughout the session. I made a point of emphasising that the presentation would follow the agenda loosely, guided predominantly by their training needs.

I delivered the training in as interesting a way as possible, focussing on keeping trainees engaged with the material, and supporting and facilitating group discussion and learning. Where necessary I explained concepts which may have been new to some of the group, and I responded effectively to questions as they arose during training. Examples of the kinds of questions I dealt with were: 'how do we prevent drop-outs', and 'are users allowed to do more than one session in an appointment'? I was comfortably able to answer most of the questions trainees had regarding *Beating the Blues,* and I presented the material clearly and coherently, explaining group activities to allow for full participation by all trainees. I allocated most of time during the session to interactive learning, and ensured that after each of these interactive sessions there was clear feedback and summarising from the members of the group to the group as a whole (Appendix E for group exercise feedback report).

I constantly monitored the trainees' reactions during the training to attempt to pace the training appropriately. When the trainees were divided into groups, I moved from group to group, making myself available for questions or guidance. At the end of the training contact details for follow-up questions, or further information provision to individuals, were provided.

Unit 4.3 – Plan and implement assessment procedures for training programmes encompassing psychological knowledge, skills and practices

Unit 4.3a – Identify assessment methods

After discussion with a colleague and the Horsham and Chanctonbury PCT service development manager, I decided that the best assessment of whether or not trainees had benefited from the training session would be if the implementation and use of *Beating the Blues* in the practices of those attending improved.

Unit 4.3b – Select assessment methods

Other assessment methods to test or ask trainees about their knowledge acquisition could have been used. However, this method was selected because it would provide a lot more information about how the training had impacted on the trainees than any other method. I was also fortunate to have the co-operation of the service development manager in this respect, and therefore access to *Beating the Blues* baseline usage data (Appendix F).

Unit 4.3c – Establish the availability of resources for the procurement of assessment procedures

Baseline data (for the months prior to the training session – Appendix F) was collected by the service development manager. Follow-up usage data for the subsequent 10 weeks (until the end of May) (Appendix F) was collected for comparison. I was completely competent to compare and evaluate the data as required.

Unit 4.3d – Produce assessment materials

Due to the nature of the assessment, there was no need to produce assessment materials for this training. For assessment to be completed successfully, the baseline data (Appendix F) needed to be compared against the follow-up data (Appendix F).

Unit 4.3e – Ensure fair appreciation of assessment methods

Primary care practices that have not had any staff attend the training were not assessed, but will be offered the opportunity to attend a further training session. The follow-up data for assessment (Appendix F) shows a little improvement in the use of *Beating the Blues* for certain of the practices, but it is clear that some of the practices may need further training. Some of the data sheets are also incomplete; the service development manager is chasing these practices for an up-to-date complete set of data. The service development manager was involved in the assessment, and was aware of, and had agreed to follow, certain assessment procedures and guidelines.

The comments on the evaluation forms will be applied to develop the next training session, and staff will be divided into smaller, more specific groups for training.

Unit 4.3f – Produce relevant records of progress and outcome

The service development manager had rated attendance of the whole training session as denoting completion of the training, so an attendance register was sent around. This will be kept for determining final assessment of the trainees. Once the final assessment has taken place

records will be kept monthly for each practice by the service development manager. Where implementation is consistently poor, staff will be invited to attend extra training.

Unit 4.4 – Evaluate training programmes encompassing psychological knowledge, skills, and practices

Unit 4.4a – Evaluate training programme outcomes

The evaluation of the training session was done via standard paper format asking trainees to rate the training (Appendix G). The evaluation form was included as part of the pack, and trainees were encouraged to fill in the form and hand it back to me at the end of the session. Twenty-four of the original thirty evaluation forms were returned completed. I reviewed these forms and entered the data into an excel spreadsheet (Appendix H). I then shared this feedback, attaching the spreadsheet to an e-mail, with my colleague – responsible for further supporting the site -, and the Horsham and Chanctonbury service development manager.

Unit 4.4b – Identify factors contributing to training programme outcomes

I have written this report to reflect and summarise the training delivered, and the feedback received.

Unit 4.4c – Identify improvements for the design and delivery of training for implementation in future programmes, and Reflections on training experience

This was a big group varying hugely in enthusiasm, thoughts, attitudes, and clinical experience. I had to ensure that I adhered closely to time allocation, so that there was enough time for discussion and questions. My knowledge-base and ability to adapt to different environments is improving with each new training session, and my confidence in delivering the training has as a result also increased.

I personally thought that the training had gone better than was reflected in the overall evaluation scores. When I was delivering the training, the overall interactive feedback had seemed positive. So receiving the kind of feedback I received on the evaluation forms came as quite a surprise to me. I normally always receive evaluation averages of 7 or higher.

However, I was trying to do something slightly different, and with such a diverse group, perhaps I should have approached the topic in a different way. Interestingly though, one individual

actually stated that: "The discussion amongst the practices was most useful rather than the presentation" – so it would seem that the group exercises, which were the new components, were appreciated. In retrospect, I am aware of the fact that these exercises require a lot of time, and perhaps we did not allow them the time they deserved in only a 2 hour and a half hour training session. I either should have extended the session by half an hour, or shortened the content by leaving out one of the group exercises.

I did make an effort to ensure that everyone felt comfortable to ask questions at any point from the start. I also tried to remember to explain acronyms as I mentioned them, but it is clear from some of the feedback that I did not do this enough. I assumed that people would ask if they did not understand something, but in a big group like this, perhaps some people are intimidated. I will make allowances for this in future.

I had ensured that everyone knew what we were covering in the session - by constantly highlighting the sections on slides throughout the presentation -, but as these did not correspond exactly with the agenda in the packs, this seemed to lead to some confusion. I had sent my presentation through to the service development manager with some discussion about content prior to the session, but she did not change the agenda to reflect my presentation on the day. In future, I will ensure that I send through a suggested agenda along with my suggested presentation, and seek final agreement from the managers of the training on both items before the day. This will hopefully guarantee that concordance is maintained, and less confusion ensues.

I had used the rough agenda sent to me originally to guide me in designing my presentation. Item 5 & 6 had therefore been included in the presentation, and were discussed. Distressingly, this was somehow missed by the trainees. Perhaps there was not enough time dedicated to the items; or when this topic was touched on I should have immediately highlighted that we were actually discussing item 5 & 6 on the "old" agenda. I think this could be avoided in future by avoiding the mismatch between agenda and presentation outline (as discussed above). Although both essentially covered the same thing, there was clearly not enough clarity.

I was interested by the comment "Some early parts very long and drawn out". The actual content presented in the beginning took 15 minutes to deliver. All the trainees were to some extent aware of the NICE guidelines and *Beating the Blues*, so this had only required a brief overview. Perhaps to them the initial process mapping had felt long and drawn out, although I personally felt that it had been a bit rushed. I am tempted to suggest here that the reason

behind this was a combination of no lunch and an inability to fully participate. In consultation with colleagues after the training however, there was also the suggestion that NHS staff are over "process-mapped": they are encouraged to use it too frequently as a learning tool. In future, in planning this kind of meeting at this time (over lunch when GPs can get away from surgeries), we should make sure that we find the funding to provide lunch (a few biscuits and tea were not adequate – it had actually been something which had concerned me). If this is not possible, potential trainees need to be informed of the fact that no lunch will be provided prior to committing to attending the training.

To further improve the training, I could also have possibly split different types of staff into different groups for the training. It would however, be a pity to split them into completely separate training sessions, as the diversity of perspectives was what enriched the feedback. Perhaps for some of the exercises, smaller and more role-focussed groups would have been more constructive.

After sharing the feedback with the service development manager, her opinion was that internal politics combined with low blood sugar had resulted in low scores (Appendix I). She felt that my training had been very well-organized and delivered. I am happy to concede that her reasons for the low evaluation scores may have partly been the case, but it is obvious that not everyone's needs were met. I need to seek advice and feedback on how I could have approached this session more powerfully.

Once again however, a strong learning from the feedback, both after the session and within the session, was about the obstacles faced by those working in mental health in the NHS.

I will organise another training session (perhaps in the evening, with dinner supplied!) to reach those who were unable to attend this session, and those who feel that they would benefit from another session. I will also continue to seek feedback on my own personal training delivery to ensure that I am aware of the improvements that I need to make in order to continually meet the training needs of those I am employed to train.

Agenda

Beating the Blues
What has been achieved in the first year of implementation?
What do we still need to achieve?

15th March 2006 @ 11.30am – 2pm

Salvation Army Hall
Horsham

Agenda Items

11.30 – 12:00

1. Introduction: - Ian/Despina and Myself input to this?
   - What are we trying to achieve
   - Where are we now
   - NICE guidelines
   - The aim of the day

If possible for the day I would like to remain fairly out of the event in hope we can really achieve some interest and so GPs perhaps listen to your content more as they can see you are impartial!

I think from my point of view I would like the day to achieve a full understanding of NICE and what the benefits are from beating the blues in a hope that we can get full implementation within multi disciplinary teams in practices.

I think we can highlight that where we are now is unfortunately not as far as we would have hoped the service would have developed. There fore the main aim of the day is to get practices thinking how we can get this working efficiently across the patch. It is for them to tell us what support, etc they need to get this rolling.

I think the most disappointing fact is the number of GP Leads that have not rolled this out within the practice and communicated the service to other partners. I am also unhappy that many GPs – even though the referral criteria states patients do not need to be IT literate – do not refer this group of patients.

It would be useful to inform them how many patients are dropping out at levels 1 and 2 so we can remind them of the importance of reiterating the easiness of these levels.

Any thing else you think would be useful from other training you may have led would be fab.

12:00 – 12:30	2. Group breakout sessions – what is working well Discussion (Ian/Despina/Melissa facilitators) I was going to get some flip charts and probably suggest 3 groups Do we want to specifiy some specific questions for them to address??
12:30 – 12:45	3. Tea and Coffee
12:45 – 13:15	4. Group breakout sessions – where things have gone wrong – where things are not working Discussion (Ian/Despina/Melissa facilitators) Do we want to try and focus them??
13:15 – 13:30	5. The role of the counsellor/mental health worker Could Despina perhaps discuss the advantage of using a counselor and perhaps the clinical role they would play and effective involvement elsewhere. This is to enable practices to think about effective involvement within the practice
13:30 – 13:45	6. The role of the practice as a multi disciplinary team Could Despina please briefly highlight from her experience what makes a service effective. I am keen to again reiterate although our referral criteria is for mild to moderate that this software is just as significantly affective in secondary care higher need settings – therefore patients within the practice with mild to moderate depression should be managed more than effectively within a well functioning setting with fully involved team members
13:45 – 13:55	7. Questions If any??
13:55 – 14:00	8. Conclusion Just to say a thanks to them and yourself for attending – and just a quick note to the group as to what support they require from us in the future.

APPENDIX B

Beating the Blues

Introduction to Beating the Blues
Despina Learmonth (Ultrasis Ltd)

Beating the Blues

Training Summary

- Background to CCBT
- Information on Beating the Blues
- Research on Beating the Blues
- Extracts from the Programme
- Implementation and administration

dlearmonth@ultrasis.com
0207 5663900

Beating the Blues

Computers in Therapy – the beginnings

- Seems to have started with "Eliza"
- Joseph Weizenbaum (1966) wrote this first client interaction programme at Mass Institute of Technology in Boston
- Brief extract of interaction
- Many "Eliza" implementations can be found on eecs.nwu.edu:/pub/eliza



Beating the Blues

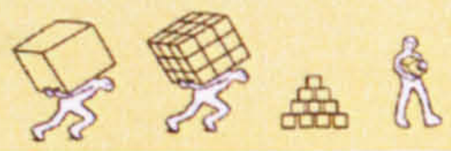
Beating the Blues

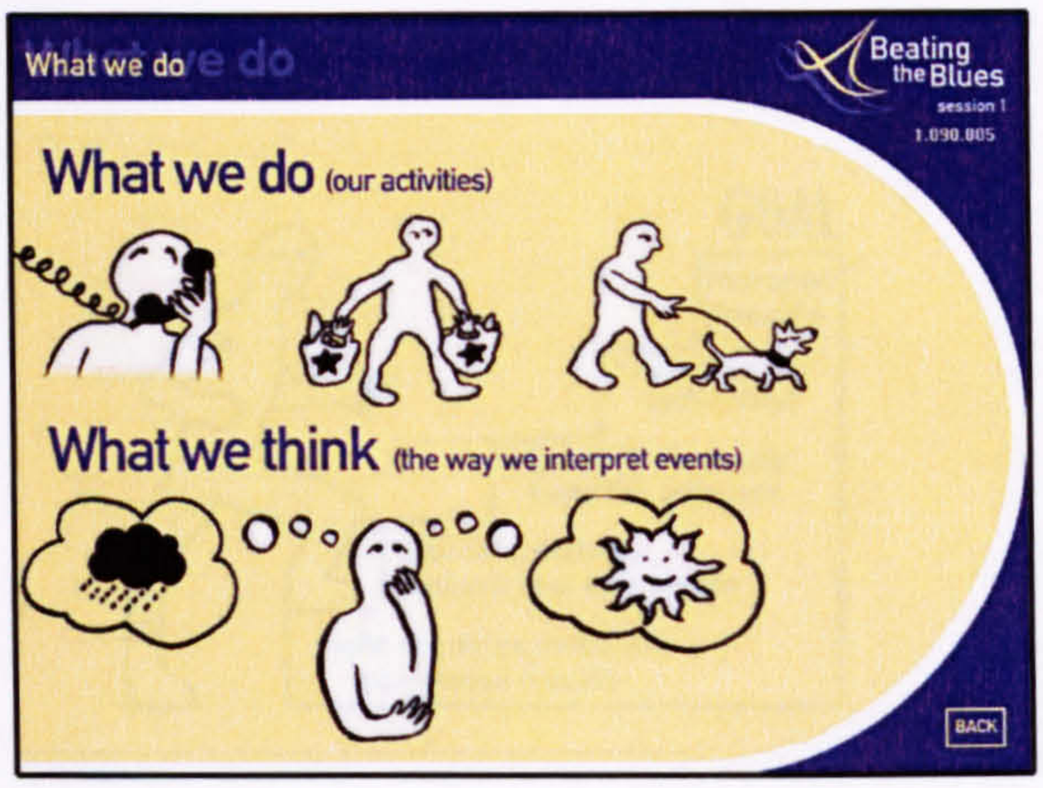
- Computerised cognitive behavioural therapy (CBT) for anxiety and depression
- Making effective psychological therapies more available and accessible
- Developed by Dr Judy Proudfoot (Institute of Psychiatry) and colleagues at the Institute of Psychiatry in conjunction with Ultrasis plc

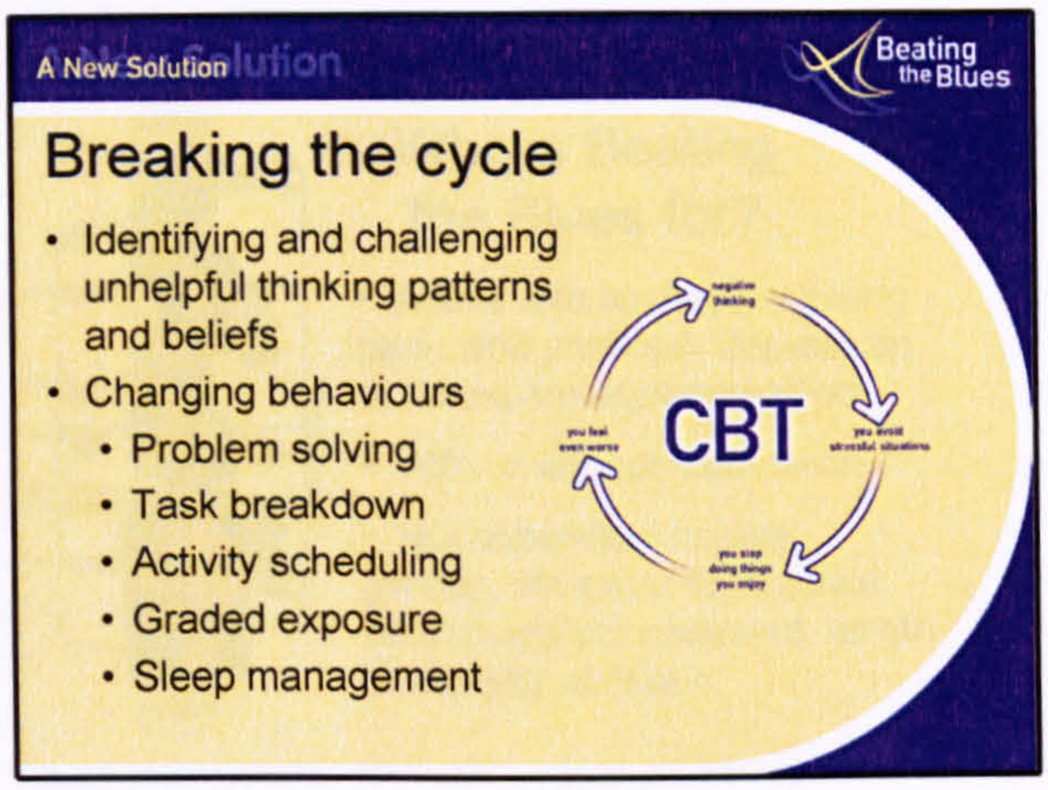


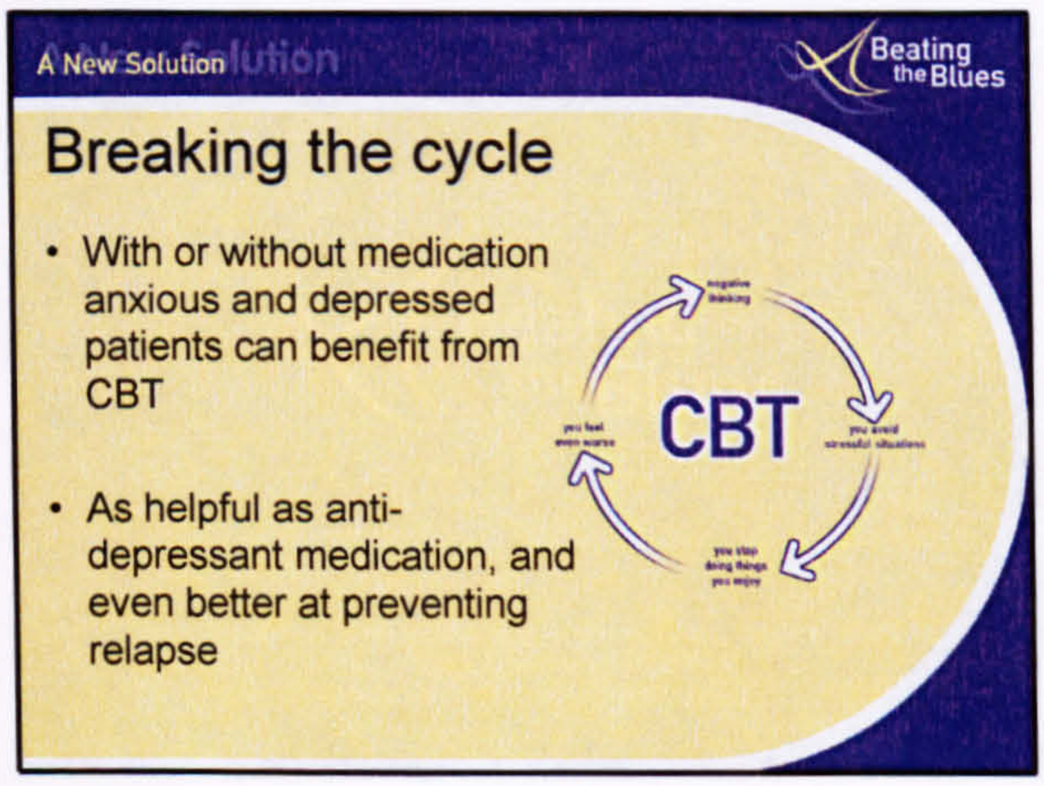


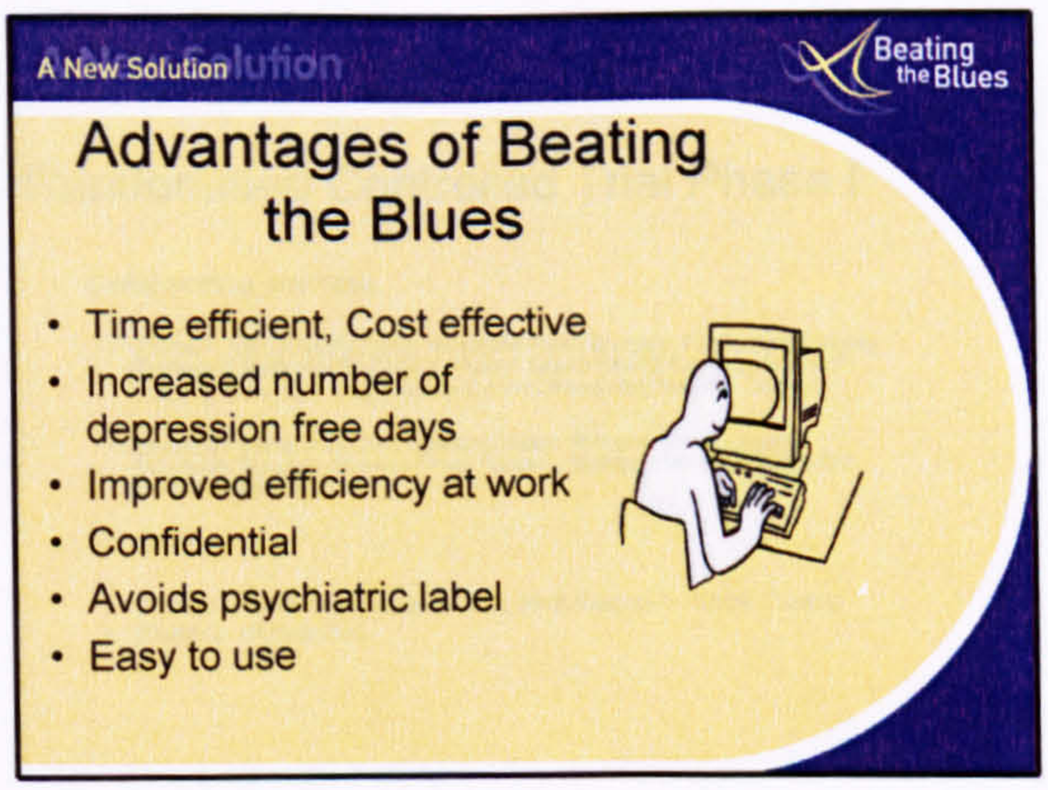





What we do
Beating the Blues
session 1
1.090.805
What we do (our activities)
What we think (the way we interpret events)
BACK

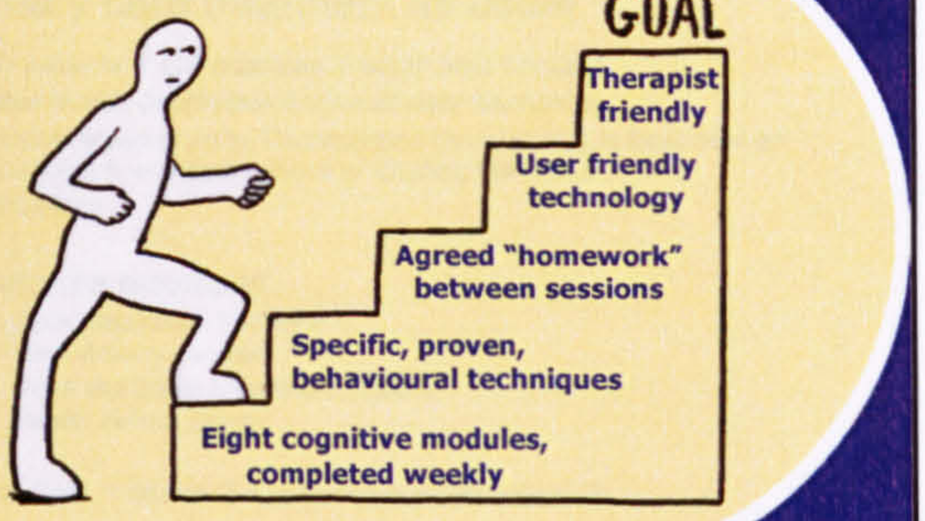

A New Solution
Beating the Blues
Breaking the cycle
• Identifying and challenging unhelpful thinking patterns and beliefs
• Changing behaviours
• Problem solving
• Task breakdown
• Activity scheduling
• Graded exposure
• Sleep management
CBT


A New Solution
Beating the Blues
Breaking the cycle
• With or without medication anxious and depressed patients can benefit from CBT
• As helpful as anti-depressant medication, and even better at preventing relapse
CBT


A New Solution
Beating the Blues
Advantages of Beating the Blues
• Time efficient, Cost effective
• Increased number of depression free days
• Improved efficiency at work
• Confidential
• Avoids psychiatric label
• Easy to use

Step by Step to Better Health

Beating the Blues



The Programme



Beating the Blues

Who is Beating the Blues for?

- Adults with anxiety (including panic and phobias), depression or mixed anxiety/depression
- With or without medication
- Not dependant on age, gender, computer experience, educational achievement, length or severity of illness

Beating the Blues

Computerised CBT for anxiety and depression: a randomised controlled trial

Judy Proudfoot, David Goldberg, Anthony Mann, Brian Everitt, Issac Marks, Jeffrey A Gray, Institute of Psychiatry
David Shapiro, Universities of Leeds and Sheffield

A New Solution

Beating the Blues

Randomised Controlled Trial Phase I

- Collaborating practices
  - Phase I - Longrove Surgery, Sandgate Road Surgery, Elm Lodge Surgery, Torrington Park Health Centre, Paxton Green Health Centre, Moatfield surgery, Mawbey Brough Health Centre, Rosemary Medical Centre.
  - Phase 2 - Canon Hill Lane Medical Centre, Princes Road Surgery, Stonecott Surgery, Queens Road Surgery, Morden Hall Medical Centre, Church House Surgery.
- Funding
  - Phase 1 - Psychiatry Research Trust, NHS Executive - South Thames.
  - Phase 2 - Ultrasis PLC

A New Solution

Beating the Blues

RCT phase I: *Beating the Blues* vs primary care treatment as usual

- 167 patients; 7 GP practices in south east England
- Patients with depression and/or anxiety disorder(s)
- Randomly assigned to Treatment as Usual (TAU) or treatment as usual plus 8 weekly sessions of Beating the Blues
- Exclusions

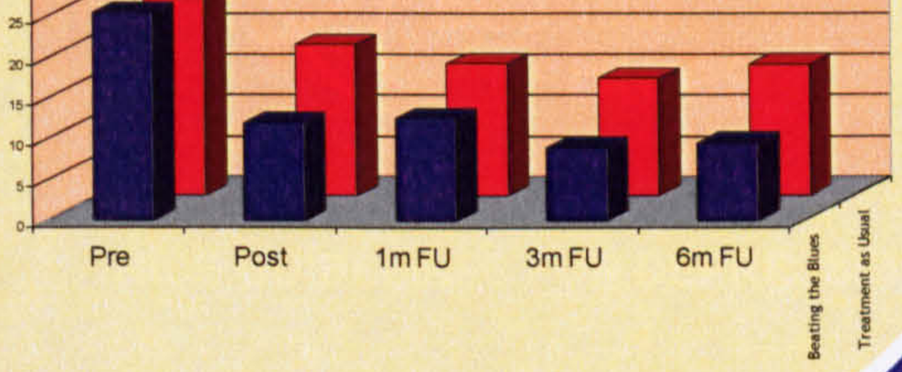
- Outcome measures:
  - Beck Depression Inventory
  - Beck Anxiety Inventory
  - Work and Social Adjustment Scale
  - Health Service Usage

- Pre, Post, 1 month, 3 month and 6 month follow-up

A New Solution

Beating the Blues

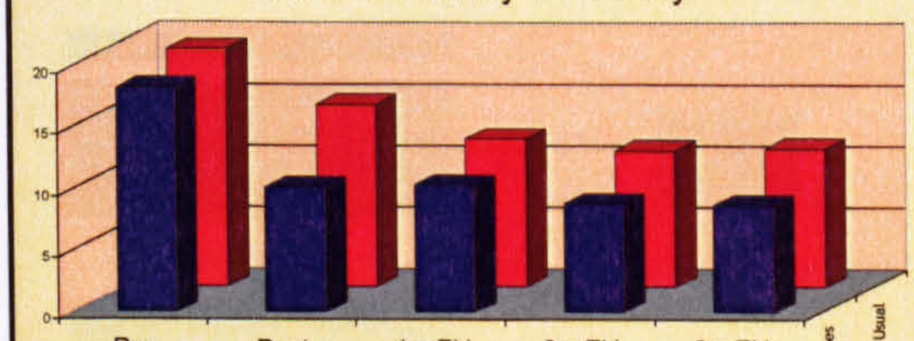
RCT Beck Depression Inventory



A New Solution

Beating the Blues

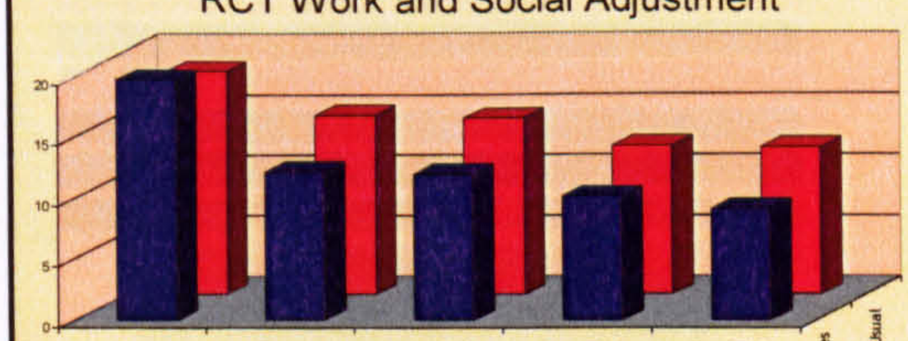
RCT Beck Anxiety Inventory



A New Solution

Beating the Blues

RCT Work and Social Adjustment



A New Solution

Beating the Blues

RCT Summary

- Significant improvements in anxiety, depression and functioning
- More powerful than usual primary care
- Maintained at 6 month-follow up
- Additive effects of antidepressant /anxiolytic medication and ***Beating the Blues***
- *Supporting the idea that computerised CBT is of real benefit to patients with anxiety and depression*

Beating the Blues

NICE GUIDELINES FOR DEPRESSION

A New Solution

Beating the Blues

Which NICE guideline?

What are the patient's symptoms?

Low mood or loss of interest, usually accompanied by one or more of the following: low energy, changes in appetite, weight or sleep pattern, poor concentration, feelings of guilt or worthlessness and suicidal ideas?

Yes → Enter depression guideline (this guideline)

No

Apprehension, cued panic, spontaneous panic attacks, irritability, poor sleeping, avoidance, poor concentration?

Yes

Enter NICE clinical guideline on anxiety (www.nice.org.uk/CG022)

A New Solution

Beating the Blues

The stepped care approach

Step 1: Recognition in primary care and general hospital settings			
Step 2: Treatment of mild depression in primary care			
Step 3: Treatment of moderate to severe depression in primary care			
Step 4: Treatment of depression by mental health specialists			
Step 5: Inpatient treatment for depression			
	Who is responsible for care?	What is the focus?	What do they do?
Step 5:	Inpatient care, crisis teams	Risk to life, severe self-neglect	Medication, combined treatments, ECT
Step 4:	Mental health specialists, including crisis teams	Treatment-resistant, recurrent, atypical and psychotic depression, and those at significant risk	Medication, complex psychological interventions, combined treatments
Step 3:	Primary care team, primary care mental health worker	Moderate or severe depression	Medication, psychological interventions, social support
Step 2:	Primary care team, primary care mental health worker	Mild depression	Watchful waiting, guided self-help, computerised CBT, exercise, brief psychological interventions
Step 1:	GP, practice nurse	Recognition	Assessment

Step 2

A New Solution

Beating the Blues

Step 1: Recognition of depression in primary care and general hospital settings

- In primary care and general hospital settings, screen patients with:
  - a past history of depression
  - significant physical illnesses causing disability
  - other mental health problems, such as dementia.
- Bear in mind the potential physical causes of depression and the possibility that depression can be caused by medication.
- Use two screening questions, such as:
  - "During the last month, have you often been bothered by feeling down, depressed or hopeless?" *and*
  - "During the last month, have you often been bothered by having little interest or pleasure in doing things?"

A New Solution

Beating the Blues

Step 2: Treatment of mild depression in primary care

Watchful waiting

- In mild depression, if the patient does not want treatment or may recover with no intervention, arrange further assessment – normally within 2 weeks.

Sleep and anxiety management

- Consider advice on sleep hygiene and anxiety management.

Exercise

- Advise patients of all ages with mild depression of the benefits of following a structured and supervised exercise programme. Effective duration of such programmes is up to 3 sessions per week of moderate duration (45 minutes to 1 hour) for between 10 and 12 weeks.

Guided self-help

- For patients with mild depression, consider a guided self-help programme that consists of the provision of appropriate written materials and limited support over 6 to 9 weeks, including follow up, from a professional who typically introduces the self-help programme and reviews progress and outcome.

A New Solution

Beating the Blues

Administering Beating the Blues

-First appointment

-Logging patients onto Beating the Blues

-Second appointment, and onward & upwards!

-Administrative functions

A New Solution

Beating the Blues

1st Appointment

- Patient to view Introduction to Therapy Video
  - Emphasise no computer experience is necessary
  - Beating the Blues has been shown to very effective in treating anxiety and/or depression
  - Talk about other healthful behaviours
- End of Appointment
  - Book 2nd appointment

A New Solution

Beating the Blues

2nd Appointment

- Beginning of session
  - Give the patient a "patient diary" for storing:
    - Session summaries
    - Weekly projects
    - Weekly progress reports
  - Make sure the patient is at ease with the computer
  - Sit with the patient as they Log in for the first time
- End of Session
  - Make a copy of the weekly progress report for your files
  - Book 3rd appointment

A New Solution

Beating the Blues

Logging on

- Note the name and date in exactly the same way as they type it in on the patient diary
- Encourage patients to use mothers maiden name as password
- Emphasise confidentiality
  - Looking away
  - Encryption
- Emphasise that they don't need any computer experience
- Patients can repeat modules if they wish
- Helpers location and availability must be made clear in case of any questions

A New Solution

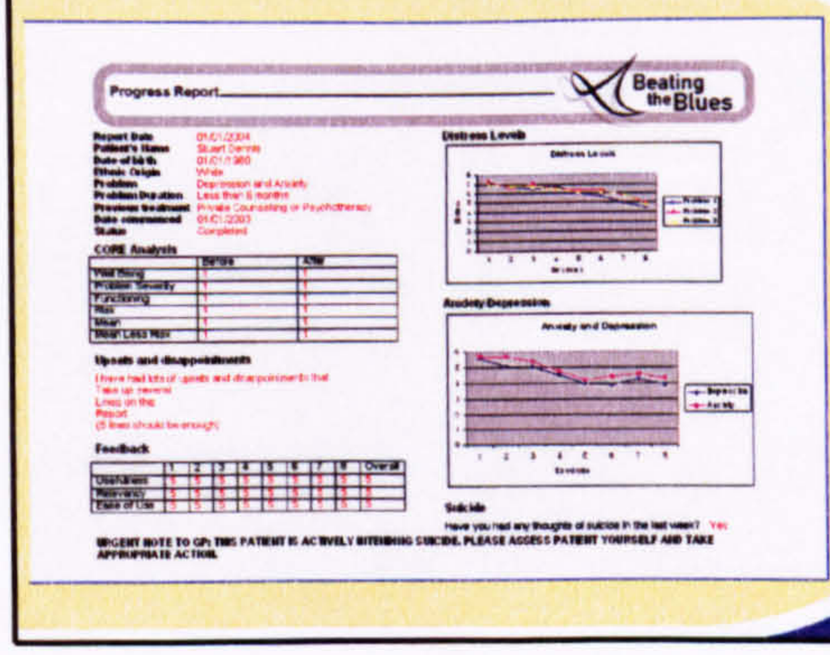
Beating the Blues

3rd-9th Appointment

- Booking the patient in and out
- Necessary outcome measures
- Print off progress reports for your files

A New Solution

Beating the Blues


Progress Report

Distress Levels

Anxiety Depression

COPE Analysis

Upsets and disappointments

Feedback

Suicide

URGENT NOTE TO GP: THIS PATIENT IS ACTIVELY INTENDING SUICIDE. PLEASE ASSESS PATIENT YOURSELF AND TAKE APPROPRIATE ACTION.

A New Solution

Beating the Blues

Check patient does not meet any of the exclusion criteria

- Active suicidal ideas
- A current or lifetime diagnosis of psychosis or organic mental disorder such as dementia
- Current alcohol or drug dependence

A New Solution

Beating the Blues

The purpose of CCBT reviews

- Monitor symptom severity & level of risk
- Check progress with the programme
- Identify any problems that may have arisen since initial assessment
- Identify obstacles to continuing to use CCBT
- Final review – assess progress towards goals
- Step-out / up if needed at any stage
- Inform primary care team of progress.

A New Solution

Beating the Blues

Trouble Shooting

- The Systems Manual
- Technical questions with the computer:
  - Call Ultrasis technical helpdesk:
    - 0207 5663900
- Any other questions:
  - Call or e-mail Despina Learmonth
    - 07718737241 (mobile)
    - dlearmonth@ultrasis.com

APPENDIX C

Beating the Blues

What has been achieved in the first year of implementation? What do we still need to achieve?

