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Citation: Yfantouda, R.P. (2007). Field: smoking cessation. (Unpublished Doctoral thesis, City University London)

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FIELD: SMOKING CESSATION

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DEPARTMENT OF PSYCHOLOGY

A Thesis submitted for the requirements of the City University for the degree of Doctor of Health Psychology

March 2007

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SECTION A

PREFACE

Having worked as a Trainee Health Psychology in a stop smoking service has enabled me to develop a range of skills required to become a competent Health Psychologist. I have a better understanding of areas in which Health Psychologists have a contribution fostering me to identify opportunities for consultancy, teaching, training, research, delivering and directing interventions and supervising other professionals, which is part of my continuous professional development plan.

As a Trainee Health Psychologist I enjoyed the opportunity of working in a multi-disciplinary team employing a number of different cultural orientations to work with clients from ethnic and social minorities in a milieu in which cultural awareness is crucial. Working in smoking cessation allowed me to couple evidence based practice and advanced research skills. This enabled me to develop my skills to become a Chartered Health Psychologist. Competent Health Psychologists continuously find inspiration and compelling data to challenge previous evidence. I practiced my Health Psychology skills by planning, implementing, evaluating and disseminating research in smoking cessation which could be applied in the promotion of organisational changes and reformulation of psychological models. The importance of conducting research in smoking cessation is irrefutable. Even though approximately 70% of smokers in the UK want to quit (WHO, 1999), smoking prevalence is still very high among children (13%) adults (28%) and pregnant women (23%), (Raw, McNeill, & West, 1998). Smoking cessation guidelines for health professionals aimed to change this situation in the UK. These guidelines introduced by Raw, McNeill and West (1998) have been endorsed by key professional bodies including the British Medical Association and the Royal College of General Practitioners. They have also formed the basis for a new set of measures announced in the UK government white paper on

tobacco: "Smoking Kills". These guidelines influenced the adoption of specialist services for smokers under the NHS umbrella, giving birth to the abstinence-oriented approach. This approach is not achieving medium (3-months) and long-term (more than a year) outcomes. At present, the Department of Health (DoH) requests statistics based on 4-week quitters (during the initial stage of withdrawal from nicotine), and hence many services fail to facilitate long-term behaviour change. Smokers manage to overcome their initial withdrawal period and their physical addiction to nicotine. However, psychological addiction and factors which maintain behaviour change are not addressed after this period. As a result, services which provide one-year follow-up data show that long-term outcomes are very poor. Many studies have been conducted in the field of smoking cessation trying to foster effective behaviour change interventions for smokers to try to change this picture. However, most studies which look at predictors of maintenance of abstinence lack standardisation of the definitions and time frames for short and long-term abstinence (Stead et al., 2004). Furthermore, there is a lack of consistency in predictor variables across studies. Generalisability is questionable as most smokers who seek treatment are more addicted and more motivated. Thus, the selection criteria employed by most studies cannot be extrapolated to the general population. In order to start understanding the existing evidence base in smoking cessation and to improve my clinical practice and research competence, I have conducted a systematic review update of Law and Tang (1995) review using improved criteria. This review looked specifically at cognitive and behavioural smoking cessation interventions. Studies led by a psychologist or led by any other health professional which had a cognitive and behavioural component were included in this analysis. PsychInfo and Medline databases were searched from 1995 to 2005. Articles were hand-searched in peer reviewed journals for 2005 (tobacco control, Journal of addictions). It was surprising to note that out of fourteen hundred and twenty two studies; only 4 were short listed for quality assessment. This review suggested that employing a number of different

techniques is the way forward to success. The components of the interventions which were shared by all the selected studies were telephone follow-up/ help-line, relapse support, use of a manual with high risk relapsing situations, facilitating smokers to recognise triggers and avoid risky situations. This review has urged me to undertake research and audits aiming to inform practice in smoking cessation. The studies I undertook aimed to shed light on psychosocial and physical dependence predicting decision to quit and abstinence in outpatients smoking cessation interventions in UK. I have also conducted a study exploring these factors in Brazilian smokers and revealing their experiences of smoking and quitting using qualitative methods. The trend followed by those studies was the message that "one size fits all" smoking cessation interventions are not effective (Stead & Lancaster, 2002), but reaching a consensus in relation to more effective approaches has been complex. To date, limited data exist pertaining to the effectiveness of various smoking cessation interventions based on socio-demographic characteristics (Ocken, Emmons, Mermelstein, Perkins, Bonollo, Voorhees, and Hollis, 2000). Furthermore, characteristics of the smoking population have changed in the last ten years and smoking is indicated as the greater aggravator of social inequalities (DoH, 2004). According to Ockene et al. (2000), strategies which were previously found to be effective with middle-class adult smokers need to be revised. The impact of social contextual factors such as stress and living environment has not been fully understood. Consequently, determining the factors associated with abstinence from smoking appears to be multifaceted. Hence, the first two studies investigated which psychosocial, physical dependence factors were associated with abstinence in an NHS community based intervention in order to improve practice. Understanding those factors could influence services to target interventions to meet the needs of smokers. The possible modifications of interventions would be grounded on the understanding of the psychosocial, physical dependence and cognitive profiles of smokers attending a multi-component group intervention. The choice of intervention

lies in the fact that smoking is influenced by physiological, psychological and social factors thus, smoking cessation requires strategies targeted at each of these levels. Moreover multi-component interventions are shown to be more effective than Uni-component interventions (Shiffman, 1993).

One of the aims of the third study was to shed light on cultural differences amongst Brazilian and British smokers. Understanding these differences might be a starting point for the development of interventions which are appropriate for Brazilian smokers by moving away from standardised approaches developed in the UK which might not be culturally specific to respond to the needs of Brazilian smokers. The first aim of this study was to understand the differences between the UK and Brazilian participants for each of the significant physical and psychosocial factors addressed in the UK studies (1 & 2). This was operationalised by comparing the medians of ten case studies in Brazil (who took part in Hajek's (1989) abstinence-oriented approach) to the sample in the UK (who took part in Hajek's (1989) abstinence-oriented approach as NHS out-patients). Further to that, this study investigated the experiences of Brazilian smokers' physical and psychological addiction, factors attributed to be associated to smoking initiation, maintenance and the process of quitting smoking. These were explored qualitatively and operationalised by using content analysis. Brazilians perceived the smoking initiation process as having been positively regarded by society. There were five themes emerging from the smoking maintenance stage (I.e. "Cigarettes as a supporting persona" and "Smoking socially constructed as intolerable"), smokers tended to have a more negative perception of smoking behaviour as they moved towards the contemplating stage (i. e. "Social cognitions: Rejection, shame and guilt"). The process of quitting has been challenging but group support was perceived as a protective factor. Most female smokers were dissatisfied about their body image and increase in body weight as a result of quitting, which was concerning and should be addressed in clinical practice.

One of the strengths of this study was that it was one of a kind: this was the first study which has used quantitative and qualitative methods comparing UK and Brazilian participants. As there are no evidence-based methods in Brazil, this study could be the starting point of a number of other studies setting a standard for best practice in smoking cessation methods in Brazil.

My understanding of smoking and psychology applied to healthcare encouraged me to find opportunities to work as a consultant with community pharmacists and commissioners to monitor and evaluate pharmacist's smoking cessation interventions. This has helped another discipline to reflect on their practice and incorporate health psychology models to pharmacological support to address the needs of smokers trying to quit.

I encountered some challenges working as an applied Health Psychologist and being part of a health care organisation working in a multi-disciplinary team. Working with so many professionals with different backgrounds can be demanding especially when roles are not clearly understood by individuals in the team. However as a Health Psychologist, my degree of commitment to my clients in smoking cessation became apparent to colleagues and other disciplines could benefit from my contribution conducting teaching and training to staff and offering consultancy. By working together, we were able to catalyse each other's development. It is my belief multi-disciplinary team members can benefit from Health Psychologists' ability to effectively disseminate psychological knowledge and their clinical proficiency.

I managed to complete units of generic professional competence working as an Applied Psychologist offering smoking cessation services to groups and individuals. Through my work, I developed clinical and organisational skills. Supervision helped me to engage in reflective, ethically guided practice in my work and of my colleagues

in a multidisciplinary team. I learned to manage my practice more effectively, learning to prioritise and understand my continuing professional development needs. Through clinical practice, I implemented smoking cessation interventions. I worked with clients across the lifespan with different and complex needs. Identifying those needs was crucial for the creation of services shaped to support more dependent smokers such as diabetic outpatients, which was a new initiative.

It was part of my role to deliver training to other health professionals in smoking cessation and to teach MSc students about smoking adopting a biopsychosocial approach. I also offered a psychoeducation session on stress management to out-patients who suffered from cardiac heart disease. These patients recognised that better managing their stress has contributed to an improvement in their quality of life. It is increasingly accepted that protecting or improving quality of life is an important goal in the treatment and management of medical conditions (Bradley and Mitchell, 2000).

I also directed midwives implementation of smoking cessation interventions which helped me to be more realistic about the needs of other health professionals and some of the challenges of supervising staff from different disciplines. This also allowed midwives to have a smoking cessation service for pregnant women which was responsive to their emotional needs.

Overall, my health psychology training/Health Psychology Doctorate has been a challenging but a worthwhile process. I believe that one of the greatest challenges has been working under constant pressure managing waiting lists and heavy case loads and being able to continue to develop myself as a Scientist-Practitioner using the skills I acquired as part of my health psychology training. It has instigated an appropriate reflective process where opportunities for further training arouse. A

possible drawback of working in busy health care settings is that in many cases supervision might not be as constant as desirable but hence a challenge for Health Psychologists to work more independently maintaining good practice.

A further challenge is given the high demands of the profession, where time management and development in the different spheres of health psychology was crucial (clinical, directing interventions, research, teaching, training, supervision and consultancy competencies).

Working with a variety of client groups in a diversity of settings promoting and facilitating change and adoption of functional behaviours facilitating smoking cessation interventions and influencing best practice through research to meet the needs of my clients has been very rewarding to me and I would hope my enthusiasm for the discipline is reflected on my contribution to the field through my case studies and research competences.

Title:

"The Role of Psychosocial Factors as Predictors of Decision to Quit and Outcomes in Community Group Smoking Cessation Intervention"

SECTION B

Abstract

The UK government white paper on tobacco "Smoking Kills" set targets to reduce rates of smoking among adults from 28% to 24%; by 2010.

The success of behavioural smoking cessation programmes varies according to the type of intervention delivered (Viswesvaran & Schimidt, 1992). Group support programmes are the most commonly delivered smoking cessation interventions in the NHS, although in order to understand which methods are most effective, it is necessary to identify which psychosocial baseline factors predict successful outcomes. This study analysed the role of psychosocial predictors of decision to quit and 4-week abstinence in a community smoking cessation programme.

Methodology

Baseline assessment data was obtained from 131 participants who attended an evidence-based 7 week NHS Specialist smoking cessation clinic (based on Hajek's 1989 model) between 2001 and 2004. Questionnaires were administered at week 1 to measure socio-demographic information and the following psychosocial factors: smoking self-efficacy/temptations (Velicer, 1992), smoking motives and motivation/determination to quit (Prochaska and DiClementi, 1984) and psychological distress (General Health Questionnaire (GHQ, Goldberg, 1978). Participants' intentions and behaviour was then measured during the course of the clinic.

Results

Younger people as well as those in relationships and those in employment were more successful at quitting for 4-weeks. The psychosocial factors that significantly predicted "decision to quit" were: low motivation ($p<.01$), smoking to cope with stress and boredom ($p<.05$), to control weight ($p<.05$) and concentrate and for enjoyment ($p<.05$)

The psychosocial factors that significantly predicted abstinence were: low motivation ($p<.05$), smoking for enjoyment and in social situations ($p<.05$) and being employed outside the house ($p<.05$).

Discussion

It appears that techniques focusing on managing stress and boredom as well as addressing weight concern might increase smokers' motivation to give up smoking. Once smokers have decided to give up, behavioural strategies that focus on handling social situations are important in sustaining long term behaviour change.

The present study sheds light on the importance of moving away from standardized interventions. "One-size fits all" approaches might not suit a number of smokers who fail to adhere to the treatment. Future research is needed to understand the role of these factors across time.

INTRODUCTION

The current scenario

Over the years research has indicated that interventions that are known to be cost-effective as a means of promoting smoking cessation are not being routinely implemented (HEA 1995 and Wilson, McDonald and Hayes 1992). New smoking cessation guidelines for health professionals aim to change this situation in the UK. These guidelines introduced by Raw, McNeill and West (1998) have been endorsed by key professional bodies including the British Medical Association and the Royal College of General Practitioners. They have also formed the basis for a new set of measures announced in the UK government white paper on tobacco: "Smoking Kills". The objectives of the white paper were to reduce by 2010: the smoking rates among children from 13% to 9%; the proportion of adults who smoke from 28% to 24%; and the proportion of women who smoke during pregnancy from 23% to 15%. The measures described in the white paper include banning of tobacco advertising, taxation, discouraging sale of tobacco to young people, promoting smoke-free working and public areas, and provision of National Health Service (NHS) smoking cessation services.

The success of behavioural smoking cessation programmes varies according to the type of intervention delivered (Viswesvaran & Schimidt, 1992). Taking into account that approximately 70% of smokers in the UK want to quit (Raw, McNeil, & West, 1998) and the health and possibly the psychological benefits of quitting are substantial, meeting the challenge of facilitating smokers to become long-term quitters has enormous public health implications. Across the NHS, smoking cessation interventions are delivered through group support programmes. The purpose of smoking cessation interventions are to analyse motives for group members' behaviour, to provide opportunity for social learning, to generate emotional experiences and to impact information and teach new skills (Hajek, 1996, 1985).

According to Stead and Lancaster (2002), smoking cessation interventions normally include methods to facilitate smokers' coping during abstinence, social skills, training, contingency management, self-control and cognitive behavioural interventions. The abstinence oriented approach sees withdrawal discomfort as remediable. Smokers' self-efficacy is built up before setting a quit day and they are empowered and supported to achieve their objective of quitting smoking during initial stage of withdrawal from nicotine.

Problems with current approaches to smoking cessation

The smoking cessation literature employing the abstinence-oriented approach adopted by the NHS has evaluated medium (3-months/6-months) rather than long-term (more than a year) outcomes (Shiffman, West, Guildbert, 2004). Hence, there is no evidence that the abstinence-oriented approach can achieve long term outcomes. This is not surprising as at present, the Department of Health (DoH) requests statistics based on 4-week quitters (during the initial stage of withdrawal from nicotine), and hence many services fail to facilitate long-term behaviour change. Smokers manage to overcome their initial withdrawal period and their physical addiction to nicotine. However, psychological addiction and factors which maintain behaviour change are not addressed after this period. As a result, services which provide one-year follow-up data show that long-term outcomes are very poor (14% success rate, Hillingdon Primary Care Trust). In order to understand which methods are most effective for smoking cessation (short and long-term), it is crucial to identify which psychosocial factors are important and ensure that they are incorporated in interventions. However, due to practical and financial constraints, the NHS is unable to provide tailored interventions despite the fact that adopting a "one size fits all" approach does not work.

The way forward

In order to yield long-term abstinence following smoking cessation group support combined with nicotine replacement and/or bupropion, it is critical to be aware of interacting psychosocial factors. Once the factors playing a role in predicting decision to quit and abstinence from smoking are understood, modifications to the existing group intervention can be recommended in order to boost outcomes.

It is also important to bear in mind the role of the health professional providing this intervention and his/her motivation to make changes to his/her practice. A previous study investigating midwives willingness to fulfil their role as advisors showed that many midwives do not perceive their role as providing smoking cessation interventions and are only willing to provide brief opportunistic advice for pregnant women (see case study 5.2). It is possible that when provided with financial incentives (e.g. as in the case of Pharmacists who work as tier 2 smoking cessation advisors), the perception of their role and enthusiasm may change (see case study 3).

Previous research limitations

The message that "one size fits all" is not effective is not new (Stead & Lancaster, 2002), but reaching a consensus in relation to more effective approaches is complex. Limited data exist pertaining to the effectiveness of various smoking cessation interventions based on socio-demographic characteristics (Ocken, Emmons, Mermelstein, Perkins, Bonollo, Voorhees, and Hollis, 2000). Furthermore, characteristics of the smoking population have changed in the last ten years and smoking is indicated as the greater aggravator of social inequalities (DoH, 2004). According to Ockene et al. (2000), strategies which were previously found to be effective with middle-class adult smokers need to be revised. The impact of social contextual factors such as stress and living environment has not been fully understood. Consequently, determining the factors associated with abstinence from

smoking appears to be multifaceted. Most studies which look at predictors of maintenance of abstinence lack standardisation of the definitions and time frames for short and long-term abstinence (Stead et al., 2004). Furthermore, there is a lack of consistency in predictor variables across studies. Generalisability is questionable as most smokers who seek treatment are more addicted and more motivated. Thus, the selection criteria employed by most studies cannot be extrapolated to the general population.

Predictors of abstinence from smoking

A systematic review on relapse and maintenance issues for smoking by Ockene et al. (2000) found that the factors predicting abstinence were clustered into physiological, cognitive and social context. Physiological factors were those related to addiction (number of cigarettes smoked, previous quit attempts, and number of years smoking). The cognitive factors comprised self-efficacy, motivation and knowledge about the health effects of smoking. Social context factors were environmental influences such as social, cultural and economic challenges. These factors were shown to be consistent in predicting abstinence of smoking for 6-months in self-quitters. The socio-demographic factors predicting maintenance were: over 65 years, male, higher education, little or none alcohol use (less than 6 units for women and 10 for men), being employed, higher intake of vegetables (at least 5 a-days), Caucasian race.

The physiological factors predicting abstinence in self-quitters were smoking fewer cigarettes per day, smoking for fewer years, longer duration of previous quit attempt, older age of onset for both groups (self-quitters and treated smokers). However, treated smokers had more previous attempts, lower addiction in the Fagerstrom scale (Heatherton, Kozlowski, Frecker, Fagerstrom, 1991), smoked cigarettes of lower nicotine content, had higher pre-cessation craving and ease with prior attempt.

The social and cognitive factors predicting abstinence for both groups were higher self-efficacy but varied across both groups for other variables. Treated smokers demonstrated higher self-monitoring and a less favourable perception of typical smoker and suffered lower stress. For the self-quitters, the socio-cognitive factors predicting abstinence were different in several aspects: They had a good self-rated health, higher desire to quit, valued healthy lifestyle, suffered from less social pressures, had a higher social economic status and males engaged in more frequent physical activity. The little overlap between the two groups elucidates the difficulty of predicting which variables modulate abstinence for smokers. The consistent predictors across groups were nicotine dependence and number of cigarettes smoked.

Cognitive factors consistently predicted short and long-term maintenance. Interestingly, higher confidence and self-efficacy and less favourable perception at baseline of the typical smoker were related to long but not short-term maintenance for treated smokers (Ockene et al., 2000).

Due to the lack of consistency in previous studies, a further investigation of psychosocial factors, which predict short and long-term abstinence from smoking, is needed. Shedding light on a successful quitters profile would reveal which elements of the intervention should be reinforced. According to Shiffman (1993) in the previous ten years smoking cessation research proposed small modifications within the intervention rather than major changes.

<u>The current study</u>

The objective of the current study was to investigate which psychosocial factors were associated with abstinence in an NHS community based intervention in order to improve practice. The possible modifications would be grounded on the understanding of the psychosocial and cognitive profiles of smokers attending a

multi-component group intervention. The choice of intervention lies in the fact that smoking is influenced by physiological, psychological and social factors thus, smoking cessation requires strategies targeted at each of these levels. Moreover multi-component interventions are shown to be more effective than Uni-component interventions (Shiffman, 1993).

Factors investigated

Self-efficacy

Self-efficacy in a number of behavioural spheres supports the hypothesis that it is a reliable, independent predictor of future behaviour (Bandura, 1986). Previous research in self-efficacy (the confidence in one's ability to "organise and execute courses of action required to attain designated types of performances" (Bandura, 1986) indicated it's significant role in maintaining abstinence from smoking.

A study by Haaga and Steward (1992), pointed out that self-efficacy plays an important role in sustaining abstinence. However, a moderate degree of self-efficacy was a higher predictor of abstinence than high and low self-efficacy, even though between the low and high group, the latter was significantly more likely to stay quit. These findings were consistent with Bandura's (1986) previous findings.

High self-efficacy appears to effect behaviour by determining the initiation and sustainability of coping efforts. Baer and Lichtenstein (19888b) indicated that post-treatment self-efficacy (the confidence in one's ability to abstain from smoking in high-risk situations) consistently predicted maintenance of abstinence. In general, self-efficacy judgements have been shown to be important determinants of abstinence. Furthermore, self-efficacy expectations before treatment predicted successful quitting post-treatment (Lenders, Muddle, de Vieres, & van de Vloet, 1993; Muddle, Kok, & Stretcher, 1995; Stuart, Borland, & McMurray, 1994). However,

there is not a consensus in these findings because other studies have failed to find such effects (Coelho, 1984; Colletti, Supnick, & Payne, 1985; McIntyre, Lichtenstein, & Mermelsten, 1983).

Matheny and Weatherman (1998) found that high confidence (e.g. belief in one's coping abilities and expectations to succeed), and belief in oneself as capable and competent, predicted abstinence. Colletti and Kopel (1979) found that self-attribution was correlated with maintenance of smoking cessation. The authors suggested that this study supported the "role of cognition as predictors of maintenance of behaviour change" (Colletti & Kopel, 1979). Colletti, Supnick, and Payne (1985) found that "individuals who relapsed before 1-month follow-up had lower self-efficacy scores that those who relapsed after 3-month follow-up". Baer, Holt, and Lichtenstein (1986) found that self-efficacy predicted smoking rates but not smoking status. In other words, self-efficacy was not correlated with abstinence, but was related to reductions in smoking rates. Furthermore, they found low self-efficacy to be a good predictor of relapse. The role of self-efficacy in improving smoking cessation success has also been found in other studies (DiClemente, Prochaska, & Gilbertini, 1985; Grove, 1993; Kowalski, 1997; Lawrence & Rubinson, 1986; Mothersill et al., 1988; Strecher et al., 1995). These studies suggest that as to when to measure self-efficacy can be problematic. One possible way to improve smoking cessation interventions is to understand smokers' self-efficacy expectations before setting a quit day or engaging in the desired behaviour. Shedding light on pre-cessation self-efficacy and whether this determines implementation of the behaviour can provide us with some evidence to modify interventions. Interventions could modulate self-efficacy by attempting to sustain it when predicting abstinence, lower it when it could be a signal of unrealistic optimism and engagement on unnecessary risk and increase it when confidence is low, therefore lower the risk of relapse. According to Mudde, Kok, and Stretcher (1995), Nicki, Remington, and McDonalad (1984) and Stuart, Borland, and McMurray

(1994), self-efficacy judgements are positively influenced by smoking cessation treatments.

Measuring smoking self-efficacy: choosing the right scale

According to Ockene et al. (2000), researchers need to note clearly the theoretical constructs that they are using in their smoking interventions and the manner by which they are measured.

Microanalysis of the relationship between specific efficacy judgment and specific outcomes may provide the most precise index of the relationship between self-efficacy and behaviour. Interventions which aim to target self-efficacy must be synchronised to individual perception of risky situations and scales used must be specific, face and concurrently valid to the targeted population. In the case of smokers, a valid and reliable measure of self-efficacy would aggregate items which are specific to smokers' judgement of risk and their outcomes, hence the ability to cope with temptations before performing the behaviour (setting a quit-day). Efficacy judgements should discriminate amongst diverse challenges or contexts. Smokers should consistently distinguish situations in which they feel confident and those in which they do not feel confident (Paty, Kassel, Gnys, Hickcox, Waters, & Balabanis, 2001).

According to Dijkstra and de Vries (2000), situational self-efficacy is defined as the ability to engage in the adaptive (not smoking) behaviour in different situations. Smokers judge their ability to refrain from smoking irrespective of how they accomplish it. Thus, situational self-efficacy is concerned with the prevention of the use of the drug.

Devins and Edwards (1988) define skills self-efficacy as the perceived self-efficacy pertaining to the use of specific skills to cope with urges, which challenge behaviour.

Skills are therefore concerned with not only whether this behaviour is attained but also the means by which it was accomplished.