Beating the Blues

Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues

Beating the Blues

Aim of today's session

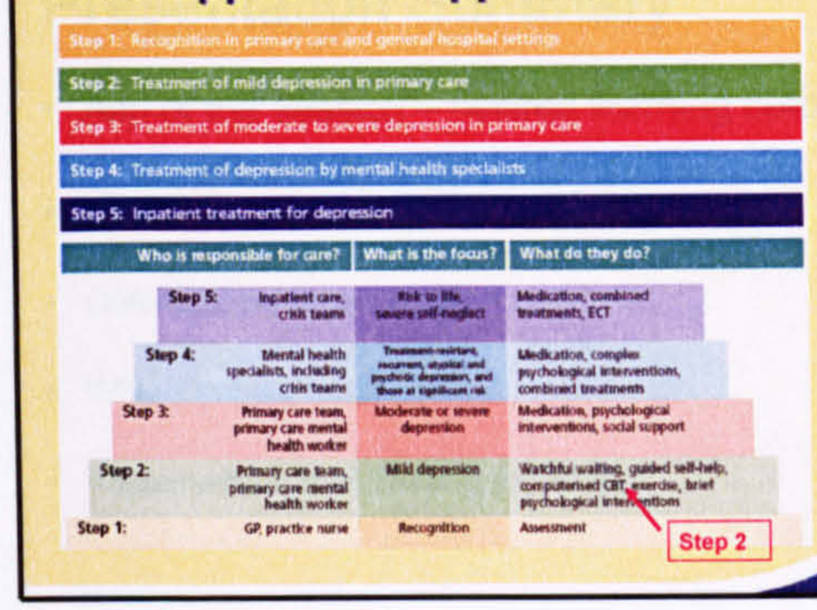
- To achieve a full understanding of NICE
- To understand the benefits of Beating the Blues
- Putting together a workable model for full implementation within multi disciplinary teams in practices
- Any further?

Beating the Blues

Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues

The stepped care approach



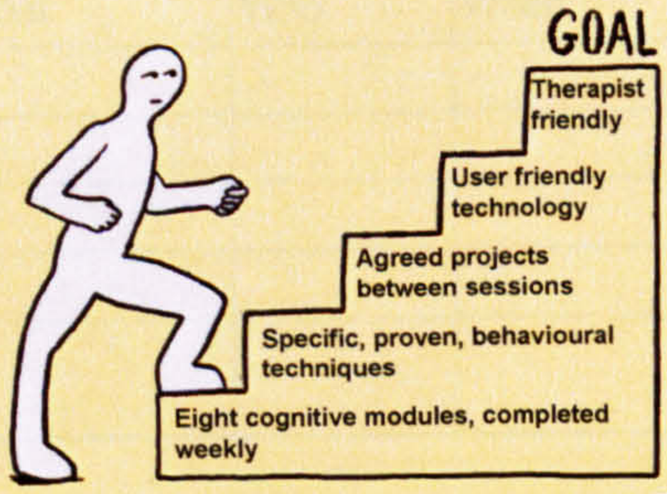
NICE Guidance 22nd February 2006

- All patients with mild or moderate depression are offered Beating the Blues
- Offered within the stepped-care approach for the management of depression in primary and secondary care.
- Final Appraisal www.nice.org.uk

Introduction - Beating the Blues

- Computerised cognitive behavioural therapy (CBT) for anxiety and depression
- Developed by Dr Judy Proudfoot and colleagues at the Institute of Psychiatry, Kings College, London in conjunction with Ultrasis UK Ltd
- Making effective psychological therapies more available and accessible

Introduction - Step by Step



Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues

Process map – in groups

- Go through exact steps from identification of patient's depression and anxiety, to completion of *Beating the Blues* programme
- Identify tasks and staff involved at each step

SWOT ANALYSIS (groups)

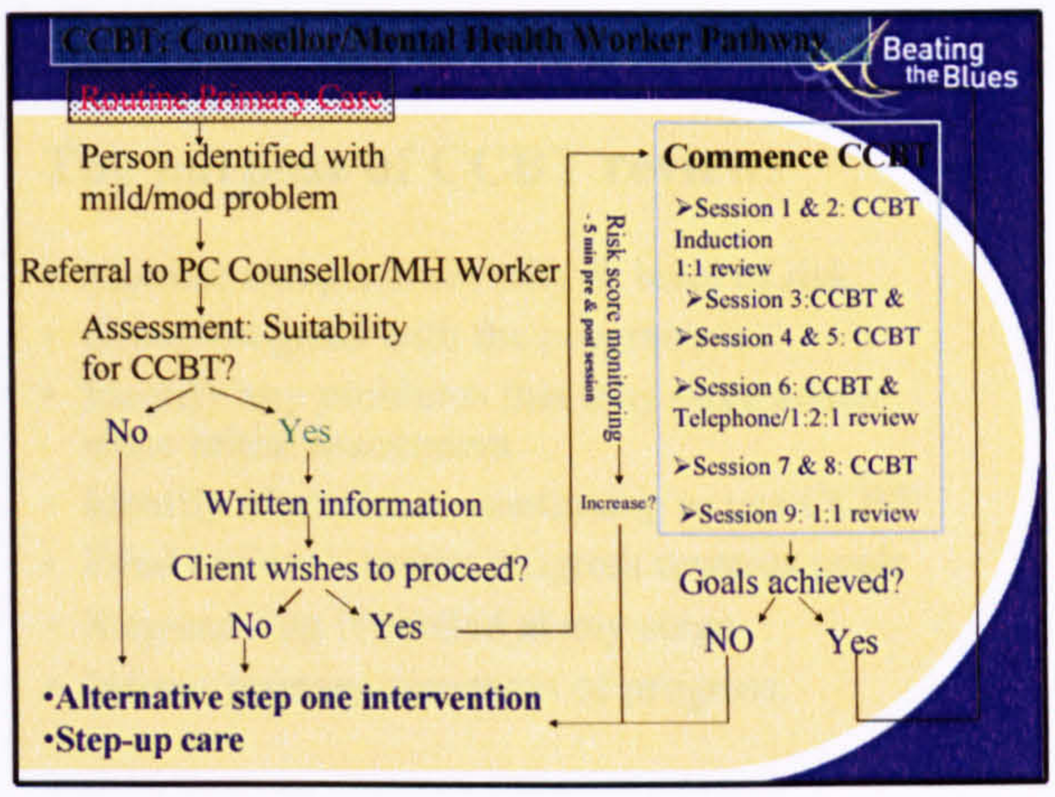
Strengths What is working well?	Weaknesses What is not working?
Opportunities	Threats

Solution Action Plan

What	Who	When

Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues



Implementation-Screening & Assessment

- Identification and diagnosis of Anxiety and Depression by Healthcare Professionals
- Screening Tool: PHQ 9 (Patient Health Questionnaire) or HADS (Hospital Anxiety and Depression Scale)
- Assessment for suitability for Beating the Blues, GP, Counsellor, Primary Care Graduate Worker, CPN, CBT Therapist

Implementation – Client Suitability

Research shows Beating the Blues is suitable for

- Adults with anxiety (including panic and phobias), depression or mixed anxiety/depression
- Can be used with or without medication
- Not dependant on:
  - Age (between ages 18 to 75)
  - Gender
  - Computer experience
  - Educational achievement
  - The length or severity illness

Implementation – Exclusion Criteria

- Research excluded clients with:
  - Active suicidal plans
  - A current or lifetime diagnosis of psychosis or organic mental disorder such as dementia
  - A current alcohol or drug dependence
- Clients require ability to read and write English

The purpose of CCBT reviews

- Monitor symptom severity & level of risk
- Check progress with the programme
- Identify any problems that may have arisen since initial assessment
- Identify obstacles to continuing to use CCBT
- Final review – assess progress towards goals
- Step-out / up if needed at any stage
- Inform primary care team of progress.

Implementation-Administration

- Booking appointments and logging Clients onto programme provided by admin staff
- 1st Session: Client views 15 minute Introduction to Therapy, either at the Beating the Blues site or at home
- 2nd Session: Client complete CORE questionnaire as part of First Module

Implementation-Support

- 2nd-9th Session: Client completes Beating the Blues in healthcare setting on their own
- Support, as appropriate, is provided during the programme
- Face to face after session 8 if required

Implementation - Tertiary CBT Service

- Waiting time 18 months for face to face CBT
- All patients offered Beating the Blues on waiting list
- 76% (212) discharged from service without any face to face CBT required
- 21% (57) went on for face to face CBT
- Waiting lists reduced to 6 months
- 1 licence equivalent to 2.5 CBT therapists

Appendix D

Horsham and Chanctonbury NHS

Primary Care Trust

Agenda



Beating the Blues
What has been achieved in the first year of implementation?
What do we still need to achieve?

15th March 2006 @ 11.30am – 2pm

Salvation Army Hall
Horsham

Agenda Items

11.30 – 12:00	1. Introduction: • What are we trying to achieve • Where are we now • NICE guidelines • The aim of the day
12:00 – 12:30	2. Group breakout sessions – what is working well
12:30 – 12:45	3. Tea and Coffee
12:45 – 13:15	4. Group breakout sessions – where things have gone wrong – where things are not working
13:15 – 13:30	5. The role of the counsellor/mental health worker
13:30 – 13:45	6. The role of the practice as a multi disciplinary team
13:45 – 13:55	7. Questions
13:55 – 14:00	8. Conclusion

POSITIVE ABOUT DISABLED PEOPLE

Beating the Blues

What has been achieved in the first year of implementation? What do we still need to achieve?

Beating the Blues

Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
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Beating the Blues

Aim of today's session

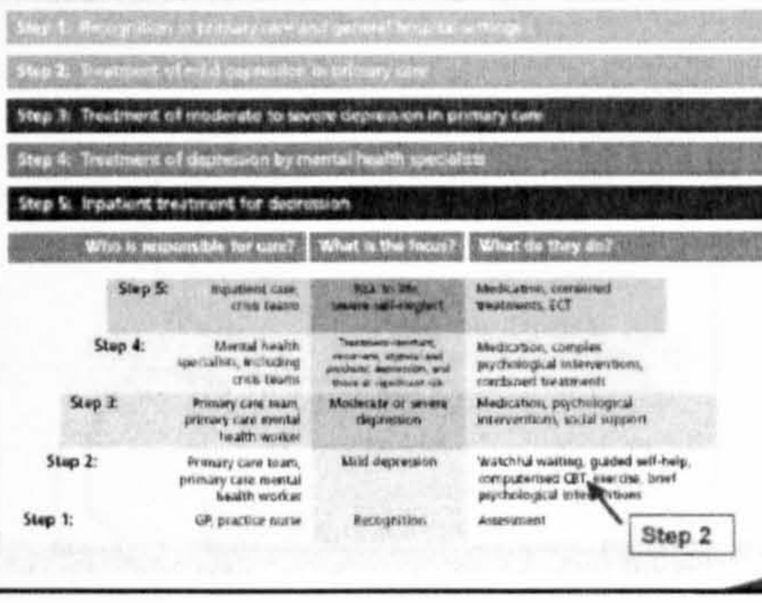
- To achieve a full understanding of NICE
- To understand the benefits of Beating the Blues
- Putting together a workable model for full implementation within multi disciplinary teams in practices
- Any further?

Beating the Blues

Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues

The stepped care approach



NICE Guidance 22nd February 2006

- All patients with mild or moderate depression are offered Beating the Blues
- Offered within the stepped-care approach for the management of depression in primary and secondary care.
- Final Appraisal www.nice.org.uk

Introduction - Beating the Blues

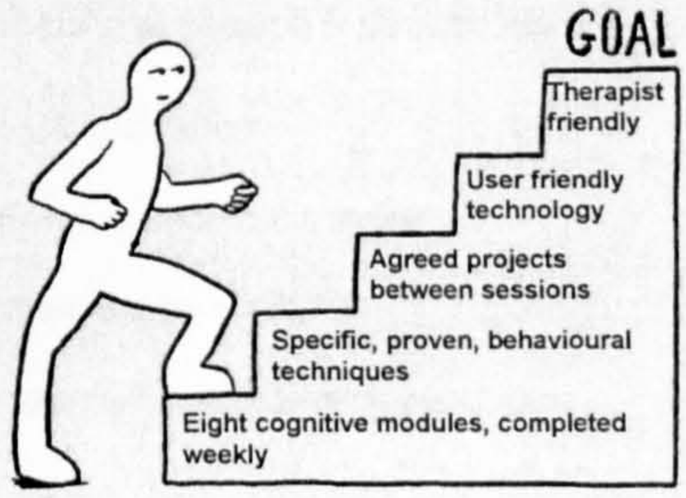
- Computerised cognitive behavioural therapy (CBT) for anxiety and depression
- Developed by Dr Judy Proudfoot and colleagues at the Institute of Psychiatry, Kings College, London in conjunction with Ultrasis UK Ltd
- Making effective psychological therapies more available and accessible

Introduction - Breaking the Cycle

- Identifies and challenges unhelpful thinking patterns and beliefs
- Changes behaviours
  - Problem solving
  - Task breakdown
  - Activity scheduling
  - Graded exposure
  - Sleep management



Introduction - Step by Step



Presentation Summary

- Aim of the session – desired learning outcomes
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Process map – in groups

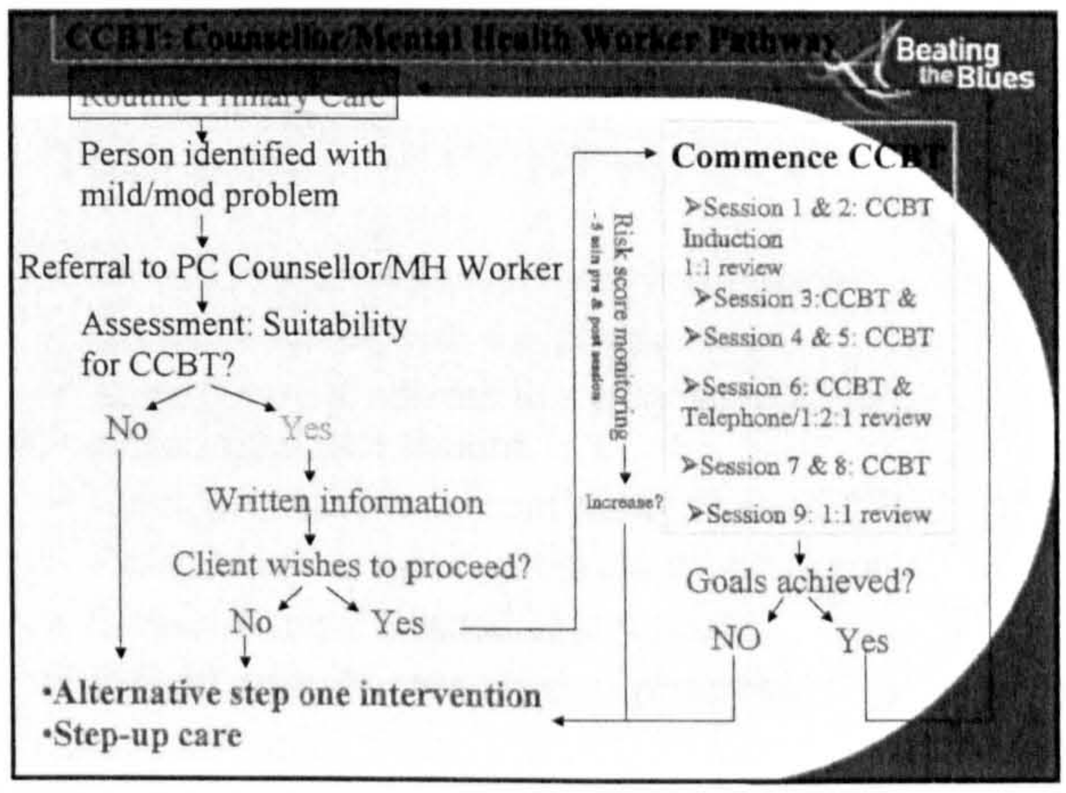
- Go through exact steps from identification of patient's depression and anxiety, to completion of *Beating the Blues* programme
- Identify tasks and staff involved at each step

SWOT ANALYSIS (groups)

Strengths	Weaknesses
Opportunities	Threats

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REFERRAL CRITERIA

- Age between 18 and 75

- No current of lifetime diagnosis of psychosis or organic mental disorder such as dementia

- Not in acute phase of drug or alcohol problem

- Can read a write English to reading age 9 or 10 equivalent to Daily Mail

- Do not need to have computer experience to use programme

- Male or female

- Mild to moderate anxiety and depression or mixed anxiety and depression

- No active suicide plans, clients with suicide thoughts can use programme

- Can be used in both acute and chronic depression and anxiety

- Clinical outcomes not dependant on academic achievement and so can be used with full range of clients

A GUIDELINE TO ASSESSMENT AND APPROPRIATE REFERRAL

PHASES OF THE ASSESSMENT PROCESS:

There are three distinct phases to the assessment process:

1 Screening: the identification of probable cases

2 Assessment and categorisation: clarification of diagnosis and severity of problem

3 Patient education & shared decision making: information sharing regarding diagnosis and treatment options, and a preliminary decision about plans for future treatment

PHASE 1: SCREENING Routine screening may improve both the recognition and outcome of depression in some patient groups. NICE recommends primary care routinely screens certain high risk groups:

_ Patients with significant physical illness

_ Patients with other mental health problems, such as dementia

_ Patients suffering major life events, such as childbirth, long-term or recent unemployment and bereavement

_ Patients with a history of relationship difficulties and physical, sexual or emotional abuse

GPs' Role:

_ Initial assessment

_ Patient education

_ Initial medication prescription

_ Case management (as an interim arrangement only)

SCREENING FOR DEPRESSION

"During the last month, have you been bothered by feeling down, depressed or hopeless?" and *"During the last month, have you been bothered by having little interest or pleasure in doing things?"*

If the patients response to BOTH questions is "no", the screen is negative. _If the patient responds "yes" to EITHER question, use a recommended screening tool (as listed below).

RECOMMENDED SCREENING TOOLS

Patient Health Questionnaire (PHQ)-9. Developed specifically for primary care and used widely in the US. Items relate closely to the criteria for depression in the DSM-IV. Download from: www.depression-primarycare.org/ _**General**

Health Questionnaire (GHQ) 12 item version Easy to complete and well validated. Available in several languages. Available from NFER-Nelson Publishing Co Ltd Tel: 08456 021937 (Current cost £33.20 for pack of 100) _**Hospital**

Anxiety and Depression Scale (HADS) (14 items) Used frequently in primary care, especially useful with patients who also have physical illness. Available from NFER-Nelson Publishing Co Ltd Tel: 08456 021937 (Current cost £36.25 for pack of 100)

Beck Depression Inventory (BDI)-II (21 items) Copyright belongs to the Psychological Corporation and can be purchased at www.fpnotebook.com. Typical cost is £68.89 for manual and 50 questionnaires and then £42.30 for each pack of 50 questionnaires.

Geriatric Depression Scale (GDS) is used for screening with the elderly. Not subject to copyright. Can be downloaded from www.miahonline.org/tools/

Edinburgh Postnatal Depression Scale (EPDS) is commonly used by Health Visitors to screen for postnatal depression. Not subject to copyright and can be downloaded from www.priory.com/psych/epds.htm. See also Cox, J. and Holden, J. (1994) Perinatal Psychiatry: use and misuse of the Edinburgh Postnatal Depression Scale. London: Gaskell

These questionnaires can be used to confirm a diagnosis, agree the diagnosis with patients and monitor progress. Most scales used in primary care are short (12-15 questions) and can be completed by most patients whilst in the waiting area. Patients who have difficulty reading or are non-English speakers may require additional help. Minimal staff input is required for the scoring of responses.

PHQ-9 MONITORING TOOL

The Patient Health Questionnaire (PHQ) is a brief 9-item patient self-report questionnaire specifically developed for use in primary care and used extensively in the United States. The PHQ-9 has acceptable reliability, validity,sensitivity and specificity as an assessment tool for the diagnosis of depression in primary care. The questionnaire can also be used to monitor progress with possible scores ranging from 0 to 27 with higher scores indicative of increasing severity.

PATIENT NAME ..... DATE.....

1 Over the last 2 weeks, how often have you been bothered by any of the following problems?
Read each item carefully, and circle your response.

A Little interest or pleasure in doing things

Not at all **Several days** **More than half the days** **Nearly every day**

B Feeling down, depressed, or hopeless

Not at all **Several days** **More than half the days** **Nearly every day**

C Trouble falling asleep, staying asleep, or sleeping too much

Not at all **Several days** **More than half the days** **Nearly every day**

D Feeling tired or having little energy

Not at all **Several days** **More than half the days** **Nearly every day**

E Poor appetite or overeating

Not at all **Several days** **More than half the days** **Nearly every day**

F Feeling bad about yourself, feeling that you are a failure, or feeling that you have let yourself or your family down

Not at all **Several days** **More than half the days** **Nearly every day**

G Trouble concentrating on things such as reading the newspaper or watching television

Not at all **Several days** **More than half the days** **Nearly every day**

H Moving or speaking so slowly that other people could have noticed. Or being so fidgety or restless that you have been moving around a lot more than usual

Not at all **Several days** **More than half the days** **Nearly every day**

I Thinking that you would be better off dead or that you want to hurt yourself in some way

Not at all **Several days** **More than half the days** **Nearly every day**

2 If you checked off any problem on this questionnaire so far, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not Difficult at All **Somewhat Difficult** **Very Difficult** **Extremely Difficult**

RECOMMENDED CATEGORIES FOR RESPONSE AND MONITORING WITH THE PHQ-9

SCORE	SEVERITY	CLINICAL PATHWAY
< 10	Mild depression	Watchful waiting or step 2
10 – 14	Moderate depression	Step 2 or 3
15 - 19	Moderate to severe depression	Step 3 or 4
> 20	Severe depression	Step 4 or 5

Definition of improvement

Improved A reduction of 2 or more points on the baseline score

Not improved Drop of 1 point or no change or increased score

Definition of remission

A PHQ-9 score of less than 5 is the eventual goal of acute phase treatment. When this goal is achieved, patients enter the continuation phase of treatment. Changes of treatments within steps and stepping up are considered for patients who do not reach their goal.

ultrasis

Research Summary for Beating the Blues

6th Jan 2006

This document provides a summary of research completed and in progress for Beating the Blues.

Published Papers

1) Development and initial testing of Beating the Blues

Proudfoot, J., Swain, S., Widmer, S., Watkins, E., Goldberg, D., Marks, I., Mann, A. &.Gray, J.A. (2003b). The development and beta-test of a computer-therapy program for anxiety and depression : hurdles and preliminary outcomes. *Computers in Human Behavior,* **19,** 277-289.

Abstract

This paper describes the development and beta-test of an eight-session computer therapy program for anxiety and depression, 'Beating the Blues'. Developed by a multi-functional team, the program uniquely combines multi-media interactive computer technology with empirically-validated cognitive-behavioral therapy (CBT) techniques and crucial non-specific aspects of therapy. The paper describes how the project proceeded through its development phase, the unexpected hurdles that occurred and the lessons learnt. As an integral part of the development, the program was beta-tested with 20 patients. Despite the small numbers and the fact that the eight sessions were completed at an accelerated rate, feedback was positive. Patients reported it was helpful, easy to use, and of those who had had previous treatment for their problems, the majority indicated it compared at least as well as other forms of therapy. The beta-test also highlighted where changes were needed to the program. These were implemented prior to release of the program for the next phase of testing. Lastly, the beta-test indicated that the program had sufficient promise for it to be evaluated formally by randomized controlled trial.

2) RCT of Beating the Blues in Primary Care Services: Cohort I

Proudfoot, J., Goldberg, D., Mann, A., Everitt, B., Marks, I. & Gray, J. (2003a). Computerized, interactive, multimedia cognitive behavioural therapy reduces anxiety and depression in general practice: a randomised controlled trial', *Psychological Medicine*, **33,** 217-227.

TEXT BOUND INTO THE SPINE

Abstract

Background. Cognitive-behavioural therapy (CBT) brings about significant clinical improvement in anxiety and depression, but therapists are in short supply. We report the first phase of a randomized controlled trial of an interactive multimedia program of cognitive-behavioural techniques, Beating the BluesTM (BtB), in the treatment of patients in general practice with anxiety, depression or mixed anxiety/depression.

Method. One hundred and sixty-seven adults suffering from anxiety and/or depression and not receiving any form of psychological treatment or counselling were randomly allocated to receive, with or without medication, BtB or treatment as usual (TAU). Measures were taken on five occasions: prior to treatment, 2 months later, and at 1, 3 and 6 months follow-up using the Beck Depression Inventory, Beck Anxiety Inventory and Work and Social Adjustment Scale.

Results. Patients who received BtB showed significantly greater improvement in depression and anxiety compared to TAU by the end of treatment (2 months) and to 6 months follow-up. Symptom reduction was paralleled by improvement in work and social adjustment. There were no interactions of BtB with concomitant pharmacotherapy or duration of illness, but evidence, on the Beck Anxiety Inventory only, of interaction with primary care practice. Importantly, there was no interaction between the effects of BtB and baseline severity of depression, from which we conclude that the effects of the computer program are independent of starting level of depression.

Conclusions. These results demonstrate that computerized interactive multimedia cognitive behavioural techniques under minimal clinical supervision can bring about improvements in depression and anxiety, as well as in work and social adjustment, with and without pharmacotherapy and in patients with pre-treatment illness of durations greater or less than 6months. Thus, our results indicate that wider dissemination of cognitive-behavioural techniques is possible for patients suffering from anxiety and/or depression.

3)RCT of Beating the Blues in Primary Care Services – Cohort I & II combined analysis

Proudfoot, J., Ryden, C., Everitt, B., Shapiro, D., Goldberg, D., Mann, A., Tylee, A., Marks, I., & Gray, J. (2004). Clinical effectiveness of computerized cognitive behavioural therapy for anxiety and depression in primary care. *British Journal of Psychiatry, 185,* 46-54.

Following randomisation of a further 107 participants (in addition to the 167 reported upon above: cohort I) from four additional general practice groups, analysis of the expanded sample confirmed the efficacy of *Beating the Blues* within sub-samples based on clinical, demographic and setting variables. The program's efficacy was unaffected by

concurrent drug treatment, duration of pre-existing illness, severity of existing illness or treatment setting. However, in relation to anxiety, significant benefits of using *Beating the Blues* were found only for patients with more severe illness at outset (those scoring 18 or more on the Beck Anxiety Inventory on entry to the study). Of 128 patients commencing *Beating the Blues* in the combined sample, 89 (70%) completed all eight sessions of the programme and the post-treatment outcome measures, suggesting that patients are as likely to persist with computerized as traditional treatment approaches. On completing the programme, patients reported significantly higher treatment satisfaction than those receiving a comparative 8 weeks of usual care.

4) Cost effectiveness of Beating the Blues

McCrone, P., Knapp, M., Proudfoot, J., Ryden, C., Cavanagh, K., Shapiro, D., Ilson, S., Gray, J., Goldberg, D., Mann, A., Marks, I.M. & Everitt, B (2004) Cost-effectiveness of Computerised Cognitive Behavioural Therapy for Anxiety and Depression in Primary Care. *British Journal of Psychiatry. 185,* 55-62.

McCrone *et al.* present an analysis of the cost effectiveness of offering *Beating the Blues* in general practice settings (N=274). In the context of the superior clinical outcomes of *Beating the Blues*, no significant differences were found in healthcare service costs between the two groups, indicating the computer treatment is a cost-effective intervention. Moreover, patients receiving *Beating the Blues* evidenced a significant cost advantage in terms of practitioner certificated days' absence from work. Further, cost-utility analysis revealed benefits at a highly competitive cost per Quality-Adjusted Life Year.

5) Service Development in Primary Care

Fox, E., Acton, T., Wilding, B. & Corcoran, S. (2004) Service development report: an assistant psychologist's perspective on the use of computerised CBT in a GP practice in Barnet. *Quality in Primary Care, 12*, 161-165.

Fox et al (2004) present their experience of implementing a Beating the Blues service within a primary care setting. The pilot service, which was managed locally by an assistant psychologist, received 62 referrals, in a ten month period, of whom 56 were suitable for the program. 39 of these patients attended an initial appointment with the service, and 27 of these completed all eight interactive sessions of Beating the Blues. The paper goes on to discuss the local and personal experience of the authors in implementing the program.

6) Service Development in a Community Mental Health Team

S. Van Den Berg, D.A Shapiro, D. Bickerstaffe, & K. Cavanagh (2004) Computerized cognitive-behaviour therapy for anxiety and depression: a practical solution to the shortage of trained therapists. *Journal of Psychiatric and Mental Health Nursing, Vol 11,Issue 5, p 508*

Computerized cognitive–behaviour therapy (CCBT) programmes have been developed to help meet the enormous need for evidence-based psychological treatment of common mental health problems in the context of a severe shortage of trained therapists to meet that need. Randomized controlled trials have confirmed the efficacy of such programmes. We present the experience of a community mental health team (CMHT) resource centre with one such programme, *Beating the Blues*, together with outcome data on a small sample of its clients. We conclude that experience and data, taken together, demonstrate the practical benefits of CCBT in routine practice.

7) Computerised therapies for common mental health problems: review and meta-analysis

Cavanagh, K & Shapiro, DA (2004) Computer treatment for common mental health problems. *Journal of Clinical Psychology*, 60, 239-251.

This paper presents a review of the development of computer treatment programs over 4 decades and reports a small meta-analytic study demonstrating large effect sizes in favour of computer treatments for anxiety and depression for pre- /post- treatment outcomes and usual care/waitlist comparators.

Manuscripts not yet published

Further, as yet, unpublished studies will provide further evidence of the broad applicability of Beating the Blues in primary and secondary care

1)Open-trial Beating the Blues in Primary and Secondary Care

Manuscript accepted for publication in British Journal of Clinical Psychology

Cavanagh, K., Shapiro, D., Van den Berg, S., Swain, S., Barkham, M. & Proudfoot, J. The effectiveness of computerised cognitive-behavioural therapy in routine primary care.

This open study supports the results of the randomised controlled trials and indicates that the findings of the RCTS can be generalised to routine care environments.

2) Open-trial Beating the Blues in Primary and Secondary Care: treatment expectations, acceptability and satisfaction

Manuscript submitted for publication

Cavanagh, K., Shapiro, D., Van den Berg, S., Swain, S., Barkham, M. & Proudfoot, J. Computerised cognitive-behavioural therapy in routine primary care: acceptability and satisfaction

This study presents an analysis of post-therapy feedback data on i)features of the program, ii) satisfaction with the treatment and iii) the overall helpfulness of the treatment when Beating the Blues is used in routine care. Overall patient's rated all three aspects of the therapy very positively.

3) Randomised Controlled Trial : Predictors of response

Manuscript submitted for publication

Ryden, C., Proudfoot, J., Shapiro, D.A., Goldberg, D., Marks, I,. Tylee, A, Gray, J Predictors of response to computerised cognitive therapy: randomised controlled trial

This study presents an analysis of whether patient characteristics are determinants of responses to CCBT

Beating the Blues Workshop Notes
15th March 2006 11:30 – 2:00pm

Group session – A SWOT analysis of Beating the Blues

Strengths	Opportunities
Recommended by NICE and offers proven benefit Self-help Tool and empowers patients to work through problems. The service is practice based. The service has a low stigma attached to it. Beating the Blues is less formal than other depression or anxiety services. The service is quickly accessible to the patient The service is an additional referral option for GPs. Beating the blues can be used effectively in conjunction with other therapies like counselling. Technical support is available	Service offers patients the opportunity of learning new life skills There is an opportunity to lower medication rates for patients presenting with anxiety or depression There is an opportunity to prevent depression and anxiety relapses There is an opportunity for GPs, the practice healthcare team and patients to access a new service. Practice can model and implement the service effectively to fit the practice dynamics. Assists counsellors to manage time
Weakness	**Threats**
The service can only be accessible to patients in practice hours only and this creates some constraints – particularly in practices with less space The hardware is not very mobile – however although laptops are not plausible perhaps the practice could purchase a computer trolley to overcome some of the accessibility issues. The administrator time/work disrupted Absence of a mental health support project worker Does need some computer skills	Some patients may find the programme confrontational Practice workload may be difficult to give patients required settling down time Other GPs do not engage

Discussion

It was noted that there were many opportunities associated with the practice having direct access to the service within the practice setting. However, probably the biggest attribute to the slow development of the service was the lack of involvement of other GPs within the practice. One possible solution for this would

be for Ultrasis Programme Manager and the PCT Primary Care Development Manager to attend practice meetings and, where required, provide training. This will be organised in the near future.

Some attendees reported a fair amount of time was being taken up attending to the patient and settling them down. Ultrasis confirmed they had some basic training on how to reduce this – practices that are interested should contact the Primary Care Development Manager to arrange.

The absent role of the mental health project worker was also briefly discussed and it was highlighted that where these posts were being utilised the workers were not utilising their mental health skills and were not actually providing an additional clinical resource but more of an administrative role. In response to the above an information pack is also being produced for patients to keep – and this should address many of the issues that are discussed informally during the settling down period.

The following section looked at what could enhance the delivery of the enhanced service within the practices:

What	Who	When
Practices expressed that it is important to emphasise the programme requires patients to conduct some small projects and homework between sessions and this needs to be fully explained to the patient.	The PCT Primary Care Development Manager and Ultrasis Manager to produce fully explanatory patient pack containing examples of homework. Training for managing patients and enquiries will be provided from Ultrasis.	By July 2006

What	Who	When
Practices expressed that the provision of laptops or portable computer tables would make the service more accessible and readily available. Some practices were struggling to accommodate the service in a space that was constantly available.	The PCT Primary Care Development Managers and Ultrasis Manager to meet practices with limited space and discuss the possibility of delivering the service for the patients from another setting e.g. Horsham Hospital	By July 2006

What	Who	When
Practices expressed another factor contributing to the slow take up of the service was that not every GP within the practice was actively making referrals to the service and therefore the service was not getting maximum use.	Ultrasis and the PCT Primary Care Development Manager to arrange meetings with all practices experiencing difficulties with full practice engagement.	By July 2006

What	Who	When
Practices also highlighted that there were some instances where patients were dropping out of the	Practices agreed to identify to patients at point of referral that sessions 1,2 and 3 could seem fairly easy to the	By July 2006

service after sessions 2 and 3 because it was fairly easy.	patients but that the software does step up a level after those sessions. Some practices also confirmed that drop out was reduced when the patient had intervention from the GP or Counsellor around levels 3 and 4.	

In conclusion to the above discussion all practices need to consider continued commitment to the service – if space issues cannot be overcome consideration needs to be given to the re-provision of the service from another site. All GPs within the practice should view the demonstration video and patients should have the opportunity to view the introductory video prior to commencing the programme.
Practices need to give consideration to the prevention of drop out rates between sessions 2 and 3 and explore the possibility of utilising counsellor and GP intervention.

The group held a discussion around some areas of good practice where the enhanced service was working effectively and efficiently and developed a process map for accessing the Beating the Blues CCBT service.

APPENDIX E

Process Mapping

GP/Nurse/Healthcare Professional initiates referral and informs pt that sessions 1/2/3 fairly easy going

↓

Questionnaire sent out by practice and patient receives information on service and leaflet

↓

Patient contacts practice to arrange access

↓

Reception team book 15min demo

↓

1st hour long session is booked and consideration is given to booking future sessions on a weekly basis

↓

Pt attends session and is allocated homework
summaries reviewed at the end of session
clinical intervention is organised, if required, prior to patient leaving site
patient books next session
additional crisis management available

↓

Clinical intervention session around session 2/3

Appendix F



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interactive healthcare

EVALUATION OF THE BEATING THE BLUES WORKSHOP

1. What are your general reactions to the training?

1	2	3	4	5	6	7	8	9	10
Didn't meet my needs				Worthwhile					Valuable and useful to my work

2. Did you find the training presentation easy to follow?

1	2	3	4	5	6	7	8	9	10
Not easy				Satisfactory					Very easy

3. Do you feel the training session met your training needs?

1	2	3	4	5	6	7	8	9	10
Poorly met				Partially met					Fully met

4. Do you feel any part of the training could be improved upon, and if yes, which part and how?

Yes / No

Comments

_____

_____

_____

_____

Any further general comments

_____

_____

_____

_____

_____

_____

Name:_____ (Optional) Date:_____

Thank you for your feedback.

Please return this form to:

Despina Learmonth

Programme Psychologist

Ultrasis

2nd Floor

Northburgh House

10 Northburgh Street

London

EC1V 0AT

APPENDIX H 15/03/06

What were your general reactions to the training?	Did you find the presentation easy to follow?	Did you feel the session met your training needs?	Do you feel any part of the training could have been improved	If yes, which part?	Any other general comments?
5	5	6	yes	Some early parts very long and drawn out.	Good discussion between surgeries.
5	5	5	yes	If you organise a meeting 11:30 - 14:00 for busy GPs & staff - lunch (a quick sandwich) might have been nice.	The discussion amongst the practices was most useful rather than the presentation
5	5	5	no	If training falls over lunch maybe sandwiches could be offered	
4	7	3	no	dissemination to other colleagues, use of PHQ to other colleagues, how HCA's can disengage	
8	10	8			lunchtime meeting - could reps supply a few sandwiches
7	7	7	yes	very good for attending staff, but doesn't reach non-attending staff and GPs	room availibility a major problem. Out of hours centre for BtB would be useful
7	8	8	no		
5	5	4			
4	8	5			
6	8	7			
6	6	6	no		
5	5	5		lots of abbreviations which obviously the doctors could follow - not explained to the rest of us	
7	6	7		In-house training modules would be very helpful. New patient packs - helpful.	further training for HCA's
8	7	6	yes	different venue with better acoustics	
7	8	8	no		
8	9	7			
7	7	8	no		
5	10	7	yes	the role of the counsellor could have been looked at in more depth	
5	6	6	yes	I needed better briefing prior to attending. However I am not sure whether that was the PCT's problem or ours!	I was straight out of surgery to training, and staright back to surgery, a sandwich would have been nice!
4	8	5			problems identified, mainly constrained by finance e.g. space, counsellor involvement. Seemed to be a PCT agenda.
5	9	5	yes	items 5 and 6 on the agenda not covered	counsellor involvement and role of practice not covered
6.5	5.5	6.5		group GP's together to discuss experiences. Workstation with programme available to use.	
7	9	5	yes	started really positively, but then lost its way! Items 5 & 6 on the agenda were really the most important and did not get covered at all.	
6	6	6		Inclusion of staff from CMHT as they sometimes refer back to primary care and could include BtB as part of care plan.	

Mean scores (1 - 10)	Mean scores	Mean scores
5.9375	7.0625	6.0625

Appendix I

From: Despina Learmonth
Sent: 08 June 2006 22:13
To: Despina Learmonth
Subject: Beating the Blues
FEEDBACK FROM MELISSA.

From: Morris Melissa [mailto:Melissa.Morris@hcpct.nhs.uk]
Sent: 16 March 2006 10:54
To: Despina Learmonth
Subject: RE: Beating the Blues

Hi Despina

Paper is being written up by Victoria as we speak

I am also in the process of doing my own feedback - personally I think the low scores were the direct result of no food - so I am not taking that too much on face value.

I have a few ideas and will touch base with these either today or Monday (not in tomorrow)

I am happy to reply and be named in your evaluation. I think 30 attended yesterday!

Think the suggestion of a future evening event - with food is great - I will have a think and come back to you!

Hope this is ok.

Thanks again for yesterday Despina - don't take the feedback personally as I think you presenting and organising is excellent.!!

Thanks Mel

-----Original Message-----
From: Despina Learmonth [mailto:dlearmonth@ultrasis.com]
Sent: 16 March 2006 10:14
To: Morris Melissa
Subject: RE: Beating the Blues

Morning, do we have the large sheets of paper still – with all the attendees feedback on them? There was a mention of dissemination to other colleagues as feedback, not necessarily a bad idea. What do you think? Also I will send you a short report feeding back on evaluation. Of course everything is confidential, and can remain anonymous if you prefer (no PCT names, staff names – ie yours, etc. – just let me know). This would be very useful to me!!!
Also how many actually attended, do we know roughly?
Thank you.
Warm regards,
Despina.

Despina Learmonth DPsych. (Health Psychology) 2007

Unit 4 – Training

Reflective commentary to accompany training clip on DVD

This piece of training was delivered to 6 Primary Care Graduate Mental Health Workers (PCGMHWs) and their clinical supervisor, a clinical psychologist, all employed by Camden Primary Care Trust (PCT). The training took place on19 July 2005, was 2 ½ hours in length - with one 20 minute break - and it focussed on equipping the PCGMHWs with the skills and knowledge that they would require for the efficient implementation and facilitation of *Beating the Blues* as a treatment option for anxiety and depression.

The clip starts from the beginning of the training session, skips a little of the training, and moves through to the section before the initial tea break. Each trainee has been given a copy of the training slides. My academic supervisor, Dr Catherine Sykes, filmed the first half of the training session.

In reviewing this training clip I observed that I interacted well with the trainees. I conveyed a sense of being approachable through expressing empathy, adding humour, and maintaining good eye contact. At this stage in my job I was well-informed about computerised CBT (CCBT) and *Beating the Blues*, and therefore I was able to answer questions knowledgably. I was also able to supply extra information from my own working experience throughout the training. This allowed me to be confident in my delivery of the material, a further strength.

Further positive points in my delivery of the training were my very limited use of jargon-based language, and my non-assumption of certain knowledge by trainees (ie NICE guidelines, CBT). I always checked out with the trainees whether or not they had fully understood before moving on to the next fact. I tried to keep my presentation of the material interesting by varying the volume and tone of my voice, and my facial expressions. At the end of this clip, I also played a little humorous cartoon – adding further variation - to make a point before moving onto more interactive group work. My body language was open and relaxed, and although I used my hands to communicate, I do not think that there was excessive hand-waving. I worked well within the space available; it was a very small room.

In terms of improving my own training technique, and therefore the overall training session, I should have laid out the desired learning outcomes more clearly at the beginning of the

session. To facilitate this further, I could have also added a slide presenting the learning outcomes after the slide presenting what the training session aimed to cover. This would have ensured that the desired learning outcomes were very clear to all the trainees.

Although the room's resources often dictate the way training equipment is laid out, I could have made more of an effort to get the laptop closer to me. This would have helped avoid my too frequent leaning across the table to click through to the next slide. A mouse with a long cable would have also helped resolve this.

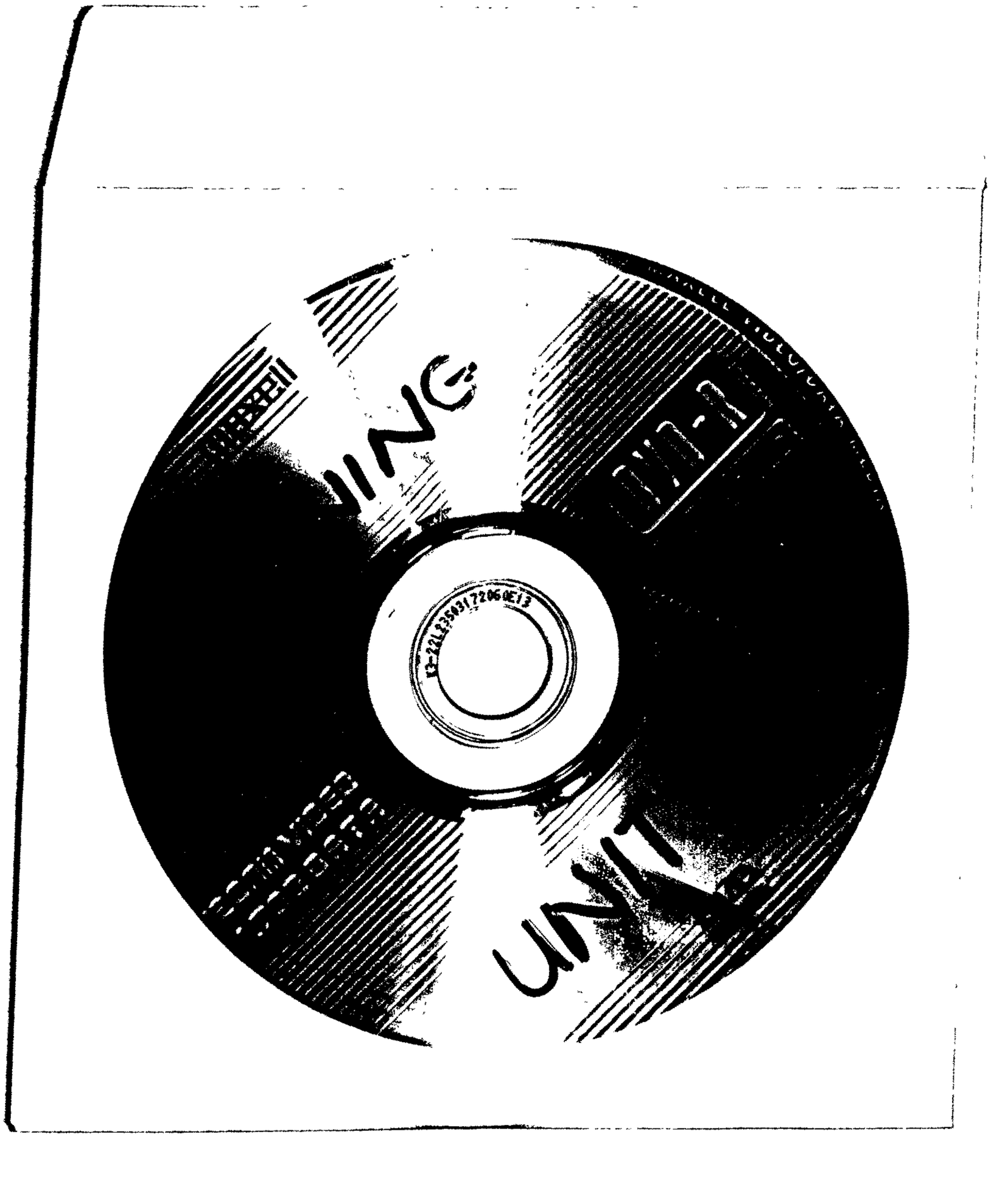
In terms of improving my posture and body language whilst presenting, I could prevent my playing with my hair, or it swinging across my face, by clipping or tying it back in future training sessions. I could also minimise my looking back at the slides for prompting by making use of the laptop screen or a paper copy of the presentation in front of me. These could then be used as prompts instead.

In order to improve the clarity of my overall presentation, I occasionally need to watch the speed and intelligibility of my speech - especially when telling anecdotes. Sporadically, by simply following my thoughts as they present themselves, I move very quickly from one training point or story into another. This is my natural conversational style, but I do need to concentrate more to keep it in check during training. This will aid maintenance of clarity and avoid confusing or losing the trainees. Concentrating more could also hopefully help to avoid such mistakes as the one where I mentioned that CCBT had been stated as a treatment option in the NICE reviews on depression AND anxiety, where in fact it was only been declared acceptable in the NICE depression guidelines. I did know this fact, and luckily it was pointed out to me by their clinical supervisor, otherwise the trainees would have been given the wrong information through my lack of concentration.

To further improve this training session, I should break more often for questions. I also need to bring CBT as a concept in slightly earlier in the training, as I present a slide explaining CBT as a concept after I have already been talking about CBT in previous slides. If there had been trainees who were unsure about what CBT was, then this early explanation would be important for them.

Watching myself delivering training was a very useful learning experience. I will certainly take what I have learnt here, and use it to improve my future training sessions.

Training Clip



UNIT 5.1

Implement intervention to change health-related behaviour

Despina Learmonth DPsych. (Health Psychology) 2007

Optional Unit 5.1 – Implement intervention to change health-related behaviour

* In order to maintain complete anonymity, the client's name and any identifying details have been omitted. This document is completely confidential and anyone who reads it for purposes of examination must at all times abide by the points laid out in the BPS code of conduct regarding confidentiality.

Setting and participant: Individual therapy sessions in a community centre with an obese client struggling with binge-eating. She had contacted the National Centre for Eating Disorders (NCFED) for help, and from a list of several of their practitioners in London had chosen to contact me for an assessment.

Description of the work: The client was a 33 year old woman, LF, who reported general good health, and moderate-exercise levels weekly (except when locked in a cycle of bingeing, then she does not exercise at all). However, she also reported suffering from tiredness, constipation, depression, tension and crying "attacks". At the start of therapy, she felt she had no purpose in life when not on a diet; she felt life was too insignificant to matter. Initially, we negotiated 12 one hour weekly therapy sessions to work on her depression, issues surrounding food, and her own self image. After these initial 12 sessions we agreed to discuss and review progress and decide on the next interventional step. The therapy used techniques from motivational interviewing (Rollnick & Miller, 1995) and cognitive behavioural therapy. During each session, tasks to be completed during the week before the next session were negotiated. This allowed the client time to put into practice what she had been working on during the sessions, and to bring any issues back to therapy each week. Whilst working on these psychological issues the aim was to also gently decrease bingeing episodes and weight (BMI = 29.73).

Unit 5.1a – Assess suitability of the client for health-related problems

As soon as a client expresses the desire to make an appointment for an assessment, I send them out a *Lifestyle Questionnaire* (created and supplied by the National Centre for Eating Disorders) (Appendix A) which asks them for personal details, medical history, weight history and body image, eating and dieting behaviours, and a final questionnaire consisting of yes/no answers. The final questionnaire supplies me with a little more information about their personal attributes. I encourage clients to complete and return the *Lifestyle Questionnaire* before their first session, so that I already have all this information before we meet. This ensures that the initial assessment session's time is more constructive for both the client and myself.

After reading LF's *Lifestyle Questionnaire* and interviewing her in the first session, it became clear that she suffered from periods of moderate depression and binge eating. She had also struggled with a year long bulimic episode in the past.

The National Institute for Clinical Excellence (NICE), in their published guidelines on eating disorders, has suggested that adults with binge eating disorders be offered interpersonal or dialectical therapy, or CBT-BED, CBT specifically focussed on dealing with binge-eating disorders. Selective Serotonin Re-uptake Inhibitor's (SSRI) such as fluoxetine (Prozac) have also been suggested for managing binge eating in the short term. As the client was also suffering from moderate depression (with very low level suicidal ideation, no obvious intent) I enquired about how the client felt about the short-term use of SSRI's (NICE have since [December 2004] also suggested SSRI's as an acceptable form of treatment, alongside psychological interventions, for moderate depression). She had taken fluoxetine in the past for only 3 months, and was keen to start therapy without it. We also reviewed the possibility of self-help groups, such as those run by the Eating Disorder Association and Overeaters Anonymous, but LF found social situations very intimidating so was reluctant to attend groups at this stage.

We discussed how, as the NICE guidelines suggest, psychological therapies will not necessarily have a weight reducing effect. I wanted to address her psychological issues and relationship with food before tackling her weight. However, as her BMI was nearly 30, and had been above 30 before, I felt that I could not ignore her weight as a health risk. With a significant history of dieting and weight loss alternating with extended periods of bingeing and weight gain (her weight had fluctuated by 3 stones in the past), weight loss as a desired goal needed to be addressed. We negotiated a maximum weight loss of 2lbs per week, and agreed that she was to tell me if her weight loss exceeded this at any stage. This was to ensure that weight loss occurred at a healthy rate, and did not totally dictate her emotional state and sense of achievement or failure during therapy.

Unit 5.1b – Identify and negotiate the behaviour change goals of the client

In the first and second sessions we discussed LF's reasons for coming to see me, and what she wanted to achieve. My aim was to build rapport with LF, construct a picture of her issues, provide any educational information required, and assist her to set goals for therapy. I also needed to check out what stage of change (Transtheoretical Model, [Prochaska & DiClemente, 1982]) she was in: before we could go ahead with goal setting I may have needed to assist LF

to move into the action stage of change (Prochaska, Norcross, & DiClemente, 1994). LF seemed to be ready to take action in changing some of her behaviours, but she did express feeling a sense of possible loss by attending the first session and preparing to change. I elicited LF's goals for therapy. Her main goals were: to lose weight and maintain the loss, eat normally, be able to form better relationships, and increase her self-esteem and confidence.

We worked on representing these goals in a way that was specific, measurable, and realistic. LF's key goal - to start with - was stabilising her eating behaviour: minimise bingeing and establish a healthy eating pattern. This goal needed to be broken down into smaller chunks in order to make it manageable. I asked LF if she felt that she was ready and able to keep a food and emotions diary for the first week. The aim of the food and emotions diary was to make LF aware of how she felt around eating, and more importantly before and after binges. The diary would also give me some idea of what LF was eating on a daily basis, and I could use this as a starting point for developing a healthy eating plan.

LF had divulged that she "felt a savage instinct to force food" into herself when she became aware of "taking on a slimmer shape" after a successful period of dieting in the past. Alerted by this, I asked her to write down what she thought it would be like, and what it meant to her, to be thin. We agreed that she would bring her completed food and emotions diary, as well as these thoughts about thinness, to our next session for discussion and reflection.

Unit 5.1c – Assess the cognitive, behavioural and situational determinants of, and influence on, relevant current behaviour

In my work with clients I often use a PIE chart (designed by Deanne Jade, principle of the National Centre for Eating Disorders: Appendix B) to start to identify the factors currently contributing (perpetuating factors) to the undesirable behaviours. Working through the PIE with LF, we identified: possible low blood sugar (when on strict diet), stress as a result of lack of ability to cope with many situations and feelings of failure, low self esteem, poor assertiveness, addiction to the behaviour, poor body image, fat/thin conflict (wanting to be thinner, but not able to identify or assimilate with thin reality of oneself), and hiding her feelings/keeping her feelings bottled up. Other factors identified were: LF's family's maladaptive behaviours (mother used to binge eat frequently when they were children, younger sister extremely obese and binge eats, father is an alcoholic, and her brother is very aggressive and in prison) and their lack of positive, caring relationships with one another, her lack of good friendships (isolation and loneliness),

sexual ambiguity and anxiety (often finds sexual advances very frightening, but wants a sexual relationship).

In the past, LF has frequently embarked on strict exercise and diet regimes, which she has managed to adhere to for months, losing substantial amounts of weight. However, all these diets have been followed by periods of bingeing and no exercise, and as a result LF has gained all the weight she previously lost. She has been dieting since she started menstruating (age 15), and gauges herself as a success or failure by whether or not she can stick to the strict plan she has set herself. She was also bulimic for a period when she was studying a postgraduate degree 5 years ago. She managed to recover from the purging behaviour, but retained the bingeing behaviour. She found bingeing left her feeling very dehydrated and suffering from headaches. She also felt very low the morning after evening or night-time binges. This normally set her up for another binge, as she felt apathetic and a failure.

Using Socratic questioning, I further explored LF's underlying beliefs and cognitions associated with her current behaviour. LF believed that she was uninteresting and had nothing to offer in a social situation. She also believed that people "back away from her" because of her size. This led her to believe that she would never be able to meet new people and develop good relationships, and would therefore always be lonely. This sense of perpetual loneliness often led to a binge. She also felt insignificant, because she has been unable to influence anyone's lives, including her own. This feeling of impotence shaped the belief that she could not achieve positive change in her life. LF did not believe that she had the capacity to stay "on the rails". She described "controlling her eating" as "like being in a carriage running on the rails – eventually the carriage is speeding too fast so that I derail myself to head off a crash". She also seemed to have very little belief in her ability to cope with the new demands or expectations that change would bring. These factors perpetuated the binge-diet cycle.

Unit 5.1d – Develop a behaviour change plan based on cognitive-behavioural principles

<u>Barriers to behaviour change:</u>

LF's ambiguity over her ability to make a permanent behaviour change was a cognitive barrier to behaviour change. Her poor coping skills, stemming from the belief that she was incapable and stupid, coupled with her "all-or-nothing" approach to dieting and managing her weight: either both eating and exercising to a strict plan, or completely chaotic eating with no exercise plan, were further barriers to successful and maintained behaviour change. Her lack of social

support and her competitive male-dominated work environment also seemed to have an adverse effect on her ability to build up her confidence and lessen her feelings of social isolation. Those closest to her, her mother and sister, had issues with food and weight themselves, and LF harboured a lot of resentment towards her mother for not protecting her siblings and herself more against their father's frequent attacks of verbal abuse (when he had been drinking). These two relationships often left LF feeling more angry and distressed, and frequently were catalysts for a bingeing episode. She ate alone, and struggled with the idea of eating in front of others. LF saw food as providing a comforting role, and filling the lonely evenings.

Facilitators of behaviour change:

LF was very motivated to change, and had already made an effort to extend her social network and plan activities to avoid staying at home alone too often. These activities frequently involved moderate intensity aerobic exercise, such as walking holidays, being part of a ramblers club, and joining the Territorial Army. She was self-aware and willing to honestly examine herself and her behaviours. She also had a good job which allowed her a certain amount of autonomy, and had set herself the goal of working towards a chartership status in her professional field. She had demonstrated in the past that she was able to stick to an exercise and diet plan for up to 4 months at a time, and she was committed to exercise being a part of her weekly routine. LF lived alone in her own little flat so had only herself to consider when planning meals and buying food. She drank very little alcohol, and did not smoke or take drugs (as these behaviours can all influence appetite and mood, they often make behaviour change more complicated). She also saw bingeing as a way in which she punished herself - leaving her feeling physically uncomfortable and exhausted. When she was caught in a bingeing cycle she felt that she could not focus on her life. Her lack of energy and total preoccupation with the bingeing would prevent her from doing her work and daily activities/chores. The wish to be able to restore the balance in her life acted as a strong motivator to stop the bingeing behaviour.

Despite believing that she was socially inept, LF interacted and expressed herself well. These factors were very important for her to be able to honestly challenge her belief in her own social inadequacy.

Motivators and beliefs:

We explored what would motivate LF to make the behaviour change and what kind of rewards she felt would be appropriate. Her main motivators were: restoring her energy levels, and increasing her ability to develop personally, professionally, and socially. She felt that losing

weight and being able to buy new clothes would be a reward in itself, as she hates the clothes she feels forced to wear now in order to cover up her "bulk". We discussed the idea of smaller rewards being set up at intervals. We tried to avoid food as a reward and discussed her using the money she usually spent on binges to treat herself. LF struggled with the idea of pampering her body, but did think that she could get her hair done, and buy one or two items of nice new clothes. As a bigger reward in several months time, she would book a walking holiday – something she could not allow herself to do when she was bingeing and overweight.

To maintain motivation on a daily basis, LF and I worked on visualisation techniques in which LF would visual herself looking and feeling more energised and stronger. Saying positive phrases to herself every morning and every evening was also explored as a potential motivator. LF felt she would not be able to believe these phrases when she said them, so we explored ways in which she could say them to increase her belief in what she was saying. She accepted the fact that by saying them she may eventually come to partly believe them, and so was willing to try this. We also discussed making lists - and sticking these lists up as reminders around the house - of why she wanted to change, as well as planning a pleasurable activity to do at least every second day to ensure that she was able to experience some enjoyment during her week. We made a list of potential pleasurable things LF could choose from on a daily basis to assist her to remain positive.

<u>Agree specific and achievable tasks required to reach the goal; and agree order and time-scale of tasks</u> (see Appendix C)

<u>Develop cognitive-behavioural strategies to deal with possible set backs:</u>

As LF previously had an "all-or-nothing" (black and white thinking) approach to her dieting, developing cognitive-behavioural strategies to deal with relapses was very important. We discussed how she would feel should she end up bingeing one evening. The fear was that this would trigger the start of an episode of at least two weeks of bingeing (her shortest episode so far), where she would be completely out of control. She would see herself as a total failure, so give up and lose hope that she could ever end this "destructive cycle".

Firstly, in reframing the relapse situation, I asked LF to call binges "learning lapse experiences". This changed the feeling of the event, minimising its impact. We discussed how everyone makes mistakes or does things that they not proud of, but as long as we can learn from these mistakes or unwanted actions (and not just perpetuate them), they cease to be as destructive as

we may have initially perceived them to be. They become learning experiences for us, and if we truly learn from them we become better equipped at dealing with future difficult situations.

To use these experiences to her advantage we worked out that when a binge took place:
- LF was to write in food and emotions diary "Learning Experience",
- identify what triggered the binge,
- write down what she learnt from identifying this trigger, and if the same situation arose again how she could manage it differently next time so she could avoid bingeing,
- remind herself of everything she has achieved to this point (even a day free of bingeing is an achievement),
- make a decision to stop bingeing and immediately throw out any food that may be left over from the binge, so that it could not directly trigger any further reactive binges,
- continue with her mealplan despite the binge: LF was not to try to restrict in order to compensate for bingeing,
- recognise that she may be possibly feeling slightly more vulnerable and anxious after the binge, so rather than berating herself, do something kind for herself: have a warm bath, go for a gentle stroll in a nearby park, listen to some music, or do some relaxation exercises,
- recognise any negative thoughts in her mind that may be making her feel depressed, and challenge them using the CBT techniques she has learnt.

Unit 5.1e – Ensure monitoring and support for the behaviour change plan

LF used a food and emotions diary to monitor her eating, bingeing, and exercise levels. She also weighed herself once a week (at the same time every week). I recorded her weight in the first session, and asked her to describe what a week of bingeing was like in order to develop baseline data. Besides using a diary for self-monitoring, I encouraged LF to ask the question "what do I really want right now?" when she felt an urge to binge. In this way, I hoped she would be able to elicit and write down what emotional states were fuelling the binge. We practised doing this in the therapy session. We explored different responses to different needs, and how LF could fulfil any immediate needs realistically for herself. Analysis of the diaries took place within the therapy sessions. I had agreed with LF that as they were hers, we would look at them together. I did notice at about 8 weeks in that LF had started to cut down on the mealplan. We discussed this, explored why she felt this was necessary, revisiting her old patterns of dieting (if it is not very restrictive, she feels it isn't good enough), and I emphasised that this was not a diet but a mealplan.

Unit 5.1f – Evaluate Outcome

By the end of our 16 sessions together, LF had only binged twice after the first week, and had managed to stick to her exercise plan and mealplan fairly closely. She had lost 2 stones and 4lbs (BMI = 24.38) in 18 weeks, slightly more than recommended in that time. It had been difficult to avoid weight loss in the first 4 weeks once she had started following the mealplan and had stopped bingeing.

LF's ability to challenge her automatic negative thoughts, and work on her self-defeating beliefs had a strong role to play in changing her maladaptive eating patterns. She was able to use coping imagery and time projection imagery by manipulating the visual, auditory, and kinaesthetic modalities to create states of relaxation. These skills also enhanced her belief in her ability to cope with change, and to begin to experience what it might feel like to positively make the changes necessary.

LF and I had a good rapport, and this meant that we found it easy to work together. I feel that as a result she felt supported and trusted me.

She was motivated to think about and seek out new activities, and started a painting class, and a philosophy evening class. She had followed the "learning lapse experience" guidelines we had discussed when she had binged, and in this way had managed to contain her binges to isolated episodes. With regards to building up her self-esteem, LF had made a huge effort to combat her negative thoughts about herself, and to work on her attributional style of thinking. She had also managed to make minor changes to her very structured routine on a daily basis. LF's willingness to explore the painful aspects of her immediate family relationships, and work on ways in which to make them less destructive and more manageable for herself, has benefited her in helping her to move forward emotionally.

As LF successfully maintained a steady weight loss, she began to express anger around the fact that managing her eating had destroyed the one area of her life where she comfortably allowed herself to be creative and chaotic. Adhering to a mealplan often left her feeling as if she may never be able to be spontaneous or impulsive again. LF also expressed discomfort with the way in which people, men in particular, had started to interact with her differently as she lost weight. She was not sure that she was ready for sexual advances or new expectations, and this coupled with rebellious anger, prompted her to sabotage her efforts and binge "to cover herself up again".

Unit 5.1g – Negotiate completion, follow-up or referral as appropriate

Initially, we had negotiated 12 sessions to be reviewed at the 11th session. As LF was struggling a little at session 11, and wanted more support, we agreed on 4 more sessions. At session 16, LF arrived telling me that she had had a lapse. She had not been able to isolate it, and she had binged for the last few days. We explored what this may be about. LF still felt that she has no real support structures, and now that we were terminating our sessions, she was afraid. She still felt incompetent socially, and lacked confidence. We discussed the idea of support groups again, and I supplied her with a few relevant contact details. I also referred her to a psychodynamic counsellor who ran groups especially for individuals who struggled to integrate socially.

Finally we reviewed LF's achievements so far. I encouraged her to stick to current meal- and behaviour plan, and to continue to challenge her thoughts. We discussed how she could alter her mealplan once she had reached her target weight in order to comfortably maintain her target weight without ever becoming too hungry.

Personal Reflections

I would have liked to have had more time with LF as her psychological issues were complex and fairly deeply rooted. I did not however want the relationship to become one of dependence, and I felt that in order for her to establish a permanent change in her eating behaviour she needed to properly deal with these deeper issues (hence my referral to a psychoanalytical therapist). She would then hopefully be able to take what she had learnt in our sessions together and implement the skills and knowledge by herself. I did find the fine line between being supportive and allowing over-dependence to develop, difficult to manage. I think that I could have handled this better by not trying to "rescue her" so often earlier in the therapy. I still struggle with my clients feeling very uncomfortable or challenged for long periods of time during our sessions. This is partly motivated by my fear that they will not return to see me (I will have failed them and driven them away); and partly by that in being totally empathetic I experience their discomfort acutely, and I find that I am not always able to remain with them in that emotional space. I will continue to remain self aware and address this weakness in my personal practice.

I also think I should have tackled LF's fat/thin conflict earlier on, and been more creative in my approach to it. I was at the time still unsure of the professional boundaries within this type of therapy, and my supervisor at the time was quite conservative in her advice. In December 2005

however, I attended a very useful 2 day CBT workshop at City University. A psychologist, running one of the days, positively encouraged taking clients out for more experiential excursions during therapy. This would have been helpful in my work with LF on her fat/thin issue, as perhaps I could have supported her more in buying new clothes, or dealing with attention when out and about.

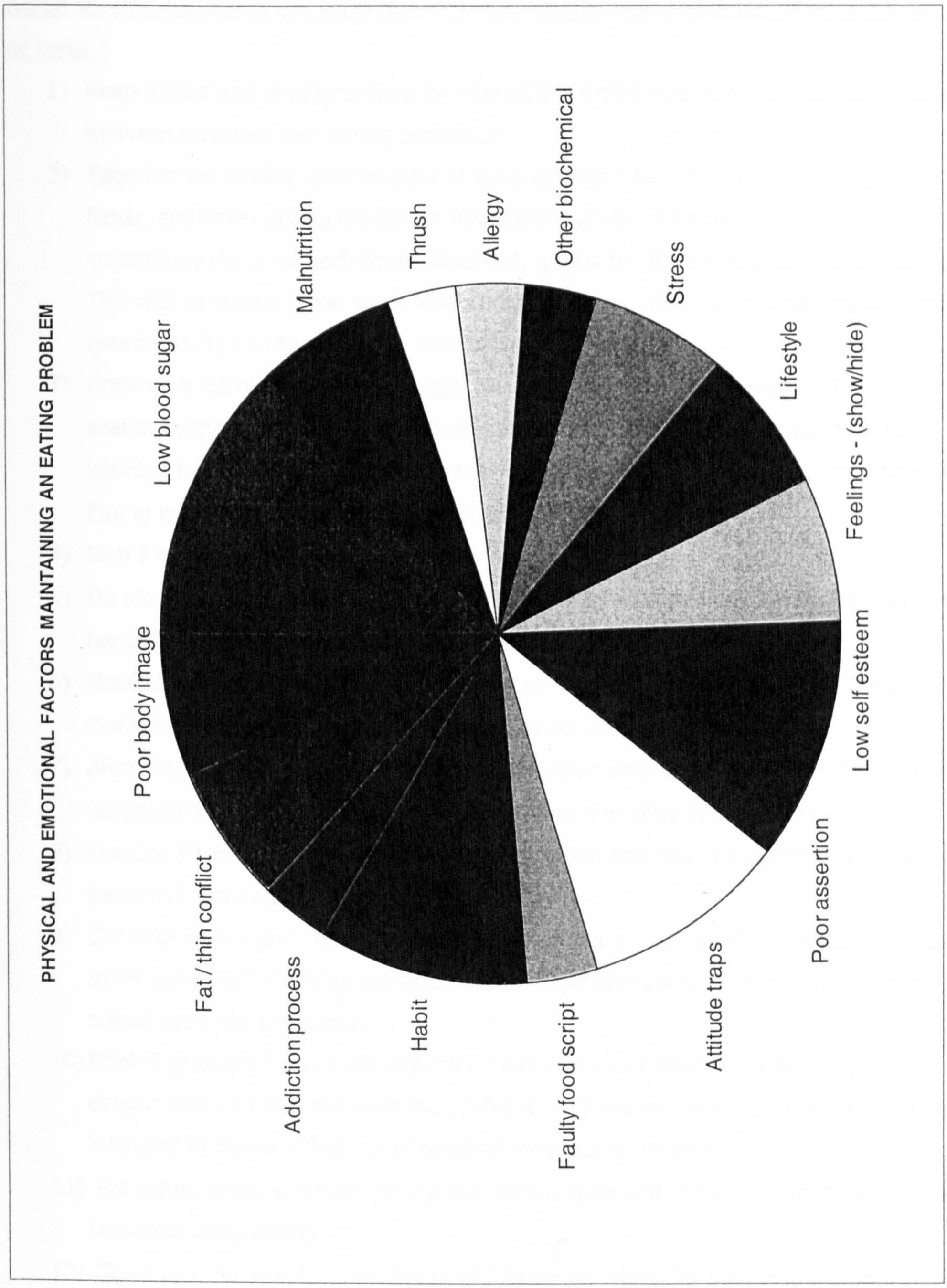
I am aware that I still need to further strengthen my therapeutic skills, such as open-ended questioning and motivational interviewing. I believe that this will be an ongoing process. Attending workshops, seminars, and seeking consultation and supervision, whilst continuing my own personal reflection, will help to ensure that I continue to develop these skills in a positive and professional way. I hope that I will be able to be a more creative and effective therapist as my confidence in my own personal ability and knowledge grows.

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Prochaska, J.O., Norcross, J.C., & DiClemente, C.C. (1994). *Changing for Good.* New York, NY: William Morrow.

Rollnick S., & Miller, W.R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychotherapy, 23*, 325 – 334.


PHYSICAL AND EMOTIONAL FACTORS MAINTAINING AN EATING PROBLEM
Low blood sugar
Malnutrition
Thrush
Allergy
Other biochemical
Stress
Lifestyle
Feelings - (show/hide)
Low self esteem
Poor assertion
Attitude traps
Faulty food script
Habit
Addiction process
Fat / thin conflict
Poor body image

APPENDIX C

Agree specific and achievable tasks required to reach the goal; and agree order and time-scale of tasks:

1) Keep a food and emotions diary for at least the first 8 weeks to continue to identify links between emotions and eating behaviours
2) Together we worked on a mealplan (not exact foods to eat, but more amounts, types of foods, and when during the day to have them) which LF felt was reasonable (very importantly included "forbidden" desserts), goal is to stick to mealplan on a daily basis. This was to ensure blood sugar levels are adequately maintained, and that LF is properly nourished. This in turn helps to control binge urges.
3) Drew up a list of "superfoods" – goal was to incorporate 2 "superfoods" into meals and snacks every day to ensure LF was adequately nourished. This was also framed as learning to view food as something that we use to nourish and nurture ourselves with. Eating is as much about enjoyment as self-care.
4) Plan 1 pleasurable thing to do every second day.
5) Do planned pleasurable thing every second day to enhance mood and ability to give herself pleasurable things other than food.
6) Maintain weight for first 4 weeks of therapy; focussing on maintenance will hopefully eliminate mindset and pressure of having to achieve weight loss.
7) After first 4 weeks weight loss in maximum increments of 2lbs per week (goal: final weight loss of 2 stone 12lbs to take LF down to a healthy BMI of 23.1)
8) Practise 10 minutes of visualisation and relaxation techniques (taught in therapy sessions) every day
9) Cut back on tea and coffee drinking, 2 cups of tea and 1 cup of coffee per day maximum to be consumed. Caffeine can affect blood sugar levels and bingeing on coffee and tea perpetuates the behaviour.
10) Drink 8 glasses of water per day. Thirst can often be mistaken for hunger, and dehydration can lead to low moods, fatigue, and headaches so it is important to remain hydrated to increase feelings of physical energy and wellness.
11) Eat sitting down at a table off a plate (with a knife and fork if appropriate). Don't watch television while eating.
12) Go to gym/do exercise a minimum of 3 times per week for 30 minutes at moderate aerobic intensity, and a maximum of 5 times per week (maximum level was set as LF

has a history of using exercise to avoid socialising or developing other hobbies or interests, or to punish herself, exercising at high levels with very little food to sustain her).

13) Write down 5 positive things about herself or her world every day, and keep them all together in a "positives book" – remind herself of them throughout the day.
14) To combat strict sense of "shoulds" and "all-or-nothing" have negotiated with LF that she do 1 thing differently in her routine every day, say "yes" to something she would normally always say "no" to, and twice a week leave her bed unmade or clutter untidy for a day.
15) To choose a hobby or interest in the second month of therapy that she would enjoy doing (preferably one requiring social interaction), and then to enrol in weekly classes or attend weekly groups/meetings. This helps to fill an evening (LF's most vulnerable time of the day), and add more enjoyable activities to her weekly routine. It also breaks social isolation.
16) Plan rewards once a week for achievements
17) Reward herself when she achieves her weekly goals

UNIT 5.3 - Communicate the processes and outcomes of psychological interventions and consultancies

Despina Learmonth DPsych. (Health Psychology) 2007

Unit 5.3 – Communicate the processes and outcomes of psychological interventions and consultancies

* For the purposes of this case study, I have sought the express permission of the contact client and the primary clients to be able to mention them by name. This document is confidential and anyone who reads it for purposes of examination must at all times abide by the points laid out in the BPS code of conduct regarding confidentiality.

Description of the work: The contact client (Ultrasis), the client who initially contacted me (Schein, 1999), had requested that I deliver training on the implementation of the *Beating the Blues* programme to: Primary Care Graduate Mental Health Workers (PCGMHW) employed by Bristol South and West Primary Care Trust (B&SW PCT), Horsham and Chanctonbury PCT's primary care team, and Kennet, North and West Wiltshire PCT's primary care team. *Beating the Blues* is a computer-based CBT programme specifically designed for the treatment of depression and anxiety. The National Institute for Clinical Excellence (NICE) in their technological review recommended that *Beating the Blues* be used as a treatment of choice for managing anxiety and depression in primary healthcare. After delivering the training sessions, I completed 3 separate reports (Appendices A, B & C) – one on each session - in order to communicate the outcomes of these consultancies to the contact client. My aim was to increase their understanding of the processes involved within each consultancy, and to equip their relevant staff to be able to carry out similar training sessions more efficiently as a result of my feedback.