Relapse self-efficacy refers to the self-efficacy of being able to sustain behaviour change even when lapses occur, (Devins, 1992; Haaga and Stewart, 1992).

Dijkstra and De Vries (2000) developed another type of self-efficacy: "try self-efficacy". The rationale behind the "try self-efficacy" is that smokers have little experience of significant quit attempts and as a result find the task of imagining abstaining from that behaviour rather imponderable, (Dijkstra, Roijackers, & de Vries, 1998). According to Dijkstra et al. (1998) try self-efficacy is defined as "perceived self-efficacy to one's ability to partially or temporarily implement behaviour". It is theorised that smokers who have not experienced a serious quit attempt will tend to imagine cutting down on smoking or staying abstinent for a shorter period. This type of self-efficacy was not measured as it is not relevant to the purpose of this study. The psychosocial predictors are modelled in terms of contributing variables in the accomplishment of two dichotomous outcomes: completely quitting smoking for 4-weeks (non-smokers) or (quitters) or continuing smoking regardless of decrease in the frequency of the behaviour (smokers) or (non-quitters).

Motivation to quit

A second component which might play a role in making a quit attempt and maintaining abstinence is motivation to quit. The concept of smokers moving across stages from precontemplation to contemplation, action and maintenance in accordance to their motivation is widely used in smoking cessation interventions (Prochaska and DiClemete, 1984). Understanding motivation to quit is critical to match messages and activities to the stage of motivation of participants. The transtheoretical model of behaviour change (Prochaska et al., 1984) has been

applied to smoking cessation (DiClemente & Prochaska, 1991), head injury rehabilitation (Lam, McMahon, Priddy, Gehred-Schultz, 1988) and psychotherapy in drugs and alcohol rehabilitation services (McConnaughly, DiClemente, Prochaska and Velicer, 1989).

The Precontemplation stage in smoking is characterised by the lack of intention or desire to implement the behaviour. In the Contemplation stage, smokers start considering changing their behaviour and begin to see it as problematic. During this stage a relative state of dissonance between smokers' behaviour and cognitions takes place. The next stage is when there is a shift in the decision balance as smokers move into the action stage, acting upon their behaviour.

The progressive stage would be Maintenance as smokers establish their non-smoking status for six months or more. However they might relapse and move back to the initial stage. A major problem with this model is that it considers behaviour change as a linear progress. Lately it has become known as the spiral of change considering that people do not necessarily progress in a linear manner; there are many loops back and forth before consolidating the behaviour (Odgen, 2000). This model is similar to Heckhausen's (1991) model which identifies four stages from the initiation to maintenance of behaviour. The pre-decisional stage would be similar to Prochaska's et al. (1984) pre-contemplation stage. Post-decisional is equivalent to contemplation, actional and evaluative to action and maintenance. Heckhausen (1991) suggests that different cognitions take place in each stage. Cognitions about feasibility and desirability of the behaviour are determinants of the volition to implement the aspired behaviour. As intention to change is formed, one moves to the post-decisional stage. The decisional stage starts when the smoker targets on achieving the behaviour and ends when the behaviour change is accomplished. To be able to normalize and sustain the new behaviour, the individual evaluates his initial plan and the achieved goal.

Based on stages of change models, Miller and Rollnick (1991) developed motivational interviewing techniques. Motivation was seen as a key factor by Rollnick et al. (1995) to promote change. The aim of this technique is to identify people who are in the pre-contemplation or contemplation stages and facilitate their process of decision by addressing ambivalence increasing dissonance. By increasing cognitive dissonance and working with the individual's own barriers to behaviour change, a shift in decision balance normally takes place taking the individual to the next stage, which is normally the implementation of the behaviour. Rollnick et al.'s (1991) techniques are vastly used in smoking cessation (Miller and Rollnick, 2002). A randomised controlled trial of smoking cessation counselling after myocardial infarction (Dornelas et al., 2000) combined aspects of motivational interviewing and relapse prevention. They argued, "Patients with low self-efficacy are almost certain to relapse without intervention. Such smoking cessation programs should be part of the management of patients with myocardial infarction" (page 234).

In the smoking cessation literature, there is extensive support for the motivation factor as playing a key role is initiating and maintaining behaviour change. According to Prochaska, and Goldstein (1991) and Velicer et al. (1992), the stage of change conception is used as a predictor of smoking cessation and as an intermediate indicator of abstinence from smoking. Finding incentives to motivate pre-contemplators to quit was explored in a number of community-based interventions. No-Smoking Day is an example of a national incentive for people to quit on a given day. Finland launched a national "quit and win" contest in 1994 offering successful 4-week quitters the opportunity to enter a draw to win a trip to an exotic destination. Korhonen, Su, Korhonen, Uutela, and Puska (1997) evaluation of this contest indicated that those with less than two early quitting attempts coped better than those with more than 2 attempts. Moreover, those who received support from health

professionals and lay persons were more likely to be successful. An important point was that given the minimum input (inexpensive) of the "quit and win" contest, abstinence rates were promising. This incentive-based intervention was also implemented in Canada by Namrata, Pickett, Laundry, and Mecredy (2000) who compared abstinence rates in the control and treatment group. Smokers who took part in the contest were significantly more abstinent on 1-year follow up compared to the control group. In groups, socio-demographics characteristics (age, sex, smoking history, presence or absence of other smokers in the household and motivation to quit as indicated by one of the stages of change) were examined at baseline. The only significant predictor of abstinence based on the above factors was motivation to quit. Those in the action stage at baseline were six times more likely to have remained quit than those in all other stages combined. According to Namrata et al. (2000) a small number of participants were not in the action stage. They argue that it is possible that some participants entered the contest with the intention of quitting but were somehow put off during the short time period between contest entry and the baseline interview. These findings are very interesting as they reinforced the importance of stage-matched interventions. Moreover it provided us with some clarification on the value of appreciation and support for pre-contemplators at baseline; yet again some evidence on the role of assessment and motivational interviewing.

Depression/ psychological distress

The prevalence of clinical depression is significantly higher amongst the smokers' population when compared to non-smokers (Breslau, 1995). Likewise, smoking prevalence is significantly higher among people diagnosed with mental health problems such as depression when compared to the rest of the population. According to McNeill (2001) there is a high prevalence of smoking amongst people suffering from Schizophrenia (80%).

A number of large-scale longitudinal studies showed that depression is related to smoking initiation and experimentation (Brook, Cohen, & Brook, 1998; Brown, Lewinshohn, Seeley, & Wagner, 1996; Escobedo, Redddy, & Giovino, 1998; Ferdinand, Blum, & Verhulst, 2001, Kandel, Davies, Karus, & Yamagguchi, 1986). Furthermore, according to Tsoh et al. (2000), smokers who suffer or have a history of depression find it harder to give up smoking and are more at a higher risk of exacerbation or re-development of depression after quitting smoking. Furthermore there is sound evidence that persistence of smoking is significantly influenced by pre-morbid conditions with strong biological causes such as major depression and schizophrenia (Glassman, 1993). Several longitudinal studies point towards the relationship between smoking and depression reporting that smoking predicts the subsequent development of depressive symptoms (Brown, et al., 1996; Choi, Patten, Gilllin, Kaplan & Pierce, 1997; Goodman & Capitman, 2000; Windle & Windle, 2001; Wu, & Anthony, 1999). There is also evidence pointing towards gender differences and coping with abstinence. Blake et al. (1989) and Marlatt et al. (1988) point out that there might be gender differences in the ability to quit smoking and women are treated less successfully with methods that are not appropriate to them. Women have less confidence in their ability to quit smoking and suffer from more negative affect when relapsing than men (Blake et al., 1989). This is a significant topic as depression is a major cause for relapsing. A study by Costello et al. (1999), found depression predicted smoking uptake for girls. However, findings have been contradictory across studies. Another study by Killen et al. (1997) reported that depression predicts initiation for boys but not for girls. According to Kassel et al. (2003), smoking status and depressive symptoms may be attributable to the fact that smoking predisposes the development of depression.

Given all the evidence of complex relationships between smoking and depression this variable was added to the logistic regression model. Assessing depressive symptoms at baseline could be worthwhile, as it appears to be a strong predictor of relapsing.

Socio-demographics

Understanding the socio-economic profile of smokers attending an intervention is crucial to enabling health professionals to evaluate when it is necessary to adopt culturally, gender sensitive and age specific approaches to smoking cessation and to target ethnic and social minorities.

Smoking levels vary considerably among different ethnic groups in the UK. Bangladeshi men have the highest rate of smoking (33%) and Bangladeshi women, the highest rate of smokeless tobacco (Erens, Primatesta &Prior, 2001). There is also a huge difference in prevalence and incidence of smoking across countries. For instance, in 1990, it was estimated that a 35-years old man in the former Soviet Union had twice the risk of dying from tobacco related causes before the age of 70 years as a man in the European Union. (Doll, Peto, Wheatley, Gray, & Sutherland, 1994). Furthermore, 56% of cancer deaths and 40% of all deaths are attributed to tobacco in the former Soviet Union, compared with 47% and 35% in the European Union (Doll et al., 1994)

Recognising the health disadvantages of those below the middle of spectrum and focusing interventions on them, as well as on the most socially disadvantaged is a ethos of the Strategic Health Authority (SHA) (1998). It was stated that: "when doing smoking cessation with a rough sleeper compared to a married hairdresser with children, different techniques will be used" (SHA, 1998, page 15). Moreover, according to the SHA "a homogenous society occupation remains the main significant axis of differentiation and the overall gradient is shorter in the UK. When there is a very complex social division of labour and great heterogeneity, the gradient

is longer. This strongly suggests that disadvantage is contagious and that the constraints and opportunities generated by the different aspects of social differences need to be summed to be able to understand the nature of the differences" (page 16). Furthermore, smoking aggravates social inequalities. People in lower socio-economic groups normally suffer from poorer health and have a shorter life expectancy. Smoking has also been identified as a primary reason for the gap in healthy life expectancy between rich and poor (Department of Health, 1998). Smoking is a very expensive habit as a 20 pack a-day-smoker will spend approximately £1800-00/year with his/her habit. The more economically disadvantaged smokers normally spend 15% of their weekly income on cigarettes compared to the average 2% for middle-class smokers (Jarvis, 2001). To make matters worst, most smuggled and forfeit cigarettes are more hazardous than the legal ones as they contain more poisonous chemicals. Even smuggled cigarettes are estimated to cost £950-00/year (Bates, 2000). Smoking prevalence has not changed in the last ten years amongst the least privileged. The Action on Smoking and Health (ASH) and the Health Development Agency (HDA) developed a programme to recognize effective strategies to decrease smoking in those groups. The HDA report (1998) highlighted that poor living conditions are linked to higher rates of smoking among children. Longitudinal studies suggested that individuals who initiate smoking when young are likely to continue the behaviour throughout their lives (Lancaster, & Stead, 2002; Anthonisen, Connett, & Kiley, 1994).Whilst it is crucial to consider those major public health issues, health, education, employment and social policies to prevent the adoption of risky behaviours, it is equally important to understand these populations when targeting behaviour change.

Higher social economic groups are more successful in quitting smoking but this is not indicative of higher motivation to quit as lower socio-economic groups reveal similar motivational levels (Jarvis, 2001).

A number of studies point towards gender differences indicating that women have more difficulty stopping smoking as compared to men (West & Zimmerman, 1987; Lorber, 1994). Tobacco control has not fully addressed the issue of gender. Is spite of the fact that the tobacco industry identified that women represent a different market than men, conventional tobacco control has failed many women because it has too often been designed with men in mind (International Network of Women Against Tobacco (INWAT), 2003). Women start smoking at a later age compared to men. Smoking starts sooner for women of higher socio-economic status but is spread to all sections of society. However, women of higher economic status who started smoking sooner than the rest are more likely to quit, INWAT (1999), They are also more concerned about weight gain (Razavi et al., 1999).

Among men, smoking is responsible for over half the excess of risk of premature death between the social classes (Jarvis & Wardle, 1999). Lung cancer is linked to premature deaths amongst unskilled manual work. Unskilled men who are manual workers have five times higher prevalence of lung cancer than professionals (Jarvis et al., 1999). Furthermore, smoking increases the risk of erectile dysfunction by around 50% (Whitehead, 1990).

According to Etter, Prokhorov, and Perneger (2002), gender differences in psychological variables are not significant indicating that smoking behaviour is regulated by similar mechanism in both genders. However, they also indicated that women were less confident that they would manage to quit than men. However, women reported more drawbacks of smoking. The fact that women were capable of restraining themselves from smoking and revealed more self-control could be a potential explanation for their lower smoking rates. Nevertheless, while men and women reveal equivalent withdrawal symptoms following nicotine abstinence, women

are more likely to relapse. According to Al'Absi (2004), women are more likely to start smoking again because of the psychological side-effects brought from quitting, while men are more likely to succumb to biological triggers such an exposure to the smell of cigarette smoking. Al'Absi (2004) claims that men suffer from higher levels of stress and accordingly, have higher levels of cortisol, which is "very pervasive, affecting the brain, the immune system and the peripheral system". Al'Absi (2004) further reinforces the argument of tailored interventions for specific groups *"when we treat men and women, we have to be concerned about how they experience these symptoms and tailor our treatment accordingly"* (pages 87-88).

Stress/ psychological motives for smoking

Stress has been defined differently across disciplines such as psychology, physiology and sociology. According to psychologists Carver, Scheier, and Weintraub (1989) stress is "the individual subjective appraisal of their abilities to cope effectively with external demands" (page 13). According to sociologists Chrousos and Gold (1992) and Cohen, Kessle, and Gordon (1995), "stress takes place when we are exposed to situations in which environmental demands tax the adaptive capacity of an organism" (page 24). The stress responses are the emotional, cognitive and physiological changes following a stressor. Cannon (1932) and Selye (1952) adopt a medical approach: stress is the response of specific physiological systems to homeostatic challenge, whether of a psychological or physical nature. Emotional responses to stress usually evoke mood swings which could be positive or negative and can be measured through self-reports. Corticotropin-releasing factor (CRF), norepinephrine (NE) and neuropeptide (NPY) are also involved in the physiological stress response.

Many studies associate stress with smoking. A study by Felitti (1998) revealed that childhood abuse and household dysfunction increase the risk of smoking. Adverse

childhood experiences, divorce and negative life events, acute and chronic stressors and perceived stress are all factors associated with smoking uptake (Anda et al., 1999; Patton et al., 1999; Siquira, Diab, Bodian & Rolnitzky, 2000). The relationship between smoking and stress appears to be stronger for girls, especially family-related stress and smoking (Byren, & Mazanov, 1999). There is also overwhelming evidence of the association between negative life events, effective stress and smoking experimentation (Orlando, Ellickson, & Jinnet, 2001; Hirschman, Leventhal, & Glynn, 1984).

Even though most studies investigated stress as an antecedent to smoking onset, there are also studies pointing towards stress as a result of smoking behaviour (Gorsuch, & Butter, 1976; Kandel, Klessler & Magulies, 1978). Other studies explored the relationship between quitting smoking or relapsing and stress. According to Parrott (1995, 1999), there are numerous grounds to predict decreases in stress and negative affect as consequence of smoking cessation. Social stigma associated with smoking might function as a stressor and contributing factor for negative affect. Research indicates that cigarette smoking plays a significant role as a perceived stress aggravator triggered by acute withdrawal between cigarettes. If this hypothesis is true, quitters should suffer from lower stress levels. According to Stewart, King, Killen, and Ritter (1995), within a formal smoking cessation programme, well-being was the highest predictor of abstinence on 6-months follow-up. Another study showed that successful self-motivated quitters showed significant decreases in perceived stress (Cohen, & Linchtenstein, 1990).

Several studies support smoking as a coping strategy against stress which would make quitting smoking more complex. A study by Revell, Warburton, and Wesnes (1985), reported that smoking helps individuals cope with stress. Smoking cessation is therefore related to elevated incidence of depressive episodes, predominantly among those with a medical history of depression (Covey, Glassman, & Stetner,

1997). Dysphoria caused by smoking cessation is short-lived (Hughes, 1990) however, if smokers cannot rely on smoking as a coping strategy, their perceived stress and negative affect could be long lasting (Chassin et al., 2002).

These studies advocated the importance of understanding the complex relationship between smoking and stress: stress as a predictor of smoking behaviour, smoking as a coping mechanism with perceived stress and links between changes in stress levels following smoking cessation and relapse.

A study by Chassin et al. (2002) showed that quitting smoking significant decreased stress. It would therefore be questionable whether not managing to quit would by contrast increase stress and cognitive dissonance. Targeting psychological sequelae of smoking cessation and relapse should be part of good practice in smoking cessation interventions.

Characteristics of specialist smoking cessation intervention

A specialist clinic run by specialist smoking cessation advisors offering behavioural support and advice is effective in aiding smoking cessation (Raw, McNeill, and West, 1998). In smokers who are willing to quit smoking , a support programme, which entails regular contact for four weeks or more given by specialists employed and trained for the objective (irrespective of professional field) enables approximately 1 in 20 attempts to quit to succeed for six months or more that would not otherwise have done so (Lancaster, & Stead, 2002). A substantial study in the USA found that, with intensive protracted behavioural support, combined with persuasive use of NRT, success rates were high. Abstinence was accomplished with approximately 25% of smokers treated who stayed quit for up to 1-year. Those smokers would not otherwise have done so (Anthonisen, Connett, & Kiley, 1994).

Combining behavioural support with nicotine replacement therapy/bupropion – the withdrawal oriented approach

To be able to understand the withdrawal-oriented approach it is fundamental to understand withdrawal. Withdrawal is a product of physical or psychological adaptation to long-term drug use. Physical and mental changes occur following the interruption/termination of drug use. The body takes normally 4 to 6 weeks to eliminate tobacco components (Bullen, Walker, & Wallace-Bell, 2006)

Experience of withdrawal symptoms or a need to take the substance to relieve/avoid withdrawal symptoms takes place during the initial period of abstinence. Nicotine replacement therapy "takes the edge" of smoking and withdrawal symptoms (Bullen et al., 2006).

Nicotine Replacement Therapy (NRT)

According to Law, and Tang (1994) NRT significantly improves the outcome of a range of behavioural interventions, from simple advice to intensive clinic based programmes. In more than 50% of placebo controlled studies, adding nicotine replacement therapy doubles the chances of success of other treatments (McRobbie & Hajek, 2004). According to a systematic review by Silagy, Mant, and Fowler (2000), NRT reduces the urges to smoke and other withdrawal symptoms following cessation. Moreover, the majority of GPs convey that NRT is effective and encourage their patients to use it. A recent survey of GPs and NRT, found that most recognize it to be effective and either recommend it or prescribe it (McEwen & West , 2000). However, evidence of NRT use is limited to adult smokers of 10 or more cigarettes per day who are not suffering from apparent smoking related diseases. There is currently insufficient research on the use of NRT in light smokers, smokers under the age of 18, pregnant smokers, and inpatient smokers. Furthermore, evidence on the

effectiveness of NRT among smokers with manifest smoking related diseases is varied (Lewis, Piasecki, & Fiore, 1998).

NRT with behavioural support

According to Raw, McNeill, and West (1998), support from health professionals is probably not essential for NRT to be effective although it is important in its own right. Placebo controlled trials of NRT in a reproduced over the counter (OTC) setting delivered analogous effect sizes to studies offering intensive behavioural support (Hays, Croghan, & Schroeder, 1999; Davidson, Epstein, & Burt, 1998*)*. However, to date studies of this type have typically involved a substantial amount of contact and monitoring which would not occur in true OTC settings. A study by Law, Sacks, Sze, and Chalmber (1987), advocated that intensive behavioural support is essential for NRT to work.

Brupropion (Zyban)

Bupropion is an anti-depressant medication widely used as a treatment for smoking cessation. It was originally used to treat depression in the United States. However, in smoking cessation a much smaller dose is used and it is quite efficacious (Jorenby, Leishow, & Nides, 1997).

According to Jorenby et al. (1997) use of nicotine-replacement therapies and the antidepressant bupropion helps people stop smoking. In this study, a double-blind, placebo-controlled comparison of sustained-release bupropion (244 subjects), a nicotine patch (244 subjects), bupropion and a nicotine patch (245 subjects), and placebo (160 subjects) was conducted for smoking cessation. The abstinence rates at 12-months were 15.6 percent in the placebo group, as compared with 16.4 percent in the nicotine-patch group, 30.3 percent in the bupropion group ($P<0.001$), and 35.5 percent in the group given bupropion and the nicotine patch ($P<0.001$). They

concluded that treatment with sustained-release bupropion alone or in combination with a nicotine patch resulted in significantly higher long-term rates of smoking cessation than use of either the nicotine patch alone or placebo. However, there is not enough evidence to argue that it is more effective than NRT. One randomised placebo controlled trial has found a higher 1-year sustained abstinence rate with bupropion than patch in combination with behavioural support (Jorenby, Leischow, & Nides, 1999).

There is evidence from a meta-analysis of the two published trials of this drug that it improves 12-month sustained abstinence rates and reduces the severity of withdrawal symptoms (Hurt, Sachs, & Glover, 1997; Jorenby et al., 1997). Unfortunately as any drug, its use features a degree of risk. In spite of the false awareness call from sensationalist journalists, the risk of seizures is broadly similar to other antidepressants which are 1 in 1000 (GlaxoWellcome, 2000). Likewise Nicotine Replacement Therapy (NRT), the evidence of its effectiveness is narrowed to medium to heavy smokers who receive adjunct behavioural support (West, McNeill, & Raw, 2000).

<u>The Withdrawal-Oriented Approach (Hajek, 1989)</u>

More addicted smokers (>10 cigarettes a day and have a Carbon Monoxide (CO) reading > 15) are normally treated in the context of a group. The rationale for offering group support is its efficiency, and because it is believed that group members can motivate each other to maintain an attempt to stop (Hajek, 1989).

According to Hajek (1989) five weekly sessions should be offered over four weeks after the quit date: "The first session is introductory with participants expected to stop after it and by the second session. NRT is distributed and discussed at the first session. From the second session meetings focus primarily on input from group members. They discuss their experiences of the past week, including difficulties

encountered, and offer mutual encouragement and support. Sessions are client (not therapist) oriented, meaning that they emphasize mutual support rather than didactic input from the therapist. The therapist facilitates client interaction and mutual support outside formal sessions. During sessions there can be several conversations at the same time and, with this approach, groups can accommodate 20-25 participants and tend to work better with such numbers".

The CO levels in expired air measures should be taken before starting the session in quit-day (baseline) and in every session subsequent to that. Usually one month after the intervention terminates, ex-smokers are normally offered follow-up sessions, which ideally could take place two, three, six, and 12 months from the beginning of the course. Hajek (1989) recommended that sessions should take an average of one hour and should be run by 2 facilitators specially trained to deliver the intervention.

The Withdrawal-Oriented Treatment for Smokers *(Hajek, 1989)* recognises that withdrawal discomfort is the major remediable obstacle to quitting in dependent smokers. The goal of treatment is to maintain abstinence during initial withdrawal discomfort. The rational is to offer behavioural support and withdrawal relief intervention (NRT, Bupropion).

Methods to enhance withdrawal relief are behavioural group support and withdrawal relief medication (NRT/Bupropion).

There are an increasing number of studies comparing the efficacy of nicotine replacement therapy in combination with two or more levels of behavioural treatment. The sample of such studies is satisfactorily large to allow a significant meta-analysis (Goldstein, Niaura, Follick & Abrams, 1989). Most advocate for the efficacy of the multi-component treatment combining behavioural support and nicotine replacement therapy/Bupropion.

Hypotheses

1. The first hypothesis is: high levels of motivation, higher socio-economic status, lower psychological distress and higher self efficacy are the best predictors of a decision to quit and attendance at quit day.
2. The second hypothesis is: high motivation, higher socio-economic status, higher self efficacy, lower psychological distress and not smoking as a coping strategy, are best predictors of abstinent at 7-weeks.

METHODOLOGY

Recruitment and Procedure

Smokers were either referred to the NHS Stop Smoking Service by their GP's, Practice Nurses, Hospital Doctors or self-referred to a free helpline. They were offered a choice of 1) One to one sessions by Specialist Advisor 2) One to one support by Pharmacist 3) Out-patient one to one support by Specialist Advisor to smokers with diabetes 4) Drop-in sessions by Specialist Advisor and 5) Community Group support by Specialist Advisors.