Setting and participants: Three members of staff, occasionally responsible for carrying out training sessions, were e-mailed the 3 reports, the corresponding training presentations (Appendices D, E and F), and the larger groups' training evaluation results (Appendices G and H) for review on 21 April 2006. An evaluation form (Appendix I) for assessing the impact of the communication was sent out to the same individuals via e-mail a few days later.

Unit 5.3a – Prepare information for dissemination

Having conducted and closed all three consultancies, I reviewed the evaluation forms from all three training sessions and entered the data from the two larger training groups into excel spreadsheets. This enabled me to calculate mean scores from the quantitative feedback. I also entered the qualitative feedback data into the spreadsheet so that it could be reviewed more easily. The individual trainees' data was anonymised, but I did name the PCTs that I had

completed the consultancy with. The reports and excel spreadsheets were stored on my personal drive on the Ultrasis company server. This drive can only be accessed by me via username and password, or by the IT staff with my express permission.

In preparing the reports (Appendices A, B, and C) I was aware of the importance of contextualising the feedback, so I briefly described each training session and I supplied the central learning materials to accompany the reports. The reports were therefore accompanied by the two excel spreadsheets (Appendices G and H), and the three presentations (Appendices D, E and F) delivered in the three separate training sessions. I then made recommendations based on the feedback and my own perceptions during the consultancy.

Horsham and Chanctonbury PCT's training session included a lot of group work, and I felt that the points that came out of this group work would also be very valuable when disseminating this information. As a result, I prepared a group feedback report (Appendix J) to accompany the relevant presentation, which presented the group exercises. I obtained permission from this PCT's service development manager to use this group feedback as a learning tool for the Ultrasis staff. As well as this, in order to increase the contact clients' ability to share knowledge on how exercise and diet can help to alleviate depression and anxiety, I included the two booklets (Appendices K and L) that I had produced. These two booklets look at how mood is affected by diet and exercise. I hoped that by educating health practitioners in more detail about how health behaviours can impact on mental health, as well as encouraging them to share this with service users, those using *Beating the Blues* as a therapeutic intervention could obtain better health outcomes.

I elected to write up the reports in Microsoft Word because they could be easily stored and disseminated via e-mail. E-mail was a practical choice for disseminating the communication, as the staff receiving the feedback were placed geographically at a distance from one another and had very full work schedules. To organise a meeting to disseminate this information would have taken a while, and I felt that the staff involved would benefit from receiving my feedback as soon as possible. Anonymising the reports by not naming individual trainees or patients also meant that there were no constraints on using e-mail to communicate the information.

Unit 5.3b – Present information to individuals, groups and organisations on the processes and outcomes of psychological interventions, consultancies

Since *Beating the Blues* has been recognised and recommended by NICE as a suitable programme for the treatment of anxiety and depression in primary healthcare, there has been an increased number of primary healthcare services purchasing and implementing *Beating the Blues* nationally. This, in turn, has led to a greater demand for training in the implementation of *Beating the Blues,* especially within the NICE stepped care framework for depression. One of the terms of my consultancy contract with Ultrasis is that I deliver training with a clinical-orientation to service managers, GPs, mental health workers and counsellors, nurses, and administration staff working in healthcare nationally. However, with the increased demand for training, more staff are required to be able to deliver effective training to these groups of individuals. Presently the staff, who do occasionally deliver training, focus almost solely on *Beating the Blues* administration and facilitation as opposed to *Beating the Blues* implementation and the clinical implications of NICE's stepped care approach for the treatment of depression. It is very important that these individuals, who have the responsibility of delivering training, are knowledgeable and competent enough to be able to deliver training focussing on both implementation and administration within the context on NICE's depression and anxiety guidelines. I identified the individuals within Ultrasis who would be responsible for sharing in the ever-increasing demand for efficient clinically-orientated training.

Two of the three identified individuals had already received feedback within the agreed timescales from one of the training sessions. This report (Appendix A) was forwarded onto the other two chosen staff members for their review. All three staff members were then sent two further reports (Appendices B and C) with the accompanying presentations (Appendices F, G and H) and evaluation data excel spreadsheets (Appendices D and E). The information was provided within a month of the completion of the final training session (and all sessions had taken place over a period of 5 weeks). The issues discussed were therefore still contemporary and relevant.

I was given no guidance on organisational policies and practices with regard to style and format of the documents. However, as the first consultancy feedback report (Appendix A) had been met with approval from the two Ultrasis staff that had reviewed it (on the 24/02/06), I felt that this was an appropriate style and format for communication within this organisation.

Unit 5.3c – Evaluate the impact of disseminated information

My main concern was that the feedback would enhance the targeted individuals' training abilities by constructively increasing their knowledge and improving their own training session development and delivery. As these staff members were very busy individuals the evaluation of the impact of the consultancy feedback needed to be succinct. Breaking down what I wanted to achieve by disseminating the feedback into smaller components, helped me to begin to create the kinds of questions I wanted to ask in the evaluation process. The aim of dissemination had been to provide information that was relevant and useful, and which could be used to strengthen future training sessions. This was then what I needed to evaluate. Had dissemination of the consultancy training feedback and presentations been relevant, useful, and professionally enriching for those who had received this information?

With this question in mind I constructed a short questionnaire (Appendix I), which was discussed and reviewed with one of my colleagues. This questionnaire would assist me to collect appropriate evaluation data. The first part of the questionnaire could be answered quickly, and yet would still provide me with enough information regarding the impact of the communication of the processes and outcomes of the consultancies. The next section of the questionnaire, consisting of two questions, allowed the individual to elaborate with more detail on how this information had made an impact. This detail was very important in informing me about the reasoning or motivation for individuals' ratings in the first section of the questionnaire.

Again the fact that the individuals receiving the information were based in different parts of the United Kingdom meant that e-mail was considered the most efficient and cost effective approach to dissemination. The evaluation forms were e-mailed to the three chosen recipients a few days after the information about the processes and outcomes of the consultancies was sent to them. I did not e-mail the evaluation form immediately with the rest of the documents as I did not want those receiving the information to feel too overwhelmed, or to start thinking about having to evaluate the information received straight away. I wanted them to be able to review the material reflectively, free of the restrictions that the evaluation may potentially place on their paths of thought.

The evaluation forms were e-mailed back to me for my review (Appendices M, N, and O), and the data was analysed. As the recipient group was small, I analysed each evaluative form separately. For the question: "Did you find that the information contained in the reports was

relevant to you?" on a scale of 1 – 10, I received two scores of 10, and one score of 6. It was interesting to note that the individual who had given a score of 6 had not yet delivered a training session herself, although she had been with the company for 5 months and will be expected to soon. She had attended a few of mine, and one of my colleague's as part of her learning path. The implication here is that this particular individual does not seem to think that this information is as relevant to her as her colleagues seem to think it is to them, despite the fact that they all are employed in the same job role. Perhaps the way in which I presented the information did not resonate with her particularly well. Or perhaps she is not yet aware, having not yet personally experienced them, of the variety of training situations she could be expected to handle. She did seem to find the feedback more *useful* than *relevant*, rating "7" on the *usefulness* question; and she did expect to be able to use it to improve her own training sessions in future (again giving a rating of "7" for this question). The other two recipients of the feedback gave scores of "8", "9", and "10" for the first section's questions (see Appendices M, N, and O). These scores reflected that they found the feedback useful and would be able to use it in improving their future training sessions: the impact I had desired to achieve.

Although the newest employee amongst the recipients of the feedback had given the lowest score in evaluating its impact, this was not a major concern. Her response to the open question: *If you do feel that you will be able to use the information, how do you think you will go about using it?* was "I would use the feedback to help me to plan my teaching sessions. For example what pre-information is needed by participants. Length of time needed for presentation. The presentations on PowerPoint were very useful. I will most likely cut and paste bits from them to use in my presentations. The year one presentation (Horsham) was very useful as obviously in year two of a licence the training/Evaluation would be different." This feedback implies that she has taken note of what was communicated, and that she will in fact be able to use this information to improve her own delivery of training sessions. As her training responsibilities increase, she may find the feedback documentation more relevant.

The two longer serving members of staff both reported that they would be able to use what had been communicated to them constructively, especially with regards to ensuring increased understanding by trainees of training material and enhancing the implementation of *Beating the Blues.*

I believe that sharing professional experiences and knowledge between colleagues is extremely important, and could certainly be done more frequently within this particular company. Sharing

of the more challenging experiences especially, would be hugely beneficial to all involved in delivering training and assisting with the implementation of *Beating the Blues* nationally.

Personal Reflections

In preparation for communicating the processes and outcomes of the selected training consultancies, I consulted relevant literature for theories and best practice regarding dissemination of knowledge. From a constructivist perspective, the task of getting learners to change their current understandings begins with helping them to recognize, and to be disturbed by, the "discrepancies" or "deficits" in their knowledge or abilities. As Shapiro (1994) pointed out, "In order to take on a new viewpoint, one must decide to let go of an old one. There must be a reason to decide to make a shift in thinking" (p. 7). Sechrest, Backer, and Rogers (1994), in applying this understanding to the task of dissemination, noted that if professionals "are not in a state of uncertainty about a problem" (p. 187) merely providing information is not likely to lead to changes in behaviour. In reflecting on my own practice in the development of this particular competence, it may have been more effective to initially highlight any discrepancies in knowledge or skills via a small quiz, which could have been delivered and completed prior to the communication of the information. In this case, this only seemed necessary for the individual who gave lower ratings to the usefulness and relevancy of the communication. However, it may have also had the potential to increase the learning or knowledge acquisition of the other two recipients - especially the newer of the two who had given ratings of 9, 8, and 8 to the first section on the evaluation form's questions – by creating an awareness of their personal "discrepancy" or "deficit".

As well as this, perhaps the most consistent finding in the literature on knowledge utilization is the importance of personal contact for the success of dissemination activities (David, 1991; Hutchinson, 1995; Fullan, 1991). "Face-to-face contact facilitates the adoption of disseminated practices, to a far greater extent than the mere provision of information" (Crandall, 1989, p. 95). I do believe that the information provided could have been better communicated by myself in person at a meeting focusing on the topic. Unfortunately, in this case face-to-face feedback would have been far more time consuming (due to the travel involved for the recipients) and expensive. Further drawbacks to face-to-face feedback were that it could be potentially more tiring for the staff (again due to the extensive travel involved), and that the time set aside for the feedback may not be suitable for everyone involved. In other words, some people work better at night, or in the morning, or can focus better on one day than another; receiving feedback via e-mail allowed them to choose a time to review it that suited them personally: a time when they felt ready to concentrate on what was being communicated.

The pros to face-to-face feedback would have been that I could possibly have presented the information in a more interesting, and certainly a more interactive, way. I would also have developed discussions around the feedback material, and been able to immediately elicit challenging responses, disagreements, or new ideas. Regrettably, finding the time to get everyone together (coordinating diaries) would have delayed the communication considerably. So on weighing up the pros and cons of both methods of communicating the feedback I felt that e-mail served me better in this particular case.

In re-reviewing the literature and thinking about the evaluative responses, I was also forced to consider that in disseminating information to potentially bring about a change in practice, the disseminator must attend to the potential users' "readiness for change". I would always incorporate the *Stages of Change* Model theory into practice when delivering or designing interventions, but I had not really considered its pertinence in this situation. I can appreciate how it could play an important role when communicating information with the expectation that the communication will have an impact. Most of the information was not requested by the contact clients, and therefore they may not have been ready to make use of it. On reflection however, I am aware that in this case I did an informal "readiness for change" assessment, and felt that the information's recipients would be ready to act upon the information communicated. With bigger groups, this assessment would need to be more formal.

I assumed the role of the consultant when communicating the information. As the self is involved in consulting, I was aware of the need to reflect on my own practice and my role as a consultant, and consider the potential impact that this may have on any communication.

Communicating processes and outcomes of practice is crucial for improving professional practice. All too frequently there is not enough time allocated for this to take place, and when it does transpire very little thought seems to be put into the process or desired impact. Engineering communication about the processes and outcomes of consultancy work was very revealing for me, and I will continue to ensure that this kind of communication remains an important part of my own professional practice.

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APPENDIX A

CONSULTANCY OUTCOMES REPORT for training session with Bristol South and West Primary Care Graduate Mental Health Workers

The pre-agreed training presentation was carried out at the Bristol Royal Infirmary on the 20/02/06 at 2pm. The training was attended by 3 Primary Care Graduate Mental Health Workers (PCGMHW) and their commissioning manager. Your colleague and the account's new manager, Ian Chapman, also attended the training. The training lasted 2 ½ hours.

Unfortunately, despite having sent the demo disks and research literature summary ahead of the training, none of the trainees had managed to read or review either completely. One of the trainees had in fact been away on leave in the previous week so had not even started to look at the material in preparation for the training (this may be why his scores were lower than those of the other 2 trainees – reported below).

The commissioning manager arrived towards the end of the training session, and therefore was not present for much of the session. I did not ask her to fill in an evaluation or assessment form. I have attached copies of the assessment form and evaluation form that I used for the training.

Evaluation and assessment:

The trainees scored 6 or 7 on all the assessment questions, except for the questions: "Do you understand how to facilitate *Beating the Blues* as an intervention for anxiety and depression in primary healthcare?" and "Do you feel you have increased your knowledge around tackling the barriers to implementation?". One of the trainees (the PCGMHW who had been leave during the week prior to the training session) scored only 5 for both questions. I have e-mailed him regarding this, and I will endeavour to supply him with any further information that he requires (using e-mail and telephone), ensuring that he is ultimately satisfied with the level of training received.

Scores of 8 or more were achieved on 2 of the evaluation forms for all of the questions. On 1 of the evaluation forms however, scores of only 6 for all 3 of the questions were obtained. This evaluation form was completed by the same PCGMHW who had scored 5 on the 2 questions cited above. In the e-mail to him I also requested information about any suitable improvements to the training that he would recommend (in order to improve the scores he had assigned).

The individual comments on the evaluation forms (in response to the questions in bold below) were as follows:

Do you feel any part of the training could be improved upon, and if yes, which part and how?

"Yes, Maybe a good idea to get problems other PCGMHWs have faced and their solutions, Q & A."

"No, Difficult to know now – will see after trying to implement and run the programme with patients"

"No, very useful. Appreciated clinical perspective as well as Ultrasis. Felt covered all aspects."

Any further general comments:

"Well run, all my questions answered well."

Scores on first 3 questions:	1) 8	2) 9	3) 9
	1) 9	2) 10	3) 10
	1) 6	2) 6	3) 6

No further training material was requested during the training session.

I have supplied all of the trainees with my contact details should they have any further clinical or research questions.

Recommendations:

I would suggest that Ian Chapman as the account manager organises a follow-up meeting with the commissioning manager in the next 4 weeks. As she is to act as the PCGMHWs' supervisor, it is very important that she feels confident in directing and assisting the implementation of *Beating the Blues.* She has a copy of the demo disk and the research literature summary which she has said she will review. For future trainings a more successful method to ensure that trainees actually listen to the demonstration disks and read the summary of the research literature needs to be developed. This is only important where training sessions are shorter in length, and the extra information covered on the disk and in the research literature summary cannot actually be covered in the session. As suggested above by one of the trainees, a few slides presenting examples of real life problems faced by PCGMHWs in the implementation of *Beating the Blues* would also improve the training. If there are any further recommendations arising from my communication with the contacted PCGMHW, I will amend this report, and send it through for your final review.

APPENDIX B

CONSULTANCY OUTCOMES REPORT for training session with Horsham and Chanctonbury PCT primary healthcare team

The pre-agreed training session took place at the Horsham Salvation Army Centre on the 15 March 2006. The training seminar ran from 11:30am to 2 pm. Thirty Primary Care- based trainees attended the session. They were a diverse group, consisting of general practitioners, nurses, administrative staff, and primary care counsellors. I was supported in the training by the Horsham and Chanctonbury PCT service development manager.

The training seminar's focus was: to review the National Institute for Clinical Excellence's (NICE) guidelines on depression, and to discuss how the programme *Beating the Blues* could be implemented more successfully within their primary care practices. A few practices had already implemented *Beating the Blues* successfully as a therapeutic tool in their practices; but there were many practices where uptake had been very poor. My task was to ensure that the trainees were provided with a structured space in which to begin exploring what had worked, and what had not worked in the last 9 months in the implementation of *Beating the Blues*. Along with the service development manager, I was also expected to provide any extra information required to assist them in improving their implementation of *Beating the Blues.*

Evaluation and assessment:

After discussion with a colleague and the Horsham and Chanctonbury PCT service development manager, it was decided that the best assessment of whether or not trainees had benefited from the training session would be if the implementation and use of *Beating the Blues* in the practices of those attending improved. Assessment will be done by comparing baseline useage data of *Beating the Blues* with useage data from the same practices in 3 months time.

Twenty-four of the original thirty evaluation forms were returned completed. The average scores and qualitative feedback collected via the evaluation form at the end of the session are contained in the excel spreadsheet attached with this report.

Recommendations:

This was a big group varying hugely in enthusiasm, ideas, opinions, and clinical experience. I had to ensure that I adhered closely to time allocation so that there was enough time for discussion and questions, whilst not seeming too restrictive, and thereby adversely affecting the creative and sharing learning experience

I personally thought that the training had gone better than was reflected in the overall evaluation scores. When I was delivering the training, the overall interactive feedback had seemed positive. In retrospect, I am aware of the fact that these exercises require a lot of time, and perhaps we did not allow them the time they deserved in only a 2 hour and a half hour training session. I either should have extended the session by half an hour, or shortened the content by leaving out one of the group exercises. The service development manager's, Melissa Morris, opinion was that internal politics combined with low blood sugar had resulted in the low evaluation scores. She felt that the training had been very well-organized and delivered.

I would suggest from my experience of this particular training that when planning future sessions, the following points are taken into account:

a) Make an effort to ensure that everyone feels comfortable about asking questions at any point from the start of the session; present desired learning outcomes in first slide, and encourage trainees to review these personally during the session to ensure that they are being met

b) Allow enough time for the training. When clients try to pressurize you into covering a certain amount of material in too little time, be firm in presenting about what can reasonably achieved in time allocated

c) Remember to explain any acronyms that you use – do not just assume that people understand what they stand for

d) Ensure that all trainees know what is being covered in the session

e) Ensure that you send through a suggested agenda along with a suggested presentation before the session. Allow enough time for review before seeking final agreement on both items from the managers of the training.

f) When holding any training over lunch- or supper-time, make sure that lunch is provided for the trainees. If this is not possible, potential trainees need to be informed of the fact that no meal will be provided prior to their committing to attending the training.

g) Where possible, when there is such diversity in the job roles of the staff attending the training , try to split different types of staff into different groups for the actual session. This will allow the training session to be more focused, and you will have a better chance of fulfilling the trainees' learning needs.

Ultrasis does need to organise another training session (perhaps in the evening, with dinner supplied!) to reach those who were unable to attend this session, and those who feel that they would benefit from another session.

*** Presentation for this session is also attached for your review.**

APPENDIX C

CONSULTANCY OUTCOMES REPORT for training session with Kennet, North Wiltshire, and West Wiltshire PCT

The pre-agreed training session took place in a training room at the Green Lane Hospital, Devizes, on 29 March 2006. The training seminar ran from 9am to 1:30pm with a break for lunch. Twenty Primary Care- based trainees attended the session. They were a diverse group, consisting of general practitioners, nurses, administrative staff, and primary care counsellors. I was supported in the training by the Lead Counsellor in Primary Care Counselling and Psychology Department at Swindon.

The training seminar's focus was on the implementation and administration of *Beating the Blues* in varied settings (from libraries to counselling centres). This was the first part of the training, and it is the part that I focussed on, led and evaluated. The second part of the training was very brief, and mainly included information provision to trainees who had joined us over lunch. Packs were prepared containing a clinical demo disk, patient leaflet, patient summary and progress report, useage report, and a research summary, and these were made available to all the trainees attending the sessions.

Evaluation and assessment:

It was agreed that the assessment would be done by individual centres after a period of implementation. The evaluation of the training was completed by trainees using an evaluation form (see attached). Fourteen of the original twenty evaluation forms for the first section of the session were returned completed. The average scores and qualitative feedback collected via the evaluation form at the end of the session are contained in the excel spreadsheet attached with this report.

Recommendations:

Once again, this was a diverse group in terms of their clinical and administrative roles and responsibilities.

I would suggest from my experience of this particular training (and review of the training evaluations) that when planning future sessions, the following further points (in addition to my suggestions for the previous training – Horsham and Chanctonbury PCT) are taken into account:

a) Explain that you, as the trainer, only have a certain amount of time to cover everything. Should anyone want further clarification of certain issues they should be encouraged to contact you for further assistance after the training.

b) Make sure all trainees who may not have easy assess to *Beating the Blues* have a demo disk, allowing them the opportunity to experience the available interactive clips from the programme themselves. I often get requests

for more interaction with the programme in training sessions, but with big groups of trainees this can be very difficult to organize. If you have given everyone demo disks at the training (as was the case in this training session), then emphasise the fact that they can experience clips from the programme interactively for themselves by working through the demo disk.

c) Be clear about highlighting that clinicians or administrators implementing the programme will have access to patient details via the progress report and patient summary. They need to share this information with any patients/users before they start using the programme, so that the limits of confidentiality when using this programme are very clear to them.

d) It is surprising how many clinicians do not think about offering advice on simple health behaviours to improve mental health. Mention introducing patients using the programme to the idea of diet and exercise (specifically reviewed by NICE) as an added way of managing anxiety and depression. Not eating, or drinking too much caffeine only exacerbates anxiety and depression as a result of low blood sugar and malnutrition. Exercise, even just a 20 minute walk per day, can be very useful. Encourage trainees to mention this to individual patients at the first session, signposting individuals to places where they can get further information if required. If this advice is implemented alongside *BtB,* it will increase the patients' chances of good clinical outcomes.

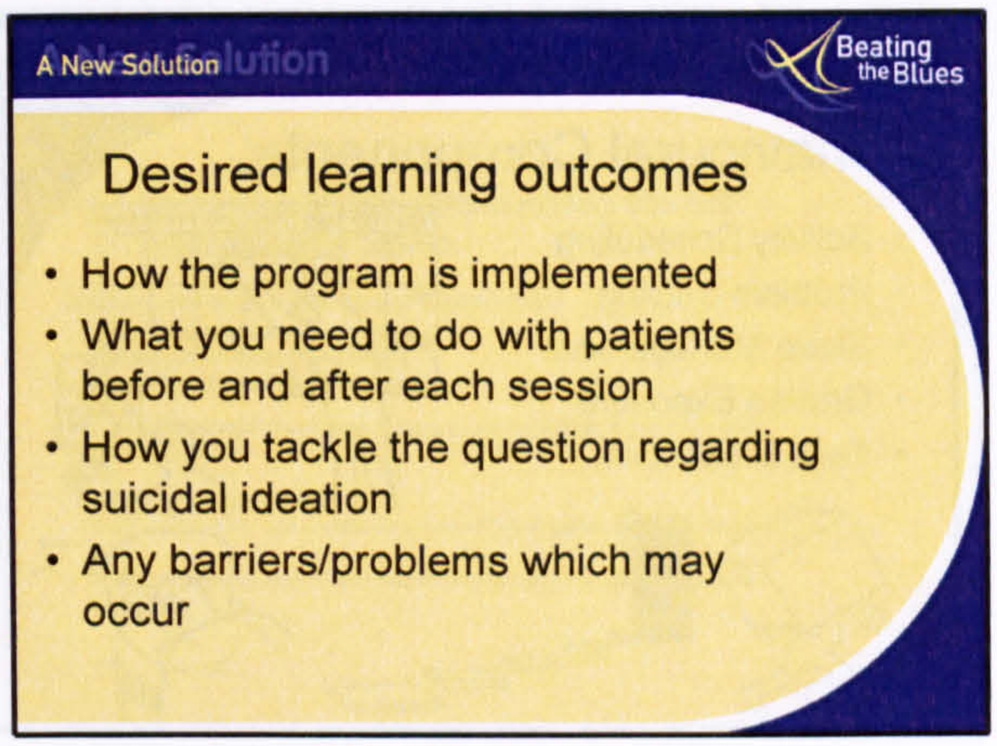
As the use of *Beating the Blues* increases nationally, so does the size and variety of the trainee groups. The models of implementation are also becoming more experimental, and moving away from the tradition surgery-based models. With a small workforce catering for ever-increasing training needs, I would suggest that we start to run regional training days, specific to different trainee groups, as soon as possible. These training days would hopefully lead to a better use of resources through more focused and therefore, more successful training sessions, with homogeneous groups of health staff attending sessions in greater numbers.

*** Presentation for this session is attached for your review.**

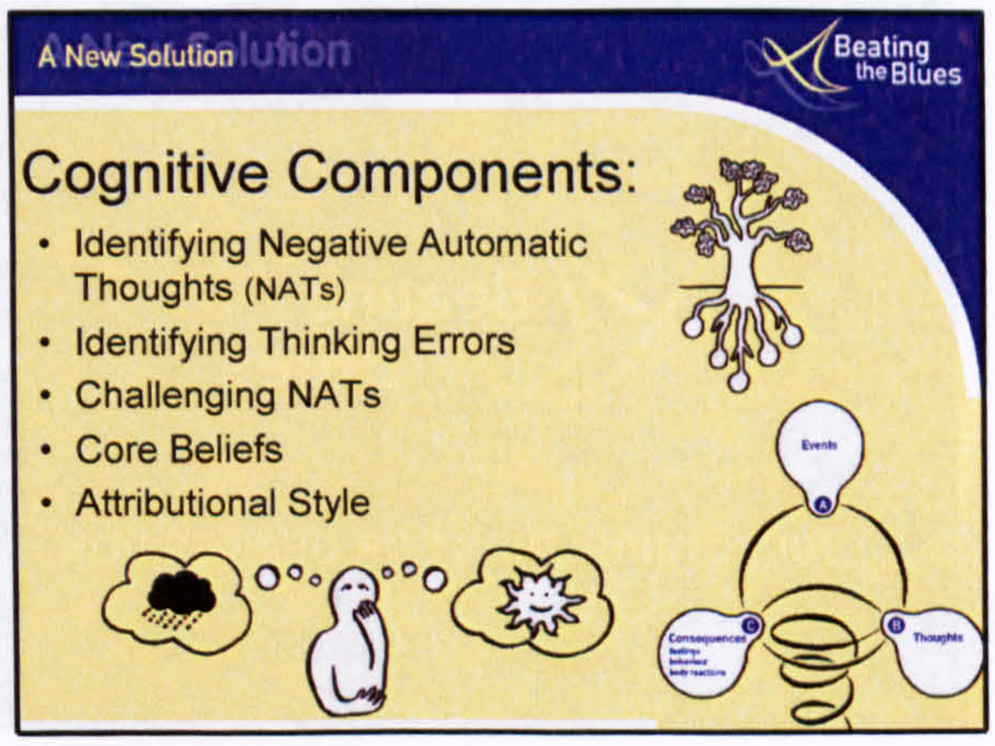
APPENDIX D (to go with Appendix A)

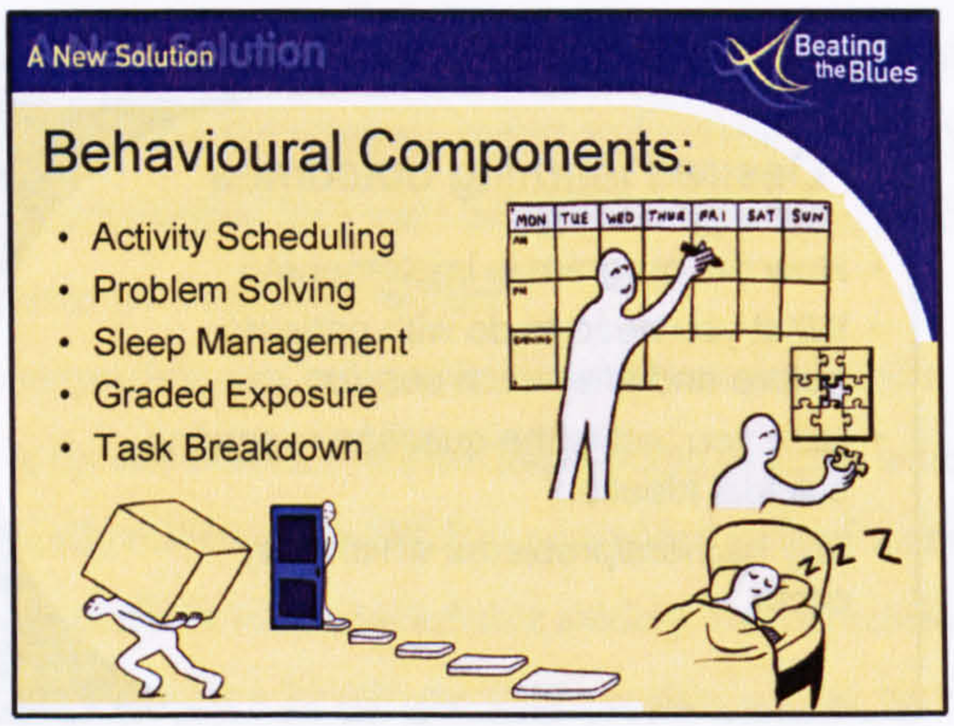
Beating the Blues

Introduction to Beating the Blues
Despina Learmonth (Ultrasis Ltd)

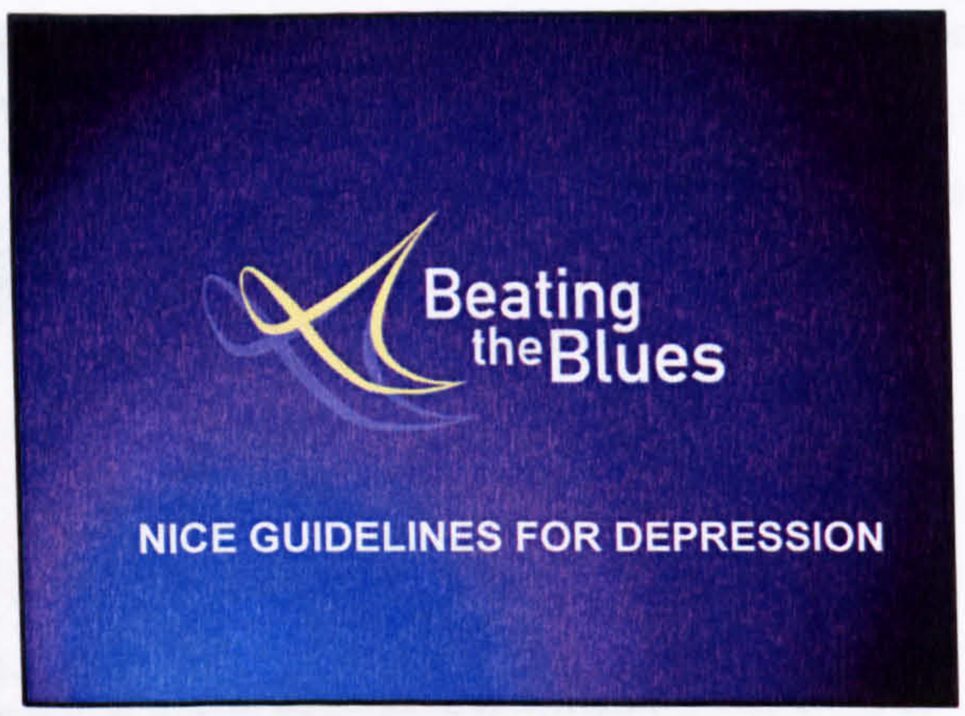


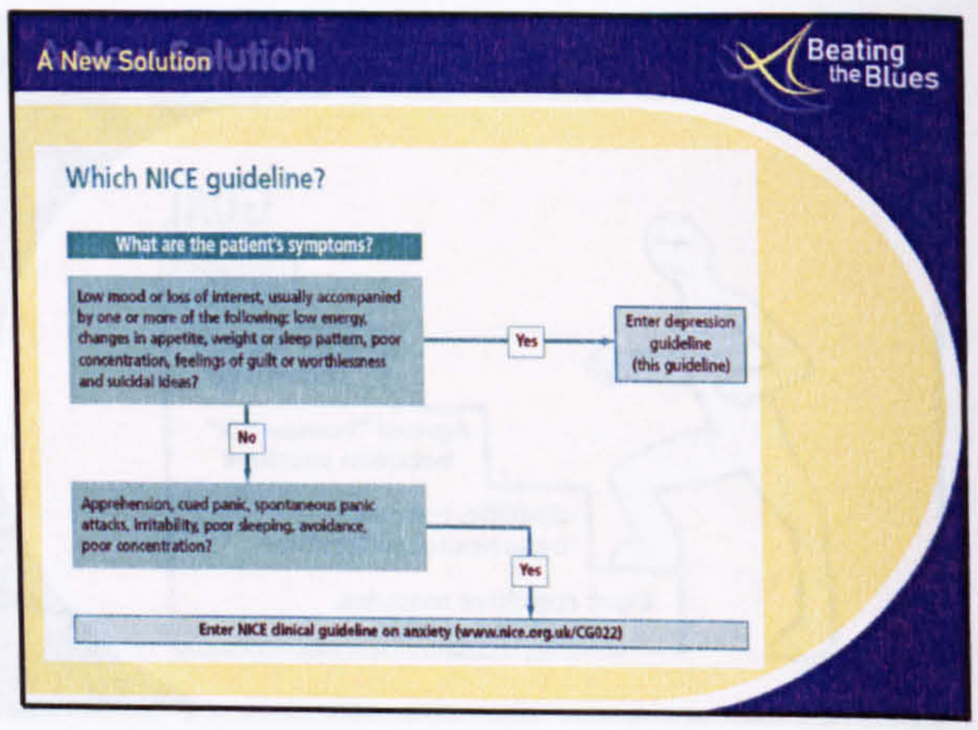





A New Solution
Beating the Blues
Behavioural Components:
• Activity Scheduling
• Problem Solving
• Sleep Management
• Graded Exposure
• Task Breakdown
MON TUE WED THUR FRI SAT SUN


The Programme
Beating the Blues
Who is Beating the Blues for?
• Adults with anxiety (including panic and phobias), depression or mixed anxiety/depression
• With or without medication
• Not dependant on age, gender, computer experience, educational achievement, length or severity of illness


Beating the Blues
NICE GUIDELINES FOR DEPRESSION


A New Solution
Beating the Blues
Which NICE guideline?
What are the patient's symptoms?
Low mood or loss of interest, usually accompanied by one or more of the following: low energy, changes in appetite, weight or sleep pattern, poor concentration, feelings of guilt or worthlessness and suicidal ideas?
Yes
Enter depression guideline (this guideline)
No
Apprehension, cued panic, spontaneous panic attacks, irritability, poor sleeping, avoidance, poor concentration?
Yes
Enter NICE clinical guideline on anxiety (www.nice.org.uk/CG022)

The stepped care approach

Step 1: Recognition in primary care and general hospital settings
Step 2: Treatment of mild depression in primary care
Step 3: Treatment of moderate to severe depression in primary care
Step 4: Treatment of depression by mental health specialists
Step 5: Inpatient treatment for depression

	Who is responsible for care?	What is the focus?	What do they do?
Step 5:	Inpatient care, crisis teams	Risk to life, severe self-neglect	Medication, combined treatments, ECT
Step 4:	Mental health specialists, including crisis teams	Treatment-resistant, recurrent, atypical and psychotic depression, and those at significant risk	Medication, complex psychological interventions, combined treatments
Step 3:	Primary care team, primary care mental health worker	Moderate or severe depression	Medication, psychological interventions, social support
Step 2:	Primary care team, primary care mental health worker	Mild depression	Watchful waiting, guided self-help, computerised CBT, exercise, brief psychological interventions
Step 1:	GP, practice nurse	Recognition	Assessment

Step 2

Step 1: Recognition of depression in primary care and general hospital settings

- In primary care and general hospital settings, screen patients with:
  - a past history of depression
  - significant physical illnesses causing disability
  - other mental health problems, such as dementia.
- Bear in mind the potential physical causes of depression and the possibility that depression can be caused by medication.
- Use two screening questions, such as:
  - "During the last month, have you often been bothered by feeling down, depressed or hopeless?"
  and
  - "During the last month, have you often been bothered by having little interest or pleasure in doing things?"

Step 2: Treatment of mild depression in primary care

Watchful waiting

- In mild depression, if the patient does not want treatment or may recover with no intervention, arrange further assessment – normally within 2 weeks.

Sleep and anxiety management

- Consider advice on sleep hygiene and anxiety management.

Exercise

- Advise patients of all ages with mild depression of the benefits of following a structured and supervised exercise programme. Effective duration of such programmes is up to 3 sessions per week of moderate duration (45 minutes to 1 hour) for between 10 and 12 weeks.

Guided self-help

- For patients with mild depression, consider a guided self-help programme that consists of the provision of appropriate written materials and limited support over 6 to 9 weeks, including follow up, from a professional who typically introduces the self-help programme and reviews progress and outcome.

NICE technology appraisal

www.nice.org.uk → Technology appraisals →

Appraisals in development → Depression and anxiety - computerised cognitive behaviour therapy (CCBT) (review)

↓

Appraisal Consultation Document: Computerised cognitive behaviour therapy (CCBT) (review)

NICE's preliminary recommendation is that all patients with mild or moderate depression are offered CCBT as a choice for treatment within the stepped-care approach for the management of depression in primary and secondary care.

A New Solution

Beating the Blues

Administering Beating the Blues

-First appointment

-Logging patients onto Beating the Blues

-Second appointment, and onward & upwards!

-Administrative functions

A New Solution

Beating the Blues

1st Appointment

- Patient to view Introduction to Therapy Video
  - Emphasise no computer experience is necessary
  - Beating the Blues has been shown to very effective in treating anxiety and/or depression
  - Talk about other healthful behaviours
- End of Session
  - Book 2nd appointment

A New Solution

Beating the Blues

Logging on

- Note the name and date in exactly the same way as they type it in on the patient diary
- Encourage patients to use mothers maiden name as password
- Emphasise confidentiality
  - Looking away
  - Encryption
- Emphasise that they don't need any computer experience
- Patients can repeat modules if they wish
- Helpers location must be made clear in case of any questions

A New Solution

Beating the Blues

2nd Appointment

- Beginning of session
  - Give the patient a "patient diary" for storing:
    - Session summaries
    - Weekly projects
    - Weekly progress reports
  - Make sure the patient is at ease with the computer
  - Sit with the patient as they Log in for the first time
- End of Session
  - Make a copy of the weekly progress report for your files
  - Book 3rd appointment

A New Solution

Beating the Blues

3rd-9th Appointment

- Booking the patient in and out
- Necessary outcome measures
- Print off progress reports for your files

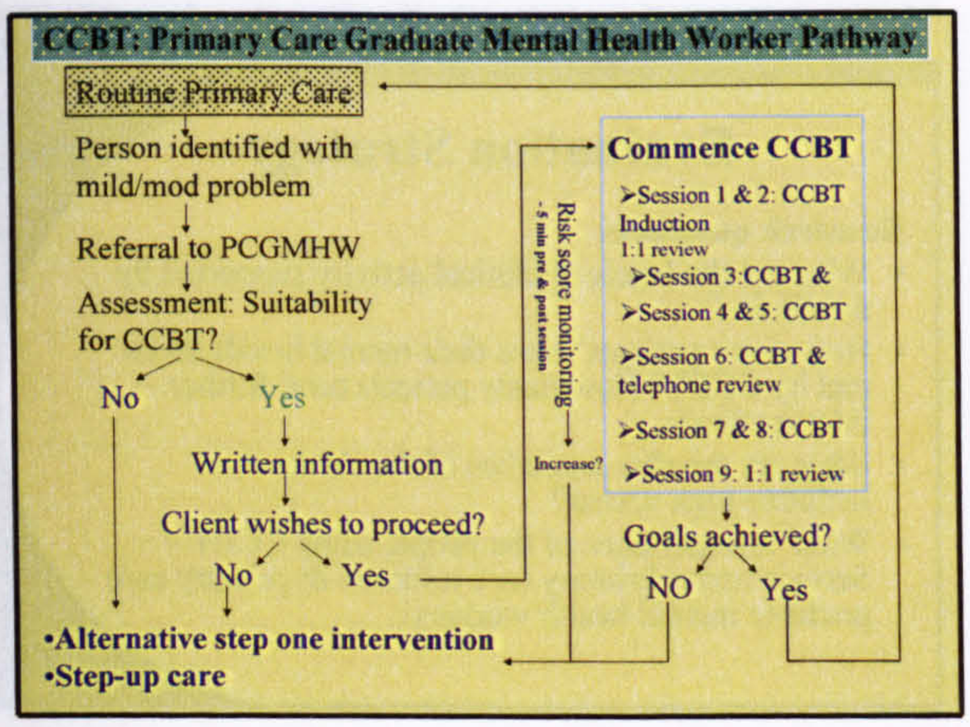
A New Solution

Beating the Blues

Outcome Measures



- **PHQ – 9**
- **HADS**
- **CORE – OM** (in electronic format as part of ***Beating the Blues***)



A New Solution

Beating the Blues

Assessment: Suitability for CCBT?

The following have no correlation to clinical outcomes:

- Gender / Age
- Previous computer experience
- Education achievements
- Length of illness

A New Solution

Beating the Blues

Check patient does not meet any of the exclusion criteria

- Active suicidal ideas
- A current or lifetime diagnosis of psychosis or organic mental disorder such as dementia
- Current alcohol or drug dependence

A New Solution

Beating the Blues

Explain & give information re: CCBT

- **Highlighting the following:**
- BtB is a computerised cognitive-behaviour therapy program based on well-established effective techniques.
- Consists of eight therapy sessions of approximately one hour and three questionnaire sessions with regular review sessions
- Patients do NOT need to have any experience of computers, but will be given introduction to the programme
- Follow-up with written information

A New Solution

Beating the Blues

The purpose of CCBT reviews

- Monitor symptom severity & level of risk
- Check progress with the programme
- Identify any problems that may have arisen since initial assessment
- Identify obstacles to continuing to use CCBT
- Final review – assess progress towards goals
- Step-out / up if needed at any stage
- Inform primary care team of progress.

A New Solution

Beating the Blues

Evaluation Strategy

Research questions:

- What are the levels of clinical activity supported by the clinics?
- How many patients' have their mental health needs met by CCBT? How many patients need further intervention?
- What are the characteristics of the clinics that facilitate high access?
- What is experience of the people using CCBT – Service users; Primary care referrers & primary care graduate mental health workers?

Beating the Blues

Trouble Shooting

- The Systems Manual
- Technical questions with the computer:
  - Call Ultrasis technical helpdesk:
    - 0207 5663900
- Any other questions:
  - Call or e-mail Despina Learmonth
    - 07718737241 (mobile)
    - dlearmonth@ultrasis.com

APPENDIX E (to go with Appendix B)

Beating the Blues

What has been achieved in the first year of implementation? What do we still need to achieve?

Beating the Blues

Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues

Beating the Blues

Aim of today's session

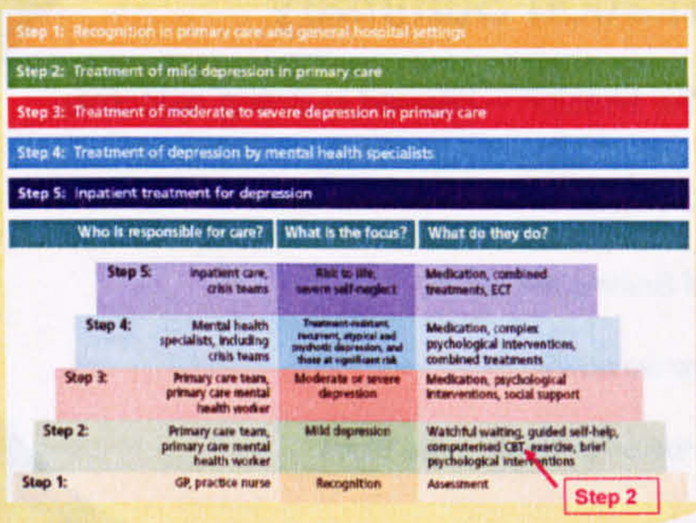
- To achieve a full understanding of NICE
- To understand the benefits of Beating the Blues
- Putting together a workable model for full implementation within multi disciplinary teams in practices
- Any further?

Beating the Blues

Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues

The stepped care approach



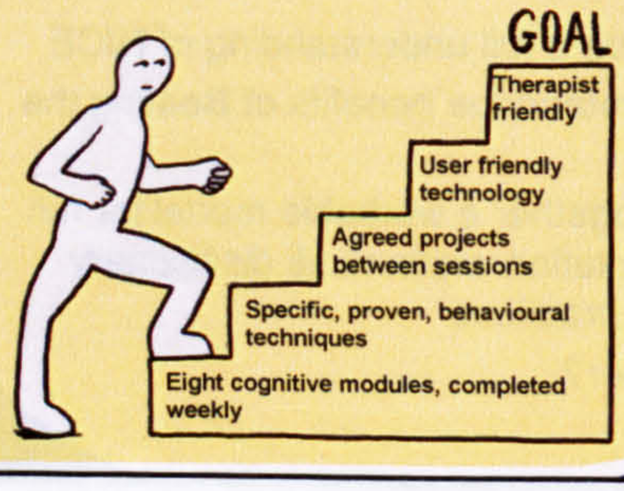
NICE Guidance 22nd February 2006

- All patients with mild or moderate depression are offered Beating the Blues
- Offered within the stepped-care approach for the management of depression in primary and secondary care.
- Final Appraisal www.nice.org.uk

Introduction - Beating the Blues

- Computerised cognitive behavioural therapy (CBT) for anxiety and depression
- Developed by Dr Judy Proudfoot and colleagues at the Institute of Psychiatry, Kings College, London in conjunction with Ultrasis UK Ltd
- Making effective psychological therapies more available and accessible

Introduction - Step by Step



Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues

Process map – in groups

- Go through exact steps from identification of patient's depression and anxiety, to completion of *Beating the Blues* programme
- Identify tasks and staff involved at each step

SWOT ANALYSIS (groups)

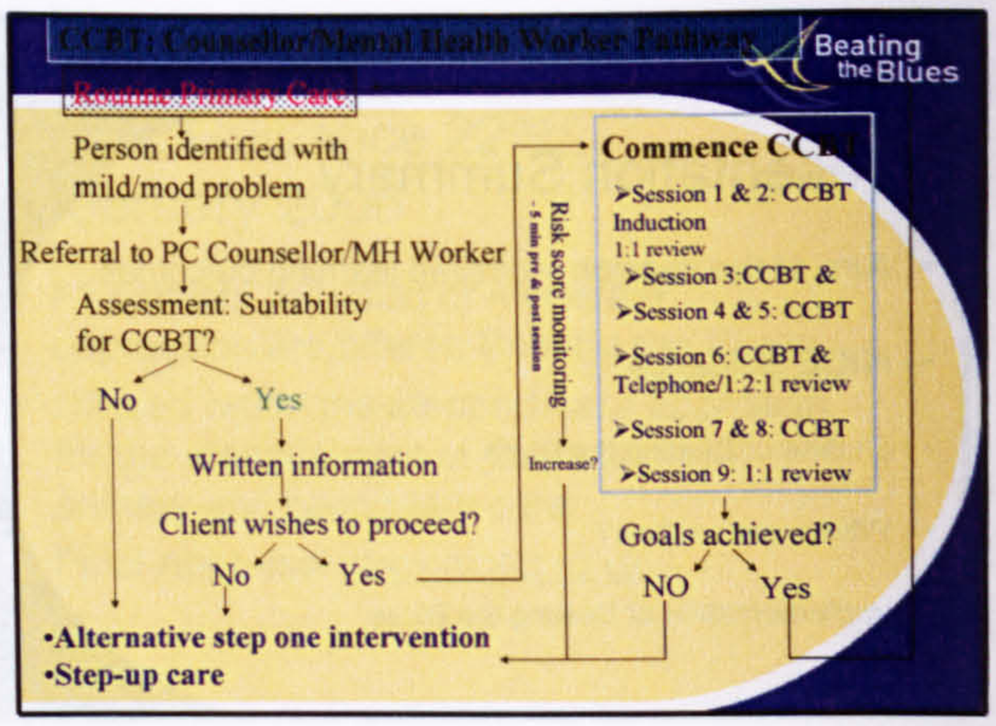
Strengths What is working well?	Weaknesses What is not working?
Opportunities	Threats

Solution Action Plan

What	Who	When

Presentation Summary

- Aim of the session – desired learning outcomes
- NICE guidance
- Outline of Beating the Blues
- Where are we now?
- Implementation of Beating the Blues



Implementation-Screening & Assessment

- Identification and diagnosis of Anxiety and Depression by Healthcare Professionals
- Screening Tool: PHQ 9 (Patient Health Questionnaire) or HADS (Hospital Anxiety and Depression Scale)
- Assessment for suitability for Beating the Blues, GP, Counsellor, Primary Care Graduate Worker, CPN, CBT Therapist

Implementation – Client Suitability

Research shows Beating the Blues is suitable for

- Adults with anxiety (including panic and phobias), depression or mixed anxiety/depression
- Can be used with or without medication
- Not dependant on:
  - Age (between ages 18 to 75)
  - Gender
  - Computer experience
  - Educational achievement
  - The length or severity illness

Implementation – Exclusion Criteria

- Research excluded clients with:
  - Active suicidal plans
  - A current or lifetime diagnosis of psychosis or organic mental disorder such as dementia
  - A current alcohol or drug dependence
- Clients require ability to read and write English

The purpose of CCBT reviews

- Monitor symptom severity & level of risk
- Check progress with the programme
- Identify any problems that may have arisen since initial assessment
- Identify obstacles to continuing to use CCBT
- Final review – assess progress towards goals
- Step-out / up if needed at any stage
- Inform primary care team of progress.

Implementation-Administration

- Booking appointments and logging Clients onto programme provided by admin staff
- 1st Session: Client views 15 minute Introduction to Therapy, either at the Beating the Blues site or at home
- 2nd Session: Client complete CORE questionnaire as part of First Module

Implementation-Support

- 2nd-9th Session: Client completes Beating the Blues in healthcare setting on their own
- Support, as appropriate, is provided during the programme
- Face to face after session 8 if required

Implementation - Tertiary CBT Service

- Waiting time 18 months for face to face CBT
- All patients offered Beating the Blues on waiting list
- 76% (212) discharged from service without any face to face CBT required
- 21% (57) went on for face to face CBT
- Waiting lists reduced to 6 months
- 1 licence equivalent to 2.5 CBT therapists

APPENDIX F (to go with Appendix C)

Beating the Blues

Beating the Blues Training

Despina Learmonth
Ultrasis Ltd

Beating the Blues

Presentation Summary

- Aim of the session – desired learning outcomes
- Outline of Beating the Blues
- NICE guidance
- Implementation of Beating the Blues

Beating the Blues

Aim of today's session

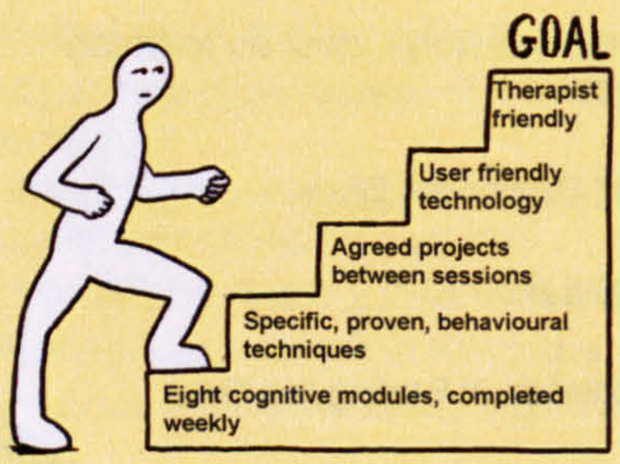
- Basic understanding of the programme.
- How the programme fits into the NICE guidelines and a stepped care approach.
- Who it is suitable for and who it is not suitable for.
- The administrative/technical requirements.
- Any further?

Beating the Blues

Presentation Summary

- Aim of the session – desired learning outcomes
- Outline of Beating the Blues
- NICE guidance
- Implementation of Beating the Blues

Introduction - Step by Step



Cognitive Components

- Identifying Negative Automatic Thoughts (NATs)
- Identifying Thinking Errors
- Challenging NATs
- Core Beliefs
- Attributional Style



Behavioural Components

- Activity Scheduling
- Problem Solving
- Sleep Management
- Graded Exposure
- Task Breakdown



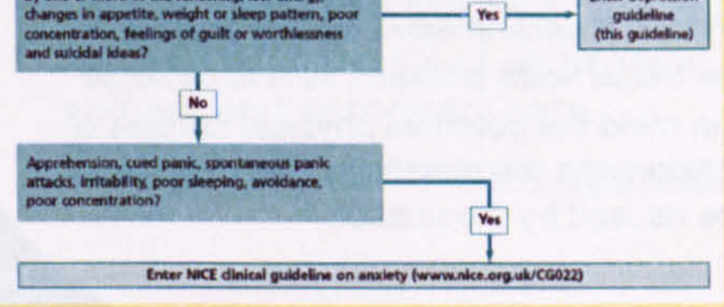
Who is Beating the Blues for?

- Adults with anxiety (including panic and phobias), depression or mixed anxiety/depression
- Can be used with or without medication
- Not dependant on:
  - Age
  - Gender
  - Computer experience
  - Educational achievement
  - The length or severity illness

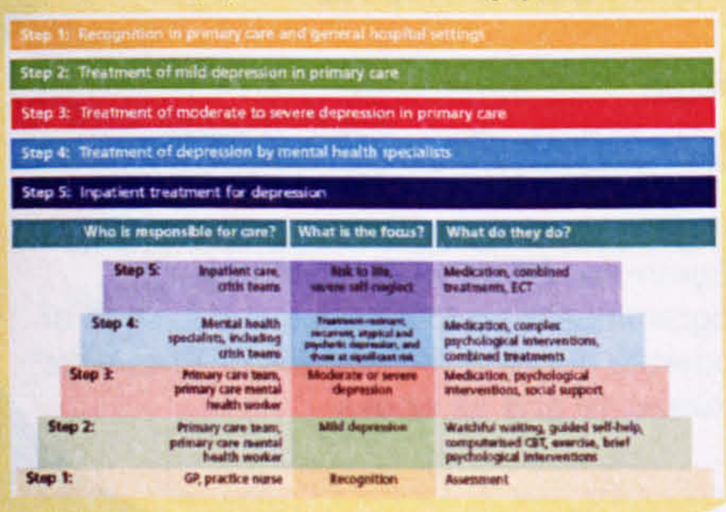
Presentation Summary

- Aim of the session – desired learning outcomes
- Outline of Beating the Blues
- NICE guidance
- Implementation of Beating the Blues

Which NICE Guidelines?



The Stepped Care Approach



Presentation Summary

- Aim of the session – desired learning outcomes
- Outline of Beating the Blues
- NICE guidance
- Implementation of Beating the Blues

Step 1 - Recognition

- In primary care and general hospital settings, screen patients with
  - A past history of depression
  - significant physical illnesses causing disability
  - other mental health problems, such as dementia
- Bear in mind the potential physical causes of depression and the possibility that depression can be caused by medication.

Step 1 - Recognition …

- Use two screening questions, such as
  - "During the last month, have you often been bothered by feeling down, depressed or hopeless?" and
  - "During the last month, have you often been bothered by having little interest or pleasure in doing things?'

Step 2 - Treatment

- Step 2: Watchful waiting
  - In mild depression, if the patient does not want treatment or may recover with no intervention, arrange further assessment normally within 2 weeks.
- Sleep and anxiety management

Step 2 Treatment …

- Exercise
  - Advise patients of all ages with mild depression of the benefits of following a structured and supervised exercise programme. Effective duration of such programmes is up to 3 sessions per week of moderate duration (45 minutes to 1 hour) for between 10 and 12 weeks.

Step 2 Treatment …

- Guided self-help
  - For patients with mild depression, consider a guided self-help programme that consists of the provision of appropriate written materials and limited support over 6 to 9 weeks, including follow up, from a professional who typically introduces the self-help programme and reviews progress and outcome.

NICE Guidance

- All patients with mild or moderate depression are offered Beating the Blues
- Offered within the stepped-care approach for the management of depression in primary and secondary care.
- Guidance document www.nice.org.uk

Administering Beating the Blues

- First appointment
- Logging patients onto Beating the Blues
- Second appointment, and onward & upwards!
- Administrative functions

First Appointment

- Patient to view Introduction to Therapy Video
  - Emphasise no computer experience is necessary
  - Beating the Blues has been shown to very effective in treating anxiety and/or depression
  - Talk about other healthful behaviours
- End of Session
  - Book second appointment

Logging on

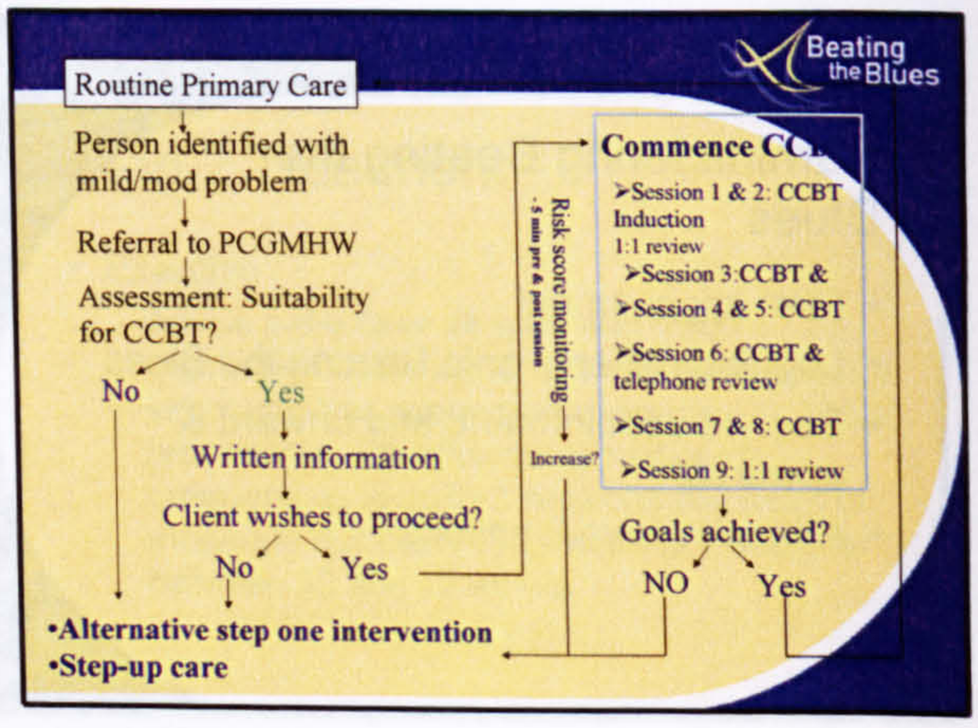
- Note the name and date in exactly the same way as they type it in on the patient diary
- Encourage patients to use mothers maiden name as password
- Emphasise confidentiality
  - Looking away
  - Encryption

Logging on …

- Emphasise that they don't need any computer experience
- Patients can repeat modules if they wish
- Helpers location must be made clear in case of any questions

Implementation-Support

- 2nd-9th Session: Client completes Beating the Blues in healthcare setting on their own
- Support, as appropriate, is provided during the programme



Assessment: Suitability for CCBT

- The following have no correlation to clinical outcomes
  - Gender / Age
  - Previous computer experience
  - Educational achievement
- Length of illness

Exclusion Criteria

- Active suicidal ideas
- A current or lifetime diagnosis of psychosis or organic mental disorder such as dementia
- Current alcohol or drug dependence

Patient Information

- Beating the Blues is a computerised cognitive behaviour therapy program based on well-established effective techniques.
- Eight therapy sessions of approximately one hour and three questionnaire sessions with regular review sessions
- No need to have any experience of computers, but will be given introduction to the programme
- Follow-up with written information

The Purpose of CCBT Reviews

- Monitor symptom severity & level of risk
- Check progress with the programme
- Identify any problems that may have arisen since initial assessment
- Identify obstacles to continuing to use CCBT
- Final review – assess progress towards goals
- Step-out / up if needed at any stage
- Inform primary care team of progress.

Troubleshooting

- The System Manual
- Technical questions with Beating the Blues
  - Call Support 0207 566 3900
- Any other questions:
  - Call 0207 566 3908

Beating the Blues

Thank You

beatingtheblues@ultrasis.com
0207 566 3900

Feedback from Horsham and Chanctonbury - APPENDIX G

What were your general reactions to the training?	Did you find the presentation easy to follow?	Did you feel the session met your training needs?	Do you feel any part of the training could have been improved upon?	If yes, which part?	Any other general comments?
5	5	6	yes	Some early parts very long and drawn out.	Good discussion between surgeries.
5	5	5	yes	If you organise a meeting 11:30 - 14:00 for busy GPs & staff - lunch (a quick sandwich) might have been nice.	The discussion amongst the practices was most useful rather than the presentation
5	5	5	no	If training falls over lunch maybe sandwiches could be offered	
4	7	3	no	dissemination to other colleagues, use of PHQ to other colleagues, how HCA's can disengage	
8	10	8			lunchtime meeting - could reps supply a few sandwiches
7	7	7	yes	very good for attending staff, but doesn't reach non-attending staff and GPs	room availibility a major problem. Out of hours centre for BtB would be useful
7	8	8	no		
5	5	4			
4	8	5			
6	8	7			
6	6	6	no		
5	5	5		lots of abbreviations which obviously the doctors could follow - not explained to the rest of us	
7	6	7		In-house training modules would be very helpful. New patient packs - helpful.	further training for HCA's
8	7	6	yes	different venue with better acoustics	
7	8	8	no		
8	9	7			
7	7	8	no		
5	10	7	yes	the role of the counsellor could have been looked at in more depth	
5	6	6	yes	I needed better briefing prior to attending. However I am not sure whether that was the PCT's problem or ours!	I was straight out of surgery to training, and staright back to surgery, a sandwich would have been nice!
4	8	5			problems identified, mainly constrained by finance e.g. space, counsellor involvement. Seemed to be a PCT agenda.
5	9	5	yes	items 5 and 6 on the agenda not covered	counsellor involvement and role of practice not covered
6.5	5.5	6.5		group GP's together to discuss experiences. Workstation with programme available to use.	
7	9	5	yes	started really positively, but then lost its way! Items 5 & 6 on the agenda were really the most important and did not get covered at all.	
6	6	6		Inclusion of staff from CMHT as they sometimes refer back to primary care and could include BtB as part of care plan.	
Average scores for category: (between 1 - 10)	Average scores for category: (between 1 - 10)	Average scores for category: (between 1 - 10)			
5.9375	7.0625	6.0625			

Feedback from Kennet and Avon PCT - APPENDIX H

What were your general reactions to the training?	Did you find the presentation easy to follow?	Did you feel the session met your training needs?	Do you feel any part of the training could have been improved upon?	If yes, which part?	Can you suggest any other topics that would be useful to your work?	Any other general comments?
10	7	7	yes	Maybe the latter part could have been paced a little slower - it was hard to take in all the info - however I trust that we will receive further hand son training later or with the organisation	All forms of therapy - which are recommended for different mental health issues e.g EMDR for PTSD interests me greatly	Wonderful to have a session like this! I am quite concerned about the issue of suicide, & how I will manage this once I have knowledge of it. The confidentiality does not sit well with my duty of care and requirements as a group facilitator & counsellor acting in accordance with BACP guidelines
8	8	7				
8	7	8				it gave a good overview of BtB
7	6	9	no		?	genrally well presented - thank you!
7	9	7	no			very interesting and informative
8	8	6	no	good presentation		
9	10	9	no			
9	9	7	no			
9	9	8				
9	9	7	no			
9	9	8				
7	8	9	yes	more interaction using the programme		
8	9	6	yes	confidentiality issues seem to conflict ie patient told confidential but access is available - patient needs to understand this from the start - not fully explained in presentation		
10	8	7	no			
8	9	8	no			
10	10	10	no			well & clearly presented
Average scores for category: (between 1 - 10)	**Average scores for category: (between 1 - 10)**	**Average scores for category: (between 1 - 10)**				
8.428571429	**8.357142857**	**7.714285714**				

EVALUATION of the *Beating the Blues* training feedback reports

This document can be printed and filled in by hand, or it can be filled in electronically and e-mailed back to me. If filling in electronically, shade in the box for the number that you pick on the 3 scales below (format, borders and shading from menu bar above).

1. Did you find that the information contained in the reports was relevant to you?

1	2	3	4	5	6	7	8	9	10
Not at all relevant				Partially relevant				Very relevant	

2. If so, did you find the information useful?

1	2	3	4	5	6	7	8	9	10
Not useful				Partially useful				Very useful	

3. Do you feel that you will be able to use this information to improve your own training sessions in future?

1	2	3	4	5	6	7	8	9	10
Not at all				Partially				Fully	

4. If you do feel that you will be able to use the information, how do you think you will go about using it? (type in box below, it will expand as you type)

Any further general comments? (type into box below, it will expand as you type)

Name: **Date:**

Thank you for your feedback.

Please return this form to: Despina Learmonth (Consultant Programme Psychologist) @ dlearmonth@ultrasis.com

APPENDIX I

Beating the Blues Workshop Notes
15th March 2006 11:30 – 2:00pm

Group session – A SWOT analysis of Beating the Blues

Strengths	Opportunities
Recommended by NICE and offers proven benefit Self-help Tool and empowers patients to work through problems. The service is practice based. The service has a low stigma attached to it. Beating the Blues is less formal than other depression or anxiety services. The service is quickly accessible to the patient The service is an additional referral option for GPs. Beating the blues can be used effectively in conjunction with other therapies like counselling. Technical support is available	Service offers patients the opportunity of learning new life skills There is an opportunity to lower medication rates for patients presenting with anxiety or depression There is an opportunity to prevent depression and anxiety relapses There is an opportunity for GPs, the practice healthcare team and patients to access a new service. Practice can model and implement the service effectively to fit the practice dynamics. Assists counsellors to manage time
Weakness	**Threats**
The service can only be accessible to patients in practice hours only and this creates some constraints – particularly in practices with less space The hardware is not very mobile – however although laptops are not plausible perhaps the practice could purchase a computer trolley to overcome some of the accessibility issues. The administrator time/work disrupted Absence of a mental health support project worker Does need some computer skills	Some patients may find the programme confrontational Practice workload may be difficult to give patients required settling down time Other GPs do not engage

Discussion

It was noted that there were many opportunities associated with the practice having direct access to the service within the practice setting. However, probably the biggest attribute to the slow development of the service was the lack of involvement of other GPs within the practice. One possible solution for this would

be for Ultrasis Programme Manager and the PCT Primary Care Development Manager to attend practice meetings and, where required, provide training. This will be organised in the near future.

Some attendees reported a fair amount of time was being taken up attending to the patient and settling them down. Ultrasis confirmed they had some basic training on how to reduce this – practices that are interested should contact the Primary Care Development Manager to arrange.

The absent role of the mental health project worker was also briefly discussed and it was highlighted that where these posts were being utilised the workers were not utilising their mental health skills and were not actually providing an additional clinical resource but more of an administrative role. In response to the above an information pack is also being produced for patients to keep – and this should address many of the issues that are discussed informally during the settling down period.

The following section looked at what could enhance the delivery of the enhanced service within the practices:

What	Who	When
Practices expressed that it is important to emphasise the programme requires patients to conduct some small projects and homework between sessions and this needs to be fully explained to the patient.	The PCT Primary Care Development Manager and Ultrasis Manager to produce fully explanatory patient pack containing examples of homework. Training for managing patients and enquiries will be provided from Ultrasis.	By July 2006

What	Who	When
Practices expressed that the provision of laptops or portable computer tables would make the service more accessible and readily available. Some practices were struggling to accommodate the service in a space that was constantly available.	The PCT Primary Care Development Managers and Ultrasis Manager to meet practices with limited space and discuss the possibility of delivering the service for the patients from another setting e.g. Horsham Hospital	By July 2006

What	Who	When
Practices expressed another factor contributing to the slow take up of the service was that not every GP within the practice was actively making referrals to the service and therefore the service was not getting maximum use.	Ultrasis and the PCT Primary Care Development Manager to arrange meetings with all practices experiencing difficulties with full practice engagement.	By July 2006

What	Who	When
Practices also highlighted that there were some instances where patients were dropping out of the	Practices agreed to identify to patients at point of referral that sessions 1,2 and 3 could seem fairly easy to the	By July 2006

service after sessions 2 and 3 because it was fairly easy.	patients but that the software does step up a level after those sessions. Some practices also confirmed that drop out was reduced when the patient had intervention from the GP or Counsellor around levels 3 and 4.	

In conclusion to the above discussion all practices need to consider continued commitment to the service – if space issues cannot be overcome consideration needs to be given to the re-provision of the service from another site. All GPs within the practice should view the demonstration video and patients should have the opportunity to view the introductory video prior to commencing the programme.
Practices need to give consideration to the prevention of drop out rates between sessions 2 and 3 and explore the possibility of utilising counsellor and GP intervention.

The group held a discussion around some areas of good practice where the enhanced service was working effectively and efficiently and developed a process map for accessing the Beating the Blues CCBT service.

APPENDIX J

Process Mapping

GP/Nurse/Healthcare Professional initiates referral and informs pt that sessions 1/2/3 fairly easy going

↓

Questionnaire sent out by practice and patient receives information on service and leaflet

↓

Patient contacts practice to arrange access

↓

Reception team book 15min demo

↓

1st hour long session is booked and consideration is given to booking future sessions on a weekly basis

↓

Pt attends session and is allocated homework
summaries reviewed at the end of session
clinical intervention is organised, if required, prior to patient leaving site
patient books next session
additional crisis management available

↓

Clinical intervention session around session 2/3

EVALUATION of the *Beating the Blues* training feedback reports

This document can be printed and filled in by hand, or it can be filled in electronically and e-mailed back to me. If filling in electronically, shade in the box for the number that you pick on the 3 scales below (format, borders and shading from menu bar above).

1. Did you find that the information contained in the reports was relevant to you?

1 2 3 4 5 6 7 8 9✓ 10

Not at all relevant — Partially relevant — Very relevant

2. If so, did you find the information useful?

1 2 3 4 5 6 7 8✓ 9 10

Not useful — Partially useful — Very useful

3. Do you feel that you will be able to use this information to improve your own training sessions in future?

1 2 3 4 5 6 7 8✓ 9 10

Not at all — Partially — Fully

4. If you do feel that you will be able to use the information, how do you think you will go about using it? (type in box below, it will expand as you type)

As my role within Ultrasis develops I will be able to use the information in my own training sessions that I will run in the future. Not only is the content of the training sessions usefull (I attended two of the mentioned sessions myself) but it is also interesting to experience that what you think the audience has learned/experienced is different to what they have actually learned/experienced. With this information in mind I will be able to structure my training sessions in such a way that the messages I want to deliver are presented in such a way that the audience will fully understand. Then follow up with some questions to make sure the audience does understand the learning message being presented.

Any further general comments? (type into box below, it will expand as you type)

Filling in the form electronically was confusing as you don't seem to be able to select one number and then shade it as you suggested, if you click on the number you want to select it highlights all of the numbers, therefore I had to insert my own tick box. The reports are short yet informative with no 'waffle' or complicated jargon.

Name: Ian Chapman **Date:** Thursday, May 18, 2006

Thank you for your feedback.

Please return this form to: Despina Learmonth (Consultant Programme Psychologist) @ dlearmonth@ultrasis.com

EVALUATION of the *Beating the Blues* training feedback reports

This document can be printed and filled in by hand, or it can be filled in electronically and e-mailed back to me. If filling in electronically, shade in the box for the number that you pick on the 3 scales below (format, borders and shading from menu bar above).

1. Did you find that the information contained in the reports was relevant to you?

1	2	3	4	5	6	7	8	9	10
Not at all relevant				Partially relevant					Very relevant

2. If so, did you find the information useful?

1	2	3	4	5	6	7	8	9	10
Not useful				Partially useful					Very useful

3. Do you feel that you will be able to use this information to improve your own training sessions in future?

1	2	3	4	5	6	7	8	9	10
Not at all				Partially					

4. If you do feel that you will be able to use the information, how do you think you will go about using it? (type in box below, it will expand as you type)

I believe the information will help us to implement Beating the Blues more effectively and efficiently. Training clients to use Beating the Blues is relatively straight forward; training clients to implement Beating the Blues is very difficult. Implementation requires structure, self learning, monitoring, identifying barriers and solutions to overcome barriers and the information will help us provide this support.

Any further general comments? (type into box below, it will expand as you type)

Name: Kaye Dalton **Date:** 21st May 2006

Thank you for your feedback.

Please return this form to: Despina Learmonth (Consultant Programme Psychologist) @ dlearmonth@ultrasis.com

EVALUATION of the *Beating the Blues* training feedback reports

This document can be printed and filled in by hand, or it can be filled in electronically and e-mailed back to me. If filling in electronically, shade in the box for the number that you pick on the 3 scales below (format, borders and shading from menu bar above).

1. Did you find that the information contained in the reports was relevant to you?

1	2	3	4	5	6	7	8	9	10
Not at all relevant				Partially relevant	■				Very relevant

2. If so, did you find the information useful?

1	2	3	4	5	6	7	8	9	10
Not useful				Partially useful		■			Very useful

3. Do you feel that you will be able to use this information to improve your own training sessions in future?

1	2	3	4	5	6	7	8	9	10
Not at all				Partially		■			Fully

4. If you do feel that you will be able to use the information, how do you think you will go about using it? (type in box below, it will expand as you type)

I would use the feedback to help me to plan my teaching sessions. For example what pre information is needed by participants. Length of time needed for presentation. The presentations on PowerPoint were very useful. I will most likely cut and paste bits from them to use in my presentations. The one year on presentation (Horsham) was very useful as obviously in year two of a licence the training/Evaluation would be different.

Any further general comments? (type into box below, it will expand as you type)

Have we thought about putting together a short training programme on the computer to help people familiarise themselves with the admin side of BTB?

APPENDIX O

Name: Katy Rose

Date: 22 May 2006

Thank you for your feedback.

Please return this form to: Despina Learmonth (Consultant Programme Psychologist) @ dlearmonth@ultrasis.com

Section D: Systematic Review

-

Computer-based interventions for the prevention of eating disorders: A Systematic Review

Abstract

Background:

Eating disorders are exceedingly difficult, time-consuming, and costly conditions to treat. Individuals with eating disorders, besides being psychologically very unwell, can damage their physical health, often irreversibly.

Objectives:

To review computer-based interventions aimed at preventing the development of eating disorders.

Method:

Search strategy: Relevant trials were identified through searching the Cochrane Controlled Trial Register (CCTR) and relevant biomedical and social science databases, as well as reference lists from articles identified through the search strategy and contact with experts in the field.

Selection criteria: Randomised controlled trials (RCTs) or randomised comparative group studies that evaluated the effectiveness of computer- and internet-based interventions in preventing eating disorders. Studies in which participants had no known DSM-IV diagnosis of an eating disorder were eligible for inclusion in the review. Studies were required to include at least one outcome measure reporting on level of eating disorder pathology, or weight and shape concern questionnaires, or coping, or self-esteem. Studies also needed to have collected at least 1 month's follow-up data.