This study assessed participants who attended group support in combination with pharmaceutical therapy. The inclusion criteria were participants who smoked more than 10 cigarettes/day, thus the intervention was targeted to more addicted smokers. Smokers in the present study, following advice, made their choice of NRT. This practice is in accordance to the National Institute of Clinical Excellence (NICE) guidelines (2000). Moreover, there is currently limited scientific evidence for matching particular smokers to particular forms of NRT (Bull, 1999). Many diagrams and decision aids have been developed to assist health professionals and smokers to make an informed selection of NRT products (gum, patch, inhalator, nasal spray,

lozenge, sublingual microtablets). However, the basis for that is simply common sense (Raw, McNeill, & West, 1998). Zyban was also used by a number of participants.

Smokers who opted for group support were sent an invitation pack with a self-addressed envelope with a stamp. The invitation pack contained leaflets and booklets with information about smoking and health, medication to "take the edge" off giving up smoking (Nicotine Replacement Therapy and Bupropion "Zyban"), information about the abstinence-oriented approach (Hajek, 1991) and a questionnaire. In order to join one of the group support sessions they had to fill in the questionnaire and post it back. The return rate of questionnaires was 63% (N=731). Data was collected from the setting up of the service (March, 2000) until November 2004. However, due to incomplete questionnaire data, 131 cases were selected for logistic regression analysis.

The questionnaire

In addition to socio-demographic information, the questionnaire assessed several psychosocial and physiological constructs. Only the constructs relevant to the present study are included.

Socio demographic information was collected according to the Department of Health requirements: age, gender, marital status, working status, educational qualifications and ethnic group.

For the purpose of this study, one self-efficacy measure was taken before setting a quit-day 1) Smoking Self-Efficacy and Temptation Scale (Velicer, 1992).

The short form of Velicer, DiClemente, Rossi, and Prochaska (1990) Smoking Self-Efficacy & Temptation scale is considered context specific using a multidimensional structure. The context specificity in this scale corresponds to specific typologies of

smoking patters and relapse situations, Shiffman et al. (2001). Smoking Self-efficacy judgements are task specific, "refraining" or "not refraining" from smoking. Within this dichotomous decision-making there are 4 tasks, which define expectations: situational self-efficacy, skills, relapse and recovery. Velicer et al. (1990) cluster situation self-efficacy in the following domains: positive/social, negative/emotional and addictive/habitual situations.

As self-efficacy in this study is measured before making this specific quit attempt in the context of treatment, this domain of self-efficacy was not examined. Relapse self-efficacy is a useful during or post-treatment measurement, which could predict long-term abstinence.

For the purpose of the present study, stress was included in the regression model hypothesising those individuals who suffer from higher perceived stress, smoke as a coping mechanism to deal with their stress, are less likely to quit smoking. Stress-related questions are part of Velicer (1992) Self-efficacy/temptation questionnaire questions include: "How temped you may be to smoke – when I am very anxious and stressed". They are also part of smoking motives, i.e. "I smoke to cope with stress". If stress at baseline and smoking is revealed as a significant coping mechanism predicting relapse, strategies should be put in place to minimise stress and help smokers to develop alternative and functional coping strategies. A further consideration is that "relapsers" who underwent multiple quit attempts might have higher levels of stress as a result of acknowledging their incapacity to achieve their goal and of smoking itself, which increases physiological stress.

The psychosocial constructs were as follows: Velicer (1992) Smoking *Self-Efficacy/Temptation* (short-form). This questionnaire contains 9 questions, which could be clustered into: positive affect/social situation (3 questions), i.e. how tempting with coffee while relaxing, negative affect situations (3 questions) i.e. how tempted

when angry or when stressed, habitual/craving situation (3 questions) i.e. tempted when first get up. All self efficacy items were measured on a 5-point likert scale: 1 – not at all tempted, 2 – not very tempted, 3 – moderately tempted, 4 – very tempted, 5 – extremely tempted.

Quitting history was assessed by the following questions: "When was your last quit attempt?" and "what was the duration of your longest quit attempt?" recorded in number of days.

Smoking motives was assessed by questions about situations smokers believe they are more likely to miss most when they stop and are divided into social (i.e. Smoking helps me socialise), physical (i.e. Smoking helps my concentration), psychological (smoking helps me to cope with boredom). This questionnaire was also a Likert scale ranging from 1 – very much to 5 – not at all.

Motivation/determination to quit questionnaire was based on Prochaska and DiClemente (1984) and measured readiness to change and implement new behaviour, i.e. "How important is to give up smoking?" The scale ranged from 1- extremely important to 5 – not at all important.

Psychological distress was measured using the General Health Questionnaire designed by Goldberg (1978). This questionnaire is used to detect non-psychotic psychiatric disorders in people in medical settings through self-report. It is used to identify cases and to measure degree of disorder and risk. Each of the items asks whether the respondent has experienced a particular symptom of item of behaviour using a four point scale ranging from "less than usual" to "much more than usual".

Study design

This was a cross-sectional design.

The intervention

Before attending group support, participants were screened for mental health problems and motivation to quit as they attended a half-an-hour clinical interview. Self-efficacy was also assessed. Information about treatment was provided as well as the opportunity for prospective participants to ask questions and talk about any fears and expectations. Smokers suffering from pathological mental health problems were referred to a clinical psychologist and excluded from the group. Dorovan (1988) supports the use of assessments in smoking cessation interventions staged that the aim of assessments should be as follows:

1. To foster a description of the problems with enough clarity to foster both clinical understanding and diagnosis. In order to achieve a better understanding of patient's problems, a questionnaire is used. This questionnaire contains various scales such as the general health questionnaire (Rosenberg, 1989), Velicier Self Efficacy/ Smoking temptations (1992), Prochaska and DiClemente Motivation to quit (1984), Fagerstrom Test for Nicotine Dependence (Heatherton et al., 1991) amongst others.

2. To identify the behavioural, physiological and psychological conditions that promote and maintain the problem behaviour

3. To select appropriate treatment tailored to the specific needs of the client. During this phase it is critical to understand patient's motivation to quit and when appropriate use motivational interviewing techniques.

4. To predict and evaluate the treatment process and outcome. To be able to predict the best outcome of the treatment it is important to understand which psychological, physiological and social factors are best predictors of the behaviour. Further to that it is vital to promote change by utilising this knowledge to better help patients to make a successful transition.

Following the assessment session, the format of the weekly smoking cessation programme was:

- Week 1: Information session
- Week 2: Preparation
- Weeks 3: Quit day
- Weeks 4-6: Support Sessions
- Week 7: Final session (before relapse prevention)
- Week 8: (optional) One month after session 2 (Relapse prevention)

Following session 3, participants completed a withdrawal symptoms questionnaire assessing clinical withdrawal during each session and in every subsequent session after quit day: depression, anxiety, sleepiness, headache (which is not a clinical withdrawal symptom but might occur when people take Zyban), constipation, irritability and poor concentration. Urges to smoke were also monitored through a questionnaire on a weekly basis. Biochemical validation (carbon monoxide monitoring) as well as self-reported abstinence status was conducted and recorded on a weekly basis.

RESULTS

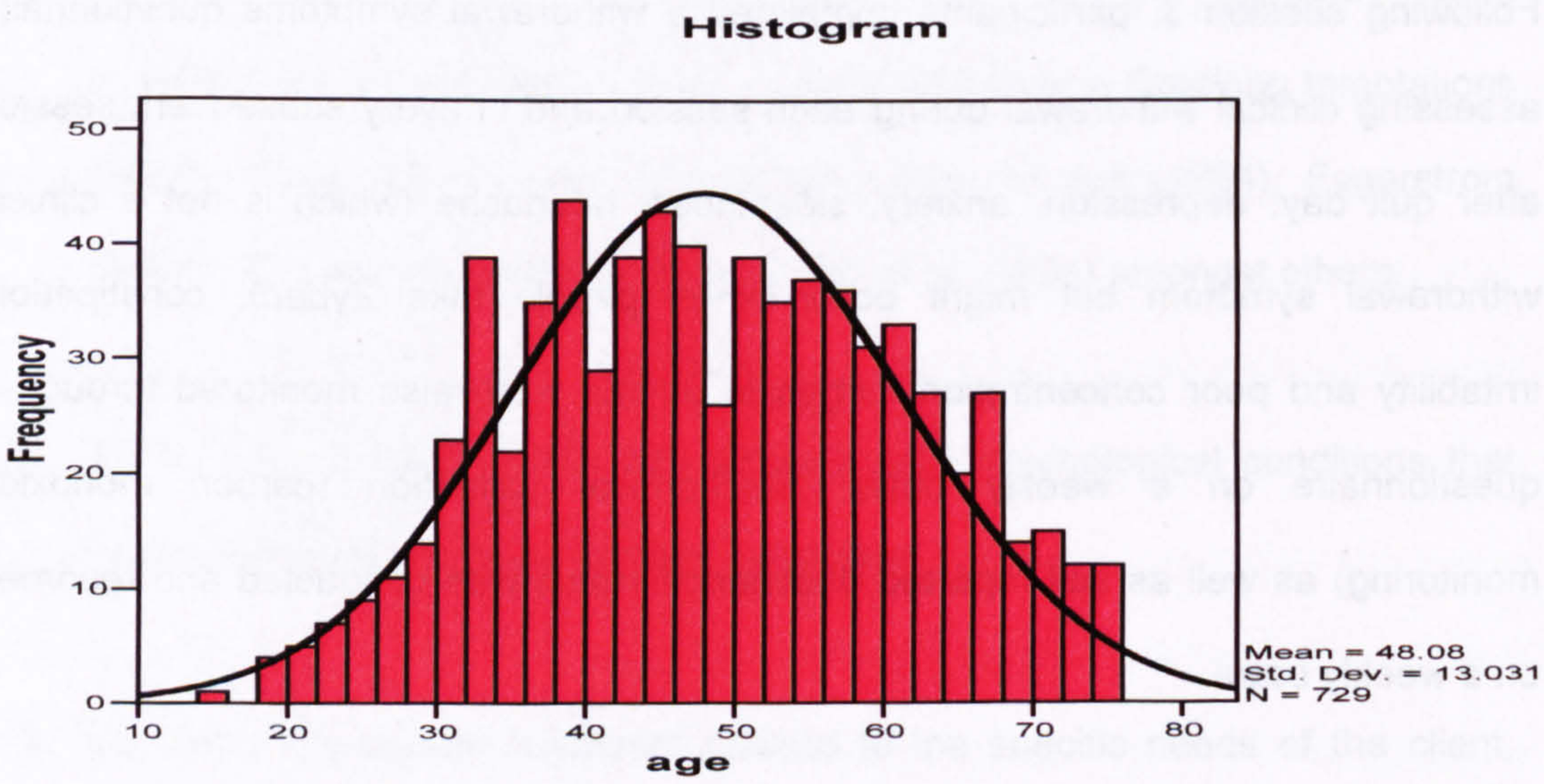
Participants

The data for the present analyses came from Smoking Cessation Specialist clinics from March 2001 to November 2004. A total of 39 groups of smokers were included in the current study with an average of 17 people in each group.

A total of 50% of those invited attend session 1. Out of those attending the first session, 87% set a quit date (attending session 3). Seven hundred and twenty nine people took part in these groups but only 131 cases completed all questionnaires so were included in the analyses.

Table 1: Mean, Standard Deviation and Range for the Age of participants.

N	Valid	729
	Missing	2
Mean		48.08
Std. Deviation		13.031
Range		61



The majority of patients (68%) were married or living with partner. A high proportion of partners also smoked (42.7%).

The groups were unevenly distributed across occupational status; 46.2% of participants were in paid employment, 13.4% unemployed, and 10.8% looking after the home, 20.4% retired and the remaining (12.8%) were either students or other.

The majority of the participants had either no education or had GCSE (65.3%), 12.3% had A' levels, 9.2% had a degree and 13.2% classified themselves as other.

A great majority of participants were White British (84.4%), 5.5% were Irish, 2.2% were Indian and the remaining 7.9% were of different ethnic backgrounds (Other White, White and Black, Caribbean, White and Black African, White and Asian, Any Other Mixed, Pakistani, Bangladeshi, Any Other Asian, Caribbean, African, Any Other Ethnic Background and not stated).

Statistical analyses

Chi-square was employed to identify whether there is a significant association between socio-demographic factors (age, ethnicity, marital status, education and occupational status), partners' smoking status and being abstinent or not being abstinent (relapsing) from smoking following treatment.

To predict to what extent past quitting attempts , socio-demographic factors, smoking motives, self-efficacy/temptations to smoke and motivation influence 4-weeks abstinence following behavioural and pharmacological smoking cessation intervention, these variables were entered in a blockwise Logistic Regression analyses. The first block entered was socio-demographic comprising categorical and numeric data (age, gender, marital status, partner smoking status, job status, educational level, ethnicity) the second was smoking motives, the third was self-efficacy/temptations and finally prior history of smoking and motivation to quit. The dependant variables were a dichotomy: abstinence at 4 weeks (self-report and

Carbon Monoxide validated) and drop outs and relapsers. The number of cases selected and included in the analyses was 131 out of 731. In all analyses, $p<0.05$ was considered statistically significant. In case significance level was above that and below o<0.005 or 0.001, it was reported.

Socio-demographic characteristics and cessation rates

Cessation rates and gender

In total, a hundred and forty six males (46.3%) were abstinent at quit plus 4 weeks and 169 dropped out or failed (44.2%). Two hundred females (48.7%) were abstinent at quit plus 4 weeks and 213 dropped out or failed (51.3%). Of those included in the analyses, seventy-three males (56%) and fifty-eight females (44%) were abstinent at quit plus weeks.

Cessation rates and age

There was a significant association between age and cessation rates, (X^2= 78.52; $p<0.046$).

Cessation rates and marital status

Single people were more likely to drop out or fail in smoking cessation treatment (64.1%). There was a significant association between marital status and cessation rates (X^2=9.077; $p<0.028$).

Cessation rates and educational qualification

There were no significant association between cessation rates and educational qualification (X^2=3.018; $p>0.05$).

Cessation rates and ethnic background

There was not a significant association between ethnicity and cessation rates ($(X^2=21.658; p>0.05)$.

Logistic Regression: Predicting attendance and abstinence

A logistic regression was conducted to investigate which were the best predictors of abstinence and attendance for the stop smoking programme.

Table 2:Decision to quit and abstinence

	Enrolled in the programme		set a quit date
abstinent at 1mth			
N	131	99	77
%		76	59

Predictors of decision to quit – table 2

	Beta B	**Wald**	**Odds Ratio OR**	**95% Confidence Interval CI**
Occupational Status				
Job status .54-62.28	1.46	1.9	5.322 *	
Partner smoking status .43-4.42	0.327	0.304	1.386	
Psychosocial factors				
Self Efficacy .89-1.08	-0.016	0.107	0.984	
Motivation 1.09-1.67	0.297	7.509	1.346**	

	B	Wald	OR
CI			
GHQ .97-1.04	0.005	0.116	1.005
Psychological motives 1.02-2.23	0.41	4.21	1.506 *
Physical motives .54-.98	-.32	4.356	0.729*
Social motives 1.27-2.47	0.573	11.437	1.774**

* significance <0.005

** significance <0.001

The above table indicates that people who are employed as opposed to those looking after the home (housewives/husbands) decide to quit and set a quit day and attend session 3 (quit day).

Psychosocial factors also were shown to play an important role in decision to quit. Accordingly, as motivation increases, decision to quit increases. High scores on motivation have been coded inversely. Hence high scores indicate low motivation and low scores indicate high motivation.

Results shows that low motivation predicts not deciding to set a quit day and attend session 3 (OR = 1.346, p<.01, CI95%1.09-1.67). This confirms the first hypothesis.

Self-efficacy was not a significant predictor of decision to quit. However, as self-efficacy increases, decision to quit increases (OR =. 0.984, p>.05, CI95%.89-1.08)

People who smoke for psychological motives such as to cope with stress and boredom are less likely to make a decision to quit (OR= 1.506, p<.05, CI95% 1.02-2.23).

Physical motives were also found to be significant predictors of decision to quit. People who smoke to control weight and to concentrate are less likely to set a quit day and attend session 3. For a small decrease in smoking as a motive to cope with weight gain and concentration, there is an increase in decision to quit (OR=0.729, p<.05, CI95% .54-.98).

People who smoke to socialize and for enjoyment, are significantly less likely to make a decision to quit (OR=1.774, p<.005, CI95% 1.27-2.47)

Table 3: Predictors of abstinence by the end of the programme

	B	Wald	OR 95% CI
Occupational Status			
Job status (employment) 0.29-13.1968	0.1607	0.997	1.861
Partner smoking status 0.396-2.6989	0.033829	0.00478	1.034408
Psychosocial factors			
Self Efficacy 0.918-1.058	-0.01409	0.151349	0.986
	B	**Wald**	**OR 95% CI**
Motivation 1.0189-1.407	0.179957	4.768678	1.197166 *

GHQ 0.9637-1.0152	-0.01096	0.679951	0.989104
Psychological motives 1.1106-1.8401	0.357357	7.695676	1.429546
Physical motives 0.7855-1.2478	-0.00999	0.007154	0.990064
Social motives 1.1106-1.840	0.357357	7.695676	1.429546**

* significance <0.005
** significance <0.001

Table 2 indicates that people who are employed are more likely to stay abstinent until the end of the programme (OR =1.861, p>.05, CI95% 0.29-13.1968).

The only significant predictors of abstinence were motivation to quit and social motives. Motivated smokers are more likely to stay abstinent by the end of the programme. Accordingly, as motivation increases, so does abstinence (OR = 1.197166, p<.05, CI95% 1.019-1.407)

The less people smoked triggered by social situations and out of pleasure, the more likely they were to stay quit at 4-weeks (OR =1.429546, p<.005, CI95% 1.1106-1.840).

DISCUSSION

This study provides some evidence to support the argument that a "one size fits all" approach adopted by the NHS does not address the needs of smokers. This section discussed the findings in relation to the hypotheses, the limitations of the present study, the implications for practice and conclusions.

The role of socio-demographic factors

The first hypothesis was that higher socio-economic status predicted decision to quit and attendance at quit day. Those hypotheses were not proved. It might be because the population in this study was skewed in occupational status and education. Even though the majority of smokers were in paid employment (46.2%), the great majority had either no education or GCSE (65.3%). There is a possibility that many smokers in this study had manual jobs. Further socio-demographic findings were that age was associated with cessation. This is not surprising given that even though the prevalence of smoking has changed in the past 10 years, smoking incidence has not changed. In spite of bans on smoking and the behaviour becoming more and more unsocial, many youngsters are still smoking. In fact, many children try their first cigarette whilst at primary school (Murray et al., 1984; Swan et al., 1991) Lader and Matheson (1991) reviewed the data from national surveys between 1982 and 1990 and indicated that smoking behaviour in 11 to 15 years old school boys, including those boys who have just tried a cigarette had fallen from 55 to 44 per cent. There was a similar decrease in school girls smoking which feel from 55 to 44 per cent. In spite of the decrease, this is not so encouraging as it was less that the decrease of shown in adult smoking. Statistics showed that in 1990 nearly a half of the school children had at least tried a cigarette (DoH, 1990). This highlights the need to reflect on the publicity used by the NHS, which uses fear tactics which have shown to be

more successful with older adults, therefore failing to target younger populations (Hale, & Dillard,1995). The inefficiency of the strategies currently used is reflected on the age of the population attending NHS group support, which tends to be older. In this study, the great majority of smokers are above 50 years old. If this pattern continues to repeat itself across services in UK this could be a public health issue. A major problem with this kind of publicity is that it does not recognise the propensity younger smokers have to engage in unrealistic optimism. Publicity which is empowering and displays smoking as a non-desirable, unattractive behaviour is more likely to have an appeal to younger populations. According to the social learning theory (Rotter, 1954), we learn to smoke and drink by associating smoking and drinking with attractive characteristics such as "it helps me to relax", "it helps me to socialise", "it makes me look cool", etc, etc. As a result in order to stop smoking, these cognitions must be addressed.

<u>Partner's smoking status</u>

Contrary to previous studies, partner smoking status did not make a difference. According to this study, single people are more likely to drop out or fail treatment. Previous studies revealed that partner's smoking status predicted relapse. It is likely that partners play an important role by offering social support to smokers trying to quit. A wealth of research has been conducted on the role of social support in smoking cessation. Murray et al (1995) evaluated the effectiveness of social support on smoking cessation and continued abstinent from smoking. Five thousand eight hundred eighty seven participants at 10 clinical centres took part in the study. Support lasted twelve weeks and participants were encouraged to bring a support person of their choice to the therapy. The multi-component therapy combined elements of behavioural and social learning principles with nicotine replacement therapy, hence similar to the present study. Results showed that there was a significant relationship between presence of a support person at the outset of the

cessation therapy and smoking status for male participants at 4 months but not female participants. Furthermore at 12-months follow up the initial presence of a support person was still related to smoking status for men but not for women. Moreover, among participants with a support person, men's smoking status was unrelated to support smoking status at the 4-month initial quitting point, and women's smoking status was moderately related to support smoking status. At the 12-month follow up, however, there was a strong relationship between smoking status of participants and of their supports. Furthermore, married participants were more successful at stopping than single. For women, marital status was the strongest social support indicator at baseline, and the attendance of a significant other at three or more group sessions was the strongest indicator at 1 year. The present study had similar findings as Murray's (1985). Being married might also be a source of social support, in case the partner does not smoke. From a social support perspective, people draw on their social networks and resources when making decisions such as the intention to quit smoking being facilitated by a network of non-smokers (Cohen et al., 1988). Accordingly, Murray et al. (1995) study showed that there was a significant relationship between presence of a support person at the outset of the cessation therapy and smoking status for male participants. However, we do not know if the elected support person was the partner. In the present study, partner's smoking status was not shown to be a predictor of decision to quit and abstinence.

Another interesting finding is that people who are employed are more likely to make a decision to quit. Accordingly, not having a job or a partner are factors which trigger people into smoking. There could be a relationship between not having a job and partner and feeling bored and smoking. Smoking as a coping mechanism for stress and boredom was a predictor of not taking a decision to quit smoking.

The role of motivation

The hypothesis that smokers which are highly motivated to quit are more likely to set a quit date and remain abstinent by the end of the programme was confirmed by this study. Motivation was a factor which has played an important role in quitting smoking in several studies. According to DiClemente and Prochaska (1991) smokers who have some thoughts about quitting are more likely to change their behaviour. In order to select participants to stop smoking group support in this study, motivation or readiness to quit was assessed before setting a quit-day. However, it is possible that motivation to quit could oscillate across time. The Stages of Change model (1984) highlights the processes involved in the transition from a smoker to a non-smoker. Smokers who are either in the contemplation stage (thinking about quitting) or in the action stage (initial behaviour change), are invited to attend sessions. Research in the field of motivation can ambiguous and contradictory. Furthermore, little information is normally known about how motivation changes across time and how significant this change is. According to Proachaska and DiClemente, individuals do not progress through stages in a straightforward linear way but may oscillate between stages of change. Some studies indicated this is not the case (Faly, 1993; Flay, Hu & Richardson, 1998; Irshman, Leventhal, & Glynn, 1984; Mayhew, Flay, & Mott, 2000). Smokers have been shown to proceed through a relatively well-defined developmental sequence of smoking behaviour.

However, there has been some criticism of the Stages of Change Model. According to Etter and Perneger (1999), the attribution of a current or former smoker to a stage of change depend to a large extend to the questionnaire used. So, in spite of using motivation to quit scale as one possible predictor of abstinence on the regression model, the validity of this questionnaire could be questioned. According to Etter et al (1999), the five-stage model does not fit reality well. Some respondents could claim

to be motivated for social desirability factors or for the fictional belief that if their answers revealed lack of motivation, they would not be admitted to the group support sessions. Furthermore in some cases individuals are not self motivated but persuaded to attend a smoking cessation support, in which case, motivators might be "powerful others" for individuals with external locus of control a concept created by Rotter (1966). In general, a limitation of assessing smokers' stage of change is that this concept does not deal adequately with occasional smokers many of whom define themselves as not smokers (Etter et al., 1999). However, Etter's argument might not be applicable to smokers attending NHS stop smoking groups as they according to Hajek et al. (1989), they tend to be dependent smokers with an average carbon monoxide reading of 25 CO/ppm. Furthermore, according to Fargestrom scale of nicotine dependence (Heatherton et al. 1991), the most consistent predictor of addiction is smoking within 5 minutes of waking up which the case of the smokers is attending this mode of support. Hence, occasional smokers do not fit this category.

The role of self-efficacy

This study also confirmed the initial hypothesis that individuals with higher self-efficacy are more likely to make a decision to quit and attend quit day. The second hypothesis, that individuals with higher self-efficacy are more likely to stay abstinent by the end of the programme was not confirmed. Even though individuals with higher self-efficacy were more likely to make a decision to quit and remained abstinent by the end of the programme, these findings were not significant. Yet, these findings should be interpreted with caution. Questionnaires were distributed during assessment session only following service protocol. Hence, measures taken represent a psychosocial state before actually attending the intervention. Again, it is possible there were changes in motivation, self-efficacy, psychological distress among other things in the course of the treatment. Since items in this scale measure hypothetical triggering situations, expectations about the future might not be fulfilled.

According to Prochaska et al. (1994), pre-cessation self-efficacy is not always associated with post-cessation self-efficacy. The level of confidence to resist temptations to smoke varies across the stages within the stages of change model, being lowest in precontemplation and highest in maintenance (Prochaska et al., 1994). However, self-efficacy is a strong predictor of success in the action and maintenance stages. By recognising smokers degree of self-efficacy as they are moving from the contemplation to the action stages can be useful. Ideally self-efficacy should be measured as a continuum. This would allow clinicians to target interventions to boost self-efficacy when needed as people in different stages need different types of interventions to facilitate the achievement of their goals. However, given the constraints of the group format the intervention is delivered, it is not always possible to respond to individual needs of smokers. From a research perspective, the major constraint in taking continuous measures of self-efficacy is that one cannot be sure as to when its variability is a result of personal accomplishments and when it might be a consequence of the nature of the intervention or both: there are too many confounding variables. The alternative would be to compare means of two randomised groups of smokers; one would be Hajek's group intervention and the second, Hajek's group intervention plus self-efficacy motivational techniques. Another limitation of measuring self-efficacy before the quit-day is smokers who never tried to stop smoking might hold unrealistic believes about their capacity to resist high-risk situations. Weinstein (1983, 1984) discussed a concept called unrealistic optimism which suggests that one of the reasons why people continue to practice unhealthy behaviours is due to inaccurate perception of risk and susceptibility. In an attempt to explain why individuals' assessment of their risk may go wrong and why people are unrealistically optimistic, Wienstein (1983) argues that individuals ignore their own risk increasing behaviours and focus primarily on their risk reducing behaviour. Accordingly, when smokers are asked to think of future risky situations and assess their own resistance to temptations, they might have

inaccurate thoughts. As a result, they might not avoid triggering situations which increase the chances of relapsing. As this study was based on short-term outcomes it did not address those issues. Ideally in an individual smoking cessation intervention, self-efficacy should be measured before setting a quit day, during the process of quitting and shortly after and 6 months after quitting. Self-efficacy might oscillate across time as individuals learn about their capacities to cope with those situations. Marlatt and Gordon (1985), argue that when exposed to a high-risk situation, if individuals can engage good coping mechanism and also develop negative outcome expectancies, the causes of a lapse will be reduced and the individual's self efficacy will be increased. However, if the individual has poor coping strategies and has positive outcomes expectancies, the chances of a lapse will be high and the individual's self-efficacy will be reduced. Thus, no lapse would occur when good coping strategies and negative outcome expectancies will raise self-efficacy, causing the period of abstinence to be maintained. Lapse would take place when poor or no coping strategies and positive outcome expectancies will lower self-efficacy, causing an initial use of the substance (cigarette).

The role of psychological distress

This initial hypotheses were that lower psychological distress would predict decision to quit and attendance at quit day and abstinence at 7-weeks. These hypotheses were based on previous findings which point towards psychological distress as a very important factor in smoking cessation. According to Shiffman (1983), in order to achieve maximum treatment efficacy and to take such factors in to account when making comparisons both within and between studies of treatment efficacy must be understood. Negative effect was not a significant predictor of decision to quit or abstinence as hypothesised. This finding contradicts previous studies. Current depression is a significant psychological factor associated with smoking (Breslau, Kilbey, & Andreski, 1993). There is evidence that smokers with elevated levels of

depressive symptoms have and increased risk of smoking cessation treatment failure (Anda et al, 1990; Rausch Nichinson, Lanke, & Matloff, 1990). Recent studies have shown that quitting smoking is related with escalating depressed mood (Swan, Ward & Jack, 1996, West, Hajek & Belcher, 1989). Accordingly, smokers suffering from depression may be at greater risk for the development of post-cessation depressive symptoms (Swan et al., 1996, West, 1989). Heightening in symptoms of depression subsequent to smoking cessation is related to a shorter time to relapse (Killen et al, 1996, Swan et al., 1996).

In order to understand those findings, it is important to reflect on the mental health status of the population attending this service. Previous audits on mental health status of the community attending group support pointed out that 71% of that population suffered or had a history of depression and/or anxiety (audits conducted locally in 2003/2004). This could indicate that negative affect was not significant because in spite of being a factor at baseline it was not diagnosed as clinically relevant, which would be an exclusion criteria. It would be valuable to look at post-cessation depression and anxiety as it is possible this could be a modulating factor for relapse. A major limitation of conducting such a study in the NHS is that the model which is currently adopted is based on 7-weeks outcomes. Most services do not compile statistics on the long run as this is not a requirement of the DoH.

Coping without smoking

This study divided smoking motives into social, psychological and physical.

Social motives

In this study, smoking for social motives constituted engaging in this behaviour as means to socialise and obtain enjoyment. The second hypothesis was that individuals who do not use smoking as a coping strategy are more likely to stay abstinent at the end of the programme. This study confirmed this hypothesis as

smokers who used smoking as a coping strategy in social situations were much less likely to make a decision to quit. This was a very significant finding. Furthermore, the less people smoked triggered by social situations and out of pleasure, the more likely they were to stay abstinent by the end of the programme. This was also a very significant finding.

Social interaction was widely studied by Doise Ugny and Perret Clermont (1975). In the context of smoking, social interaction with other smokers could influence people to recognize smoking as a desirable behaviour. By contrast, a smoker who engages in social interaction with non-smokers might become aware of smoking as an anti-social behaviour and this could fall under the socio cognitive conflict which is defined as "*the communication of discrepancies between the perspectives of two or more participants in a stake, which promotes opportunities for the participant to become more aware of deficiencies in their individual understanding*" (page 319).

Psychological motives

In this study, smoking for psychological motives was characterised by people who smoke to cope with stress and boredom.

People who smoked for psychological motives such as to cope with stress and boredom were less likely to make a decision to quit. Nevertheless, psychological motives were not a significant predictor of abstinence. It might be that people who smoked to cope with stress and boredom did not set a quit day and failed to attend sessions.

Physical motives

In the present study, physical motives for smoking was characterised as smoking as means to control weight and to concentrate. Findings also indicated that weight was a major concern for many smokers and it functioned as a mean to control weight

gain. Physical motives were found to be significant predictors of decision to quit. People who smoked to control weight and to concentrate were less likely to set a quit day and attend session 3. This finding was in accordance to previous studies: weight gain has long been recognized as a distinguishing feature of nicotine withdrawal, as opposed to other drug withdrawal syndromes (Hugues, Higgins, & Bickel, 1994). Several, population studies suggested that smokers weigh several pounds less than people who have never smoked and when they quit, they gain until they each the weight they would have weighted had they never smoked (Perkins, 1993; USDHHS, 1998). According to Pormeleau & Kurth (1996), it is estimated that 20-30% of women who stop smoking will gain less than 5 pounds, with few maintaining or losing weight (Nides et al., 1994). Roughly, 25% of recent ex-smokers will gain more than 15% (Nides et al., 1994) and half of the women gaining more than 30 pounds (Williamshon et al., 1991). The remaining women will gain somewhere between 5 and 15 pounds. Hence, reluctance to consider weight gain following smoking cessation is common among women with 40% expressing reluctance to accept any gain and 75% affirming they would be disinclined to accept a gain in excess of 5 pounds (Pormelau, & Kurth, 1996). Thus, the actual amount of weight gained by most women far exceeds their acceptance. Most women also are unrealistic about the impact of cessation weight gain upon quitting and believe that its occurrence might result in relapse (Pormelau, Zucher, & Stewart, 2001). However, contrary to their beliefs, several studies show that long term weight gain is positively associated with success in quitting and decreased long term relapse (Gritz, Berman, Read, Marcus, & Siau, 1990; Kllen et al., 1996, Norregaard, Tonnesen, & Petersen, 1993).

Even though physical motives predicted decision to quit, they were not significant predictors of abstinence. People usually put on weight after stopping the use of NRT and that is usually 3 months after setting a quit day and 2 months after the termination of the treatment. Results were analysed based on 4-week quitters and

hence the role of this factor in maintaining abstinence might not be fully understood. Many studies indicate that weight gain is associated with relapse (Borelli and Mermelstein, 1998, Swan, Ward, Carmelli, & Jack, 1993). However, these studies were retrospective and were looking at medium term abstinence rates. If we know that weight is a very important concern then it should be addressed and interventions with smokers concerned about weight gain should be tailored. Nevertheless, studies in this field are conflicting. According to Hall, Tunstall, Vila, and Duffy, (1992), adding weight control components to smoking cessation programs has not proved long term abstinence rates.

This study highlights that weight was a concern which could influence smokers contemplating cessation. Even though it significantly influenced decision to quit, it did not significantly predict abstinence. It is possible that findings were not significant because there is "evidence that a large number of weight concerned women smoker are essentially invisible, either because they do not attempt to quit at all or because they terminate their quit attempts very early, without ever seeking treatment" (Pomerleau, 2001). Support for these findings is also found in several studies (Klesges, & Klesges, 1998; Klesges et al., 1988; Perkins, Levine, Marcus, & Shiffman, 1997). Another interesting finding supporting this study is that quit attempts of women smokers who diet are shorter than those made by non-dieting smokers (Jarry, Cambs, Polivy, & Herman, 1998). According to Pomerleau et al. (2001), clarification of this issue would have consequences for the formulation of public health policy. In case weight gain, regarded as a side-effect of quitting smoking abstinence does not form an obstacle to cessation in large numbers of women, then allocating funds for research and policy development to this issue would be an inappropriate use of resources. However, Williamson et al (1991) also support the creation of more tailored interventions addressing this issue "if weight gain or fear of weight gain, even in amounts that pose relatively little health threat, constitutes a

deterrent to quitting or large numbers of women, then it is important to avoid trivializing the issue by dismissing it as a cosmetic concerned and to address it more aggressively than has been done to date".

A possible future direction in regards to the relationship between smoking and weight would be to understand whether smoking to control weight is a coping mechanism which is shared by women and men alike and whether there has been a change in this pattern across time. Several studies found that this concern is specific to women. Further to that, it would be valuable to understand whether concerns about weight oscillate in the process of quitting and remaining abstinent. In case smokers use cigarettes to maintain their weight, it would be encouraging to address more functional ways to tackle this concern. Also, smokers who are concerned about their weight might successfully quit smoking but be at risk of relapsing once weight is gained as a result of remaining abstinent.

Conclusions

This study shed light on factors which predicted decision to quit and abstinence. Most previous studies looked at predictors of abstinence but failed to reveal factors contributing to decision to quit. The importance of understanding factors contributing to decision to quit is that it provides us with insight on how to improve adherence to treatment and attendance. If drop-out rates are high because smokers give up before the end of the treatment and fail to attend the sessions, this has implications to public health as interventions are less likely to be cost-effective. Moreover, smokers' needs are not addressed as they cannot be supported if they are lost to follow up. Revealing factors which contribute to decision making processes can help us to target smokers early on the intervention.

In conclusion, there were many predictors of not taking a decision to quit smoking and attending week 3: stress, smoking out of enjoyment and in social circumstances and out of boredom and to control weight. Factors predicting taking a decision to quit were as expected: self-efficacy and high motivation. However, there were few significant predictors for abstinence: being employed outside the house, being motivated in the beginning of the programme. Smoking for enjoyment and socially were predictors of relapse.

It appeared that motivation was a factor which was significant in decision to quit and remaining abstinent.. Even though it was measured during assessment, it had an impact on abstinence in the end of the programme. There could be several explanations for that. The intervention incorporates motivational interviewing strategies during sessions. Even though motivation was not measured during the process, it is targeted throughout the intervention. Strategies were used during sessions to boost motivation. An example of a clinical practice which encourages smokers to stay motivated by sharing their experience is the buddying system. The buddy system comprises of smokers calling each other for further support and to share their experiences of withdrawal. Further to providing informational support whereby the individual is provided with information to overcome his/her distress or to perform better in a task, network support is also encouraged. Network support takes place when individuals become member of a group of people who share the same interests and activities (Sarafino, 2002).

Kviz et al. (1994) evaluated the effectiveness of social support in a minimal contact self-help smoking cessation program. Their study suggested that buddy support is helpful in remaining abstinent from smoking and suggested that it should be used in minimal-contact smoking cessation programs. In a similar study, participants who had a buddy were twice as likely to quit, as were participants without a buddy (Kviz et al., 1994). Hence even though we considered pre-cessation motivation as a predictor

of decision to quit and abstinence, there might be confounding factors maintaining motivation levels high. Further studies are needed to understand the impact of buddy system and motivation to quit and stay abstinent and outcomes when programmes end and buddies are not longer available.

Another variable which should be addressed throughout the therapy is self efficacy. Self-efficacy was a significant predictor of decision to quit but not abstinence. It could be possible that self efficacy measured in the beginning of the programme reveals unrealistic optimism. Hence, self-efficacious smokers might be reluctant to change their routines and as smoking for enjoyment and socially predicts relapse it is straightforward to understand the link between not changing routines and being tempted in social circumstances. It is vital that clinicians set realistic expectations from the beginning of the programme and address smoking as a coping mechanism in social situations. Alternative coping mechanisms must be developed early on in the therapy.

Further original findings were that being employed outside the house predicts abstinence. It is possible that with the new smoking bans in working places, smokers found less opportunities to smoke and that their behaviour ceased to be normalized. Furthermore, people employed outside the house might be busier and boredom was a factor predicting lack of decision to quit smoking.

In conclusion, the outcome of smoking cessation is influenced by a complex array of psychosocial factors. More research is needed to understand the relative importance of these different factors across time and employing a wider range of participants from ethnic minority backgrounds. The present study raises awareness to the fact that "one size fits all" approaches to smoking cessation might be minimalist and not address important psychosocial issues.

Limitations

Further to the limitations discussed in the previous session, there were other limitations which were specific to the study design.

One of the limitations in this study is that it is a small/medium scale study looking at short-term quitters. Hence, there were some potential threats to external validity as finding might not be generalisable to larger populations and there is little evidence to argue they are consistent across time. Further to that, Individuals taking part in the study were not followed up for a year to cross-validate those findings. The difficulty in carrying out a 1-year follow-up study is that only a small percentage of participants are not lost to follow-up smoking a year on.

Taking into account this is a small scale study based on short term results, findings were in accordance to hypothesis and hence can inform practice locally.

Implications for Practice

Several clinical implications arise based on the findings of this study. Firstly, it is important to distribute questionnaires before, during and after the intervention in order to monitor the oscillation of those variables.

Interventions should be tailored to smokers who do not have a job outside the house, to help them to keep busy and learn to dissociate that environment with smoking. As high socio-economic status is associated to making a decision to quit, low socio-economic status smokers need to be targeted. Understanding the impact of smoking on one's budget and learning how to cope with stress resulting from living in impoverished circumstances is crucial for this group to contemplate quitting.

As expected, motivation is a key component modulating smokers' decision to quit and stay quit. Hence, incorporating motivation interviewing techniques during assessment or as a telephone session preceding the actual group intervention is likely to have an impact on smokers' decision to quit and abstinence.

The role of self-efficacy was not significant in this study. However, findings pointed towards setting realistic expectations from the start of the interventions. It is important to assess smokers' willingness to adopt a collaborative approach and help them to problem solve and develop their own strategies to cope with temptations. This intervention incorporates elements designed to boost smokers' self-efficacy, however this is not enough. It would be valuable to offer individual support to smokers who have external "powerful others" locus of control and cannot profit from a collaborative approach. It is likely that those smokers could benefit more from advice drawn from a medical model; which would be more directive and prescriptive. In order to offer smokers this treatment option, questionnaires investigating locus of control need to be distributed during screening sessions.

As this study indicates that smoking as a social behaviour could function as a barrier to deciding to quit and staying abstinent, smoking cessation interventions must add components to address alternative social behaviours and perhaps some assertiveness and people' skills training. It is harder to shift cognitions in older adults who associate smoking with social desirability. It is therefore fundamental that clinicians acknowledge smokers' core beliefs and social schemas in order to challenge these beliefs in light of new evidence (i.e. smoking bans in public places and second hand smoking).

This study indicated that weight is a major barrier against adoption of healthier lifestyle (quitting smoking). Smokers are very concerned that they might put on weight as a result of quitting. Their concern is justified as most smokers put on between 3 and 8 pounds when they quit. There is a combination of reasons for that; firstly, ex-smokers stop using nicotine which suppresses their appetite. Furthermore, they tend to enjoy their food more as their taste buds are no longer inhibited. However, even if ex-smoker to change their caloric intake, they are likely to put on

weight as nicotine speeds up the metabolic rate and lack of it, will decrease energy use in the body. In order to help smokers to understand their choices and minimise weight gain, they need advice from dieticians and health professionals who can help them to increase their energy burning through adoption of an exercise regimen. A session addressing those issues could be incorporated in the intervention to address those concerns. Alternatively, smokers attending group support could be offered the choice of seeing a specialist to help them to manage their weight and address their satisfaction with their body image.

This study provides some evidence for more tailored approaches. Some of the components indicated above can be easily incorporated in group smoking cessation interventions. However, it is likely that smoker will only stay quit on the long run if they are provided with a choice of treatment which meets their individual needs. This option would be more financially taxing for the NHS. However, it would probably prove to be more cost-effective on the long-run. Public health initiatives can only make a difference to the prevalence of smoking when they learn to measure outcomes based on long-term quitters and base their cost benefit analyses on statistics based on this long-term follow-up.

Title:

The role of physiological factors affecting attendance and outcomes of out-patients group smoking cessation interventions".

Abstract

Smoking is a highly addictive behaviour and many smokers find it difficult to stop using cigarettes, as of the 17 million who try to quit each year, fewer than 1 out of 10 actually succeed (Kessler, 1994) . It is possible the existence of a serious health problem would increase smokers' decision to quit. According to Coleman, Barrett, Wynn, and Wilson (2003), "motivation to stop smoking is associated with smokers' possessing substation smoking-related morbidity or believing that they have symptoms caused by smoking, but it is not clear if this holds for smokers attending general practice consultations"

Recruitment/ intervention

A total of 407 smokers attending specialist clinics from 2001 to 2004 took part in this study. Smokers attended a 7-week abstinence oriented group support based on Hajek's model (1989).

Aims

This study aims to shed light on physical dependence and physical illness factors, which might have an impact on attendance and outcomes of smoking cessation efforts.

Method

The IVs were Nicotine dependence (Fagerstrom Test for Nicotine Dependence - Heatherton et al., 1991), number of cigarettes smoked/week, perceived health status, number of health problems, level of CO in expired breath a week after setting a quit day. The DV were Decision to quit (attending week 3 and setting a quit date) and abstinence for four weeks verified by CO levels in expired breath

Results

Older participants, whose doctors advised them to stop smoking and were less physically dependent on tobacco, were more likely to stay abstinent until the end of the programme. ($p<.005$)

Discussion

In spite of design limitations which looked at short-term outcomes, this study underscores the importance of GP advice to stop smoking, age and physical dependence.

Further research is needed looking at the effect of those variables across time.

Introduction

Many smokers, however, find it difficult to stop using cigarettes, as of the 17 million who try to quit each year, fewer than 1 out of 10 actually succeed (Kessler, 1994). Statistics indicate that 80% of smokers acknowledge the health risks of smoking (DoH, 2000). There are a number of physical and psychological factors which play a role in the initiation and maintenance of smoking behaviour. Some of the psychological reasons why people smoke are habit as smoking becomes an automatic behaviour associated with positive emotions. Smoking is also a behaviour that fosters immediate gratification because it is associated with positive effects but has no apparent and immediate consequences on health and physical functioning. Physical addiction explains why people carry on smoking, in spite of acknowledging its dangers.

Physical addiction

Addiction is a product of the person, the drug and the situation. Personality traits and psychological states such as anxiety, depression, sensation seeking, social deviance and susceptibility to drug effects function as predisposing factors to addiction. Nicotine is a highly additive drug and smoking is perceived as an enjoyable activity, which helps smokers to cope with a number of situations. The Diagnostic Statistical Manual (DSM-III) devised by the American Psychiatric Association pointed out that many tobacco smokers meet the criteria for the clinical diagnosis of the 'substance dependence' disorder that was then termed 'tobacco dependence'. In subsequent revisions of the DSM, the American Psychiatric Association renamed the disorder 'nicotine dependence'. There is plenty of evidence for nicotine dependence or addiction. According to Royal College of Physicians (RCP), (2000), more than 80% of

smokers acknowledge the health risks; however urges to smoke are as strong as cravings for alcohol, heroin, and stimulants for patients searching treatment for drug dependence. Withdrawal symptoms include depressed mood, increased appetite, increased aggression, restlessness, poorer concentration, dizziness, and sleep disturbance amongst others. More than 95% of smokers rarely if ever go a day without cigarette. Furthermore, a large number of smokers light up within 15 minutes of waking up. Withdrawal symptoms and urges to smoke are linked to nicotine depletion. According to West, McNeil, and Raw (2000), nicotine binds to acetylcholine receptors at nerve terminals (presynaptic receptors) and cell bodies/dendrites (post–synaptic receptors). On binding to postsynaptic receptors it initially excites the nerve cell blocking further activity. Chronic nicotine exposure results in an increase in the number of acetylcholine receptors in parts of the brain. As nicotine is a stimulant, it provokes an increase in activity in the sympathetic nervous systems, hence, affecting brain activity.

Nicotine addiction is related to positive and negative reinforcing actions (RCP, 2000). Positive reinforcing actions are linked to the effect on the mesolimbic dopamine pathway. Negative reinforcing actions may result from neuro-adaptation to dopaminergic actions or chronic serotonin depletion. Long-term nicotine use may decrease activity in the dopamine pathway and reduce responsiveness to natural reinforcers. Depletion of serotonin may result in heightened aggression and depressed mood, which is reversed by nicotine.

Measuring nicotine dependence

The Fagerstrom Test for Nicotine Dependence (FTND) is a valid and reliable instrument to measure dependence. The FTND originated from the Fagerstrom Tolerance Questionnaire. The Fagerstrom Tolerance Questionnaire (Heatherton,

Kozlowski, Frecker, & Fagerstrom, 1991). was a short version of the actual questionnaire containing eight questions. According to Pomerleau, Carton, Lutzke, Flessland, and Pomerleau (1994), the test's validity increased when only 6 of the original 8 questions were used. Hence, the test now contains only 6 questions specifying context, time of consumption as well as most unlikely cigarette to give up.

Reviews of the FTND were contradictory. The scale has been criticised by Etter, Duc, Perneger (1999) for failing to include all the components of the DSM-IV criteria for nicotine dependence. Studies by Payne, Smith, McCracken , McSherry , and Antony (1994) and Etter et al (1999) claim that the FTND has insignificant internal consistency with Cronbach's alpha coefficients ranging from .70 to.56. Other tests conferred the scale as adequate (Heatherton et al., 1991; Pomerleau et al., 1994; Huang, Lin, & Wang, 2006). This is the case of studies looking at test-retest reliability. Seven months test-retest reliability was found suitable by other researches (Etter et al, 1999 & Pormeleau et al, 1990).