Data extraction: Fourteen studies that reported the use of computer- or internet-based programmes for the prevention of eating disorders were located. These were critically appraised by two independent reviewers. Eight studies met the selection criteria outlined above. Standardised mean differences (SMD) were calculated for continuous variable outcome data, and where possible outcome data (SMD) from the same outcome measures in similar studies was pooled. Data was analysed using the *Comprehensive Meta Analysis* software program. A fixed effects model was used to analyse the data, except in cases of unexplained heterogeneity, when a random effects model was used.

Results: Effects were identified for higher risk participants on measures of weight and shape concerns and eating disorder pathology. As there were so few studies, one large study tended to dominate the results.

Conclusions: The results identify promising prevention programmes, but there is a definite need for improved methodological rigour, and further research with increased sample sizes, more diverse population groups and eating disorder incidence reporting to reach any firm conclusions about the programmes' effectiveness.

Background

Eating disorders have increased markedly in incidence and prevalence to almost epidemic proportions in Western societies in the last two decades (Dalle Grave, De Luca, & Campello, 2001). As mental disorders they are extremely difficult to treat and patients consume a huge amount of mental health resources. Besides the financial cost, anorexia nervosa has been reported to have the highest mortality rate of all the mental illnesses, as well as increasing future risk for depressive illnesses, anxiety disorders, substance abuse, and suicide attempts (Johnson, Cohen, Kasen, & Brook, 2002). Eating disorders can also lead to a number of irreversible physical conditions such as infertility, osteoporosis, damage to the heart, and destruction of normal bowel function (which in severe cases can necessitate the life-long use of a colostomy bag).

Along with an increasing prevalence of disordered eating, evidence from more recent decades reports a "normative discontent" around weight and body shape that is beginning to be all pervasive in the minds of adolescent girls and young women (Rodin, Silberstein, & Striegel-Moore, 1985; Grogan, 1999; Tiggemann & Slater, 2003; . The subsequent rise in the use of unhealthy and extreme weight loss behaviours has led to frequent calls for the development of primary prevention strategies, especially within education systems (Pratt & Woolfenden, 2002). Bearing in mind the huge resource (family, friends, public healthcare) and health – mental and physical - implications of treating eating disorders, it is imperative that we focus more fully on their prevention.

Pratt and Woolfenden (2002) felt that the one significant pooled effect found in their review of eating disorder prevention programmes for children and adolescents did not allow for any firm conclusions to be made about the impact of these prevention programmes. However, a later meta-analytical review by Stice and Shaw (2004) found that eating disorder prevention programmes' intervention effects ranged from an absence of any effects to reductions in current and future eating pathology. Certain effects even persisted as long as 2 years and were superior to minimal-intervention control conditions. They discussed how the most noteworthy limitation of the programmes was the fact that eating disorder literature had not been used to guide the design of many of the prevention

programmes. It is therefore important that eating disorder prevention programmes do not just provide information, but focus on incorporating components that aim at reducing known risk factors for eating disorders.

Since the introduction of low cost personal computers, health care providers have been researching and developing ways in which to use this rapidly expanding technology to improve physical and mental health (Celio, Winzelberg, Dev, & Barr Taylor, 2002). The advent of internet technology has also given rise to new opportunities in treatment and prevention of ill-health, providing a potentially powerful method of delivering behavioural and cognitive interventions. Computer- and internet-based interventions are said to be advantageous in delivering psychological services because they offer anonymity, and remove geographical and time constraints. They can also potentially offer a cost-effective method of reducing sub-clinical problems before they progress to clinical disorders (Zabinski, Celio, Wifley, & Barr Taylor, 2003).

Computer- and internet-based interventions have already been used successfully in the treatment and prevention of a number of health-related issues. Proudfoot et al. (2004) demonstrated via a RCT how depression and anxiety could be treated using computerized CBT, Harvey-Berino et al. (2002) evidenced promise for internet-based weight maintenance programmes, and Strecher, Shiffman, and West (2005) highlighted the benefit of web-based tailored behavioural support materials used in conjunction with nicotine replacement therapy in a smoking cessation programme.

Rationale for current systematic review

The development and evaluation of eating disorder prevention programmes and the promotion of health eating attitudes/behaviours and weight regulation practices is of crucial importance. As computer- and internet-based interventions have already been used successfully in the treatment and prevention of a number of health-related issues, the purpose of this systematic review is to evaluate the effectiveness of computer- or internet-based eating disorder prevention programmes for both the general population and those determined to be at risk.

Objectives

The objective of this review is to identify and present the evidence on the effectiveness of computer- and internet-based eating disorder prevention programmes/interventions.

Review question

Are computer-based interventions for the prevention of eating disorders effective?

Methodology

Criteria for considering studies for this review

Types of studies

This review considered randomised-controlled trials (RCTs) and randomised comparative group studies that evaluated the effectiveness of computer- and internet-based interventions in preventing eating disorders. The RCT is considered to be the gold standard in terms of assessing the value of any intervention, as RCTs are systematically carried to control for certain research biases. They therefore generally provide the best information regarding how effective an intervention is compared to no intervention or another similar type of intervention.

Types of Participants

This review was not concerned with a particular age group or gender, so studies included both children and adults who met the study inclusion criteria.

Types of intervention

Interventions included

Computer- and internet-based interventions that were specifically designed for eating disorder prevention by addressing one or more of the factors considered to be influential in the development of eating disorders (predisposing or precipitating factors), predominantly: coping, conflict and stress management, perfectionism, body image, self esteem, self worth, and social skills. Studies also needed to have collected at least 1 month's follow-up data in order to ascertain whether or not the intervention continued to have effect once participants were no longer actively engaging in it.

Interventions excluded

Interventions were excluded if their focus was: treatment-orientated, targeted family or friends, was purely nutritional education or information giving about eating disorders, was solely about using e-mail or live chat to communicate with a therapist, or included individuals diagnosed with an eating disorder. These interventions were excluded in order to ensure that the studies in the review specifically examined the prevention (not treatment) of eating disorders via computer-based programmes that included elements aimed at reducing recognised risk factors for eating disorders.

Types of outcome measures

To be included studies had to use at least one standardised psychological outcome measure reporting on levels of eating disorder pathology, or weight and shape concern, or coping or self-esteem; and this measure was to be used with the intervention and control group, pre-, post-intervention, and at follow-up. Including a measure of this type was important for being able to report whether or not at least one recognised risk factor for eating disorders had been reduced by the researched computer-based intervention.

Search Strategy for identification of studies for this review

As the use of computers and the internet in healthcare prevention and treatment is fairly new, there was no time period limitation for this search. However, the last search was done in October 2006.

1. Databases of ongoing and existing trials and systematic reviews were searched including the Cochrane Central Register of Controlled Trials (CENTRAL), the Cochrane Database of Systematic Reviews, The National Research Register (http://www.nrr.nhs.uk/), and the *meta*Register of Controlled Trials (http://www.controlled-trials.com/mrct/).
2. The following electronic databases were also searched - via OVID - for published reviews, and individual trials: Embase Psychiatry (1997 – 3rd quarter 2006), PsycInfo (1806 – September week 4 2006), Medline (1966 to September week 3 2006), the Cochrane Database of Systematic Reviews, the Cochrane Central Register of Controlled Trials (CENTRAL), and Google Scholar.
3. Any studies being identified as being possibly relevant to the review had their reference lists hand searched for further relevant articles.
4. Authors of relevant studies and known experts in the field were contacted to acquire any recent or unpublished studies.

The below search was carried out in each of the databases named above, as well as in hand searches of the reference lists of any articles identified by the database searches as being potentially relevant for the review. There were no language restrictions. As suggested in the Cochrane Reviewers' Handbook (p. 71) the electronic search strategy included two of three sets of search terms: 1) "terms to search for the health condition of interest"; and 2) "terms to search for the intervention(s) evaluated". The third group "terms to search for the types of study design to be included" was not incorporated, as retrieval of every single study that had examined or explored the use of computer- or internet-based interventions or programmes for eating disorders was desired. Even those research studies that had not used randomized control/comparative groups could have

very valuable reference lists. After the selected studies were retrieved, review of their full text established whether or not they met the inclusion criteria.

Terms in search strategy

1. eating disorders.mp. [mp=title, original title, abstract, name of substance word, subject heading word]
2. bulimia.mp.
3. anorexia.mp
4. disordered eating.mp
5. binge eating.mp
6. purging.mp
7. body image dissatisfaction.mp
8. OR/1 – 7.tw [tw = as textwords]
9. (computer-based or computer based).mp
10. (internet-based or internet based).mp
11. OR/9 – 10
12. prevent$.mp
13. program$.mp
14. intervention.mp
15. OR/12 – 14.tw
16. 1 and 12
17. 1 and 11
18. 8 and 15

Selection process

4,608 abstracts were checked for potential studies. All studies identified during the database search were assessed for relevance to the review based on information contained in the title and the abstract. When a title/abstract could not be rejected with certainty, the full text of the article was obtained for further evaluation. Full articles were retrieved for further assessment if the information given in the abstract suggested that the study examined the computer-based or internet-based prevention of eating disorders. Additionally, a colleague (AR) independently selected studies for retrieval. Full-text copies of 14 papers were assessed independently against the inclusion criteria using the Trial Eligibility Form (see Appendix A) by two researchers (AR and DL). Authors of studies were e-mailed if there was any uncertainty about the overlapping of data sets used in different studies. After discussion, it was agreed that 8 papers warranted inclusion in the review. A list of the characteristics of the excluded studies can be seen in Appendix B.

Assessment of methodological quality of included studies

The Cochrane Reviewers' Handbook (updated May 2005) makes the point that reviewers should not use quality scoring, or rely in their reviews on detailed quality assessments. Higgins and Green (2005), as reported in the Cochrane Reviewers' Handbook, felt that: quality scoring was not supported by empirical evidence, could be time-consuming, and ambiguous. As a result, quality scores were not calculated. However indicators of quality were recorded to provide an indication of individual studies methodological characteristics.

The following factors were recorded (see Appendix C,Table 1):

- Random allocation – does the study describe how participants were randomised?
- Blinding – were participants, providers, and outcome assessors blind to the intervention?
- Attrition rate – what was the attrition rate for the study, and did the study include intention to treat (ITT) analysis?
- Sufficient sample – did the study include a power calculation?
- Was there testing for high risk and low risk participants, and comparison of outcome their data?
- Was there a reasonable follow-up period for measurement of maintenance of the effects of intervention?

All studies identified in agreement by the independent reviewers (DL and AR) as meeting the inclusion criteria were assessed for methodological quality using the above criteria.

Data extraction and management

The data was independently extracted and recorded by two reviewers (DL and AR), and is presented under the headings used for extraction in Table 1, "Main characteristics of the eight studies included in the systematic review". This provided a context for discussing the reliability, internal and external validity, and generalisability of the results. Effect sizes for individual studies were calculated by subtracting the mean score of the control group from the mean score for the intervention group and dividing by the pooled standard deviation at baseline (Cohen, 1988). Where the data required for statistical analyses was not available, authors of the relevant papers (Dr Winzelberg, Professor Barr Taylor, Dr Wilfley, Dr Celio, Dr Luce, Dr Graff Low) were e-mailed with requests for data tables or figures. If the data could not be obtained, studies were not considered for inclusion in meta-analyses.

Data synthesis (meta-analysis)

Where data was available which were sufficiently similar with respect to participants and interventions, pooled estimates of effect were obtained using the *Comprehensive Meta Analysis version 2.2.034* (Borenstein & Rothenstein, 1999) programme (www.Meta-Analysis.com). A fixed-effects model was used to pool the data. If, however, there seemed to be significant unexplained heterogeneity between studies, a random effects model, was used (Deeks, Khan, Song, Popay, Nixon, & Kleijnen, 2006). In interpreting effect size statistics particular attention was given to examining the practical meaning of the effect sizes obtained in this study. Conventional "rules of thumb" were generally used to describe effect sizes (small: d ≤.20; medium: d = .50; large: d ≥ .80). A classification of "no effect" was given to an outcome set when the confidence interval surrounding the average weighted effect size estimate ranged from a negative value to a positive value (i.e., the confidence interval included zero). The *p*-value for the combined effect of pooled studies could also be used to inform whether or not the combined value was different from zero, and therefore an effect was achieved.

Subgroup analyses and investigation of heterogeneity

Subgroups were examined for heterogeneity based on the following factors:

(1) Type, intensity, and duration of the eating disorder prevention intervention,

(2) Age,

(3) Gender,

(4) Ethnic make-up of sample,

(5) Risk status for eating disorders,

(6) Different comparison interventions,

(7) Length of time to follow-up for outcome measure scores.

The investigation of differences in estimates of treatment effects between studies, those which did not obviously differ on one of the above-mentioned criteria, was done via the visual examination of forest plots.

Results

Description of studies

Articles were rejected at title, abstract, or text review if they did not fulfill inclusion criteria as outlined above. Fourteen studies were located that reported use of a computer-based or internet-based eating disorder prevention programme and were critically appraised by two independent reviewers. Six of the 14 studies were excluded: one of the studies focused on providing feedback for online screening (risk assessment), rather than on

evaluating the delivery of an intervention (Luce et al., 2005); two studies (Gollings & Paxton et al., 2006; Bruning Brown, Winzelberg, Abascal, & Barr Taylor, 2004) included inappropriate participants: participants' parents, and young women suffering from bulimia; one study (Abascal, Bruning Brown, Winzelberg, Dev, & Barr Taylor, 2004) only randomised whole classes, not actual individual participants; and the final excluded study did not focus on the online intervention's implementation and assessment, but on increasing compliance through the use of a computerised tracking programme.

Eight of the 14 studies (Winzelberg, Taylor, Sharpe, Eldredge, Dev, & Constantinou, 1998; Winzelberg et al., 2000; Celio et al., 2000; Graff Low et al., 2006; Barr Taylor et al., 2006; Zabinski, Pung, Wilfley, Eppstein, Winzelberg, & Celio, 2001; Zabinski, Wilfley, Winzelberg, & Taylor, 2004; Franko et al., 2005) met the inclusion criteria outlined above.

The 8 studies included a total of 1,107 young women randomised to receive either a computer-based or classroom-based prevention programme for eating disorders or to be in a control/comparison group. All included studies had more than 55 participants. Their ages ranged from 17 to 36 years. In all the studies, programmes were university- or college-based.

In Franko et al. (2005) the user was asked at beginning of the programme, Food, Mood and Attitude (FMA), to serve as a "peer counsellor" to assist the university to address the problem of eating disorders on campus. The user was then introduced to 3 different eating disordered women's profiles; however, no profile pictures were included. The user explored the women's personal "scrapbooks" of life at university. They could not skip material on the CD-ROM-based programme (Food, Mood and Attitude). Both didactic and interactive "thinking" material was presented in the programme. Finally, the user was given material that could assist in combating (internalising) the current thin ideal, and was asked to provide feedback and treatment suggestions to the 3 hypothetical students in the programme. This was an approximately 2 hour CD-Rom programme. Participants/users initially did a 1 hour session, and then 1 - 2 weeks later did a second hour of the programme before filling in post-intervention questionnaires. A trained research assistant was in the room monitoring users' progress and adherence while they used the programme.

The CD-Rom-based Student Bodies (SB) programme used in the studies by Winzelberg et al. (2000), Zabinski et al. (2001), Winzelberg et al. (1998), Celio et al. (2000), Barr Taylor et al. (2006), and Graf Low et al. (2006) was modelled after "The Road to Recovery" programme (Davis et al., 1989), cognitive behavioural interventions employed

by Cash (1991), and eating disorder prevention literature. The SB package consisted of two components: the SB software and an e-mail support group. It was meant as a psychoeducational intervention addressing image dissatisfaction, excessive weight concerns, and dieting or restrained eating. SB was divided into 4 sections: eating disorders, healthy weight regulation, nutrition, and exercise (Winzelberg et al., 1998). Interactive software allowed the user to explore the content rather than forcing them to adhere to a structured programme. In creating the underlying design there was the assumption that users would be motivated to complete most of the software content. In Winzelberg et al. (1998) this programme was used in this unstructured way by users over a 3 month period. Participants were also assigned to moderated e-mail support groups, where they participated anonymously, providing emotional support and discussing their reactions to the software. The moderator was responsible for monitoring and maintaining discussion in support groups, reflecting concerns or offering suggestions on SB software. SB was later delivered over the internet as a structured 8-week intervention (Winzelberg et al., 2000; Zabinski et al., 2001). The primary focus of each week was related to body image improvement. Interactive software featured text, audio and video components, on-line self-monitoring journals, and behaviour change exercises. There were mandatory and optional exercises to complete each week. Participants were expected to post at least one message to the discussion group, and also answer or comment on at least one other message each week. The goal of this on-line discussion was to provide a forum for the receipt and giving of emotional support and to be able to discuss reactions to software. Research assistants encouraged participants to complete homework assignments, and a moderator again moderated online discussion. Celio et al. (2000) used SB with 3 face-to-face sessions added: weeks 1 and 2 was orientation to the programme, and week 6 group discussions on body image dissatisfaction. The moderator was clinical psychology doctoral student. Every time participants logged on they were given feedback on their adherence and filled in an on-line report. Each week, when a participant logged onto the programme, they were directed to the updated weekly programme content. Participants were expected to read the content and complete the accompanying assignments, including participating in the online discussion group, self-monitoring, and/or writing entries in the Personal Journal or Body Image Journal.

The intervention was very similar for the Barr Taylor et al. (2006) study, except the 3 face-to-face sessions were not included, and about 9 months following the 8-week intervention participants were notified by e-mail that the programme would be available for 2 weeks to review material from the initial 8 sessions.

Graf Low et al. (2006) decided to use SB in 3 ways: without a discussion group, with a moderated discussion group and with an unmoderated discussion group. All moderators were either clinical psychologists, or clinical psychology graduate students with clinical psychologists as supervisors. The discussion groups were all asynchronous.

The computer-based intervention used by Zabinski et al. (2004) was similar to SB, but included relapse prevention training and consolidation of lessons learned to encourage maintenance of any gains as well as synchronous chat. Based on a cognitive behavioural approach (Fairburn, Marcus, & Wilson, 1993) it occurred in three phases. Phase 1 focused on improving eating behaviour; phase 2 focused on cognitive restructuring surrounding negative thoughts related to over-evaluation of shape and weight, teaching participants to identify and challenge negative cognitions; and phase 3 focused on relapse prevention training and consolidation of lessons learned to encourage maintenance of any gains. The programme consisted of brief weekly psychoeducational readings (1–2 pages), the synchronous and asynchronous support groups, homework assignments, and weekly summaries (1 page). All of the chat sessions and e-mail correspondence were facilitated by the same moderator, an advanced graduate student in clinical psychology specializing in eating disorders and body image. The moderator structured the discussions, and ensured equal participation in the discussions. In addition to synchronous support during the interactive chat, participants were required to post at least one message to the message board each week. The message board was also monitored by the moderator and a licensed psychologist to identify messages of clinical importance and to respond appropriately. Participants accessed the psychoeducational support group from campus computing centres or remotely if they had Internet access elsewhere.

The control groups were all wait list control groups, except possibly in the Graf Low et al. (2006) study where no information was given about the control group, and Franko et al. (2005) where control group participants watched videos on women's and/or gender issues during the period of the intervention.

Methodological quality

See Appendix C, Table 1: "Main characteristics of the eight studies included in the systematic review" for tabulated summary of studies discussed below.

Only 2 (25%) of the studies described the randomization method used (Barr Taylor et al., 2006; Franko et al., 2005), and just 3 (0.38%) studies used intention-to-treat analyses

(ITT) (Celio et al., 2000; Winzelberg et al., 2000; Graf Low et al., 2006). However Franko et al. (2005) had a 97.9% response rate so perhaps this is the reason they deemed ITT analyses unnecessary. The influence that "clustering" (e.g. class level factors) could have, was taken into account when selecting the studies: studies that appeared to randomize whole classes were not included in the study.

None of the studies included reported a power calculation, and reporting of blinding of outcomes, assessors, and participants was very poor with only 2 studies mentioning blinding with regards to assessors being unaware of group status of participants (Barr Taylor et al., 2006) and research assistants who administered intervention or control condition being blind to risk status of participants (Franko et al., 2005). All of the measures were self-report measures, except in the Barr Taylor et al. (2006) study (discussed above) so this should not have introduced any notable bias. Given that the studies involved the introduction of eating disorder prevention programmes focused on weight, shape, eating, and exercise, participants could not easily be blinded as to whether they were receiving the intervention or not. Similarly blinding of participants to the purpose of the programmes would have been difficult as they all discuss attitudes to bodies, shape and weight. It is possible that participants may not have assumed they were for eating disorder prevention, but would have definitely known that they were for improving body image and healthy eating.

A variety of outcome measures were used across the different studies (see Table 1 for a tabulated summary). Six studies applied anthropometric measurements, including body mass index and body weight (Winzelberg et al., 1998; Zabinski et al., 2001; Zabinski et al., 2004; Barr Taylor et al., 2006) and all studies included a measure of perceived and desired body shape, except 3 (Barr Taylor et al., 2006; Graf Low et al., 2006; Franko et al., 2005). Graf Low et al. (2006) included the Stunkard Figure Rating Scale (Stunkard, Sorenson, & Sculsinger, 1983). All studies applied one or more subscales from a standardised measure designed to assess a range of eating disorder symptoms (e.g. the Eating Disorder Inventory (EDI) or the Eating Disorders Examination - Questionnaire (EDE-Q)). All the studies also included a measure of more specific eating disorder symptoms. These included the EDE-Q Weight and Shape Concerns subscale (all studies, except Barr Taylor et al., 2006), the EDE-Q Restraint subscale (Celio et al., 2000; Graf Low et al., 2006; Franko et al., *2005;* Zabinski et al., 2001; Zabinski et al., 2004), the EDE-Q Eating Concerns subscale (Celio et al., 2000; Graf Low et al., 2006; Zabinski et al., 2001; Zabinski et al., 2004), the Sociocultural Attitudes to Appearance Questionnaire (SATAQ)(Franko et al., 2005), the Weight Concerns Scale (WCS) (Graf Low *et* al, 2006; Barr Taylor et al., 2006), the EDI Drive for Thinness and Bulimia subscales (all studies,

except Franko *et* al, 2005; Zabinski et al., 2004). An adapted 4-item on-line support scale adapted from Multidimensional Scale of Perceived Social Support was used by all studies except two (Barr Taylor et al., 2006; Franko et al., 2005). Franko et al. (2005) also used a Knowledge Test, a questionnaire developed by the researchers and rated for content and importance validity by eating disorder experts.

One study included a measure of affective symptoms, the Center for Epidemiological Studies Depression Scale[1] (CED-S) (Barr Taylor et al., 2006), and a further study included a measure of self-esteem in the Rosenberg Self Esteem Scale (Zabinski et al., 2004).

Follow-up periods for measuring maintenance of effects of interventions ranged from 10 weeks – 12 months. The longer the follow-up period the stronger the maintenance effects were considered to be (provided there were no further interventions during this period). Two studies had 10-week follow-up periods (Zabinski et al., 2001; Zabinski et al., 2004), 3 had 3 months (Winzelberg et al., 1998; Winzelberg et al., 2000; Franko et al., 2005), 1 had 4 months (Celio et al., 2000), another study followed up for 8 – 9 months (Graf Low et al., 2006), and Barr Taylor et al. (2006) reported on up to 1 year's follow-up data for outcome measures. Measures were administered at pre-, post- and follow-up for all studies.

Two studies compared participants with higher risk scores to participants with lower risk scores (Franko et al., 2005; Winzelberg et al., 2000), whilst 3 studies only included high risk participants (Barr Taylor et al., 2006; Zabinski et al., 2004; Zabinski et al., 2001) . Therefore, in these latter studies no comparison could be meaningfully made. High-risk participants were identified in the studies on the basis of: (1) WCS scores greater than or equal to 50, reported they were moderately or very afraid of gaining 3 pounds, or reported that their weight was the most important thing in their life (Barr Taylor et al., 2006), (2) a score greater than 57 on the WCS (Zabinski et al., 2004), (3) scored higher than or equal to 110 on the BSQ (Winzelberg et al., 2000; Zabinski et al., 2001), or (4) categorized by Questionnaire for Eating Disorder Diagnoses (Mintz, O'Halloran, Mulholland, & Schneider,1997) as either *symptomatic* or *asymptomatic.*

In two studies (Celio et al., 2000; Zabinski et al., 2004) the moderator for the discussion groups was the first author, suggesting a moderate risk of bias.

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[1] (Orme, Reis, & Herz, 1986)

Participation (including drop-out) rates varied across studies. On average the SB participants in the study by Celio et al. (2000) completed 68% of all assigned activities. Attrition rates were 11.8% (9) at post-intervention (1 Student Bodies, 5 Body Traps, and 2 wait list control [WLC]); 23.7% at follow-up (3 Student Bodies, 10 Body Traps, and 5 WLC). The SB intervention group in the study by Winzelberg et al. (2000) read an average of 80.5% of the assigned web pages, and they posted an average of 19.6 (*SD* = 8.0) postings to the electronic bulletin board. 8 participants (13.3% - 4 intervention, 4 control) dropped out during pre- post- period; another 7 (11.7% - 3 intervention, 4 control) did not complete 3 month follow-up.

Of the 244 participants who were randomized to the intervention in Barr Taylor et al.'s (2006) study, 28 (11%) never logged onto the programme. For the remaining 216, adherence to the intervention protocol was high: the mean (*SD*) percentage of pages read was 79% (24.2%) (range: 6%-99%). Fifty-nine participants (14%) had no follow-up data and, hence, were not available for the survival analysis. The follow-up response rates by recruitment/intervention waves were as follows: wave 1: post-intervention, 91% (145/159), 1 year, 81% (129/159), 2 years, 81% (128/159), and 3 years, 69% (110/159); wave 2: post-intervention, 92% (170/185), 1 year, 86% (160/185), and 2 years, 82% (151/185); wave 3: post-intervention, 95% (129/136) and 1 year, 90% (122/136). Overall, compliance with follow-up assessments was quite high. Only 38 intervention participants (16%) did not complete any follow-up assessments compared with 21 control participants (9%). Franko et al. (2005) received a 96.25% response rate – only 9 (3.75%) participants did not complete at follow-up. Combined with a large sample size this allowed the study to present strong, and probably more true, pre-, post-, and follow-up analyses. In Graf Low et al.*'s* (2006) study 11 participants failed to log-on or complete one of the assessments. The 9.7% who never logged on were excluded from analyses, so the attrition rate was 6%. On average, women assigned to the intervention spent 241.4 (*SD* = 172.06) minutes logged onto the SB programme over the 8 weeks. Winzelberg et al. (1998) found that only an average of 50% of participants completed the software; and overall 5 control group and 7 intervention group participants dropped out or were unavailable for follow-up (21%). Whilst Zabinski et al. (2001) had 61 (98%) participants who completed post-treatment assessment, and 58 (90%) who completed follow-up assessment. Women in the SB intervention group read an average of 80.5% (*SD* = 26.1) of the assigned web pages, and posted an average of 70.7% (*SD* = 28.8) of 1 to 2 required messages per week. Finally, Zabinski et al. (2004), introducing synchronous online chat in a new programme, only lost 1 participant in the intervention group at post-intervention (98% completed) and 1 in the intervention group at follow-up (97%

completed). On average, participants reported spending a mean of 2.2 (*SD* = 0.51) hours per week (including the hour-long chat discussion) on the programme. Compliance rates were high. The mean of homework compliance was 87.5% (*SD* =18.1), and the average number of sessions attended was 78.9% (*SD* =15.7).

Individual studies' statistically significant results can be seen in Appendix D, Table 2:"Summary of individual studies' results".

Meta-analyses

Of the 8 studies included in the review, 26 pooled comparisons of two or more studies using similar outcome measures and similar intervention types were possible. Where unexplained heterogeneity in the data was noted a random effects model was used for these pooled comparisons. In all of the analyses conducted, both post-intervention data and data reported for follow-up - if available – was pooled separately.

- PREVENTION INTERVENTION GROUP 1: Normal risk participants used Student Bodies (SB) with a programme moderator (2 studies) and compared to a wait list control group (WLC) (1 study) or a WLC and Body Traps (BT) (1 study).

Reasons for combining these studies: Both these studies (Celio et al., 2000 – study 1; Winzelberg et al., 2000 – study 2) used the SB programme with private American female university students age 19.6 years (*SD* = 2.2, range 18 – 36 years) (study 1), and female students at a West Coast public university age 20.0 years (*SD* = 2.8, range 18 – 33 years) (study 2). The intervention lasted 8 weeks, and had follow-up periods of 3 months (study 1), and 4 months (study 2). These two studies delivered this intervention in the same way over the same time frame to very similar participants, so their effect sizes were pooled on individual outcome measures to improve precision, by basing the estimation of the treatment effect on more information; and to investigate if low statistical power due to small sample sizes had affected the studies' effect sizes. Study 1 contained two separate interventions, SB and BT, which were compared to a wait list control group, and study 2 compared SB to a wait list control group. BT is a classroom delivered intervention so was not included in the analysis.

INDIVIDUAL EFFECT SIZES FOR STUDY 1 & 2

	Post - Intervention	Follow-up
BSQ – Study 1	0.35	0.22
BSQ – Study 2	0.09	0.23
EDE-Q Weight/Shape Concerns subscale – Study 1	0.56	0.56
EDE-Q Weight/Shape Concerns subscale – Study 2	0.145	0.11

Pooled comparisons: The BSQ and the EDE-Q Weight and Shape Concerns subscales were combined. Pooled results for the BSQ at post-intervention were: WMD = 0.229, -0.176 to 0.634, 95% CI (Table 3, Figure 2)[2]; and at follow-up WMD = 0.225, -0.180 to 0.692, 95% CI, indicating no effect at either post-intervention or follow-up. A visual examination of the forest plots (Figure 1 & 2) revealed heterogeneity of the individual study's effect sizes at post-intervention, but not at follow-up. The average weighted mean effect sizes for the combined EDE-Q Weight/Shape Concerns subscale revealed no effect, both at post-intervention [WMD = 0.043, -0.043 to 0.772, 95% CI], and at follow-up [WMD = 0.145, -0.259 to 0.548, 95% CI]. Again there seems to be heterogeneity in the individual study's effect sizes. The participants in study 1 were defined as having "high body dissatisfaction" (BSQ mean = 109.6, *SD* = 30.4), however, study 2's participants' BSQ mean was approximately 110, so the participants' were matched with regards to pre-intervention BSQ scores. On closer examination, possible significant differences were discovered in the ethnic make-up of the studies' samples (study 1 = 67% Caucasian, 11% African American, 9 % Asian, 7% Hispanic/Latina, 6% multi-ethnic; study 2 = 53% Caucasian, 35% Hispanic, 5 % Asian, 3 % African American and 3% "other"), and the campus culture (study 1 = private university, study 2 = public university). Attrition rates though, were almost identical for both studies. For follow-up outcomes on the EDE-Q Weight and Shape subscales the effect sizes discrepancies could have been as a result of the differences in follow-up periods. Study 1 had a period of 3 months, and study 2 had a follow-up period of 4 months. However, a similar effect on the BSQ scores was absent.

- PREVENTION INTERVENTION GROUP 2: A long term follow-up of normal risk participants who were divided into 3 groups, and had used SB with an unmoderated discussion group, a moderated discussion group, or the SB programme as a stand alone intervention. All of the groups were compared with WLC controls.

Reasons for combining this study with the above two studies: Initially the intention was not to pool this study (Graf Low et al., 2006 – study 5) with any other of the studies, because its delivery of SB as a stand alone intervention, and then as an intervention without a moderated discussion group was different. However, as the focus of the review is on computer- or internet-based programmes for the prevention of eating disorders, and

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[2] The effect sizes reported in Winzelberg et al. (2000) for the BSQ post-intervention and follow-up, 0.4 and 0.7 respectively, are not the figures that were produced from the raw mean scores and *SD*s - supplied on request by the primary author - by *Comprehensive Meta Analysis version 2.2.034 (*and corroborated through manual calculation). This anomaly was noticed because a strong correlation was reported between the BSQ, and the EDE-Q Weight & Shape Concerns subscales. Effect sizes of 0.4 and 0.7 did not fit in with this statistical picture, so the raw data's effect sizes were accepted as the correct ones.

the computer-based programme was at the core of the prevention interventions, further exploration was undertaken. An examination of a forest plot for the three studies on the EDI-DT (Figure 3) and EDI-B subscales (Figure 4) showed very similar variances and 95% confidence intervals for study 1 (Celio et al., 2000) and study 5, and study 2 (Winzelberg et al., 2000) and study 5 respectively, supporting the pooling of their results. The studies' interventions also all lasted 8 weeks, and the participants were all university-based or college-based female students.

INDIVIDUAL EFFECT SIZES ON DIFFERENT OUTCOME MEASURES FOR STUDY 1, 2 & 5

	Post - intervention	Follow-up
EDI-DT – Study 1	0.4	0.66
EDI-DT – Study 2	0.1	0.17
EDI-DT – Study 5	0.44	0.6
EDI-B – Study 1	0.34	0.3
EDI-B – Study 2	0.1	0.17
EDI-B – Study 5	0.08	0.49

Data for all 3 studies at post-intervention on the Drive for Thinness and Bulimia subscales of the Eating Disorder Inventory (EDI), but not follow-up (different follow-up intervals), was pooled. The study's (Graf Low et al., 2006) individual intervention groups were combined for pooling with the other two studies, as the differences between the three groups receiving the intervention were modest, and the groups' sample sizes were very small (14 – 19). However, this analysis revealed a no effect when the studies were pooled, both for the EDI-DT [WMD = 0.29, -0.025 to 0.611, 95% CI, $p < 0.071$] and for the EDI-B [WMD = 0.17, -0.144 to 0.49, 95% CI, $p < 0.285$]. Both a random and fixed effects model were used following the suspicion that there was heterogeneity between the studies as study 5 had employed slightly different implementation methods to the other two. However, both statistical models produced identical results.

The pooled results (using a random effects model as a result of unexplained heterogeneity between the groups' individual effect sizes) for the EDI-DT and the EDI-B (using a fixed effects model) at follow-up for studies 1 and 2 found no effect on either: EDI-DT: WMD = 0.399, -0.080 to 0.878, 95% CI; EDI-B: WMD = 0.229, -0.144 to 0.603, 95% CI.

- PREVENTION INTERVENTION GROUP 3: High risk participants use Student Bodies (SB) (3 studies) and an online programme similar to SB (see Table 1 – study 8) (1 study), both types of interventions included a moderator; and compared with a wait list control group (WLC) (4 studies)

Reasons for combining these studies: The intervention used in these studies was SB (Barr Taylor et al, 2006 – study 3; Zabinski et al, 2001 – study 7) or a very similar online programme which was also delivered over 8 weeks with a moderator (Zabinski et al., 2004 – study 8). All these studies specifically chose high risk participants for the intervention. All the participants were undergraduate university-based or college-based female students. As the interventions and participants were very similar, these studies were combined. Study 2 (Winzelberg et al., 200) had a sub-group of identified high risk participants which were also included in the pooled analyses. Pooled analyses for follow-up data were only carried out for study 7 and 8, as the follow-up period for study 3 was 1 year compared to their 10 weeks.

INDIVIDUAL EFFECT SIZES ON DIFFERENT OUTCOME MEASURES FOR STUDY 2, 3, 7 & 8

	Post - intervention	Follow-up
BMI – Study 3	0.16	-0.04
BMI – Study 7	0	-0.04
BMI – Study 8	0.01	0.02
BSQ – Study 2	1.24	1.57
BSQ – Study 7	0.39	0.36
EDI-B – Study 2	0.48	0.61
EDI-B – Study 3	0.22	0.11
EDI-B – Study 7	0.12	-0.14
EDI-DT – Study 2	0.95	0.61
EDI-DT – Study 3	0.61	0.39
EDI-DT – Study 7	0.56	0.46
EDE-Q Global – Study 3	0.7	0.36
EDE-Q Global – Study 7	0.53	0.53
EDE-Q Global – Study 8	0.46	0.76
EDE-Q Weight Concerns – Study 2	0.37	0.56
EDE-Q Weight Concerns – Study 7	0.19	0.1
EDE-Q Weight Concerns – Study 8	0.48	0.74
EDE-Q Shape Concerns – Study 2	1.56	0.89
EDE-Q Shape Concerns – Study 7	0	0
EDE-Q Shape Concerns – Study 8	0.51	0.64
EDE-Q Eating Concerns – Study 7	0.41	0.2
EDE-Q Eating Concerns – Study 8	0.51	1.06
EDE-Q Restraint – Study 7	0.23	0.45
EDE-Q Restraint – Study 8	-0.02	0.19

Eighteen pooled comparisons of intervention outcomes relating to weight and shape, eating and body image were possible for studies focussing on high risk participants' use of Students Bodies with a clinical moderator. In three studies of this intervention type (Barr Taylor et al, 2006 – study 3; Zabinski et al, 2001 – study 7; Zabinski et al, 2004 – study 8) BMI could be compared for control and intervention groups at post-intervention and for two studies at follow-up (study 7 and 8). There was no effect when these three studies were pooled [WMD = 0.001, -0.172 to 0.175, 95% CI] for post-intervention or at follow-up [WMD = 0.03, -0.336 to 0.395, 95% CI].