In spite of the ambiguity regarding validity and reliability of the test, many studies considered the FTND a valuable measure of nicotine dependence. Further to that, the test has good face validity. Some researchers claim that the major reason why the test might have a less than sound internal consistency is because there is no widespread agreement on what is nicotine dependence (Pormeleau et al, 1994). Hence there are no cross-validated criteria for nicotine dependence and different approaches see smoking in very different ways: physical addiction, psychological addiction, habit and behaviour.

In addition, according to Heatherton et al. (1991) the FTND is strongly associated with physical measures of nicotine dependence. The FTND was significantly correlated with carbon monoxide measures at baseline, 90 minutes and 180 minutes after deprivation. As well as carbon monoxide in expired breath, there are other

objective measures of smoking dependence, which are actually more accurate. Saliva cotinine is a test used to measure nicotine dependence. In spite of being more reliable measure than the CO test as CO has a shorter half-life in the body than nicotine, cotinine is still not reliable across time. Several studies found that the FTND positively correlates with salival cotinine (Pomerleau et al., 1990; Etter et al., 1999; Kozlowski et al., 1994). Payne et al. (1994) found that the FTND significantly correlated with saliva continine.

Approaches to smoking cessation

There are several approaches to smoking cessation. Different approaches use a combination of theoretical orientations focusing on specific aspects of smoking cessation depending on whether it is viewed as a habit, a psychológical and/or physical addiction. The most widely used approach in the NHS views smoking as a physical and psychological addiction.

Educational approaches are based on the belief that people start smoking and continue to smoke because they are not aware of dangers posed by their behaviour. Hence, the solution is to raise awareness to risks of smoking to health, motivating smokers to stop.

Proponents of Behavioural approaches see smoking as a learned and reinforced habit. The methods used to help smokers to stop include a number of techniques to help them to unlearn the undesirable behaviour. Some of the methods used are teaching skills, conditioning, aversive techniques, extinguish cue reactivity amongst others.

Cognitive approaches are based on the belief that smokers think that smoking is useful or suits a purpose and stopping is very difficult or impossible. Hence, the goal of the treatment is to revise and challenge the validity of those beliefs to enhance self-efficacy. Methods used work with smokers' ambivalence in making a decision to quit and motivational interviewing is widely used.

Proponents of Psychodynamic approaches argue that people smoke to satisfy unconscious needs (oral, self-destructive). The goal of the treatment is to uncover those motives and through awareness promote change and so it is an analytical method.

The withdrawal-oriented approach is the most widely used approach in the NHS. Proponents see tobacco as a drug and smokers as addicted. The goal of the treatment is to maintain abstinence during initial withdrawal discomfort. The methods used are withdrawal relief medication and support, normally using group processes.

The present study employed the withdrawal-oriented approach using a group out-patient format. The treatment approach was developed at the Imperial Cancer Research Fund (ICRF) Health Behaviour Unit of the National Addiction Centre at the Institute of Psychiatry, and its smoker's clinic at the Maudsley Hospital in London. This approach tries to overcome some of the reasons by which smokers have been unable to quit on their own despite will power which haven't been fully explained by educational, behavioural and cognitive approaches. Nicotine deprivation is seen as the main remediable source of difficulties these smokers encounter when attempting to stop smoking. Thus overcoming withdrawal discomfort is the primary objective of this method (Hajek, 1989). To overcome these obstacles, personality, psychosocial resources, life stresses and other factors must be addressed (Ockene, Nutall, Benfari, Hurwitz, & Ockene, 1982). According to Hajek (1989), all the above factors

are linked with nicotine deprivation. Hajek (1995) points out that the withdrawal-oriented therapy sees withdrawal discomfort as the major remediable obstacle to quitting in dependent smokers. It is compatible particularly with the cognitive approach, especially in maintaining abstinence.

Among numerous obstacles to long-term quitting, the first is the acute withdrawal discomfort. Effective methods exist to boost smokers through this initial period. A number of studies in nicotine dependence found it a significant predictor of outcomes in smoking interventions (Hajek 1992). Higher levels of dependence predicted poorer outcomes. Another study by Hajek (1992) found that nicotine dependence was more predictive of success than motivation. Several studies looked at physical predictors of abstinence. Glasgow, Strycker, Eakin, Boles, and Whitlock (1999) studied the role of strength of habit (the Fagerstrom Tolerance Questionnaire, number of cigarettes/day, and before quitting carbon monoxide in expired breath). Findings indicated that nicotine dependence was the main predictor of outcomes and accordingly, more dependent smokers revealed lower success rates than medium and light smokers. Similar findings were shared by Borrelli, Niaura, Keuthen, Goldstein, Depue, Murphy, and Abrams (1996, 2002) and Horn, Fernandes, Dino, Massey, and Kalseka (2003). Accordingly, there is a lot of support for treating smokers as an addiction. Nicotine replacement therapy is used to help smokers to cope with nicotine withdrawal. In the mean time, psychological factors reinforcing the behaviour are targeted. There is sound evidence in a number of studies and reviews supporting the use of nicotine replacement therapy (NRT) as an appropriate and effective treatment for smokers who are willing to give up.

Smoking cessation clinics in the UK typically offer a combination of NRT and behavioural support delivered over a series of weekly session. All formats of behavioural intervention, individual or group were found to be effective. Cochrane reviews found no difference in efficacy between group and individual support.

However group support is more cost-effective. Anthonisen, Connett, Kiley, and Altose (1994), found a 35% versus 9% success rate with intensive behavioural support with NRT when compared with usual care.

Nicotine replacement therapies (NRT)

Nicotine replacement therapy and Zyban are recommended for smokers who have expressed a desire to quit. However, according to the National Institute of Clinical Excellence (NICE) guidelines, they should only be prescribed as part of an abstinent-contingent treatment. The rationale for its use is that addicted smokers experience unpleasant nicotine withdrawal symptoms and craving on stopping which undermines their effort to quit. Nicotine delivery is much slower and levels of nicotine are lower than those through inhaled tobacco. Furthermore, whereas tobacco smoker contains around 4000 components, nicotine replacement therapy delivers pure nicotine only. Smokers' withdrawal symptoms are controlled while behavioural aspects of smoking are targeted. Hence, through nicotine replacement therapy use, withdrawal symptoms are milder, cravings are controlled and weight gain is delayed. Cochrane reviews of 96 randomised controlled trials with 35,500 smokers indicated that nicotine replacement therapy was effective. According to the American Psychiatric Association and UK Smoking Cessation Guidelines (2000), NRT doubles success rates when compared to placebo. According to a NICE meta-analyses (2002), absolute success rates will depend on the amount of support provided and type of patient (age, socio economic status (SES), motivation, dependence). Odds ration at 1 year when compared to placebo equals 17% abstinence versus 10%. There are currently 6 products on the market. According to Agency for Health Care Policy and Research (AHCPR) guidelines (2000), all products are equally effective.

Currently the following products are available in the market:

- Nicotine chewing gum (2 and 4mg)
- Transdermal nicotine patches (various strengths – 16 and 24 hours)

- Nasal spray
- Inhalator
- Sublingual tablet (Microtabs – 2 mg)
- Lozenge (1, 2 and 4 mg)

Products vary in many ways: speed of nicotine absorption, ease of use, frequency of use, type of side/sensory effects, amount of behavioural replacement, potential to adjust the dose as needed (Sutherland, 2000).

Cochrane reviews showed that all products were effective and dosage should be adjusted according to level of dependence.

According to a Cochrane review (2000), highly dependent smokers found the 4mg gum more effective than the 2 mg (OR=2.67, C.I. 95% 1.69-4.22). However the use of the 4 mg gum was not proved to be more effective than the 2 mg for lighter smokers.

A trial by Daughton (1991) found no significant difference in efficacy between the 16 and 24 hours patches. The NICE guidelines (2002) also propose that both patches are equally effective.

Even though all products were effective, research indicated that there are advantages of using patches over other products. According to Sutherland (2001), patches are easier to use and result in better adherence. Furthermore, different from the gum and some of the other products it does not require a technique to use. It does not sting the mouth, causes gastric irritation, hiccups and throat irritation like the oral products.

In the present study, most participants used some form of nicotine replacement therapy or Zyban according to their choice and GP prescription.

bupropion or Zyban is a heterocyclic second-generation antidepressant. It is a relatively weak re-uptake inhibitor of norepinephrine, serotonin and dopamine. It was

initially used for depression patients only. Its development as a medicine for smoking cessation sprung from anecdotal evidence from patients suffering from depression who unexpectedly stopped smoking while taking Zyban. Later studies testing the effect of Zyban in smoking cessation demonstrated it's effectiveness in treating smokers trying to quit.

Unlike NRT, there is no nicotine in Zyban. Instead, it works on chemicals in the brain which are involved with nicotine addiction. Zyban helps to reduce the urges to smoke and helps to reduce the withdrawal discomfort (e.g. irritability, anxiety, and depression).

It is used for smoking cessation as smokers are more likely to have a history of major depression than non-smokers. Moreover, nicotine may act as an antidepressant in some smokers. It is a fact that the development of depressed affect or depression after smoking cessation may lead to relapse.

Some studies employed Zyban and a placebo to test its effectiveness. A study by Hurt et al (1997) employed a randomised, double blind, placebo controlled trial. This study employed 615 participants who met the criteria. The results indicated no significant differences among the groups at the start. Point-prevalence rates of abstinence at one year were significantly better in the Zyban group as opposed to the placebo. However, Glaxo Wellcome, a pharmacology industry who produces the drug being tested, funded this study.

A study by Jorenby et al. (1999) randomized 893 non-depressed smokers to receive either Zyban 300mg/day or 21 mg patches, both zyban and patches or placebo over 9 weeks treatment period combined with intensive behavioural support. Continuous abstinence rates at 1 year were 18%, 10%, 23% and 6% respectively. All three active treatments were more effective than the placebo ($P<0.001$). Zyban was more effective than patches ($P<0.001$), and the difference between Zyban and the combined treatment was not statistical significance.

NICE also conducted a meta-analysis of the effectiveness of Zyban. The odds of being continuously abstinent at 1 year were 2.10 (CI 1.62 -2.73). Accordingly, Zyban doubles the chances of staying abstinent when compared with placebo.

As with all medicines, Zyban can cause side effects. The common side effects of Zyban include difficulty sleeping, headaches, dizziness, nausea, anxiety, dry mouth and rashes or itching. An uncommon side effect of Zyban is seizures. Zyban is also contra-indicated for people suffering from a number of conditions:

Epilepsy, previous seizures or fits

- Previous head injury
- Eating disorders (current or previous bulimia or anorexia nervosa)
- Hepatic cirrhosis (liver disease)
- Concurrent use of Monoamine oxidase inhibitors (MAOIs) e.g. tranylcypromine, phenelzine, moclobemide
- Bipolar disorder (manic-depression)
- If you are pregnant or breast feeding
- Central nervous system tumour
- Experience of abrupt withdrawal from alcohol or benzodiazepines
- Any other predisposing factors for seizure e.g. taking stimulants/anorectic agents or having diabetes which is treated with hypoglyceamics or insulin.

<u>Physical health, smoking cessation and health professional support</u>

Understanding health behaviours is motivated by the realisation that in modern countries, a large proportion of mortality rates are caused by behaviour patterns, which are modifiable (Stroebe and Stroebe, 1995). Hence realising that individuals have a decisive role in the quality and length of their lives is very important to health psychology. Moreover, in order to instigate individuals to make functional health style

choices, health psychology is concerned in identifying the factors, which underlies such health behaviours. A series of social cognition models were born trying to predict health behaviours: The Health Belief Model (Rosenstock, 1974), Health Locus of Control (Rotter, 1954), Protection Motivation Theory (Rogers, 1983), Self-Efficacy (Bandura, 1977, 1992), The Theory of Planned Behaviour (Ajzen, 1985, 1988, 1991) amongst many others.

Health behaviours have been defined by Kasl and Cobb (1966) as "*any activity undertaken by a person believing himself to be healthy for the purpose of preventing disease or detecting it at an asymptomatic stage*" (page 43). Further to being a very medical view of what is health behaviour, this definition is very simplistic as it takes for granted that the process of adopting health behaviours is a linear and rational, without accounting for other psychological factors such as motivation for change. It is possible the existence of a serious health problem would increase smokers' decision to quit. According to Coleman, Barrett, Wynn, and Wilson (2003), "*motivation to stop smoking is associated with smokers' possessing substantial smoking-related morbidity or believing that they have symptoms caused by smoking, but it is not clear if this holds for smokers attending general practice consultations*" (page 1114). However the evidence to support that suffering from a smoking-related illness would motivate people to stop smoking is conflicting. Population surveys show a similar prevalence of smoking in asthmatics and non-asthmatics (Althuis, Sexton, & Prybylski, 1999; Wakefield, Ruffin, Campbell, Roberts, & Wilson, 1995). An explanation for this phenomenon was put forward by Wakefield et al. (1995) and Chapman, Wong, & Smith (1993). They suggest that smokers often hold self-exempting beliefs, whilst they accept that smoking is generally harmful, they cite illogical justifications to explain why they are not personally at risk from their own smoking. For example, many smokers do not believe that their smoking puts them at any higher risk of myocardial infarction or cancer than other people (Ayanian & Clery, 1999). This evidence suggests that decision making processes are not linear and

rational as suggested by Kasl et al. (1966). A cross-sectional study comparing motivation for smoking cessation in apparently healthy patients who smoke to those who smoke and have ischaemic heart disease, hypertension or diabetes by Wilkes and Evans (1999) indicated that individuals who smoke and have either ischaemic heart disease, hypertension or diabetes may be more motivated to give up smoking and were more receptive to individual support. There might be a relationship with health professionals' willingness to advise more severely ill smokers to give up their habit. According to the Health Education Authority (HEA) (1998), inpatient, outpatients smokers should be advised to stop as early as possible and the advice should be recorded in the notes in a readily accessible form. However, research indicates that the support offered to smokers as smoking cessation interventions delivered by general practitioners appear to be scarce, consisting of brief advice only and tends to be restricted to patients with smoking related disease (Coleman, Wynn, & Barrett, 2001; Thorndike, Rigotti, & Stafford, 1998). By contrast, Wilkes et al. (1998) point out that both brief advice in primary care consultation and nurse-led active intervention in this group of patients may yield significant rates of smoking cessation. Further to inconsistency in findings in relation to health professional advice to stop smoking, there are no coherent information from studies investigating the link between smokers' attitudes and their beliefs about their aetiology of illnesses or symptoms from which they suffer. A study of older smokers found that those who attributed symptoms to smoking rather than ageing were more motivated to quit smoking (Clark, Hogan, Kriz, & Prochaska, 1999). In another study looking at motivation to quit smoking and respiratory symptoms found no association between respiratory symptoms and motivation to stop smoking (Walters & Coleman, 2002).

Clearly, many of us know that abstaining from unhealthy behaviours or actively making a decision to change one's life style is a key factor in preserving or improving one's quality of life and postponing mortality. However, it is trickier to understand why

unhealthy behaviours are maintained, the purpose they serve and under what circumstances people decide to actively change maladaptive behaviours. Shedding light on how to predict and understand who performs those behaviours and how to implement intensions might be essential to indicate how to target interventions designed to change behaviours. It is suggested by Cummings, Becket, and Maile (1980) that factors, which predict adoption of health behaviours, are:

1) Accessibility of health care services
2) Attitudes to health care (beliefs about quality and benefits of treatment)
3) Perceptions of disease threat
4) Knowledge about disease
5) Social network characteristics
6) Demographic factors

Beliefs, attitudes and knowledge (social cognitive factors 2 to 5) have been fundamental to the development of models, which predict health behaviours.

Understanding the role of health threats that might be caused or aggravated by smoking is key for the development of further theories. The first theory, which is explained by a number of social cognitive models, is:

1) People who have health problems, which are severe and are vulnerable because of their behaviour, might be more likely to take a decision to quit. One model that would explain this type of rationale is the protection motivation theory. Individuals would weight the advantages of maladaptive behaviours (smoking) against the severity of their disease (ie. Very severe, very impairing) and their vulnerability (ie. I have diabetes and prognosis is poor if I carry on smoking). They would also weight response efficacy (ie. If I stop I might feel better and live longer) and self-efficacy (ie. I am confident that I have what it takes to stop smoking).

By contrast, another explanation might be formed:

2) The existence of the health problem might be on itself a reason not to take a decision or abstain from smoking. Firstly, living with the restrains imposed by chronic disease management might take individuals to think that they don't want to give up behaviours, which they see as rewarding. Second, if those individuals feel that the risk posed by this health problem is far too great and there is no cure, they might be unwilling to change their lives. In accordance to locus of control as a generalised expectancy that one's actions are external. According to Rotter (1990), externals are less likely to exert efforts to control their actions and to seek out and process relevant information and show less autonomous decision-making.

This study is hypothesising that having a smaller number and less life threatening health problems would predict decision to quit and abstinence. By contrast, suffering from too many health problems and/or from health problems which might be life threatening might be a reason to avoid treatment. Previous research was not consistent in indicating a clear relationship between different types of health problems, individuals' beliefs in relation to their prognosis and decision to quit and stay abstinent from smoking. The relationship between number and type of health problems and their role in taking a decision to quit and abstaining from smoking needs to be explored.

<u>Hypothesis</u>

1) Less dependent smokers, with lower number of health problems which are not life threatening, are more likely to make a decision to quit smoking and stay abstinent by the end the programme.

Aims

This study aims to shed light on physical dependence and physical illness factors, which might have an impact on attendance and outcomes of smoking cessation efforts. Predictors of abstinence will be investigated by using quantitative methods.

Objectives

The objective of this study is to investigate the role of physiological factors, number and type of health problems and nicotine dependence as predictors of decision to quit and abstinence in outpatients smoking cessation intervention

METHOD

Table 1: Independent and dependent variables

IVs Nicotine dependence: Fagerstrom Test for Nicotine Dependence (Heatherton et al., 1991)

number of cigarettes smoked/week

Perceived health status

Number of health problems

Level of CO in expired breath a week after setting a quit day.

DVs Decision to quit: Attending week 3 and setting a quit date

Abstinence: Continuous abstinence throughout the four weeks verified by CO levels in expired breath

DESIGN

A retrospective design was employed to address cigarette consumption and abstinence following seven weeks of an abstinence oriented intervention. Participants answered a questionnaire before coming to the treatment. Participants were informed about data confidentiality and the use of this information for research and auditing purposes. Variables were inserted in SPSS database. By employing a logistic regression model, predictors of decision to quit and abstinence were understood.

Recruitment and Procedure

Smokers referred to the Specialist Stop Smoking Service and those who were willing to stop with others were offered group support. Participants in this study took part in a stop smoking group support. In order to join the group, they had to fill in an invitation letter which they received in conjunction with an information pack and a self-addressed envelope with a stamp. They could also call the service to arrange a telephone appointment for a screening session. The invitation pack contained leaflets and booklets with information about smoking and health, medication to "take the edge" of smoking (Nicotine Replacement Therapy and Bupropion ·"Zyban"), information. Approximately 63% of all those invited, returned their questionnaires and, of those, 71% attended session 1. Data was collected from the setting up of the service (March, 2000) until November 2004. A total of 731 questionnaires were returned. This study used data from these 731 participants but only 405 cases were selected due to missing data on the others.

Procedure

The study took place in a Pain Management department in a London Hospital.

Smokers received a telephone screening session before attending session 1. The purpose of screening was to assess motivation, to provide smokers with an opportunity to discuss their needs and assess their suitability for group support. The exclusion criteria were smokers who suffered from severe mental health problems which were referred to a Clinical Psychologist for one-to-one support. Motivational interviewing techniques were used to work with smokers' ambivalence before taking part in the programme. Treatment was explained and doubts were clarified during screening and realistic expectations were set.

The sessions addressed issues related to smoking and social support. Group processes were boosted throughout the treatment.

A CO breath with the Biomedical CO reader was taken before setting a quit date and every subsequent session. This reading functioned as an objective measure of smoking prevalence and classified participants as light, moderate, heavy and very heavy smokers. The CO reading was also used as a motivational tool. The rationale for this is that a number of smokers go through nicotine withdrawal when they stop smoking. The process can be very distressing, especially because benefits of stopping are not immediately perceived. Therefore, the realization that their lungs are getting better and the CO reading showing that levels of the poisonous gas lowered in their bodies can be a very rewarding experience.

A questionnaire containing level of addiction based on the Fagerstrom scale (Heatherton et al. 1991) was distributed before smokers were admitted to the treatment. Number and type of health problems were also part of the questionnaire. Primarily logistic regressions were conducted looking at categorical data: predictors of abstinence following a 7 weeks in out-patient smoking cessation therapy.

Outline of assessment plus 7 sessions - WITHDRAWAL-ORIENTED TREATMENT

(see Chapter 1 for more details)

- Session 1: Information session/Preparation session
- Session 2: Preparation
- Session 3: Quit-day
- Session 4-5 – Support sessions
- Session 6: Final session (before relapse prevention)
- Session 7: (Relapse prevention)

During sessions, participants completed a withdrawal symptoms questionnaires assessing clinical withdrawal during session 2 and in every subsequent session after quit day: depression, anxiety, sleepiness, headache (which is not a clinical withdrawal symptom but might occur when people take Zyban), constipation, irritability and poor concentration. Urges to smoke were also monitored through a questionnaire on a weekly basis. Biochemical validation (carbon monoxide monitoring) as well as self-reported abstinence status were conducted and recorded on a weekly basis.

1) The variables entered in the logistic regression model were physical factors such as nicotine dependence, number of health problems, level of CO in expired breath a week after setting a quit day. The dependent variable were attending session 3 and setting a quit day and abstinence throughout four weeks by self report and objectively measured by CO levels in expired breath

The data were obtained from participants who attended a 7-weeks smoking cessation program from 2000 to 2004.

Data analysis and reporting findings

In order to address socio-demographic differences in cigarette consumption, Chi-square was employed.

Questionnaires (NHS Clinic questionnaire) were distributed before the intervention to investigate predictors of abstinence. The questionnaires were coded using templates and data was analyzed using Logistic Regression (SPSS).

Ethical issues

Smokers who were screened and were suitable for group support were invited to attend sessions. Smokers consented to the use of their questionnaire for research purposes. Their data is coded in SPSS using templates hence participants' data is not identifiable. Their willingness to have their information used for research and audit purposes did not affect treatment in any way. Data was coded numerically to ensure that confidentiality is maintained. Client records are kept in a locked file in an office. This study was conducted in an ethically appropriate manner according to formal guidelines from the British Psychological Society (Code of Conduct and Ethical Principles and Guidelines).

Results

Statistical analyses

In order to determine if there is a significant association between socio-demographic factors (age, marital status, education and occupational status), partners smoking status and abstinence or not from smoking following treatment Chi-square was employed.

The relationship between physiological factors such as physical dependence (Fagerstrom scale, number of cigarettes/roll-ups smoked, carbon monoxide levels at week 3 – quit day), physical illness factors (perceived health status, perception of the risks smoking poses to health, number and type of health problem as variables) and

decision to quit smoking and abstinence. These variables were entered in Enter and Forward LR Logistic Regression analyses. The number of cases included in the Chi-square analyses was 731. The number of cases selected and included in the logistic regression analyses was 405 out of 731. In all analyses, $p<0.05$ was considered statistically significant.

Descriptive Statistics

The sample employed in this study had a similar distribution of male and female.