In two studies (study 7, and the high risk sub-group from Winzelberg et al., 2000 – study 2), a pooled effect for the BSQ using a random effects model found no effect, both at post-intervention[(WMD = 0.717, -0.093 to 1.528, 95% CI] (Table 5, Figure 5) and at follow-up [(WMD = 0.888, -0.288 to 2.064] (Table 6). This model was used for the meta-analysis because of the unexplained heterogeneity in the effect sizes of the high risk participant groups in the studies.

In three studies (study 2, 3 and 7) scores on the EDI-Bulimia could be compared via use of the standardised mean difference (SMD) statistic at post-intervention. A small effect size was found when these studies were pooled [WMD = 0.219, 0.037 to 0.401, 95% CI] (Table 7). However, as study 3 had a much larger participant sample than the other two, and tended to dominate the results (Figure 6), a sensitivity analysis was performed by removing study 3. This resulted in no effect [WMD = 0.211, - 0.242 to 0.665, 95% CI] being indicated for the two remaining studies.

Study 2 and 7 were pooled for follow-up on the EDI-Bulimia subscale. A random effects model was used because of the unexplained heterogeneity in effect sizes and confidence intervals between the 2 studies (Figure 7). No effect was found [WMD = 0.140, -0.571 to 0.852, 95% CI].

A medium effect size (average weighted mean) for three studies (studies 2,3 and 7) pooled for post-intervention outcomes on the EDI Drive for Thinness Subscale (EDI-DT) was found [WMD = 0.618, 0.432 to 0.803, 95% CI] (Table 9, Figure 8). Removing study 3 in order to perform a sensitivity analysis, did not change the medium effect size found initially [WMD = 0.657, 0.194 to 1.120, 95% CI]. For follow-up, two studies (studies 2 and 7) were combined revealing a medium effect size [WMD = 0.498, 0.040 to 0.956, 95% CI].

Further pooled comparisons with studies of high risk participants were possible on the EDE-Q Global scale, and all subscales of the EDE-Q. For the EDE-Q Global scale (studies 3, 7 and 8) the effect size at post-intervention was WMD = 0.653 [0.475 to 0.831, 95% CI] (Table 10). A sensitivity analysis removing study 3 revealed WMD = 0.494 [0.123 to 0.865, 95% CI]; and a higher effect size was found at follow-up (studies 7 and 8) [WMD = 0.646, 0.271 to 1.021, 95% CI]. For the EDE-Q Weight Concerns and the EDE-Q Shape Concerns subscales (studies 2, 7 and 8) pooling of the data resulted in: EDE-Q Weight Concerns with WMD = 0.342 [0.001 to 0.683, 95% CI] (Table 11), and EDE-Q Shape Concerns with WMD = 0.415 [0.069 to 0.760, 95% CI] (Table 12). At follow-up medium effect sizes were maintained on both subscales: EDE-Q Weight Concerns [WMD

= 0.439, 0.095 to 2.500, 95% CI] (Figure 9) and EDE-Q Shape Concerns [WMD = 0.415, 0.069 to 0.760, 95% CI] (Table 13).

Two studies' (study 7 and 8) data was pooled on the EDE-Q Restraint and Eating Concerns subscales. There was no effect found for the Restraint subscale at both post-intervention [WMD = 0.101, -0.265 to 0.468] and follow-up [WMD = 0.315, -0.053 to 0.684], but the EDE-Q Eating Concerns subscale, although finding a small effect at post-intervention [(WMD = 0.189, 0.090 to 0.832] (Table 14, Figure 10), revealed a medium effect at follow-up [WMD = 0.614, 0.236 to 0.993].

Discussion

The aim of this systematic review was to determine whether eating disorder prevention programmes evaluated via a randomised controlled trial or comparison group methodology can lead to an improvement on the factors that are considered to increase risk and contribute to the development of eating disorders. The results of the review, based on 8 studies and 26 pooled comparisons of studies using similar intervention types and common outcome measures, were mixed but encouraging. However, the results of these pooled comparisons should be interpreted with caution if being used to guide practice or develop policy, as each pooled comparisons consisted of only 2 -3 studies.

Given that the first generation of eating disorder prevention programmes (delivering didactic psychoeducational material verbally) were unsuccessful for reducing eating disorder pathology or risk factors (Stice & Shaw, 2004), the appearance in this study's results of small to medium effect sizes on primary outcome measures was cause for some optimism around the direction that computer-based eating disorder prevention programmes may be taking.

Meta-analyses results

The outcome variables used in the meta-analyses were not only among the most frequently and consistently measured variables amongst the studies, but they also represented many of the widely documented protective and risk factors in eating disorder literature. Effect sizes were calculated separately at post-test and at follow-up for each of the following variables: general eating pathology, body dissatisfaction, body mass index, and drive for thinness.

The outcome variables that were most affected by the prevention programmes were *drive for thinness* and *eating concerns*, both in high risk participants. The average weighted effect size for *drive for thinness* at post-test was 0.618 and at follow-up 0.498, whilst at

follow-up the *eating concerns* WMD = 0.614. *Eating Concerns* was not measured in the unselected - not selected based on level of risk - sample studies, and the *drive for thinness* variable measurement in these comparisons produced no effect. A meta-analysis for the high risk participant studies on the EDE-Q Global also produced a medium effect size both at post-intervention [WMD = 0.653, 0.475 to 0.831, 95% CI], and at follow-up [WMD = 0.646, 0.271 to 1.021, 95% CI]. Small to medium effects were then found on all included subscales of the EDE-Q, except for *restraint,* amongst the high risk participants.

Heterogeneity of Interventions

One of the studies (Franko et al., 2005) was not pooled for comparison with any of the other studies because of the very different way in which it delivered the computer-based prevention intervention (Food, Mood and Attitude). The content (see Table 1) was delivered in 2 one-hour sessions over 1 to 2 weeks. Otherwise, in 6 of the studies the computer-based programme, Student Bodies, was used in various ways (with chat room, without chat room, slightly differing assignments, and booster sessions before final follow-up) with different risk-level participants. For all of the SB studies, bar one (Winzelberg et al., 1998 – 3 months) the duration of the intervention was 8 weeks. The final study in the review used a programme very similar to SB with synchronous, instead of asynchronous communication for the chat room, and an 8 week programme duration.

Results indicated that interventions delivered to solely high risk participants produced significantly larger effect sizes than did the interventions delivered to unselected groups. This was also found by Stice and Shaw (2004) who proposed that perhaps the subjective distress that exists within high risk participants may motivate them to engage more fully with the programme; and the relatively lower levels of risk factors and eating disorder pathology in unselected samples compared to high risk samples may serve to emphasise intervention effects. The length of the programme also seemed to have an impact, as Franko et al. (2005) in their study revealed no effects on the primary weight and shape measures. However, as there is only one study for comparison, this area needs to be explored further. It does make sense that a multi-session programme is better in terms of allowing participants time to internalise and try out parts of the programme in their daily lives. However, it is also important that prevention programmes are not too long, as delivery can become costly and attrition rates may increase.

Data concerning the ethnicity and gender of participants can be seen in Table 1. All studies provided this information, apart from Graf Low et al. (2006) who did not provide data on age. All of the studies were aimed at females attending college or university with

average ages ranging from 18.2 – 20.8. The groups' participants were predominantly Caucasian (53% - 92.3%), but even in the studies where a high proportion of the sample was not Caucasian, there was no analysis for different ethnic groups. This is important as the findings can currently only be generalised to women, with an emphasis on Caucasian ethnicity. All of the studies were carried out in the USA; there is a need for this kind of research in other countries. All of the participants were also attending tertiary educational institutions, meaning that they are probably mostly middle to upper socioeconomic groups with good levels of literacy, including both computer and numeric. Although research has shown a link between higher economic and educational status and anorexia, bulimia, binge eating disorders, and EDNOS are not yet thought to prevail in one particular socioeconomic or educational-level group. This makes the potential generalisability of the studies' results to other populations and settings questionable.

Methodological quality

All studies had some methodological limitations, particularly their failure to carry out a power calculation. Several of the sample sizes were very small, and this could have been a potential reason for absence of effect on some of the outcome measures. Even the pooling of these studies may not have produced a big enough sample to truly find a meaningful effect. This is a problem, as especially with the unselected groups of participants, effects may well have existed, but smaller samples meant they were not able to be detected.

Studies reported data follow-up periods ranged from 10 weeks to 12 months. A difficulty in evaluating prevention programmes is the likelihood that the effects of the intervention may not be seen for some months after completion. No immediate intervention effect may later result in a significant long-term effect. Evaluation of the longer-term effects of the programmes would aid in determining if computer-based eating disorder prevention programmes have a long term, enduring, and positive impact on those who use them. Ideally a period of at least 12 months would be desirable for evaluating the impact of prevention programmes.

The use in two of the studies (Celio et al., 2000; Zabinski et al., 2004) of the primary researcher to act as moderator for the programmes' discussion groups may have introduced bias into these studies' results. Although described (Table 1) in the studies, it is not known how active a role the moderator actually played in directing the intervention; especially in study 8 (Zabinski et al., 2004) where the online chat was synchronous.

Most of the studies used repeated measures ANOVA to analyse the data, or participants' baseline scores were added as a covariate on all the analyses to adjust for the baseline value of the outcome being predicted. This strengthened the studies, as it meant that initial levels of outcome variables were controlled for. The only study that did not do this was study 6 (Winzelberg *et* al, 1998). In study 6, there were differences at baseline between the two groups, intervention and control. The t-test that was used would not have controlled for this, and no other statistical method was employed to manage this difference. Without control for initial levels, any differences at baseline between groups (even non-significant) can artificially intensify or attenuate results. Another limitation in statistical methodology and reporting was that a number of the studies did not report effects sizes, and when they did, confidence intervals, which are useful in ascertaining whether or not there is an effect, were not reported along with them. Effect sizes are very important because they provide an indication of the clinical significance of the results, and allow for studies to be more easily included in meta-analyses.

Only 1 study actually reported whether or not any of the participants had become sub-clinical or clinical during the course of the intervention (study 3). This kind of information is vital as re-examination of the sub-clinical or clinical participants' details can possibly highlight which participant characteristics may make individuals more vulnerable to adverse effects or help to stem incorrect referrals to the intervention

Participant use of the programmes

Satisfaction with the programmes was measured by 3 studies, and the reports were favourable. A high percentage of the women using the programme (86% to 97%) were 'satisfied' or 'very satisfied' with it. Of course, this data needs to be interpreted in conjunction with examination of the levels of adherence, as it can be assumed that many of those who were not satisfied with some aspect of the programme would not have continued to use it. Adherence is a more powerful marker than attrition in these studies, as many of the participants were paid or awarded university credits to complete post-intervention and follow-up questionnaires. Adherence refers to factors such as how much time was actually spent doing the programme, completion of a specific section, or how many postings were submitted to the electronic bulletin board. Winzelberg et al. (1998) describes this phenomenon as "dosage of the programme". As adherence (called compliance in studies) assessment was reported via different measures in the studies (posting to the electronic bulletin board, completion of a specific section, completion of homework assignments, reading of assigned web pages), it is more difficult to compare the outcomes. However, for those studies that tracked adherence over time (and did not

just offer a reported average over time), adherence lessened with time. Interestingly, there were mixed results regarding adherence being related to outcomes. Three of the studies found that adherence was related to at least some of the primary outcome measures at post-intervention and follow-up (studies 1, 3 and 5), whilst the other 5 found no significant relationship between adherence and outcome (except for study 2 on the BSQ at follow-up).

Implications for practice

Existing evidence suggests that computer-based eating disorder prevention programmes can be effective for reducing risk factors in women who are at risk. These programmes need to take place over a number of weeks and be supported by a clinical moderator. However, more research is needed into the effectiveness of these treatments, as well as into the mediating and moderating factors affecting outcomes.

Implications for future research

Findings from this study support the continued development and implementation of eating disorder prevention programmes. The interventions studied here were found to be effective in influencing eating disorder related attitudes and behaviours. Future studies should include: larger participant samples in order for studies to have sufficient power to detect differences in treatments, more diverse participant samples (i.e., not Caucasian, lower socio-economic groups, male participants, and non-US citizens), and longer episodes of follow-up data collection so that we can ascertain how participants' outcomes changes over greater periods of time. As well as this, closer examination of the role of the clinical helper, different sections of the programmes, and synchronous versus asynchronous online support would enable practitioners to customise interventions, maximising their impact. A final recommendation, also suggested by Fingeret (2004), offered for improving research in this area is to actually measure the incidence of eating disorders in study participants following an intervention. Researchers in this field tend to rely on changes in attitudinal and behavioural risk factors as indicators of intervention effectiveness instead of assessing for the specific collection of symptoms that indicate the presence of an eating disorder. This prevents accurate conclusions about effectiveness being drawn. Rather, the information presented focuses on the degree to which these interventions effectively influence eating disorder-related attitudes and behaviours.

Conclusion

This review discussed a few promising computer-based eating disorder prevention programmes. Two of the programmes were found to decrease risk factors for eating disorders. However, there were insufficient research studies for firm conclusions to be drawn about whether or not they are effective at reducing eating disorder development. Further research, including the factors mentioned above, would be very useful in establishing whether or not these interventions can be truly effective; and if they are found to be effective, which elements of the programmes are responsible for their effectiveness.

Appendix A

Trial Eligibility Form (Study Selection Criteria)

Review question: Are computer-based interventions for the prevention of eating disorders effective?

This section must have all *Yes* answers for the study to be included

Selection criteria	Inclusion criteria	Yes	No
Participants	Studies can include all participants, both children and adults, who are considered by the researchers to be suitable for the intervention.		
Interventions	Computer- or internet-based eating disorder prevention programmes		
Outcome	At least one measure reporting on level of eating disorder pathology, or weight and shape concern questionnaires, or coping or self-esteem.		
Study Design	Randomised-controlled trials (RCTs) and randomised comparative group studies that evaluated the effectiveness of computer- and internet-based interventions in preventing eating disorders. At least 1 month follow-up outcome data.		

This section must have all *No* answers for the study to be included

Selection criteria	Exclusion criteria	Yes	No
Participants	- family or friends of intended participant involved; - participant/s has an eating disorder		
Interventions	- purely nutritional education or information giving about eating disorders; - programme is solely e-mail or live chat to communicate with a therapist; - programme is treatment-orientated		

Appendix B

Study	Reason for exclusion
Zabinski et al., 2001	A very small sample (4 participants) with no comparative group.
Luce et al., 2005	Focus of the study was on providing feedback for online screening (risk assessment), rather than on evaluating the delivery of an intervention.
Celio et al., 2002	Not a study focusing on the implementation and assessment of online intervention, but rather focusing on increasing compliance in with the use of a tracking programme on *Student Bodies.*
Gollings & Paxton, 2006	Bulimic participants not excluded, seemed to be both treatment and prevention programme.
Bruning Brown, 2004	Parents included in intervention, so targeting family as well.
Abascal et al., 2004	Randomisation of whole classes not individuals. No follow-up.

Appendix C

Table 1: Main characteristics of the eight studies included in the systematic review

Study ID = 1	Methods	Participants	Outcome Measures	Interventions
Authors: **Celio et al. (2000)** **Aim:** Compare a wait list control group (WLC) with computer-based prevention programmes, Student Bodies (SB), and a face-to-face intervention, Body Traps (BT) groups; to decrease body dissatisfaction and disordered eating behaviours at post-treatment and follow-up **Length of Intervention:** 8 week intervention **Follow-up:** 4 months	**Randomisation** Method not described **Blinding**: Clients: unknown Providers: unknown Outcome Assessors: unknown **Intention to treat:** Yes **Power calculation:** Not discussed **Baseline:** no differences found between groups on outcome measures, but WLC condition did have more freshmen and fewer sophomores than Body Traps condition	**Location:** USA **Inclusion Criteria:** None described **Exclusion Criteria**: Currently diagnosed with bulimia or anorexia (self report) or BMI < 17.5 **Number starting in each group:** 27 Student Bodies, 25 Body Traps, 24 Wait List Control **Gender**: 100% female **Social demographic:** private American university students **Age**: 19.6 years (*SD* = 2.2, range 18 – 36 years) **Ethnicity:** 67% Caucasian, 11% African American, 9 % Asian, 7% Hispanic/Latina, 6% multi-ethnic **Recruitment method:** fliers posted on campus and e-mail messages posted on housing distribution lists **Incentives:** offered 2 units of upgraded academic credit contingent on completion of programme requirements	**Primary:** Eating Disorder Examination Questionnaire[3] (EDE-Q) Weight/Shape Concerns subscale; Body Shape Questionnaire (BSQ)[4] **Secondary:** EDE-Q subscales of Restraint and Eating Concerns, Eating Disorder Inventory (EDI) subscales: Drive for Thinness and Bulimia – scored on a continuous measure to provide greater sensitivity for non-clinical samples; also an adapted 4- item Support Scale; compliance was also measured	**Professional supporting the intervention:** Moderator (Angela A. Celio) leading face-to-face discussions, and on-line discussions and addressed any issues with the software **Description of Intervention/s:** **Body Traps** 8 2-hour meetings over an 8 week period. Lecture or a guest speaker, and group discussion. Academic readings (1 – 2 articles/week) from the same course reader as Student Bodies group. Written reflections to complete in response to academic readings (1 – 2 pages) to get a pass grade. This intervention was mainly academic, no focus on cognitive, behavioural, or other methods for weight regulation or improvement in body image. **Student Bodies** This internet-based programme incorporates interventions and ideas for improving body image and developing healthy dietary practices developed by Cash (1991), Davis et al. (1989), and Taylor and Altman (1997). This was a modified version based on previous research suggestions. Students offered pass/fail grade based on adherence, as adherence shown to have better outcomes. 3 face-to-face sessions (lasting 1 -2 hours over 8-week period). Weeks 1 and 2: Orientation to the programme. Week 6: Group discussions on body image dissatisfaction. Academic readings (1 -2 articles/week). Written reflections in response to academic readings (1 -2 pages) – if did not complete an adequate number of these assignments participants would be given a fail grade. On-line readings on body image, exercise, nutrition, and eating disorders; cognitive behavioural exercises. On-line body image journal (>= 1 entry/week suggested). Discussion group messages (at least 2 messages/week, 1 in response to a group member). Every time participants logged on they were given feedback on their adherence and filled in an on-line report. **Attrition:** 11.8% (9) at post-intervention (1 Student Bodies, 5 Body Traps, and 2 WLC); 23.7% at follow-up (3 Student Bodies, 10 Body Traps, and 5 WLC)

[3] Fairburn & Beglin, 1994
[4] Cooper, Taylor, Cooper, & Fairburn, 1987

Study ID = 2	Methods	Participants	Outcome Measures	Interventions
Authors: **Winzelberg et al. (2000)** **Aim:** Compare a wait list control group (WLC) with a computer-based prevention programme group, Student Bodies; to provide evidence for the effectiveness of providing health care via the internet **Length of Intervention:** 8 week intervention **Follow-up:** 3 months	**Randomisation**: Method not described **Blinding**: Clients: unknown Providers: unknown Outcome Assessors: unknown **Intention to treat:** Yes **Power calculation:** Not discussed **Baseline:** no significant differences between groups for measures or demographics	**Location:** USA **Inclusion Criteria:** Desire to improve body image satisfaction **Exclusion Criteria**: History of bulimia or anorexia (self report or intake interview), currently engaged in purging behaviours or BMI < 18 **Number starting in each group:** 31 Student Bodies programme, 29 control group **Gender**: 100% female **Social demographic:** students at a West Coast public university **Age**: 20.0 years (*SD* = 2.8, range 18 – 33 years) **Ethnicity:** 53% Caucasian, 35% Hispanic, 5 % Asian, 3 % African American and 3% "other" **Recruitment method:** recruited through campus newspapers, fliers and presentations given in dormitories and sororities. **Incentives:** each student completing the programme gets $25.	**Primary:** Body Shape Questionnaire (BSQ) **Secondary:** Eating Disorder Inventory's (EDI) Drive for Thinness and Bulimia[5] subscales – scored on a continuous measure to provide greater sensitivity for non-clinical samples; and Eating Disorder Examination Questionnaire (EDE-Q) Weight/Shape Concerns subscale; adapted On-line Support Scale adapted from Multidimensional Scale of Perceived Social Support; adherence was also measured	**Professional supporting the intervention:** Moderator, graduate student in clinical psychology, responsible for maintaining the discussion, reflecting on concerns expressed by participants and offering suggestions based on Student Bodies content. Researchers contacted participants if they missed assignments to encourage them to complete them. **Description of Intervention/s:** **Student Bodies** Structured 8-week intervention delivered by internet. Primary focus of each week related to body image improvement. Interactive software featured text, audio and video components, on-line self-monitoring journals, and behaviour change exercises. Mandatory and optional exercises to complete each week. Participants expected to post message to discussion group, also answer or comment on >1 message. Goal of on-line discussion to provide forum for receipt and giving of emotional support and to discuss reactions to software. **Attrition:** 8 (13.3% - 4 intervention, 4 control) dropped out during pre- post- period; another 7 (11.7% - 3 intervention, 4 control) did not complete 3 month follow-up.

[5] Garner & Olmsted, 1984

Study ID = 3	Methods	Participants	Outcome Measures	Interventions
Authors: **Barr Taylor et al. (2006)** **Aim:** A randomized controlled trial of an 8-week, Internet-based cognitive-behavioral intervention (Student Bodies) compared with WLC that included an online, asynchronous, moderated discussion group. **Length of Intervention:** 8 weeks **Follow-up:** 1, 2 & 3 years	**Randomisation**: Participant randomization was stratified by school, and random-number sequences were generated by the study coordinator using SPSS. **Blinding**: Clients: unknown Providers: unknown Outcome Assessors: Interviewers were blind to participant group assignment at follow-up. **Intention to treat:** No **Power calculation:** Not discussed **Baseline:** Participants randomly assigned to the intervention had significantly lower WCS scores (F[1,414]=3.9; *P*=.048) and Global EDE-Q scores (F[1,417]=4.9; *P*=.03). There were no other significant differences between the intervention and control groups on demographics, baseline measures of psychopathology, or ED behaviours.	**Location:** USA **Inclusion Criteria:** High risk for developing eating disorder; Weight Concern Scale's (WCS) score > = 50 **Exclusion Criteria**: Currently meeting DSM IV criteria for an eating disorder, or BMI < 18 or > 32 **Number starting in each group:** intervention was provided to 13 groups and ranged in size from 14 to 24 members per group (480 in total). **Gender**: 100% female **Social demographic:** 31% freshman, 20% sophomore, 22% junior, 18% senior, and 8% graduate student residing in the San Diego and the San Francisco Bay areas in California **Age**: mean (*SD*) age was 20.8 (2.6) years (range 17-31 years). **Ethnicity:** 60% white, 2% African American, 10% Hispanic, 17% Asian, and 11% other/unknown. **Recruitment method:** Potential participants were recruited from flyers posted at local academic institutions, campus mailings, and mass media. Potential participants completed a brief screening questionnaire delivered by telephone or e-mail. **Incentives:** none mentioned.	The Weight Concerns Scale[6] [7]; the Eating Disorder Inventory (EDI) Drive for Thinness and Bulimia subscales, and the EDE Questionnaire (EDE-Q), a self-report version of the EDE, the Center for Epidemiological Studies Depression Scale, a 20-item self-report questionnaire[8] (was used to assess depressed mood); BMI.	**Professional supporting the intervention:** Discussion groups were moderated by a clinical psychologist or psychology graduate student who was supervised by a clinical psychologist. **Description of Intervention/s:** **Student Bodies** Student Bodies (SB) programme modelled after "The Road to Recovery" programme [9], cognitive behavioural interventions employed by Cash (1991), and eating disorder prevention literature. SB divided into 4 sections: i) eating disorders, ii) healthy weight regulation, iii) nutrition, and iv) exercise. The core goals of the programme were to reduce weight and shape concerns, enhance body image, promote healthy weight regulation, reduce binge eating, and increase knowledge about the risks associated with eating disorders. Each week, when a participant logged onto the programme, she was directed to the updated weekly programme content. Participants expected to read the content and complete accompanying assignments, included participating in the online discussion group, self-monitoring, and/or writing entries in the Personal Journal or Body Image Journal. Weekly e-mails were sent to participants to reinforce programme participation and encourage participants who failed to comply with study expectations for participation. About 9 months following the 8-week intervention, participants were notified by e-mail that the programme would be available for 2 weeks to review material from the initial 8 sessions. **Attrition:** Of the 244 participants who were randomized to intervention, 28 (11%) never logged onto the programme. For the remaining 216, the mean (*SD*) percentage of pages read was 79% (24.2%) (range 6%-99%).

[6] Killen et al., 1994
[7] Killen et al., 1996
[8] Orme et al., 1986

Study ID = 4	Methods	Participants	Outcome Measures	Interventions
Authors: **Franko et al. (2005)** **Aim:** Compare a control group with a computer-based prevention programme, Food, Mood and Attitude (FMA); to examine the efficacy of FMA on 1st students from 2 American universities. **Length of Intervention:** 1 – 2 weeks **Follow-up:** 3 months	**Randomisation**: - initial random selection from 717 women so that 75% from 2 non-minority ethnic groups, and 25% from 2 minority ethnic groups. Randomisation to the conditions was done using a computerised urn randomisation programme[10]; this programme took into account ethnicity, age and risk status in assignation. **Blinding**: Clients: unknown Providers: The research assistant (RA) who administered intervention or control condition was blind to risk status of participants. Outcome Assessors: unknown **Intention to treat:** No (but possibly because 97.9% response rate) **Power calculation:** Not discussed **Baseline:** all primary outcome measures similar for two groups	**Location:** USA **Inclusion Criteria:** - aimed to recruit at least 25% minority students, female, first semester of university, between 18 – 22 years of age, willingness to participate in study, screened as either *at risk* (categorised by Q-EDD[11] as "symptomatic"), or *low risk* (categorised by Q-EDD as "asymptomatic"). **Exclusion Criteria**: - currently in treatment for any type of eating disorder, or identification by Q-EDD as meeting criteria for an eating disorder diagnosis **Number starting in each group:** 120 intervention group, 120 control group **Gender**: 100% female **Social demographic:** students in first semester of university **Age:** 18.2 years of age, *SD* = 0.4 **Ethnicity:** 73.3% Caucasian, 6.8% Asian-American, 11.4% African-American, 3% Hispanic, and 5.5% "other" **Recruitment method:** Trained research assistants (RAs) used advertisements (flyers), in residence halls, and in student centres in the fall of 2001. **Incentives:** participants were paid $5 to participate in screening phase of project; $20 after completion of the first session and $40 after completion of the second session and post-intervention assessment. At follow-up of 3 months, participants were paid $65 for returning completed measures.	Knowledge Test (questionnaire developed by researchers and rated for content and importance validity by eating disorder experts); Sociocultural Attitudes towards Appearance Questionnaire[12] *(*SATAQ*);* EDE-Q Shape Concerns, Weight Concerns, and Restraint subscales; participants' programme satisfaction measured.	**Professional supporting the intervention:** Trained research assistant that would be in the room monitoring users' progress while they used the programme, and checking they completed full session. **Description of Intervention/s:** **Food, Mood, and Attitude** User is asked at beginning of programme to serve as a "peer counsellor" to assist university to address problem of eating disorders on campus. User then introduced to 3 different eating disordered women – only their profiles, no pictures of them. User must explore women's personal "scrapbooks" of life at university. Cannot skip material on CD-ROM. Both didactic and interactive "thinking" material presented. Finally user given material that can assist in combating (internalising) current thin ideal. At the end user is asked to provide feedback and treatment suggestions to 3 hypothetical students in programme. This is an approximately 2 hour CD-Rom programme. Participants/users do a 1 hour session and then 1 - 2 weeks later do second hour before filling in post-intervention questionnaires. **Control condition** Control group participants watched videos on women's and/or gender issues during these 2 hours. They were not led to believe these may help with body image or eating habits. **Attrition:** 96.25% response rate – only 9 (3.75%) participants did not complete at follow-up.

[9] Davis et al., 1989
[10] Wei , 1978
[11] Questionnaire for Eating Disorder Diagnoses (Mintz et al., 1997)

Study ID = 5	Methods	Participants	Outcome Measures	Interventions
Authors: **Graff Low et al. (2006)** **Aim:** Randomised control trial to explore effectiveness of Student Bodies (SB) with or without a clinically moderated discussion group, and long term follow-up to assess effects of SB over time. **Length of Intervention:** 8 weeks **Follow-up:** 8 – 9 months	**Randomisation**: Method not described **Blinding**: Clients: unknown Providers: unknown Outcome Assessors: unknown **Intention to treat:** Yes **Power calculation:** Not discussed **Baseline:** no significant differences in weight, shape, or eating related variables between groups (4 groups), although controls somewhat higher on eating and body image measures	**Location:** USA **Inclusion Criteria:** None mentioned. **Exclusion Criteria**: - previous diagnosis of eating disorder or currently purging **Number starting in each group:** Not mentioned, but 61 completers: controls = 14, moderated discussion = 14, unmoderated discussion = 19, programme alone = 14 **Gender**: 100% female **Social demographic:** 72 first and second year students enrolled in a private, liberal arts college in the northeast **Age:** not mentioned **Ethnicity:** 8.7% "students of colour" **Recruitment method:** e-mail announcements **Incentives:** participants were paid $40 for completing assessments at all three times.	Weight Concerns Scale (WCS); EDE-Q Weight and Shape Concerns subscale; EDE-Q subscales of Restraint and Eating Concerns, and Eating Disorder Inventory's (EDI) Drive for Thinness and Bulimia subscales – scored on a continuous measure to provide greater sensitivity for non-clinical samples; SATAQ; Stunkard Figure Rating Scale[13]; compliance to the programmes.	**Professional supporting the intervention:** Moderator for the discussion group was a clinical psychologist **Description of Intervention/s:** **Student Bodies (SB) without a discussion group:** programme addresses risk factors for eating disorders and each session is geared towards improving body image. It is 8 weeks long and topics include media influences on body image, nutrition, exercise, and cognitive-behavioural strategies for decreasing body dissatisfaction. **SB with moderated discussion group:** Programme typically accompanied by an on-line asynchronous online discussion group moderator who oversees online discussion, responds to post, corrects misinformation, makes observations. **SB with unmoderated discussion:** Moderator did in fact monitor this discussion to ensure contributions were appropriate. No information given on what level of involvement or non-involvement of moderator given. *In both discussion conditions, SB invites participants to read messages from other group members, and to select messages options that suggest they want feedback, are posting a "success story" or "just sharing".* **Control condition** No information. **Attrition:** 11 participants who failed to log-on or complete one of the assessments; 9.7% who never logged on excluded from analyses, so attrition rate is 6%.

[12] Heinberg, Thomson, and Stormer (1995)
[13] Stunkard et al., 1983

Study ID = 6	Methods	Participants	Outcome Measures	Interventions
Authors: **Winzelberg et al. (1998)** **Aim:** Compare a wait list control group (WLC) with a computer-based prevention programme, Student Bodies (SB); explanatory investigation of effectiveness of SB programme and computer-mediated support group; intervention group participants assigned to 1 of 2 e-mail support groups (about 10 members each) **Length of Intervention:** 3 months **Follow-up:** 3 months	**Randomisation**: Method not described **Blinding**: Clients: unknown Providers: unknown Outcome Assessors: unknown **Intention to treat:** No **Power calculation:** Not discussed **Baseline:** Statistically significant differences at baseline for EDE-Q *Weight* and *Shape* subscales, intervention group greater shape concerns (intervention = 3.46, control = 2.6, $F[1,50]$ = *missing*, $p < .02$) and weight concerns (intervention = 3.44, control = 2.72, $F[1,50] = 4.47$, $p < .04$) Higher BMIs for participants who did not return after post-intervention assessment than those who completed all 3 assessments	**Location:** USA **Inclusion Criteria:** None mentioned **Exclusion Criteria**: Currently bulimic or anorexic, or BMI < 19 **Number starting in each group:** 27 Student Bodies programme, 30 control group **Gender**: 100% female **Social demographic:** undergraduates at a private university **Age**: 20.0 years (*SD* = 2.8, range 18 – 33 years) **Ethnicity:** 54% Caucasian, 20% Asian-American, 10% African-American, 9% Hispanic, and 7% "other" **Recruitment method:** recruited through advertisements in campus newspapers, flyers and electronic bulletin boards. **Incentives:** each student paid $10 for participating in the programme.	**Primary:** Eating Disorder Inventory (EDI) Drive for Thinness and Bulimia subscales; the EDE-Q Weight and Shape subscales and the Body Shape Questionnaire (BSQ) **Secondary:** height, weight, software usage patterns, and a general knowledge quiz on healthy and unhealthy weight regulation strategies and the consequences of such strategies. Discourse of email group's postings analysed to determine frequency, general theme, and purpose or intent of messages.	**Professional supporting the intervention:** Moderator, clinical psychologist, responsible for maintaining the discussion, reflecting on concerns expressed by participants and offering suggestions based on Student Bodies content. **Description of Intervention/s:** **Student Bodies** Student Bodies programme modelled after "The Road to Recovery" programme, cognitive behavioural interventions employed by Cash (1991), and eating disorder prevention literature. SB divided into 4 sections: i) eating disorders, ii) healthy weight regulation, iii) nutrition, and iv) exercise. Interactive software allowing user to explore content rather than forcing them to adhere to structured programme – underlying design is assumption that users will be motivated to complete most of software content. **Attrition:** Overall 5 control group and 7 intervention group participants dropped out or were unavailable for follow-up (21%). On average 50% of participants completed software.

Study ID = 7	Methods	Participants	Outcome Measures	Interventions
Authors: **Zabinski et al. (2001)** **Aim:** controlled study evaluating whether an 8-week programme offered over the internet, Student Bodies, would significantly decrease body image dissatisfaction, disordered eating patterns and preoccupation with shape/weight among women at high risk for eating disorder. Compared with WLC. **Length of Intervention:** 8 weeks **Follow-up:** 10 week follow-up	**Randomisation**: Method not described **Blinding**: Clients: unknown Providers: unknown Outcome Assessors: unknown **Intention to treat:** No **Power calculation:** Not discussed **Baseline:** no significant differences for demographics or measures	**Location:** USA **Inclusion Criteria:** Students who scored >=110 on the BSQ during a mass administration of questionnaires in introductory psychology class (1 *SD* about normal population; 1 *SD* below bulimic population) **Exclusion Criteria**: Self-reported past or current eating disorder, BMI < 19, or more than 1 x month purging behaviours **Number starting in each group:** intervention = 31, control = 31 **Gender**: 100% female **Social demographic:** 62 students from public West Coast university **Age:** average = 19.3 years (*SD* = 1.4, 17 to 24). **Ethnicity:** 66.1% Caucasian, 26.8% Hispanic/Latina, 5.4% other, 1.8% Asian **Recruitment method:** Students who scored >=110 on the BSQ during a mass administration of questionnaires in introductory psychology class (1 *SD* about normal population; 1 *SD* below bulimic population) approached to do study. **Incentives:** participants fulfilled course requirements and received $25 for participation and completion of all assignments	**Primary:** BSQ; Drive for Thinness and Bulimic subscales on EDI; EDE-Q Weight, Shape, Restraint, and Eating subscales **Secondary:** height, weight, and social support measure (adapted On-line Support Scale adapted from Multidimensional Scale of Perceived Social Support [Winzelberg, 2000]), BMI	**Professional supporting the intervention:** Moderator for the bulletin board was a psychology graduate **Description of Intervention/s:** **Student Bodies (SB):** Consisted of two components: the SB programme and bulletin board. Software modelled after self-help group and psycho-educational treatments for eating disorders, and electronic bulletin board designed to provide support and forum for discussion of readings and assignments; participants encouraged to post 1 -2 original messages and respond to another message each week. **Attrition:** 61 (98%) completed post-treatment assessment, 58 (90%) completed follow-up assessment

Study ID = 8	Methods	Participants	Outcome Measures	Interventions
Authors: **Zabinski et al. (2004)** **Aim:** to evaluate a synchronous chat internet-delivered intervention (chat room) for improving body image and eating habits for at risk for eating disorder women; compared with WLC. **Length of Intervention:** 8 weeks **Follow-up:** 10 week follow-up	**Randomisation**: Method not described **Blinding**: Clients: unknown Providers: unknown Outcome Assessors: unknown **Intention to treat:** No **Power calculation:** Not discussed **Baseline:** no significant differences between conditions or chat rooms for demographics or measures	**Location:** USA **Inclusion Criteria:** Students who scored >=57 on Weight Concerns Scale (Killen, 1994) – identifies risk **Exclusion Criteria**: Meeting the DSMIV criteria for a clinical eating disorder; current or previous treatment for eating disorder, using psychotropic medications, or thoughts of harming themselves or others. **Number starting in each group:** intervention = 30 (3 chat rooms with 10 members each), wait list control = 30 **Gender**: 100% female **Social demographic:** 60 students from public West Coast university **Age:** average = 18.9 years (*SD* = 2.4, 17 to 33). **Ethnicity:** 65% Caucasian, 19% Hispanic/Latina, 8% Asian/Pacific Islander, 3% African American, 5% other ethnicities **Recruitment method:** campus flyers and information presented in introductory psychology lectures used to identify potential participants. Potential participants contacted by research assistants via telephone to briefly describe study and determine eligibility. Eligible participants invited to introductory meeting. **Incentives:** participants given credit for their introductory psychology course (if applicable) and $25 for follow-up assessment completion	EDE-Q: all 4 scales, Weight, Shape, Restraint and Eating; Rosenberg Self-Esteem Scale (RSE) (Rosenberg, 1965); weight; height; BMI; MSPSS **Following measures post-treatment only:** Online Social Support Scale (OSSS, Winzelberg et al, 2000); Satisfaction questionnaire[14]	**Professional supporting the intervention:** An advance graduate student in clinical psychology specialising in eating disorders and body image (first author, M.F.Z) **Description of Intervention/s:** **Control:** WLC **Intervention:** based on a CBT approach (Fairburn, Marcus, & Wilson, 1993). Phase 1 focussed on improving eating behaviour. Phase 2 focussed on cognitive restructuring of negative thoughts related to over-evaluation of shape and weight. Phase 3 focussed on relapse prevention and maintenance of intervention gains. Intervention consisted of brief weekly psychoeducational readings (1 -2 pages), the synchronous and asynchronous support groups, homework assignments, and weekly assignments, and weekly summaries (1 page). Weekly participants received readings via e-mail to prepare for chat, had 1 hour long online chat, completed homework for topics, and received summaries of chat via e-mail. Moderator structured sessions by posing questions related to the reading and allowing participants to practice skills, ask questions or deal with barriers to skill implementation. Moderator also ensures everyone is involved in discussions. In addition to synchronous support during chat, participants encouraged to post on message board at least 1 message weekly. **Attrition:** 59 (98%) (intervention group = 29) at post-intervention, 58 (97%) (intervention group = 28) at follow-up

[14] Questionnaire consisted of 10 open-ended questions, and 20 questions that were either yes or no. Scored on a 5-point Likert Scale.