Diagram 1: Gender of participants

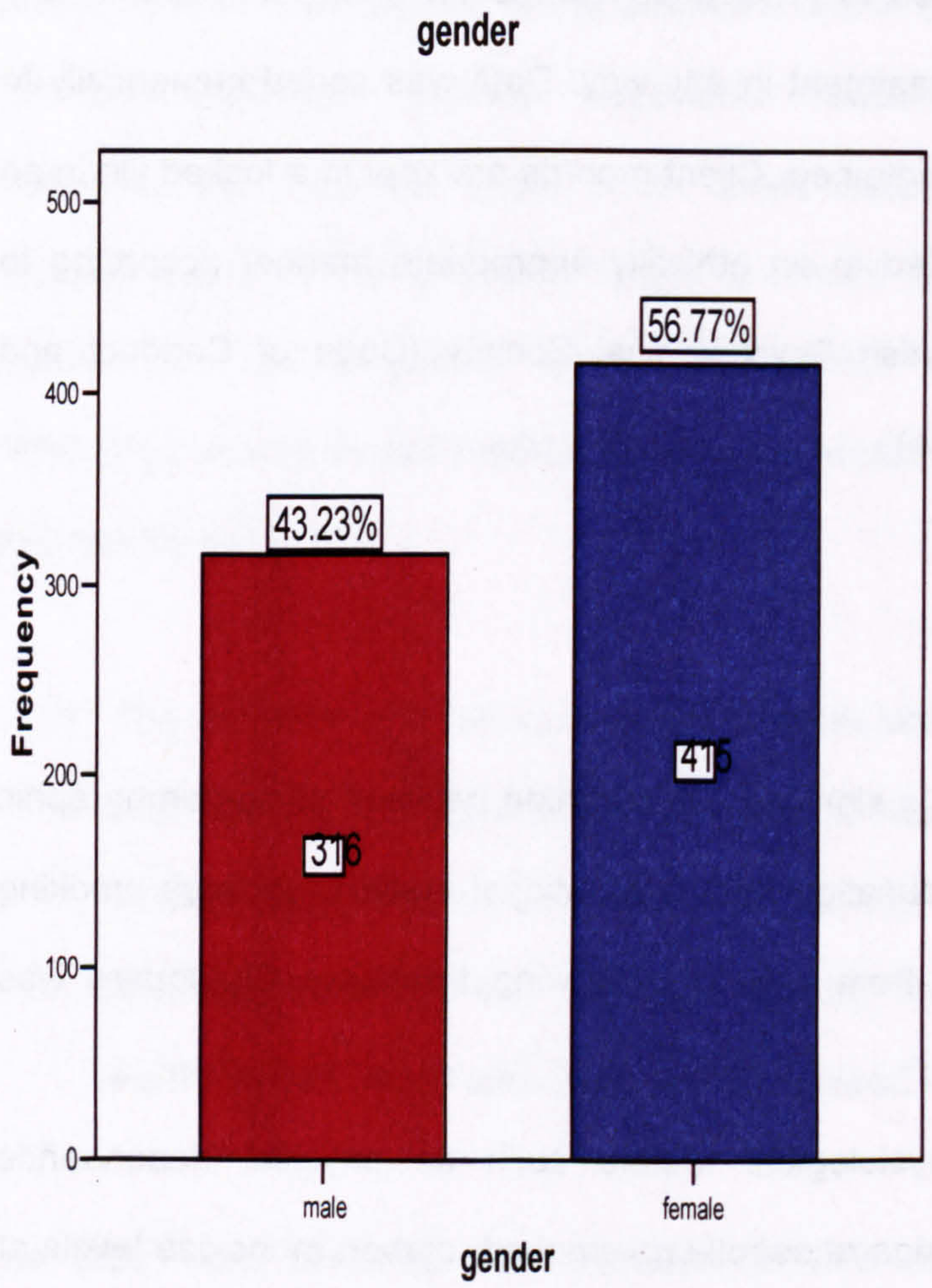
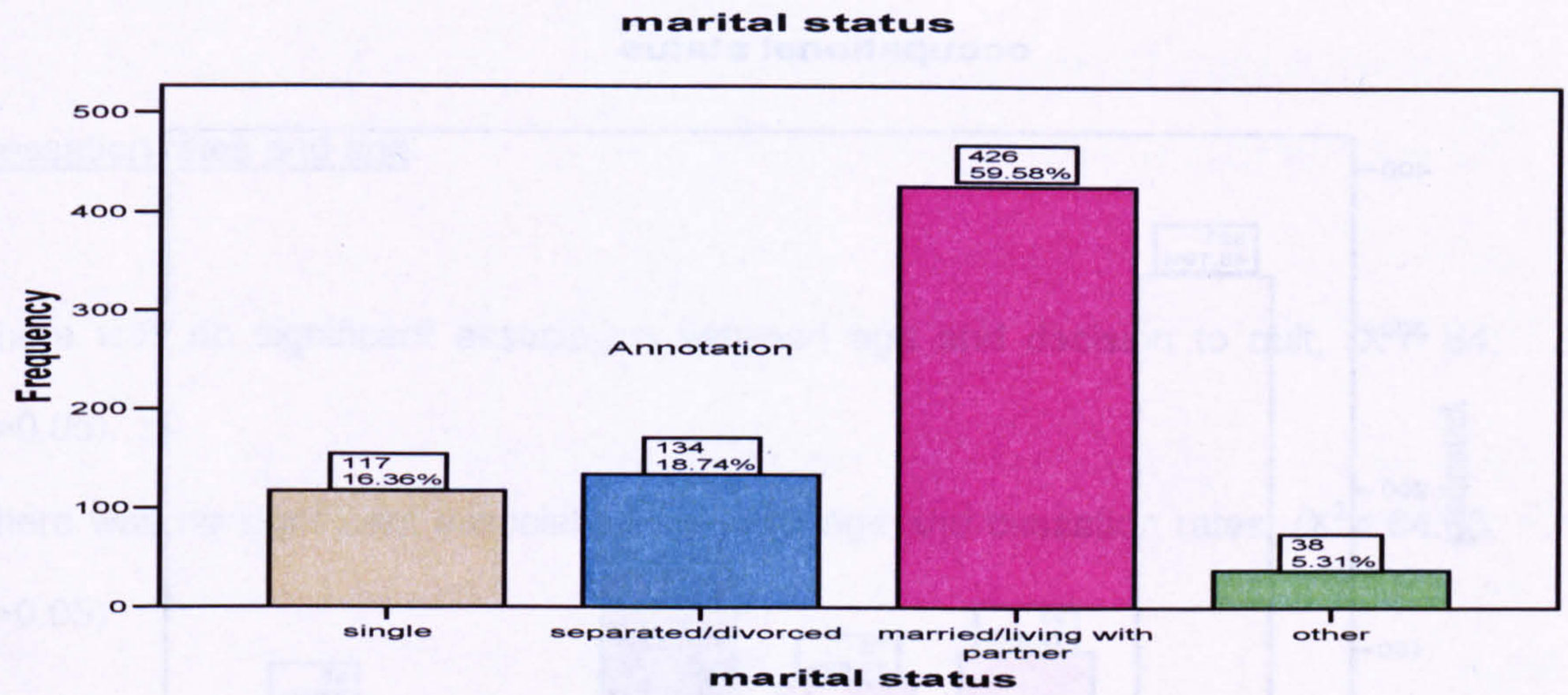
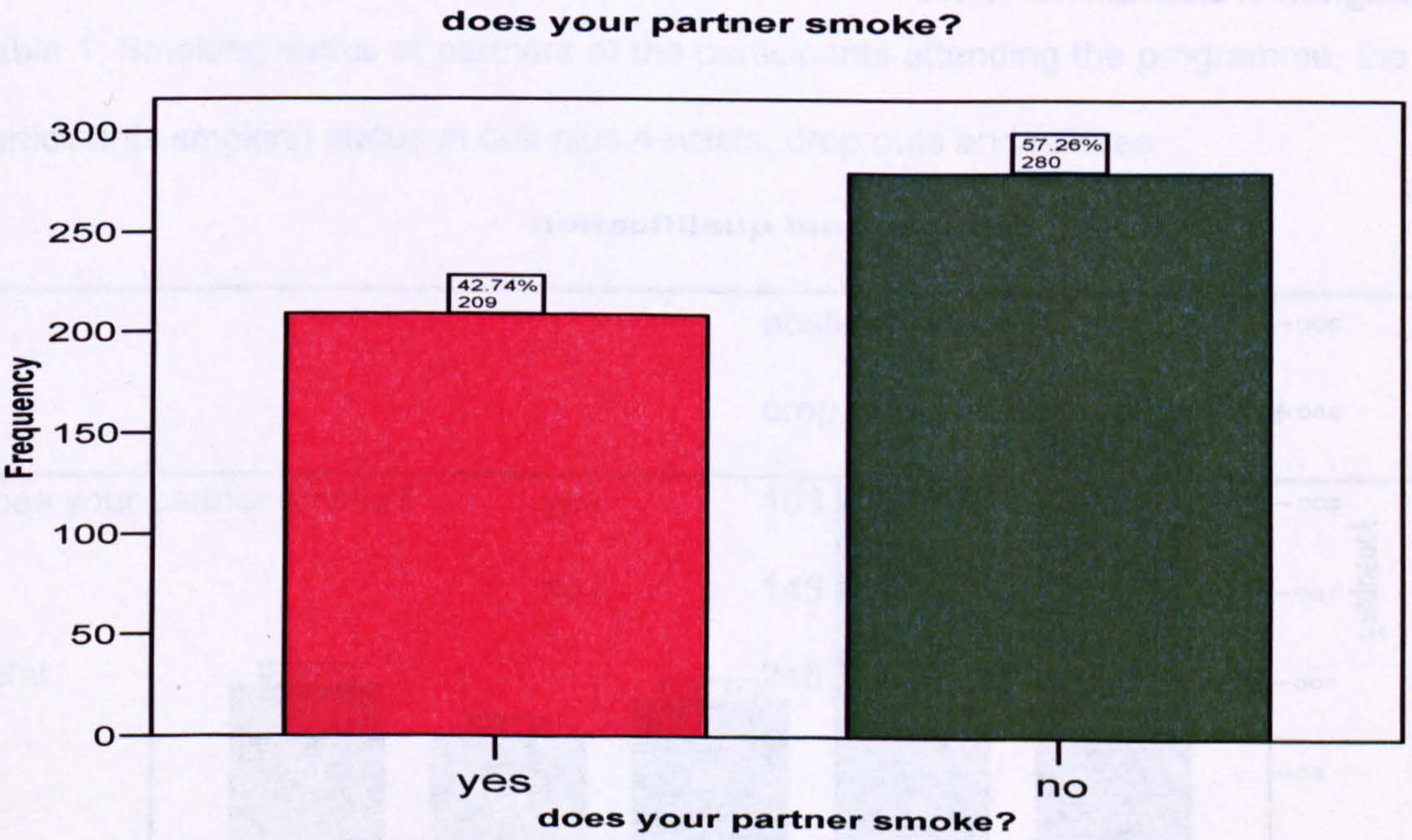


Diagram 2: Marital status of participants



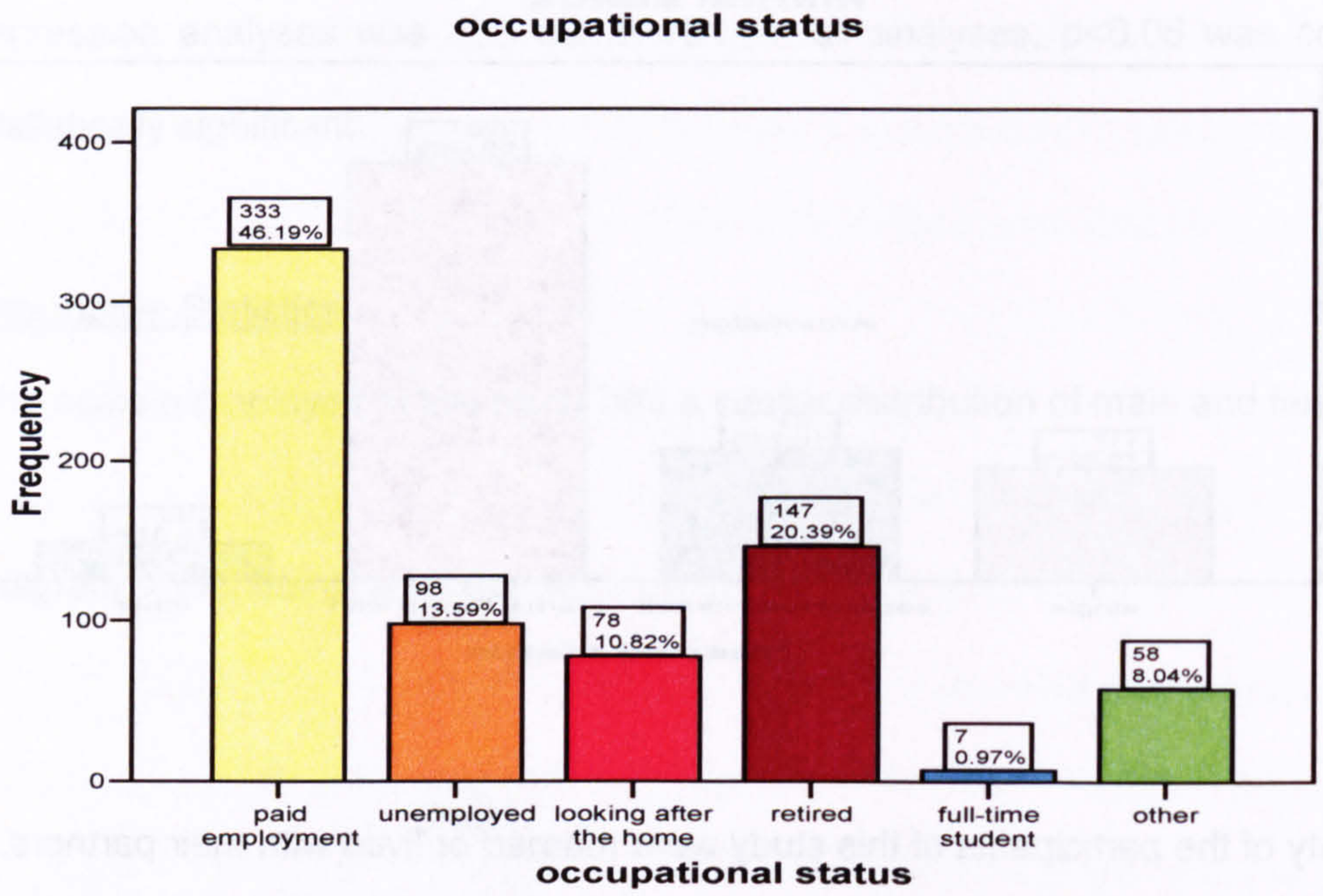
The majority of the participants of this study were married or lived with their partners.

Diagram 3: Partners' smoking status



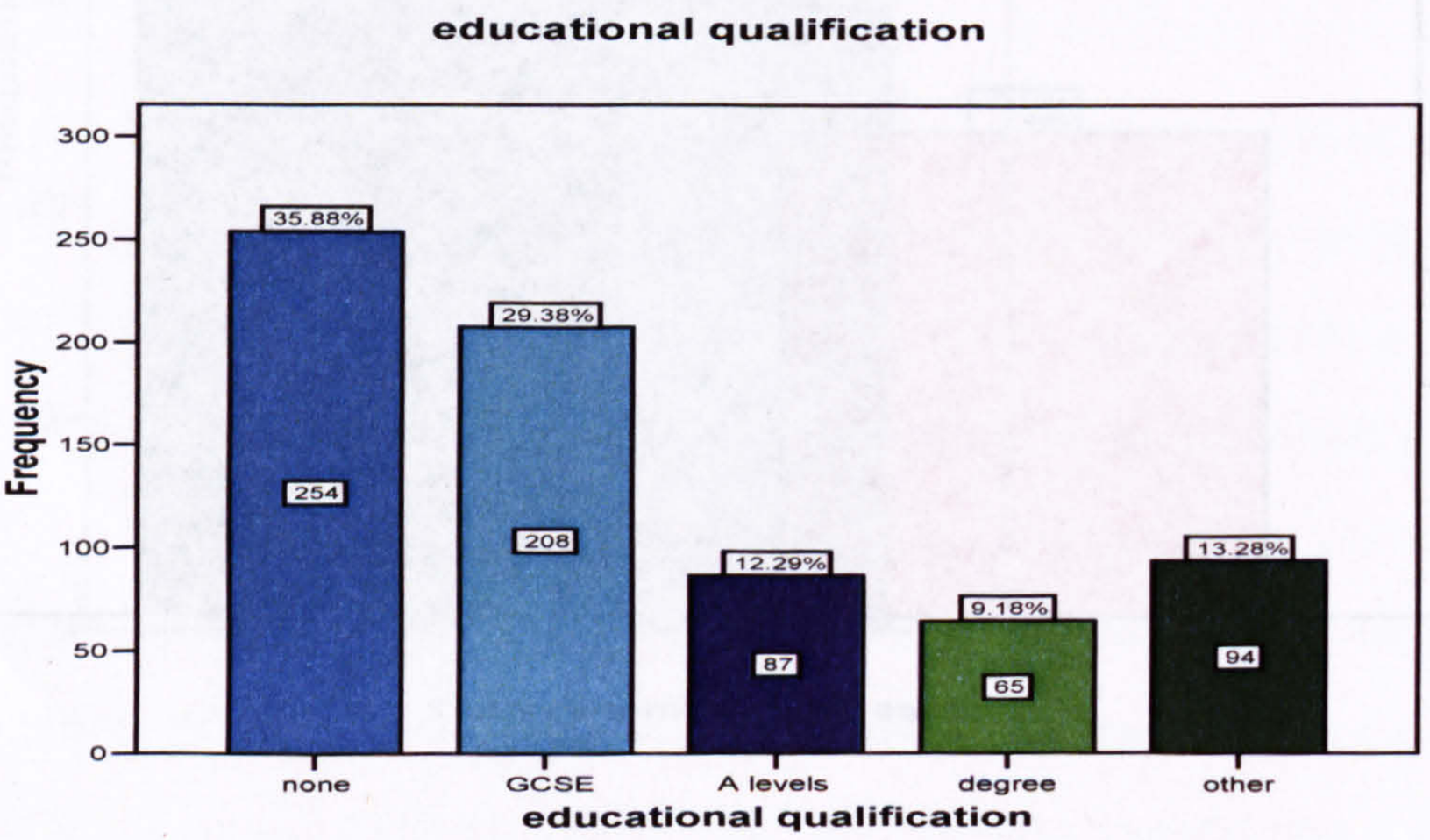
The majority of the participants in this study had partners who did not smoke.

Diagram 4: Occupational status



The majority of participants in this study was in paid employment or retired.

Diagram 5: Educational status



The majority of the participants in this study had no education or GCSE.

Chi-squares

Cessation rates and age

There was no significant association between age and decision to quit, (X^2= 64; p>0.05).

There was no significant association between age and cessation rates, (X^2= 64.66; p>0.05)

Partner's smoking status

When smokers attending the outpatient smoking cessation course were asked, they reported that the majority of their partners were non-smokers or ex-smokers.

Table 1: Smoking status of partners of the participants attending the programme, the participants smoking status at quit plus 4-weels, drop outs and failures.

		abstinent at Q+4 drop outs and failures		Total
Does your partner smoke?	yes	103	106	209
	no	145	134	279
Total		248	240	488

There was no significant association between partners smoking status and abstinence at 4-weeks after quit day (X^2= .346; p>0.05).

There was no significant association between partners smoking status and decision to quit (X^2= 1.49; p>0.05).

Age at which started smoking

Table 2: Statistics on Age in which out-patients started smoking

Statistics

		age	At what age did you start?	number of cigarettes/day	number of roll-ups/day
N	Valid	729	727	713	714
	Missing	2	4	18	17
Mean		48.08	15.97	21.02	3.91
Mode		45	14	20	0
Std. Deviation		13.031	4.192	10.407	9.274

There was no significant association between age person started smoking and abstinence at 4-weeks after quit day (X^2= 43.89; p>0.05).

There was no significant association between age person started smoking and decision to quit (X^2= 41.4; p>0.05).

Number of roll-ups smoked/day

There was a significant association between number of rolled cigarettes smoked per day and abstinence at 4-weeks after quit day (X^2=41.87; p<0.05).

There was no significant association between number of rolled cigarettes smoked per day and decision to quit (X^2= 30.26; p>0.05).

Logistic regression

A Forward LR logistic regression was conducted. Variables inserted in the equation were eliminated until the best model was produced. The model generated is as follows:

Table 3 - Predictors of abstinence by the end of the programme

Enrolled In programme	included in analyses	excluded	abstinent	relapse/dropouts
N 136	405	326		268
% 44%	55%	45%		66%

	B	Wald	OR	95% CI
Socio-demographics				
Age .991	-.026	8.81	.009**	.959-
Smoking and health				
Smoking and health (2) 3.87	.813	8.700	.276**	1.314-
(Has your doctor advised you to stop smoking?)				
Physical dependence				
Dependence (3) .90	-.653	5.275	.284*	.298-
(What would be the hardest cigarette to give up?)				

Age was a significant predictor of abstinence for 4 weeks (OR = .009, p<.005, CI95% .959-.991). Older participants are much more likely to stay abstinent until the end of the programme.

The second variable selected in the model was smoking and health *"Has your doctor advised you to stop smoking?"*

Participant's doctor advising them to stop smoking was a very significant predictor of abstinence (OR = .276, p<.001, CI95%1.314-3.87). Participants whose doctor advised them to stop smoking were much more likely to stop smoking.

The third variable selected in the model was the third question in the Fagerstrom scale of nicotine dependence (Heatherton et al. 1991) "*What would be the hardest cigarette to give up?"* This was a very significant predictor of abstinence (OR = .284, p<.001, CI95%.298-.90). Participants, who found that the hardest cigarette to give up was the morning one, were much less likely to remain abstinent until the end of the programme. By contrast, participants who found that the hardest cigarette to give up was all the others were much more likely to remain abstinent until the end of the programme. According to the Fargestrom scale, (Heatherton et al., 1991) participants who find the morning cigarette the hardest cigarette to give up are much more dependent smoker.

Some of the variables were excluded from the analyses as they did not contribute to the model. The variables which were excluded were as follows:

- CO reading in week 3 (pre-cessation)
- Questions 1, 2, 4 & 5 in the Fagerstrom scale (Heatherton et al., 1991)
- Number of health problems
- Age at which participant started smoking,
- Number of cigarettes and rolled up smoked per week
- Perception of health status
- The question "Do you think that smoking has affected your health?" on the smoking and health questionnaire

An Enter Logistic Regression was conducted to investigate the extent to which age, gender, physical dependence, and physical illness variables predicted decision to quit. None of the variables inserted in the regression model were found to be significant predictors of decision to quit

Table 4: Decision to quit and abstinence

Enrolled in the programme		Attendees	Drop-outs before the quit day
N	405	386	19
%		95.3%	4.7%

Socio demographic	**B**	**Wald**	**OR**	**95%CI**
Age	.011	.020	.973	- 1.051
	1.130	.496	.223	- 1.561
Nicotine dependence factors				
Number cig/day	-.010	.225	.021	.950 - 1.032
Dependence 1	.773	2.921	.452	.893 - 5.260
Dependence 2	-.127	.026	.780	.191 - 4.061
	B	**Wald**	**OR**	**95%CI**
Dependence 4	.205	.067	.795	.258 - 5.838
Dependence 5	.107	.017	.821	.223 - 5.560
W3CO	.013	.764	.015	.984 - 1.044
Health Factors				
Health status	.061	.046	.281	.612 - 1.844
Smoking and health1	-.368	.113	1.095	.081 - 5.913
Smoking and health 2	-1.583	2.219	1.063	.026 - 1.648
Health problems	-.028	.024	.183	.679 - 1.391

Socio-demographic factors

The socio demographic factors age and gender were not significant predictors of decision to quit smoking.

Nicotine dependence factors

Even though low nicotine dependence factors predicted decision to quit, this was not a significant finding.

Physical health/perception of health status

Health factors such as number of health problems, doctor advising participant to quit, perceiving smoking as a risk to one's health were predictors of decision to quit, and these were not significant findings.

Discussion

This study hypothesised that less dependent smokers, with lower number of health problems which are not life threatening are more likely to make a decision to quit smoking and stay abstinent by the end the programme.

The profile of the successful quitter according to the present study was an older participant who was told by his/her doctor to stop smoking and who had no problems in giving up his/her morning cigarette, hence who was less addicted. This finding is in accordance with previous research which revealed the profile of those who quit smoking as older but also revealed they were more likely to quit only if they attributed their symptoms to smoking rather than ageing (Clark, Hogan, Kriz, & Prochaska, 1999). It is not clear what reasons have driven those smokers to take a decision to quit. None of the factors inserted in the equation model significantly predicted decision to quit smoking. Thus, the hypothesis was not entirely verified in the present study. Nicotine dependence factors indeed played a role as predictors of abstinence. Yet, not all items in the scale significantly predicted abstinence. Nonetheless, findings indicated that more dependent smokers did find it harder to quit smoking. Interestingly, number of health problems, perception of health status and awareness of the risks which smoking present to health, were not significant predictors of abstinence or decision to quit smoking. This finding would be similar to previous studies by Sexton et al. (1999) and Wakefield et al. (1995), indicating a higher prevalence of smoking amongst asthmatics when compared to non-asthmatics. It is

possible that the reasons brought forward by Wakefield et al. (1995) and Chapman et al. (1993) hold true (smokers often hold self-exempting beliefs, whilst they accept that smoking is generally harmful, they cite illogical justifications to explain why they are not personally at risk from their own smoking). Protection Motivation Theory (Rogers, 1983) could offer a plausible explanation for these phenomena. It is possible older smokers believe it is too late for quitting and getting any benefits from it, hence believing it to be a low response efficacy for quitting smoking (i.e. believing that their efforts would not improve their health and judging the costs of quitting smoking as higher than the gains of remaining abstinent).

The most interesting finding in this study is the role of the doctor's advice in staying abstinent until the end of the programme and how doctors' advice played an important role in older smokers who were more likely to quit. Those findings could be understood in the context of locus of control models and doctor and patient communication.

Health promotion was defined by the Ottawa Charter for Health Promotion (World Health Organization, 1986) as "*the process of enabling people to increase control over, and to improve, their health*" (pages 7-8). According to Norman and Bennett (2003) in the UK, it is also an inherent element of preventive care in primary health care where general practitioners are now required to give patients advice about the importance of adopting a series of health behaviours such as quitting smoking, alcohol consumption, drug use, diet and safe sex. In view of that, the construct health locus of control is widely researched as a predictor of health behaviour (Wallston, 1992).

Health locus of control was developed by Rotter (1954) based on his social learning theory by which the odds of a behaviour occurring is mediated by one's expectancies of that behaviour being reinforced and this reinforcement considered rewarding. It is

an action and experienced outcomes perceived ratio. Rotter developed an internal versus external dimension of control whereby internals believe that events are a consequence of their actions and they have volition and control over them. By contrast, externals believe that events are unrelated to actions and determined by factors which they cannot control. Wallston and Wallston (1982) developed a measure of the health locus of control appraising whether individuals perceive their health as controllable by others or by them. The external locus of control has 2 dimensions: fate – "*my health is in the hands of fate"* (luck, God) and powerful others (family, doctor). Powerful other could be their GP "*I will follow my GP's advice*". According to Ogden (2001), research points out that health locus of control is related to whether or not individuals change their behaviors and to the type of communication style they require from health professionals. For example, if a doctor encourages and individual who has external "powerful others" locus of control to stop smoking they will be likely to comply because they believe that their health outcomes are in the hands of the doctor. By contrast, an internal will not comply with the same advise if he does not deem himself responsible for his health.

According to Norman et al. (2003), smokers who perceive that they have personal control over their health will be more likely to take a decision to quit smoking and stay abstinent. However, this relationship might change for older adults. According to Lachman (1986), the elderly are more external on the health-specific locus of control dimensions. Their research indicated that age differences were found most often on the chance and powerful others control dimensions, suggesting that the elderly acknowledge the importance of external sources of control. In addition, the domain-specific scales were better predictors of behavioral outcomes within their respective domains for the elderly but not for the young. A study by Blanchard and Irion (1988) found a similar relationship between locus of control and older adults. They suggest that the belief in powerfulness of others was positively related to planful problem-solving and self-control in older adults. Hence, it is possible that the reason why

older smokers were more likely to quit smoking following their GP advice to quit is because they are more adherent to their Doctors' advice. It would be valuable to conduct a study looking at the relationship between GP advice to stop smoking and locus of control in older adults. A future direction of this study would be to employ a more medical model with older smokers in which health professionals continuously highlight the importance of quitting smoking and maintaining abstinence; thus adherence to treatment is reinforced throughout treatment. The outcomes of this intervention could be compared to the standard intervention for an age-matched population.

However, those findings should be interpreted with caution as one of the limitations of this study is that it is based on short-term quitters. Yet, in spite of this constraint, these research findings are quite unique as there is little evidence in the literature to support the view that smokers with a strong belief in the role of powerful others are more successful in quitting after attending a smoking cessation programme. Wojcik (1988) found that smokers with strong powerful others locus of control attending formal treatment programmes were more likely to relapse 3 months after quitting. Segall and Wynd (1990), studied smokers who had attended an 8- week smoking cessation programme. They found that after 6-months relapsers revealed stronger beliefs in the role of powerful others than abstainers.

Another future direction of this study would be to investigate the doctor-patient communication style adopted by GP's locally. A number of studies have examined the role of information and the type of information on improving patient adherence with recommendations made during consultation with health professionals. Mullen et al. (1985) conducted a meta-analysis on the effects of instructional and educational information on compliance. He pointed out that 64% of patients were more compliant when using such information. Haynes (1982) investigated base line of 52% compliance with recommendation but reported that behavioural and individualized instruction improved compliance to 75%. According to Lay (1989), improving

compliance depends on the effectiveness of oral communication. Accordingly, he suggests that health professional follow the following rules to improve their communication style:

- ❖ Simplify information
- ❖ Primacy effect - patients remember the first and last thing they are told
- ❖ Stress the importance of compliance
- ❖ Use repetition
- ❖ Be specific
- ❖ Follow-up consultation with interviews.

The specialist service is responsible for the training of GP's and other health professionals to become smoking cessation advisers. It is part of training to discuss models of adherence and role playing different communication styles and discuss them in the light of research in doctor-patient communication. It would be therefore interesting to learn if those trained health professionals have adopted these communication styles or not. Results indicated that whichever style they adopted, it was effective in urging patients to stay abstinent until the end of the programme.

Another explanation why doctor's advice might play a more important role in older people and less in younger people could be that younger people are more likely to engage in unrealistic optimism, a concept proposed by Weinstein (1983, 1984). Weinstein proposes that the reasons why people continue to practice unhealthy behaviours are due to inaccurate perceptions of risk and susceptibility. Weinstein described the cognitive factors that contribute to unrealistic optimism as 1) lack of personal experience with the problem 2) the belief that it is preventable by individual action 3) the belief that it has not yet appeared and it will not appear in the future 4) the belief that the problem is infrequent. The consequences of smoking are generally not perceived until much later in life and accordingly it is likely that younger smokers

might downplay it's consequences for their health and not take on board their GP's advise to stop smoking. If that's the case, NHS publicity using fear tactics is questionable. Are these tactics only targeting older smokers? Do they have any appeal to younger smokers? According to Dillard and Hale (1997), fear appeals are more effective for older populations. Older people perceive threats to their health as more severe than younger people. According to Dillard et al. (1997), "*an effective appeal must include a severe threat; evidence suggesting the target is especially vulnerable to their threat and solutions that are both easy to perform and effective*".

It is likely doctors' advice might play a more significant role with older people compared to younger people. On average younger adults have been trained to use a wider array of communication channels such as computers and internet, which might not be so widespread amongst older adults. Hence, younger people might not rely so much on the advice of their GP's because they can monitor their symptoms and acquire health education using a wealth of media sources. Furthermore, reinforcement of the advice might play a role in deciding to quit smoking and staying abstinent: older people are likely to visit their GP's more frequently and hence they would probably have heard more frequently that they should stop smoking. Furthermore, older people are more likely to suffer from chronic health problems and GP's are more likely to offer advice to those who suffer from smoking related illnesses (Althuis et al., 1999; Wakefield, et al., 1995, Chapman et al., 1993). Furthermore, according to Coleman et al. (2003), smokers who attend GP's routine consultations and believe that they have smoking-related problems are more motivated to stop smoking than others.

Younger people might see their GP more randomly and could make their lifestyle choices based to a greater extent on social factors (smoke bans), information on the web, in the workplace, etc. Therefore, independently of the locus of control, repetition of information from the same source (GP) might play an important role in people's

quitting attempts. Future directions for this study would also be to investigate sources of referral. Also if there are differences between younger and older smokers' decision to quit and abstinence based on different sources of information. Moreover, research should shed light on what these factors say about their locus of control.

An audit on 367 smokers which was conducted in a NHS service (Pires, 2004) indicated that from July to October 2003, the majority of the users have been referred to this service through their GP's (74%). The remaining referrals came from a Hospital Doctor (2%), Occupational Health in the Civic Centre (4%) and Rehabilitation Nurse (2%). Word of mouth was also a source of referral – some users heard about the service through their friends (12%), through their work mates (2%), from previous group members (2%). One percent of users called the service triggered by the warnings in the pack of cigarette.

From February to May 2004 (N=214) , even though the majority of users still have been referred from their GP's, the rate of referral coming from this source decreased (66%). Referrals coming from Hospital Doctors were still low (1%). Publicity had some impact on the source of calls; a local newspaper had some impact on calling rates (12%), followed by TV (1%), Non Smoking Day in the local shopping mall (2%), local radio station (1%) and Ads on the GP's Practice (4%). Finally, word of mouth still had an impact as users come to the service following their friends' advice (11%).

This audit revealed that the findings of this study are not surprising once we understand the extent to which GP's advice contributed to referrals (M=70%). As this study was based on short termed outcomes and the impact of the GP's advice was measured before setting a quit day, we did not know if it has a lasting effect. A further future direction would be to investigate the impact of health professional interaction and advice throughout treatment as a predictor of attendance and abstinence.

In conclusion, in spite of design limitations which looked at short-term outcomes, this study underscores the importance of GP advice. It also revealed that older smokers were more likely to give up smoking, which is in accordance to a report by the Health Developmental Agency (2004) "*a strong age gradient exists in the estimated proportion of ex-smokers across England, with highest rates reported for the elderly*" (page 11). Some of the implications of this study would be to revise publicity communication style in the NHS so younger smokers are also targeted. This is a public health priority as over a third of men aged under 54 and a third of women under 44 in UK are estimated to be current smokers. Highest rates were found among men aged 25-34, where prevalence was estimated to be as high as 40% (Health Developmental Agency, 2004).

Findings point out that more addicted smokers find it harder to give up smoking, as expected.

Further research is needed looking at the effect of those variables across time.

Title:

"An exploration of psychosocial and physical dependence factors of smokers attending outpatients smoking cessation intervention in the UK, which might play a role in Brazil".

Abstract

It is possible that methods which were developed in a specific country could fail to address cultural issues. Shedding light on cultural differences might be a starting point for the development of interventions which are appropriate for Brazilian smokers, providing us with a sound argument not to rely entirely on 'one size fits all approaches' adopted in the National Health Service (NHS).

Recruitment/ intervention

Ten participants consented to take part in this study and attended a group session. Smokers attended a 7-week abstinence oriented group support based on Hajek's model (1989).

Aims

To understand the difference between the UK and Brazilian participants for each of the significant factors addressed in the UK studies (1 & 2). Medians between UK and Brazilian participants were compared.

To explore qualitatively the factors which were perceived as significant to the Brazilian smokers to urge them to initiate and to quit smoking and the process of quitting smoking using a NHS programme brought to Brazil.

Method: Questionnaires employed in the UK were translated into Portuguese and used in Brazil in order to investigate whether psychosocial and physical dependence factors which played a role in decision to quit and abstinence in UK (Studies 1 & 2) were relevant to Brazilian smokers. A descriptive qualitative design was employed in this study (Content Analysis).

Results :Smoking initiation was positively regarded by society, there were five themes emerging from the smoking maintenance stage (I.e. Cigarettes as a supporting persona and Smoking socially constructed as intolerable), smokers tended to have a more negative perception of smoking behaviour as they moved towards the contemplating stage (i. e. Social cognitions: Rejection, shame and guilt). The process of quitting has been challenging but group support was perceived as a protective factor. Most female smokers were dissatisfied about their body image and increase in body weight as a result of quitting.

Discussion: This is the first study which has used quantitative and qualitative methods comparing UK and Brazilian participants. As there are no evidence-based methods in Brazil, this study could be the starting point of a number of other studies setting a standard for best practice in smoking cessation methods in Brazil.

Introduction

Understanding culture is essential to promote healthier lifestyles and reduce the incidence and prevalence of smoking. Conceptualisations of culture vary across scientific disciplines and theoretical orientations. Because of the complexity of the causes and effects of smoking, no particular discipline can single-handedly target smokers across different cultures (Unger, Chou, Palmer & Ritt-Olson 2003).

Smoking is a behaviour which is widely practised across countries independently of their different cultures. Culture can, however, shape the methods employed by different countries to deal with tobacco use. There are differences in social norms, smoking bans and the function they serve, as well as in people's experiences of giving up smoking. There are also major differences in the way tobacco is used. In Cuba, tobacco is smoked in hand-rolled cigars, whereas in India it is smoked in *bidis* (small, flavoured cigarettes) (Unger *et al.*, 2003). In Indonesia it is mixed with clove and in many Middle Eastern countries people smoke *Narguile* (flavoured tobacco is filtered in water and smoked in pipes which can be shared). Smokers in Sweden adopt snuff (chewed or powdered tobacco) and in Bangladesh they use smokeless or chewed tobacco. In Southeast Asia tobacco is smoked in *suipas* (clay pipes).

There is also a huge difference in prevalence and incidence of smoking across countries.

For instance, in 1990, it was estimated that a 35 year old man in the former Soviet Union had twice the risk of dying from tobacco-related causes before the age of 70 years as a man in the European Union (Peto, Lopez, Boreham & Thun, 1994). Furthermore, 56% of cancer deaths and 40% of all deaths are attributed to tobacco in

the former Soviet Union, compared with 47% and 35% respectively in the European Union (Peto *et al.*, 1994).

There are also gender differences. For instance, in China 63% of men and only 4% of women smoke. The US Department of Health and Human Services (2001) sees gender differences as a target for public health interventions. The reasons behind gender differences are many and varied. According to West and Zimmerman (1987, cited in Lorber (1994), gender differences in smoking and the fact that prevalence of smoking has increased amongst women in the last ten years could be an expression of women's relative equality and power in society.

Many interventions across the world are based on evidence-based methods from elsewhere. Accordingly, many health studies employ racial and ethnic variables as alternative measures of cultural groups under the assumption that racial or ethnic groups share cultural practices, belief systems and customs (Chin & Humikowski, 2002; Murry, Smith & Hill, 2001). This might not be the case. If smokers in the same country have cultural, social and ethnic differences and individual needs, the gap might be even wider across countries.

A distinct problem is when differences within countries are minimised and, in an effort to be part of that culture, people adopt behaviours which harm their health. According to Unger, Trinidad, Weiss & Rohrbach (2004) smoking among Asian-American adolescents is a growing public health problem. Even though this group presented a lower prevalence of smoking when compared to North Americans, the differences are decreasing. Acculturation to the US has been found as a risk factor for smoking among Asian-American adolescents (Chen, Unger & Cruz, 1999; O'Hare & Van Tran, 1998; Unger *et al.*, 2000). Berry (1980) defines acculturation as 'the exchange of values,

beliefs, languages, customs and mannerisms that occur when people with diverse cultural backgrounds come into contact with one another'. According to Nichter (2003) in order to understand the role of culture in tobacco use we must consider two fronts:

1) Culture as it is commonly regarded in relation to ethnic differences, and

2) Popular culture as an ongoing project subject to both the identity needs of youth and the influence of an advertising industry that manipulates these needs to sell and develop market niches.

When ethnic minority groups adopt cultural habits which are not part of their culture they might be going through an assimilation process, trying to search for a cultural identity with which to be integrated in the new culture, and/or being influenced by the advertising industry and their surroundings. Nichter (2003) argues that, 'When using the term ethnicity it is important to differentiate between an ethnic identity one assumes in context and an ethnic label that is imposed by others. One's ethnic identity is an identity one chooses to assume on the basis of some sense of social and political affiliation. Far from being fixed or static, which would render ethnicity a reified construct, ethnic identity may be claimed or distanced in particular contexts, at particular times, and for particular reasons'. Accordingly, ethnic identify is contextual. Smoking behaviour might be a choice which is based on collective experiences and social interaction.

Unfortunately, there are very few studies on smoking cessation in developing countries. Some of the methods developed in different countries like the UK are employed elsewhere. It is possible that methods which were developed in a specific country and have been reasonably successful when employed in that cultural context are not entirely appropriate when employed elsewhere, as they could fail to address cultural issues which might be influential for the population undergoing a process of adoption of a healthy behaviour. Cultural differences need to be acknowledged and

addressed in order to provide a service which is appropriate to a specific population. Shedding light on cultural differences might be a starting point for the development of interventions which are appropriate for Brazilian smokers, providing us with a sound argument not to rely entirely on 'one size fits all approaches' which might not be generalisable to different cultures outside the UK. There are many reasons to believe that interventions used in the UK might not incorporate elements which would be relevant and essential to Brazilian smokers. The reasons for the adoption of smoking and maintenance of the habit might be different across countries. Those differences might predispose individuals to smoke, including education, economic insecurity, and social class, amongst other factors. According to King (1997), ethnic differences should be examined when adopting different interventions across countries.

The Brazilian scenario

Brazil is a developing country which has been widely influenced by initiatives in the US However, in Brazil to date, there are no reports about the impact of the cultural characteristics of the country on smoking behaviour and response to specific treatments, even though smoking is a very important public health problem (Costa e Silva & Koifman, 1998).

Brazil is a very ethnically diverse country with a very young population. The incidence and prevalence of smoking in Brazil is very high. In 1989, 32.6% of the population above 15 years of age smoked (Pesquisa Nacional sobre Saúde e Nutrição (PNSN)). Furthermore, Brazil is the fourth biggest producer of tobacco in the world, after China, the US and India. Since 1993 it is also the greatest exporter of tobacco. As might be expected, the financial cost of smoking is low and prevalence is high. In 2004, it was estimated that around 28 million people smoked; 16.7 million men and 11.2 women (MS, 1988). In 2001, a study conducted in Rio de Janeiro with 2,479 people revealed that smoking prevalence reduced from 30% in 1989 to 21% in 2001 (MS/INCA, 2002

b). An analysis of per capita consumption suggested that there is a tendency for reduction of smoking prevalence in Brazil. In 1989 and 2000, the per capita consumption dropped from 1,772 in 1989 to 1,197 in 2000. Accordingly this would indicate a reduction of one third. In order to support Brazilian smokers in their efforts to quit, it is important to understand what factors contribute to the initiation and maintenance of the behaviour and factors which facilitate abstinence from smoking locally. However, there are few studies which tested predictors of success and failure in stop-smoking clinics in Brazil (Chatkin, Haggstram, Rodini & Fritscher, 2001; Costa, Younes & Lourenco, 2002).

The social determinants of smoking maintenance in Brazil

In Brazil, tobacco is the second most-consumed drug. There are many factors which promote the uptake and maintenance of the behaviour; availability, cheap price and widespread publicity disseminating a positive image of the drug, showing smokers as young, beautiful, successful, free, powerful, and intelligent, among other things. Hence it is likely that it is easily portrayed as a success formula which is accepted by youngsters. According to the Brazilian Department of Health (2003),

'During many years smoking was portrayed as socially acceptable and the image of smokers being very positive. The success of publicity strategies is revealed through the fact that 90% of smokers in Brazil start smoking when they are under 19 years old. Hence to develop an effective tobacco control policy, we need to understand that smoking behaviour is not limited to the smoker himself. The problem was originated by social, political and economic contexts which favour smokers, promoting smoking incidence and discouraging abstinence.

The scenario in the rest of the world

According to a report on the smoking epidemic in the UK by the Health Development Agency, adult smoking prevalence is estimated at 27%. The majority

of smokers are men aged under 54, and one third of women under 44 were estimated to smoke. Just one third of adults in England were estimated to be ex-smokers, with higher rates estimated for men compared with women. In terms of smoking-attributed mortality, approximately 86,500 deaths a year are attributed to smoking (1998-2002). A major goal for health promotion strategies in UK is to reduce the prevalence of cigarette smoking and avoid relapse. Tobacco smoking has been called the biggest single cause of preventable ill-health and premature death in the UK (DoH, 1999).

In the UK, it is predicted that half of the smokers will die from smoking-related causes, one third before the age of 65. The fact that tobacco is the most significant preventable cause of chronic ill health and premature death in developed countries, urges health authorities to attempt to reduce the incidence and prevalence of smoking. Most mortality which could be attributed to smoking is among males. Nevertheless, women are at higher risk than men for breast, lung and bladder cancers (Bosch, 2001). Unfortunately more and more women have taken up smoking over the years. As a result, the number of deaths that have smoking as a contributor has also skyrocketed among women. The incidence of lung cancer among women increased from 3% in 1950 to 25% in the year 2000 (Charatan, 2001). In the UK, 62% of smoking-related deaths are among men and 38% among women.

The 'Smoking Kills' White Paper established a target for adult smokers in the UK, aiming to trim down in all social classes so that the overall rate falls from 28% to 24% or less by the year 2010, with an interim target of 26% by 2005. This could be a constructive initiative as, considering the actual levels of smoking worldwide, it is predicted that by that by the year 2020, the annual death rate will be 10 million and about half of today's world population will be killed by tobacco (Peto, 1994). The 'Smoking Kills' White Paper reinforces the banning of tobacco advertising and the

discouragement of its sale to young people, and promotes smoke-free working places and public places. It also regulates taxation. The White Paper was the origin of the Smoking Cessation Specialist Services under the NHS umbrella. The Department of Health also launched a series of guidelines directing health professionals to fulfil their roles as smoking cessation advisors and established protocols for use of NRT and bupropion (Raw & McDonald, 1992).

Media campaigns worldwide try to tackle the problem of drug abuse by creating awareness of illegality and the health risks of using these substances. Since smoking causes about one fifth of all deaths (120,000 deaths/year), it can be considered a high-risk legalised drug. According to national research conducted by the US Health Department (2001), measuring drug abuse, nicotine is the most addictive drug. In spite of being the most addictive drug and having high lethality and being the most precocious used drug in the United States, nonetheless it is legalised. According to the National Institute of Drug Abuse (1996), smoking is the second most addictive drug after alcohol. The drugs which followed in the ranking were; crack, heroin, cocaine, inhalants, and cannabis.

A media campaign launched recently by the US National Drug Control Agency devised a strategy to increase to 80% the proportion of young people who perceive regular use of illicit drugs, alcohol and tobacco as harmful from 2002 to 2007. This campaign bases its strategy on studies indicating that changes in drug-related knowledge, beliefs and risk-perception highly influence attitudes and behaviours towards drugs. However, as effective as smoking cessation publicity has proven to be, it has failed to motivate a number of smokers to quit.

Smokers who seek support find multi-component interventions useful. Results of a considerable number of papers indicate that using a combination of techniques is normally more efficacious in helping people to quit than a single therapy by itself. A

study by Richmond, Harris and Neto (1994) provided evidence that nicotine replacement therapy is effective as an aid to smoking cessation when used as an adjunct to cognitive behavioural intervention. The Cochrane review by Lancaster and Stead (2002) found that there was an increase in cessation with the use of a group programme. They also argue that there is no evidence that group support is more effective than a similar intensity of individual counselling. However, contrary to previous findings, Lancaster *et al.* (2002) propose that there is limited evidence that the addition of group therapy to other forms of treatment, such as advice from health professional or nicotine replacement therapy, produced extra benefits. They also found limited evidence that programmes which included components for increasing cognitive and behavioural skills to avoid relapse were more effective than the same length or shorter programmes without these components. Furthermore, there was no evidence that manipulating the social interactions between participants in group smoking cessation programmes affected outcomes. From these findings it is clear that there is a lot of ambiguity in what is effective in smoking cessation interventions and which components play a role in decision to quit and outcomes. So, in order to provide appropriate smoking cessation interventions in different countries and settings, it is crucial to understand whether the components which are addressed and manipulated in the context of the treatment are relevant to that population.

The factors which played a role in predicting outcomes and decision to quit in two UK studies were as follows (see study 1 and 2 for details)

1. Psychosocial study 1: marital status, motivation to quit, stress, weight control, smoking to facilitate social interaction and being employed outside the house.

Study 2: Being older, Doctor's advice to stop and being more physically dependent on nicotine.

Aims

There were two aims in this study.

1) To understand the difference between the UK and Brazilian participants for each of the significant factors addressed in the UK studies (1 & 2).

This was operationalised by comparing the medians of ten case studies in Brazil (who took part in Hajek's (1989) abstinence-oriented approach) to the sample in the UK (who took part in Hajek's (1989) abstinence-oriented approach as NHS out-patients). The medians of the psychosocial and physical dependence factors and importance of GP advice that were significant in the UK were compared to the medians of these factors in Brazil. These findings were presented in tables in the appendix and summary in the text.