Appendix D

Table 2: Summary of individual studies' results (only significant findings reported here)

Study ID	Authors	Findings
1	**Celio et al. (2000)**	EDE-Q Weight/Shape concerns subscale: Statistical significance between wait list control (WLC) and Student Bodies (SB) at post-intervention (F[2,54] = 2.53, p = .08) EDI drive for thinness subscale: Statistical significance (F[2,54] = 3.32, p = .044) at post-intervention EDE-Q Weight/Shape concerns subscale: significant differences found between SB & WLC groups (F[2, 54] = 3.38, p = .042) at follow up EDE-Q Eating Concerns subscale: statistically significant difference (F[2,54] = 3.36, p = .042) at follow-up EDE-Q Restraint subscale: statistically significant difference (F[2,54] = 6.02, p = .004) at follow-up EDI Drive for Thinness scale: statistically significant difference (F[2,54] = 5.19, p = .009) at follow-up In all the above outcomes SB group showing greater improvement. Intention-to-Treat (ITT) analyses: statistically significant difference on all measures between SB & WLC (p = .05), SB showing greater improvement; follow-up same as completers' analysis above. Overall attrition rate = 24%, not statistically significant between conditions at post-intervention, but at follow-up. Higher compliance associated with greater improvement.
2	**Winzelberg et al. (2000)**	BSQ: statistically significant differences in direction of intervention group (F[1,41] = 5.78, p = 0.021) at follow-up EDI Drive for Thinness: statistically significant differences favouring intervention group (F[1,41] = 4.29) at follow-up ITT analyses: found statistical significance at follow-up for BSQ (F[1,57] = 7.74, p = .007, EDI sub-scales: Drive for Thinness (F[1, 57] = 5.38, p = .24) and Bulimia (F[1,57] = 6.18, p = .016). No relationship between compliance and outcomes, except for BSQ at follow-up for which compliance counted for 14% of variance (β = -.299), F[2,18] = 5.71, p = .03).
3	**Barr Taylor et al. (2006)**	EDI-B: Significant reduction in scores for the intervention group from baseline to post-intervention (F[1,386] = 10.0; p = .002). WCS: Statistically significant differences baseline to post-intervention and baseline to 1-year follow-up between the

		intervention and control groups on the scores for the WCS: $F(1,386) = 89.7$, $p < .001$; $F(1,386) = 16.1$; $p < .001$ Global EDE-Q: Statistically significant differences baseline to post-intervention and baseline to 1-year follow-up between the intervention and control groups: $F(1,392) = 76.7$; $p < .001$; $F(1,392) = 10.7$; $p = .001$ EDI Drive for Thinness subscale: Statistically significant differences baseline to post-intervention and baseline to 1-year follow-up between the intervention and control groups: $F(1,383) = 54.7$; $p = .001$; $F(1,383) = 17.1$; $p < .001$. Clinical diagnoses: Over course of follow-up, 43 participants were classified as becoming a sub-clinical or clinical eating disorder case. 10 participants were classified as being cases on the basis of reporting entering therapy for treatment of an eating disorder. Of the remaining 33, the diagnoses were 2 with bulimia nervosa, 27 with sub-clinical bulimia nervosa, and 14 with sub-clinical Binge Eating Disorder (BED). There was no overall significant difference in onset of EDs between intervention and control groups. Medication: At baseline, only 14 participants were taking antidepressants, and 11 continued to take medications during follow-up period. Only 11 subjects started taking medications. Of the 25 who were taking medications, 5 developed EDs: 4 control participants and 1 treatment participants. Adherence: higher for participants with higher scores on the WCS ($t1=2.2$; $p=.03$), EDI Drive for Thinness subscale ($t1=3.5$; $p=.02$), Global EDE-Q ($t1=2.8$; $p=.005$), and EDI bulimia subscale ($t1=2.3$; $p=.02$). Higher adherence resulted in reduced post-test scores on the WCS ($t209=-2.3$; $p=.02$), EDE-Q Restraint subscale ($t211=-3.0$; $p=.003$), and EDE-Q Weight Concerns subscale ($t211=-2.3$; $p=.02$). 97 participants (40%) of treatment group used booster session at least once following completion of core 8-week programme.
4	**Franko et al. (2005)**	Knowledge: Statistically significant gains in knowledge of FMA group over time relative to control group ($F[1,227] = 22.27$, $p < .001$); at-risk group increased knowledge over low-risk group ($F[1,227] = 4.40$, $p = .037$). Internalization and Awareness subscales: At-risk FMA women showed greater improvements than control group: ($F[1, 223] = 4.67$, $p = .032$) for Awareness, ($F[1, 223] = 10.02$, $p = .002$) for Internalisation, and three way interaction (Time x Group x Status) on the Internalisation scale revealed that at-risk women who used FMA experienced the most change ($F[1, 218] = 4.54$, $p = .034$). EDE-Q Shape Concerns: At-risk FMA group improved compared to at-risk control group ($F[1, 227] = 5.01$, $p = .03$) Overall effect size (low & high risk): 0.2, -0.059 to 0.459, 95% CI.

		High risk group effect size: 0.333, -0.010 to 0.677, 95% CI[15]. EDE-Q Weight Concerns: At-risk FMA group improved compared to at-risk control group (F[1, 227] = 6.64, p = .01) Overall effect size: 0.067, -0.191 to 0.325, 95% CI. High risk group effect size: 0.276, -0.067 to 0.619, 95% CI. EDE-Q Global score: statistically significant between at-risk FMA and at-risk control (F[1, 227] = 6.09, p = .01), FMA group greater reductions in ED pathology. No significant difference between low-risk groups. Overall effect size: 0.214, -0.044 to 0.473, 95% CI. High risk group effect size: 0.286, -0.057 to 0.629, 95% CI.
5	**Graff Low et al. (2006)**	Non-completers (11 participants) seemed to have more concerns on every eating and body image dimension (Hotelling's T = .84, F(10,60) = 3.7, p = .001) and were slightly heavier than completers. EDI-B: Statistical significance for group by time interaction in direction of controls (increasing bulimia scores over time) (F[3,58] = 2.5, p = .025) EDI-Body Dissatisfaction (BD): main effect of time decreasing for all groups (F[2,59] = 7.6, p = .001). Significant effect for group assignment at 8 – 9 months after controlling for baseline BD scores (F[1,60] = 1.01, p = 0.05). Unmoderated discussion group had statistically significant lower scores than controls (p = .045). Weight Shape Concerns (WSC): Unmoderated discussion group lower scores (F[1,60] = 5.3, p = .026) than control after controlling for baseline WSC scores. **3 intervention groups then compared with control group:** EDI-DT: significant effect of group with lower scores than controls at post- and follow-up (F[1,60] = 3.7, p = .05). For EDI-BD: Group x Time interaction was significant (F[2,59] = 3.3, p = .05). Also a main effect of time: decreased significantly at post- and follow-up in intervention group (F[2,59] = 8.2, p = .001), but not in controls. WSC: significant Group x Time interaction (F[1,60] = 3.2, p = .05): increased in control group over time, but remained the same in treatment group. Stunkard discrepancy scores: significant Time x Group interaction (F[1,60] = 6.5, p = .013): increasing by time in the

[15] The high risk group effect size calculations were based on the assumption that the group sizes for the intervention and control high risk participants were identical in size. The total group sizes including all the participants are almost identical (control = 115, intervention = 116), and as no mention is made of how many high risk in each group, in order to calculate the effect sizes the division was made the same as the whole sample. No effect was found for either the entire group or the high risk individuals on the scales mentioned in the results table.

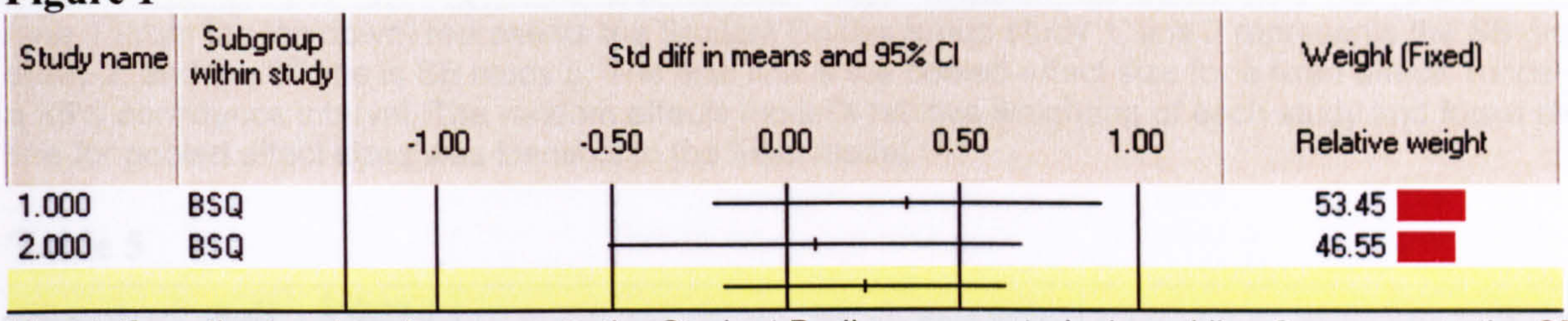
		control group, and decreasing by time in intervention group. Significant at Time 2 and Time 3. Intention-to-treat analyses: main effect for group on EDI-DT at follow-up (F[1,70] = 3.0, p = .036); in post hoc analyses unmoderated discussion group significantly different from control group. Treatment condition had no effect on use of programme. Overall time spent using the programme was significantly correlated with decreasing drive for thinness (r = .25 (61), p < .05) and lower reported shape and weight concerns (r = .27(61), p < .05) at long term follow-up.
6	**Winzelberg et al. (1998)**	BSQ: a statistically significant difference (t[49] = -2.25, p < .029), intervention group greater improvement of body image over measurement period. Knowledge test: significant difference over time, no difference between groups. 53% of software completed. No correlation between use of software and outcomes. But participants who completed the weight regulation section improved their score on the EDI Drive for Thinness subscale (examined mean slope = -.83, unexamined mean slope = -.23, p < .05). Effect sizes: EDI-Bulimia = .27, EDI- Drive For Thinness 0.29, EDE-Q Weight Concerns Scale = 0.48, Shape Concerns Scale = 0.51, and BSQ = .56. Discourse analysis for intervention themes – not discussed as part of this review.
7	**Zabinski et al. (2001)**	No significant two-way interactions revealed, but significant main effect for time on all measures: BSQ: F(2, 108) = 7.76, p < .002; *EDE-Q* Global: F (2,108) = 8.08, p < .002, EDE-Q Weight subscale: F(2, 108) = 5.27, p < .01; BMI: F(2, 108) = 6.20, p < .005. Follow-up analyses showed significant differences were maintained at follow-up. There was a significant time effect for BMI from post-intervention to follow-up: intervention group (25.2[4.3] to 24.0[4]) and control group (25.2[2.7] to 24.4[2.7]).
8	**Zabinski et al. (2004)**	EDE-Q Global score: statistically significant interaction F(2, 116) = 4.04, p < .05, with intervention participants improving more than wait-list control (WLC) participants. Post-hoc analyses revealed differences occurred from baseline to follow-up. EDE-Q Weight Concerns: statistically significant interaction F(2, 116) = 3.76, p < .05, EDE-Q Eating Concerns: statistically significant interaction F(2, 116) = 6.79, p < .005, with intervention participants improving significantly more than WLC participants. Post-hoc analyses revealed differences occurred from post-treatment to follow-up.

		EDE-Q Shape Concerns subscale: significant effect of time $F(2, 116) = 9.24$, $p < .001$. Post-hoc analyses: baseline to post-treatment ($p < .002$) and from baseline to follow-up ($p < .002$). Both groups showed improvements over time and maintained these changes from post-treatment to follow-up. RSE: significant Group x Time interaction $F(2, 116) = 4.52$, $p < .02$, with intervention participants improving over controls: significant effects from baseline to follow-up, $F(1, 58) = 6.18$, $p < .02$, and from post-treatment to follow-up, $F(1, 58) = 6.05$, $p < .02$. BMI: significant main effect of time, $F(2, 116) = 5.86$, $p < .01$, BMI (1 – 2lbs) increasing from baseline to post-treatment ($p < .001$).

Table 3

Study name	Subgroup within study	Statistics for each study						
		Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
1.000	BSQ	0.350	0.283	0.080	-0.204	0.904	1.238	0.216
2.000	BSQ	0.090	0.303	0.092	-0.504	0.684	0.297	0.766
		0.229	0.207	0.043	-0.176	0.634	1.108	0.268

Figure 1

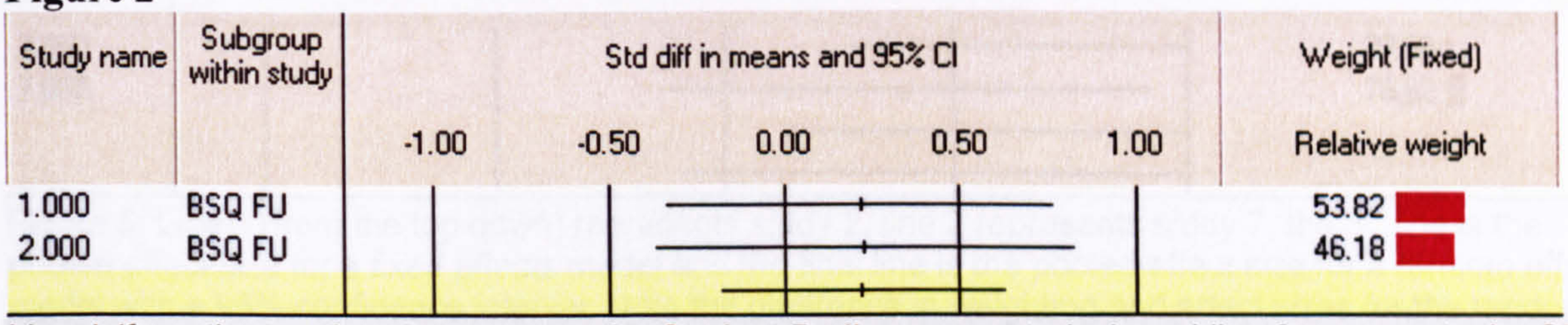


Line 1 (from the top down) represents the Student Bodies group study 1, and line 2 represents the SB group study 2. The final line is the pooled effect size with a 95% confidence interval.

Table 4

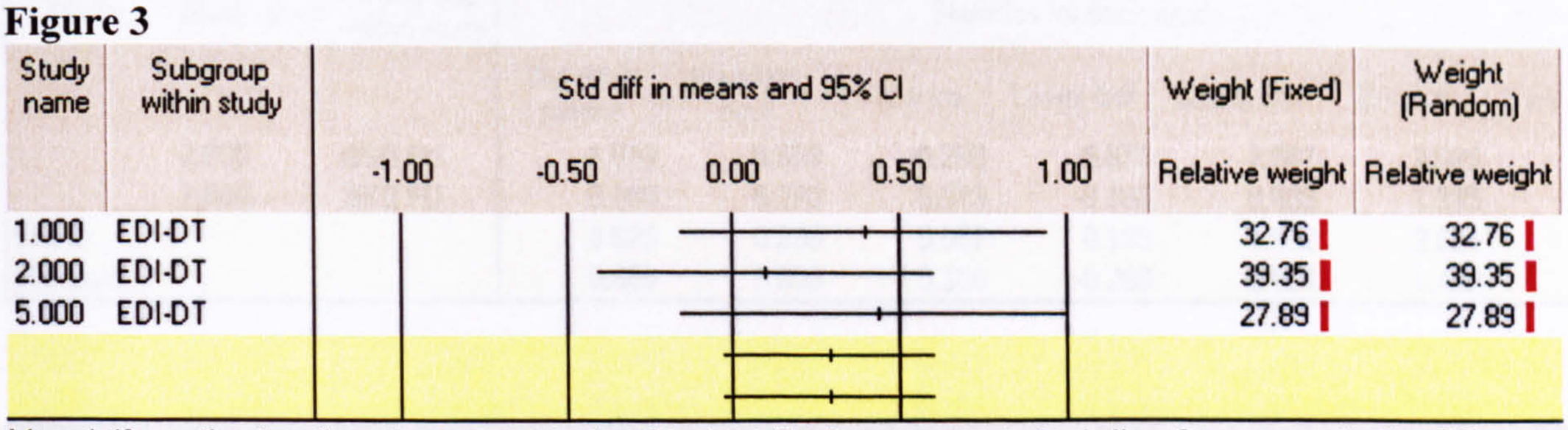
Study name	Subgroup within study	Statistics for each study						
		Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
1.000	BSQ FU	0.220	0.281	0.079	-0.332	0.772	0.782	0.434
2.000	BSQ FU	0.230	0.304	0.092	-0.365	0.825	0.757	0.449
		0.225	0.206	0.043	-0.180	0.629	1.088	0.277

Figure 2



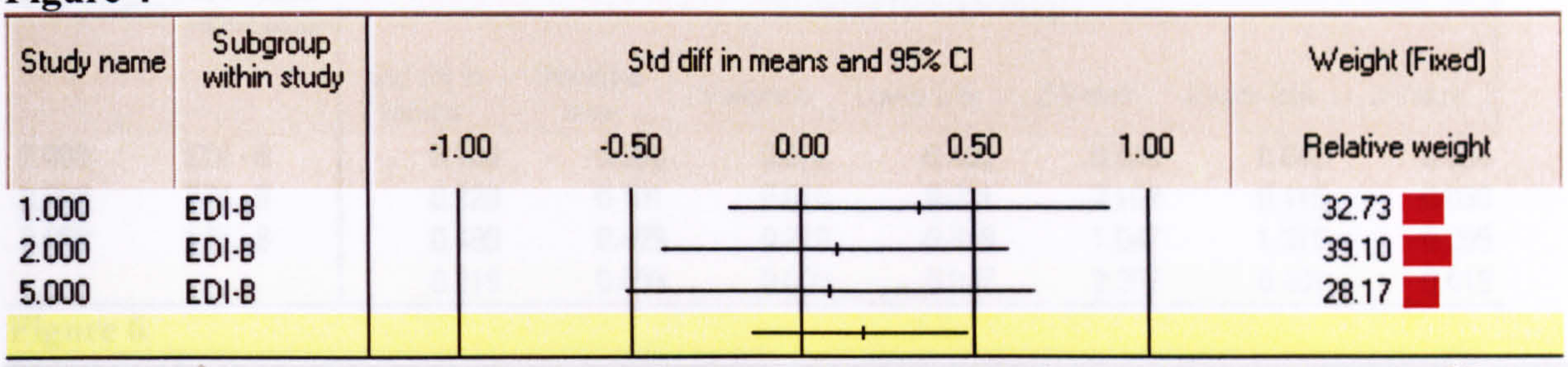
Line 1 (from the top down) represents the Student Bodies group study 1, and line 2 represents the SB group study 2. The final line is the pooled effect size with a 95% confidence interval.

Figure 3



Line 1 (from the top down) represents the Student Bodies group study 1, line 2 represents the SB group study 2, and the 3rd line is SB study 5. The second last line is the pooled effect size for a fixed effects model with a 95% confidence interval, and the final line is the pooled effect size for a random effects model.

Figure 4



Line 1 (from the top down) represents the Student Bodies group study 1, line 2 represents the SB group study 2, and the 3rd line is SB study 5. The final line is the pooled effect size for a fixed effects model with a 95% confidence interval. The random effects model's relative weighting of each study and forest plot line for pooled effect sizes was identical to the fixed model.

Table 5

Model	Study name	Subgroup within	Statistics for each study						
			Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
	2.000	BSQ	1.240	0.489	0.239	0.282	2.198	2.538	0.011
	7.000	BSQ	0.390	0.270	0.073	-0.139	0.919	1.445	0.149
Fixed			0.589	0.236	0.056	0.126	1.052	2.492	0.013
Random			0.717	0.414	0.171	-0.093	1.528	1.734	0.083

Figure 5

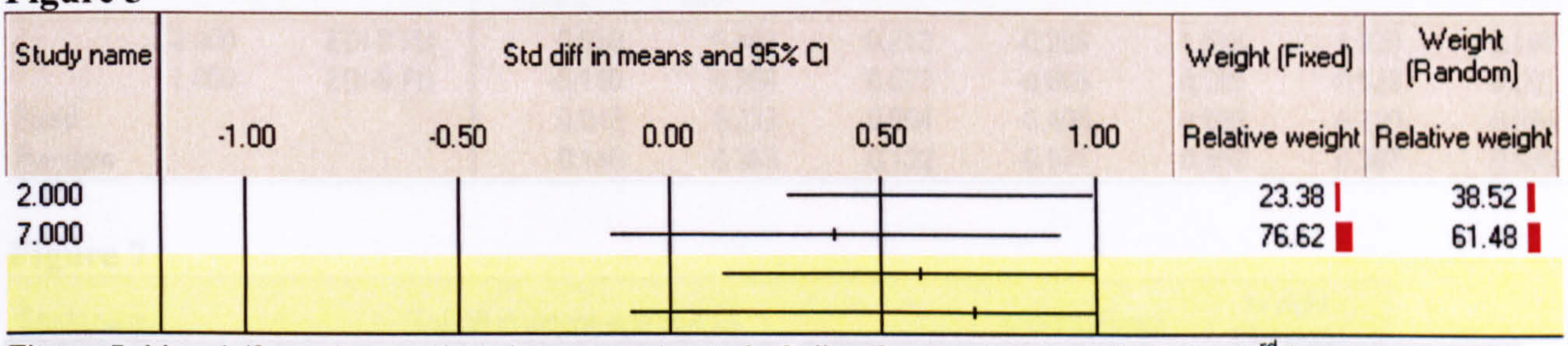


Figure 5: Line 1 (from the top down) represents study 2, line 2 represents study 7, the 3rd line is the pooled effect size for a fixed effects model and the final line is the pooled effect size for a random effects model with a 95% confidence interval. Note the difference in weighting and effect sizes for the random effects model.

Table 6

Model	Study name	Subgroup within study	Statistics for each study						
			Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
	2.000	BSQ FU	1.570	0.509	0.259	0.573	2.567	3.085	0.002
	7.000	BSQ FU	0.360	0.270	0.073	-0.168	0.888	1.335	0.182
Fixed			0.625	0.238	0.057	0.158	1.092	2.624	0.009
Random			0.888	0.600	0.360	-0.288	2.064	1.480	0.139

Table 7

Study name	Subgroup within study	Statistics for each study						
		Std diff in means	Standard error	Variance	Lower limit	Z-Value	Upper limit	p-Value
7.000	EDI - B	0.120	0.268	0.072	-0.405	0.448	0.645	0.654
3.000	EDI - B	0.220	0.101	0.010	0.021	2.168	0.419	0.030
2.000	EDI - B	0.480	0.459	0.210	-0.419	1.047	1.379	0.295
		0.219	0.093	0.009	0.037	2.353	0.401	0.019

Figure 6

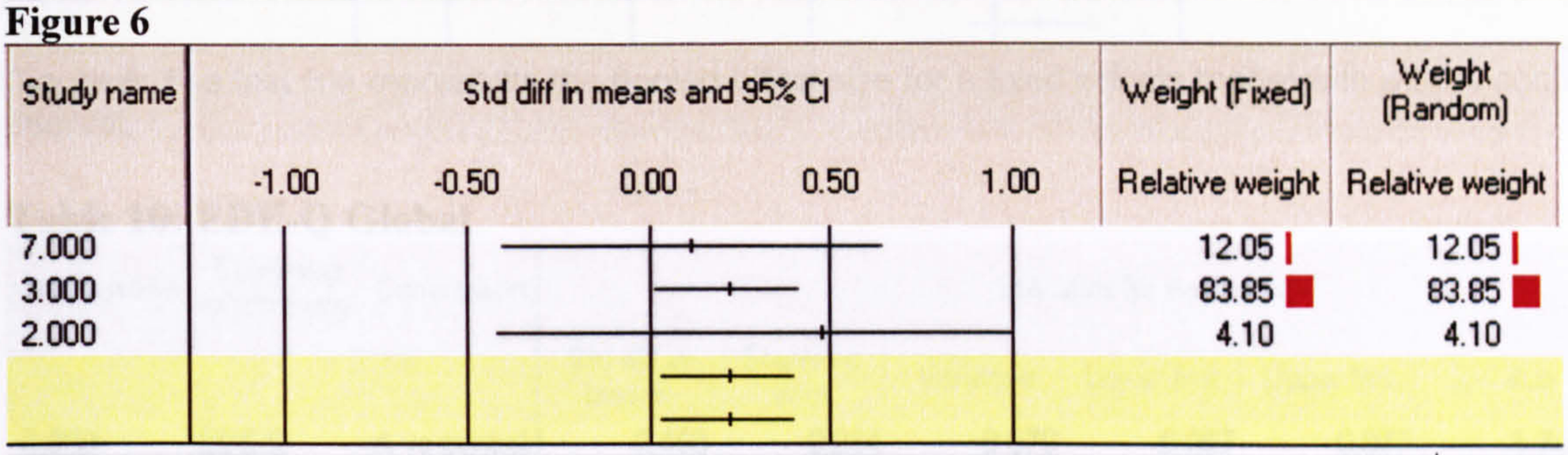


Figure 6: Line 1 (from the top down) represents study 7, line 2 represents study 3, the 3rd line is for study 2, and the final line is the pooled effect size for a fixed effects model with a 95% confidence interval.

Table 8

Model	Study name	Subgroup within study	Statistics for each study						
			Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
	2.000	EDI-B FU	0.610	0.462	0.213	-0.296	1.516	1.320	0.187
	7.000	EDI-B FU	-0.140	0.268	0.072	-0.665	0.385	-0.523	0.601
Fixed			0.049	0.232	0.054	-0.405	0.503	0.210	0.834
Random			0.140	0.363	0.132	-0.571	0.852	0.387	0.699

Figure 7

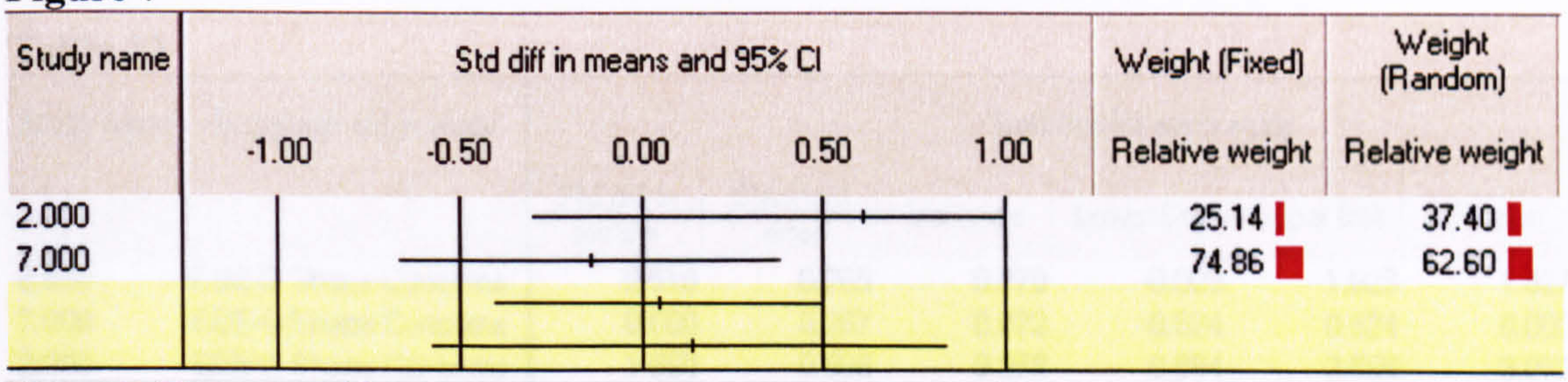


Figure 7: The second last line represents the pooled effect size for a fixed effects model, and the final line is the pooled effect size for a random effects model with a 95% confidence interval.

Table 9

Study name	Subgroup within study	Statistics for each study						
		Std diff in means	Standard error	Variance	Lower limit	Z-Value	Upper limit	p-Value
7.000	EDI - DT	0.560	0.273	0.074	0.026	2.054	1.094	0.040
3.000	EDI - DT	0.610	0.103	0.011	0.407	5.895	0.813	0.000
2.000	EDI - DT	0.950	0.474	0.225	0.020	2.003	1.880	0.045
		0.618	0.095	0.009	0.432	6.515	0.803	0.000

Figure 8

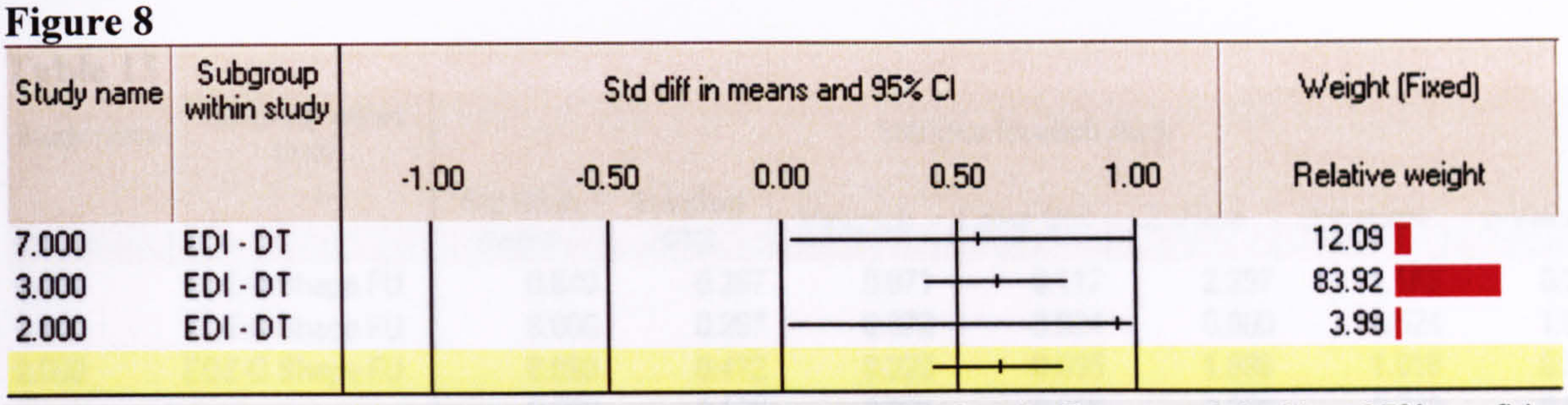


Figure 8: The last line represents the pooled effect size for a fixed effects model with a 95% confidence interval.

Table 10: EDE-Q Global

Study name	Subgroup within study	Comparison	Statistics for each study						
			Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
8.000	EDE-Q	A vs control	0.460	0.264	0.070	-0.057	0.977	1.744	0.081
7.000	EDE-Q	A vs control	0.530	0.272	0.074	-0.003	1.063	1.948	0.051
3.000	EDE-Q	A vs control	0.700	0.103	0.011	0.497	0.903	6.769	0.000
			0.653	0.091	0.008	0.475	0.831	7.191	0.000

Table 11

Study name	Subgroup within study	Statistics for each study						
		Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
8.000	EDE-Q Weight Concerns	0.480	0.264	0.070	-0.038	0.998	1.817	0.069
7.000	EDE-Q Weight Concerns	0.190	0.268	0.072	-0.335	0.715	0.709	0.478
2.000	EDE-Q Weight Concerns	0.370	0.456	0.208	-0.525	1.265	0.811	0.418
		0.342	0.174	0.030	0.001	0.683	1.966	0.049

Table 12

Study name	Subgroup within study	Statistics for each study						
		Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
8.000	EDE-Q Shape Concerns	0.510	0.265	0.070	-0.009	1.029	1.927	0.054
7.000	EDE-Q Shape Concerns	0.000	0.267	0.072	-0.524	0.524	0.000	1.000
2.000	EDE-Q Shape Concerns	1.560	0.508	0.258	0.564	2.556	3.070	0.002
		0.415	0.176	0.031	0.069	0.760	2.350	0.019

Figure 9

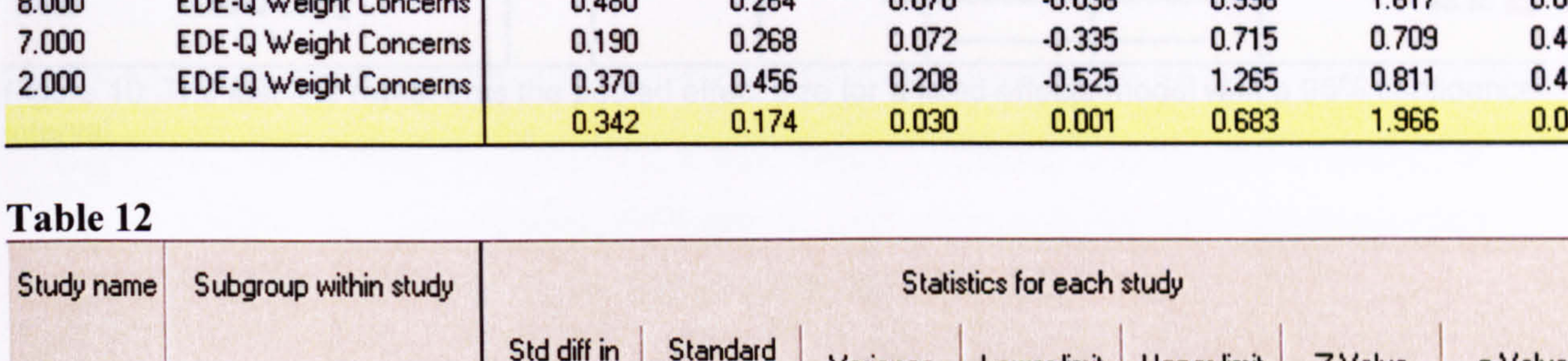


Figure 9: The last line represents the pooled effect size for a fixed effects model with a 95% confidence interval.

Table 13

Study name	Subgroup within study	Statistics for each study						
		Std diff in means	Standard error	Variance	Lower limit	Z-Value	Upper limit	p-Value
8.000	EDE-Q Shape FU	0.640	0.267	0.071	0.117	2.397	1.163	0.017
7.000	EDE-Q Shape FU	0.000	0.267	0.072	-0.524	0.000	0.524	1.000
2.000	EDE-Q Shape FU	0.890	0.472	0.223	-0.035	1.886	1.815	0.059
		0.399	0.175	0.031	0.055	2.276	0.743	0.023

Table 14

Study name	Subgroup within study	Statistics for each study						
		Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value
8.000	EDE-Q	0.510	0.265	0.070	-0.009	1.029	1.927	0.054
7.000	EDE-Q	0.410	0.270	0.073	-0.120	0.940	1.517	0.129
		0.461	0.189	0.036	0.090	0.832	2.439	0.015

Figure 10

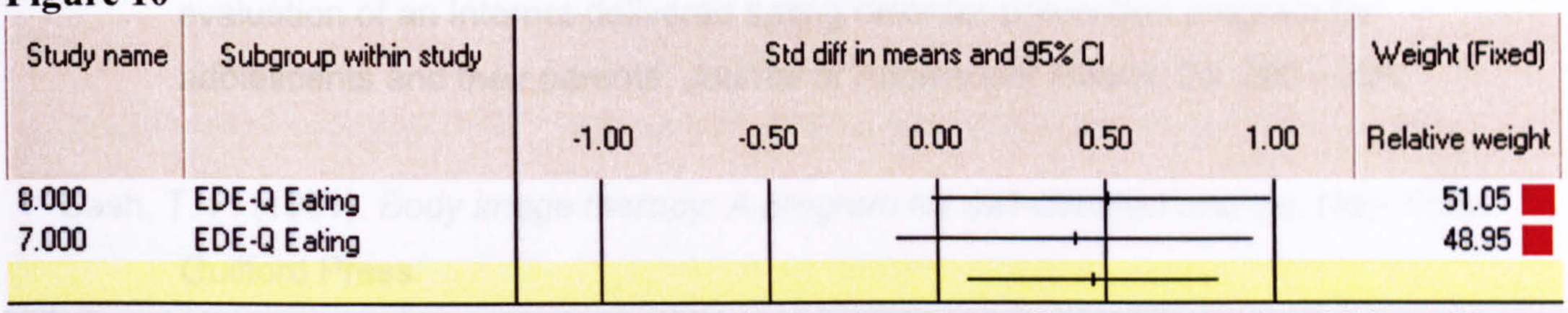


Figure 10: The last line represents the pooled effect size for a fixed effects model with a 95% confidence interval.

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