2) The second aim of this study was to explore qualitatively the factors which were perceived as significant to the Brazilian smokers to urge them to initiate and to quit smoking and the process of quitting smoking using a NHS programme brought to Brazil.

Objectives

The objective of this study is to explore some of the similarities and differences of the Brazilian and UK participants and to explore the process of quitting smoking from the Brazilian participants' perspectives. This would allow us to reflect on how we could adapt NHS interventions to become culturally specific to meet the needs of a Brazilian population.

Method

Brazilian outpatients attending an abstinence-oriented smoking cessation intervention in Brazil based on Hajek methods (1989) took part on this study. Participation was voluntary.

Primarily, questionnaires employed in the UK were translated into Portuguese and used in Brazil in order to investigate whether psychosocial and physical dependence factors which played a role in decision to quit and abstinence in UK (Studies 1 & 2) were relevant to Brazilian smokers. Descriptive statistics were conducted, comparing the median of individual cases of the participants taking part in this study to the UK participants. The medians compared were; socio-demographic data, number of cigarettes smoked in the beginning of the programme and for each of the psychosocial and physical factors found to be significant in the UK study. This method was employed in order to provide a picture of the participants in the Brazilian study and how similar or different they were from the participants in the UK study.

Further to that, a descriptive qualitative design was employed in this study. This approach was selected as rich descriptive data would not be available through quantitative methods.

Recruitment and intervention

Advertisements aiming to recruit smokers to the therapy session with messages high in self- and response-efficacy were placed in local papers, magazines and in GP's waiting rooms. The advertisements contained a phone number for participants to call and book to attend a free trial of smoking cessation treatment. In spite of the fact that the intervention is normally paid for, for the purpose of this study, treatment was free of charge. The clinic secretary provided prospective participants with information about the intervention and sent leaflets and booklets upon request. Prospective participants could also opt to email the clinic asking for information and/or to be contacted in the future. Dates and times of the sessions were arranged through the phone conversation. All the smokers calling to book a session were booked into an individual session for initial assessment. Following assessment, participants were invited to attend a group session based on the available dates and times. Participants who suffered from severe

mental health problems or who did not wish to sit in a group were offered individual support. The assessment session lasted approximately half an hour. Both the individual and group sessions lasted approximately one hour. Ten participants took part in the Brazilian study. Ten participants consented to take part in this study and attended a group session. As they arrived at the session, they were greeted by a secretary who provided them with a place to sit, refreshments and some reading material on the intervention. As participants were seated they were introduced to the Counselling Psychologist and General Practitioner who co-facilitated the sessions.

A CO reading in expired breath was taken before each of the seven sessions started. This reading was the objective measure of smoking prevalence and a motivational tool. The readings differed across participants and in some cases, even though one participant might smoke more than another, the readings could be similar or even the opposite of that expected. The reason for this is the fact that some smokers inhale more carbon monoxide than others and some have smoked more recently than others, and this varies in accordance with the manner in which people smoke. The format of the sessions in Brazil was the same as that employed by the NHS Stop Smoking out-patients groups in the UK.

<u>Outline of assessment plus seven sessions of the withdrawal-oriented approach for the present study (See study 1 for more details)</u>

- Session 1: Information session/Preparation session
- Session 2: Quit day
- Sessions 3-5: Support sessions
- Session 6: Final session (before relapse prevention)
- Session 7: One month after the end of the programme - (Relapse prevention)

During sessions, and in every subsequent session after quit day, participants completed questionnaires on withdrawal symptoms assessing clinical withdrawal.,These might include depression, anxiety, sleepiness, headache (which is not a clinical withdrawal symptom but might occur when people take Zyban), constipation, irritability and poor concentration. Urges to smoke were also monitored through a questionnaire on a weekly basis. Biochemical validation (carbon monoxide monitoring) as well as self-reported abstinence status were conducted and recorded on a weekly basis.

The questionnaire

Participants completed questionnaires during the assessment session. As well as socio-demographics information, the questionnaire assessed several psychosocial and physiological constructs.

The socio-demographics information, which was adapted to the cultural context, was as follows: Gender, marital status, working status (in paid employment, unemployed, looking after the home, retired, full-time student, other), educational qualification (none, secondary school pass or equivalent, high school exam qualifications or equivalent, degree or equivalent, Other...specify), and ethnic group (White-Brazilian, other White, Black-Brazilian, Black African, other Black, Native Indian, Asian, Middle-Eastern, Mixed-White/Black Brazilian, White/Black African, other Mixed, Other...specify).

The psychosocial constructs were as follows: Smoking Self-Efficacy/Temptation (short-form), (Velicer, 1992). This questionnaire contains nine questions, which could be clustered into: positive affect/social situation (three questions), i.e. how tempting with coffee while relaxing; negative affect situations (three questions) i.e. how tempted when angry or when stressed; and habitual/craving situation (three questions) i.e. tempted when first get up. All self-efficacy items were measured on a five-point Likert

scale: 1 – not at all tempted, 2 – not very tempted, 3 – moderately tempted, 4 – very tempted, 5 – extremely tempted.

Quitting history was assessed by the following questions: 'When was your last quit attempt?' and 'What was the duration of your longest quit attempt?' recorded in number of days.

Smoking motives were assessed by questions about the situations smokers believe they are likely to miss most when they stop, and are divided into; social (i.e. smoking helps me socialise), physical (i.e. smoking helps my concentration), and psychological(smoking helps me to cope with boredom). This questionnaire also used a Likert scale ranging from 1 – very much to 5 – not at all.

The 'Motivation/determination to quit' questionnaire was based on Prochaska and DiClemente (1984), and measured readiness to change and implement new behaviour, i.e. 'How important is to give up smoking?'. The scale ranged from 1-extremely important to 5 – not at all important.

Psychological distress was measured using the General Health Questionnaire designed by Goldberg (1978). This questionnaire is used to detect non-psychotic psychiatric disorder in people in medical settings through self report. It is used to identify cases and to measure degree of disorder. Each of the items asks whether the respondent has experienced a particular symptom or item of behaviour using a four-point scale ranging from 'less than usual' to 'much more than usual'.

The following physical dependence and physiological factors were also assessed in the questionnaire: Nicotine dependence (Fagerstrom Test for Nicotine Dependence -

Heatherton *et al.*, 1991), number of cigarettes smoked per week, perceived health status, and number of health problems.

Interviews

Further to completing the questionnaires, all ten participants were interviewed by a Trainee Health Psychologist. The Trainee Health Psychologist was the Chief Investigator and observed 4 sessions of the smoking cessation sessions which were led by a Counselling Psychologist and Medical Doctor.

Semi-structured interviews were employed to collect information which was relevant to previous findings in the UK. The objective of those interviews was to shed light on the role of psychosocial and physical variables in decision to quit and abstinence. Interviews were transcribed and sections which were relevant to the variables investigated were quoted. A systematic set of questions was constructed in order to help the respondent to remember or understand the issues dealt with following Ellard and Rogers' (1993) 'Ten Commandments'. The topics addressed the research question. The process of the interviews started as a more general conversation funnelling to specific areas in accordance with the interview schedule. The objective of a general conversation was to break the ice, building rapport with participants. Ten Brazilian participants took part in this study and were included in the content analysis.

Participants completed the clinical questionnaire during the initial assessment session. By the end of the programme, all 10 participants were telephoned and invited for interviews, which lasted between 45 minutes and one hour. All the participants provided written consent to having their questionnaires employed in this study. They also provided written consent to take part in the interview and having their data analysed for the purpose of this study. Participants were briefed on the purpose of the interview when they were invited. The interviews took place in a quiet room. The interviews were audi-o taped for further verification and transcription. The tape recorder was turned off

at any time on the participant's request. Sometimes participants requested the tape recorder to be off for some moments to disclose very personal information. Such information was not used in this research. The tape recorder was turned on again upon gaining their consent.

In order to address the role of psychosocial and physical dependence factors as predictors of decision to quit and abstinence in Brazil, structured interviews were conducted. The interviews followed a pre-developed set of questions as a guide.

Transcription

The transcription occurred soon after the interview. The interviewer/researcher transcribed the material. The entire tape was firstly listened to three times and then re-wound to the beginning for the transcription to start. Most of the content was fully understood as it was spoken on the researcher's native language. When small parts were not understood after continuous re-winding, the researcher skipped it to return later in order to avoid hearing bias. Normally this approach made later understanding more straightforward.

When a small part of the tape was definitively not audible or understood, in transcribed version, ellipsis were placed in parentheses (...). When the interviewee did not complete the sentence or changed the subject, an ellipsis only was placed in the extract. The interviews were transcribed adhering to the interviewees' exact words. Before the analysis started, the researcher replayed the recordings to inspect the accuracy of the transcription. All transcripts were printed with large margins. According to Morgan (1993), the validity in quantification of qualitative data is rooted in the way the categories/codes are created. The coding process was double-checked separately by a second researcher. Extracts were translated into English by the researcher as accurately as possible. The researcher is certified in English-Portuguese translation. For ethical reasons, interviewees' names were substituted by a pseudonym. The tapes

were completely destroyed after transcription (see appendix for some of the translated transcribed material).

Analysis

Content analysis was employed to analyse qualitative data. Content analysis has most often been thought of in terms of conceptual analysis. In conceptual analysis, a concept is chosen for examination, and the analysis involves quantifying and tallying its presence. The main objective of this study was to investigate if psychosocial and physical dependence factors, which have been shown to be significant in the UK, were also salient in Brazil. Hence, the examination of the phenomena was very structured around pre-existing themes. Further to that, the current study intended to quantify the extent to which these themes were present across participants. The method of content analysis enables the researcher to include large amounts of textual information and systematically identify its properties, e.g. the frequencies of most used keywords by detecting the more important structures of its communication content. Yet such amounts of textual information must be categorised according to a certain theoretical framework, which will inform the data analysis, providing at the end a meaningful reading of content under scrutiny. It involves coding participants' transcribed data into closed categories which summarise and systematise the data. The categories were derived from the data itself combined with prior theoretical framework of the researchers. This prior familiarity with the literature on the topic was appropriate given that this study wanted to look at specific cultural differences or similarities between smokers in the UK and in Brazil. The main advantage of this analysis is that it also allowed the conversion of qualitative data into a quantitative form. The number of responses falling within each category was summarised and presented in a table. This analysis provided a useful summary of Brazilian smokers' understanding of physical and psychosocial factors which can function as barriers to their efforts to quit smoking.

Each category was presented in quotations but also as summaries of emerging themes across participants. The main advantage of using this methodology is that it allows participants' beliefs about smoking and smoking cessation to be illustrated in full and can be then summarised into an essentialist framework. In order to preserve the integrity of the text, quotations were presented.

A separate researcher with qualitative methods experience was provided with a copy of the transcripts and conducted a separate analysis. Thematic agreement and frequency were rated by the two raters. An inter-rater reliability analysis was conducted using Cohen Kappa. Cohen's kappa coefficient is a statistical measure of inter-rater reliability. It is generally thought to be a more robust measure than simple percent agreement calculation since κ takes into account the agreement occurring by chance. The inter-rater agreement for the two raters was Kappa= 0.85, p> .05; indicating a very high level of agreement between the raters.

Ethical issues

This study was conducted in an ethically appropriate manner according to formal guidelines from the British Psychological Society (Code of Conduct and Ethical Principles and Guidelines). The outcome measure for smoking prevalence was validated by a breath carbon monoxide (CO) reading performed with the participant's written consent. Participation in the sessions was voluntary. Interviews were conducted following written consent. Appropriate debriefing took place. The confidentiality of all data was made clear to participants. To ensure this took place, a pseudonym was employed for each participant. In order to ensure confidentiality, personal details were also modified. Participants' attention was drawn to the possibility of withdrawing from the interview if at any point if they wanted to do so and the non-use of their data in case they wished it. Furthermore, participants were aware of the recording of the interviews. Audio taping was carried out to exclude interviewer bias.

Brazilian Participants' section

Table 1: Brazilian and UK Participants' Age, Mean, Median and Standard Deviation

		Brazilian	UK
N	Valid	10	729
	Missing	0	2
Mean		51.6	48
Median		48	47
Std. Deviation		13.898	13.031

Table 2: Brazilian Participants' Gender Frequencies

Gender

		Frequency	Percent
Valid	female	7	70
	male	3	30
	Total	10	100

Table 3: Brazilian Participants' Employment Status

employment

		Frequency	Percent
Valid	employed	8	80
	retired	1	10
	missing	1	10
	Total	10	100

Table 4: Brazilian Participants' Education

education

		Frequency	Percent
Valid	none	3	30
	higher	7	70
	Total	10	100

Participant 1

Josefina is a 55 years old woman. She is a translator. She has a University degree. She is divorced with 1 son. She drinks alcohol (does not disclose how many units). She used to smoke a 20 pack of cigarettes a day. She started smoking when she

was 20 years old. When Josefina arrived at the stop smoking service her CO reading was 32. In week 3 (quit day) it was down to 7. She was a successful quitter.

Participant 2

Angelo is an 80 years old man. He is retired. He is married. He started smoking when he was 16 years old. He describes himself as a light social drinker.

Angelo arrived in the stop smoking service with a CO reading of 48. He used to smoke 20 cigarettes a day. His CO reading dropped to 37 on quit day. He never totally stopped smoking but he reduced a lot.

Participant 3

Ana is a 30 years old woman. She is single and works as a marketing and publicity analyst. She has a University degree. She suffered from an eating disorder.

Ana use to smoke 40 cigarettes a day had a CO reading of 44 when she arrived in the service. She managed to stay abstinent until the end of the programme but she relapsed later.

Participant 4

Marcia is a 69 years old woman. She is married. She retired but still works as an interior designer. She resumed secondary school. She suffers from bi-polar disorder and panic attacks. She is undergoing psychological and medical treatment.

She used to smoke 20 to 23 cigarettes a day. She did not manage to quit. When she arrived in the stop smoking service, her CO reading was 48. It was down to 7 in quit day. She stopped smoking in the end of the programme and relapsed. Her CO reading in the end of the programme was 2.

Participant 5

Reginaldo is a man of 46 years old. He is married and works as an auditor. He has a University degree. He suffers from liver disease. He drinks once a week. He smoked for 32 years. He claims that he smoked over 20 cigarettes a day. His CO reading in week 1 was 51. By the end of the programme his reading was down to 2. He is still not smoking. He took zyban for 2 months.

Participant 6

Darlene is a 50 years old woman. She is married and has 2 children. She works as a journalist. She has a University degree. She used to smoke 40 cigarettes a day. Her CO reading was 54 in week 1. She relapsed week 5 of the programme but she managed to quit again and wasn't smoking for 3 weeks when the interview took place. She took zyban for 2 months. She is a light drinker (4-6 units/week). She also takes anti-depressive drugs and sees a therapist.

Participant 7

Iwana is a 49 years old woman. She is an artist and painter. She is married. She has a university degree. She used to smoke 20 cigarettes a day. Her CO reading was 34 on week 1. It was down to 1 in the end of the programme. She was successful quitter. She took zyban for 2 months.

Participant 8

Julia is a 46 years old woman. She is married and has a university degree. She works as a primary school teacher. She drinks a bottle of wine a week. She suffers from emphysema. She also takes anti-depressive medication. She suffers from acute depressive episodes and is seen by a psychiatrist. She used to smoke 30 cigarettes a day. Her CO reading was 44 in week 1 of the programme. She managed to stop smoking. Her CO reading in the end of the programme was 1.

Participant 9

Lucia is a 47 years old woman. She is divorced. She owns a small female clothes confection. She has a university degree. She describes herself as a light drinker. When she started the programme she had a CO reading of 38. She is a successful quitter and her CO reading inn the end of the programme was 1.

Participant 10

Laercio is 44 years old. He is a salesman. He has secondary education. He smoked for 29 years. He describes himself as a light social drinker. He suffers from duodenal ulcers, liver disease and manic-depressive disorder. He is currently seeing a Psychiatrist to help him with his maniac-depressive symptoms and is taking anti-depressive medication. His CO reading in week 1 was 43. It dropped to 4 in quit day. He is a successful quitter and his CO reading in the end of the programme was 2.

Results

Case studies evaluation

Psychosocial, physiological and behavioural factors found to predict outcomes in the UK were explored in Brazil. Clinical questionnaires and interviews of individual case studies were compared with the median of UK clinical questionnaires (Please see appendix)

2) What is your marital status?

Diagram 1A: Marital status of UK participants

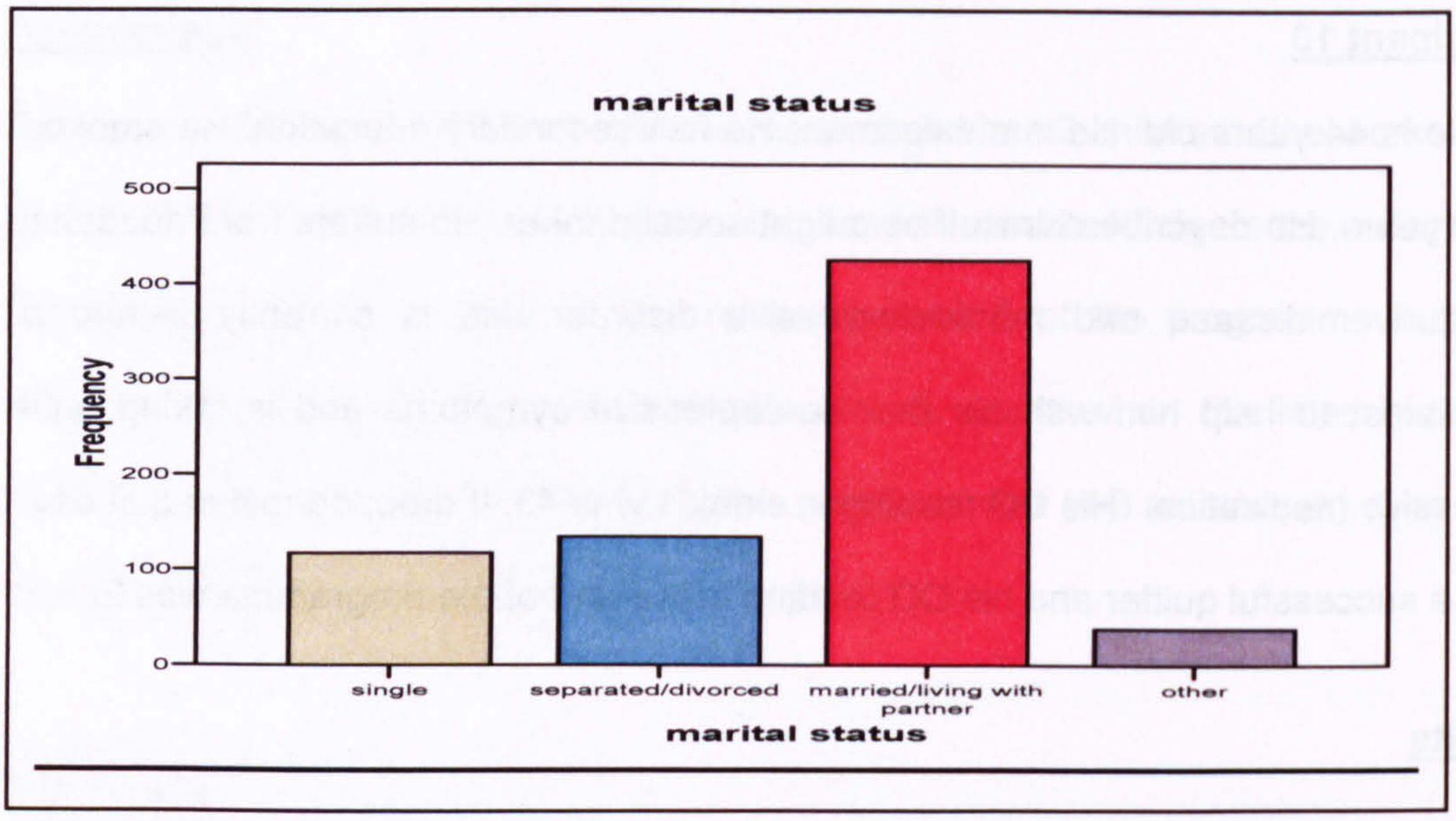
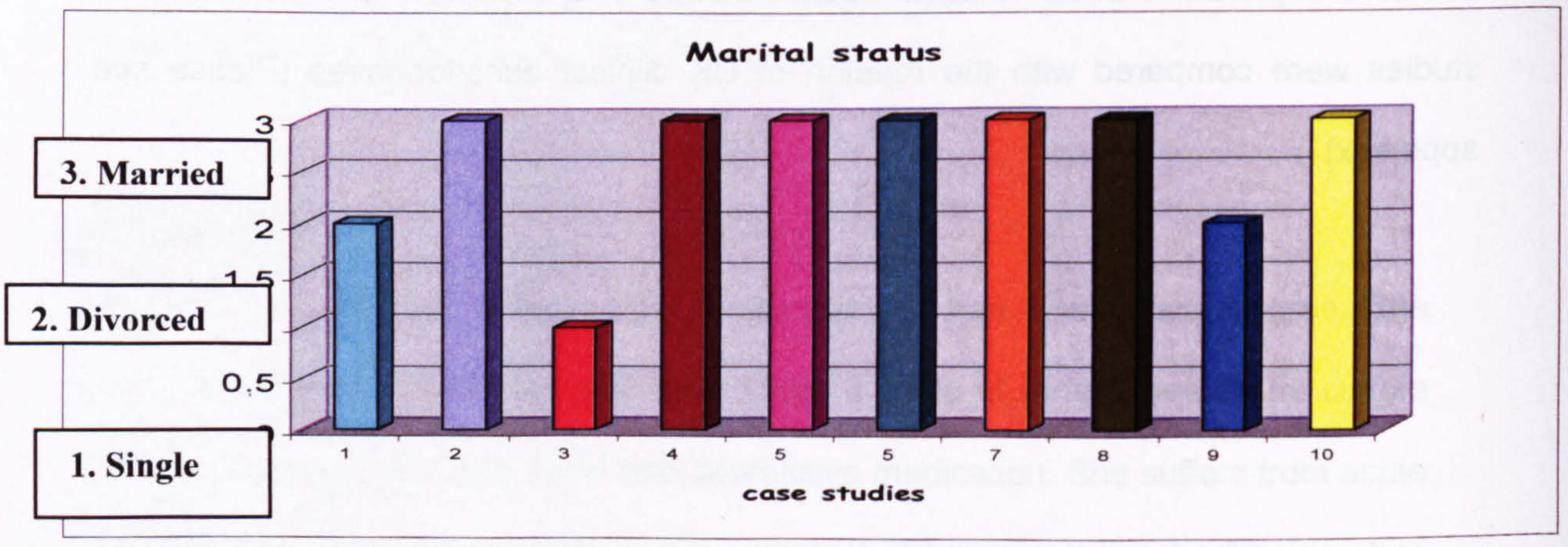


Diagram 1B: Marital status of participants in Brazilian study



3. Motivation to quit

The Brazilian participants in the current study displayed much higher motivational levels than the median of the UK participants. The 'motivation to quit' scale contains four questions; in the first and third question, 10 out of 10 Brazilian participants scored higher than the UK participants. In the second and fourth question, 7 of 10 Brazilian participants had higher scores.

Smoking motives – physical, psychological, social

4. Do you smoke to help you cope with stress?

Case studies 1, 7, 8 and 10 scored higher in smoking and stress scale when compared with the UK median. Case studies 3, 4, 5, 6 and 9 scored the same as UK participants' median. Only case study 2 scored less than the UK median in smoking to cope with stress.

5. Do you smoke to control your weight?

Case studies 3, 5, 7, 8 and 10 scored higher in smoking to control your weight than the median of the UK participants. The only male who scored higher than the UK median was case study 5. All the others were female. However, case studies 1, 4, 6 and 9 are also females and scored lower than the median of the UK participants. Case study 2, a male, scored below the UK median. Hence, 50 percent of the participants (5 out of 10) scored higher than the UK median (3 out of 5 of those scored much higher than the UK median). Fifty percent of the Brazilian participants (5 out of 10) scored much lower than the UK median.

With the exception of case studies 7 and 10, who scored much higher than the median of the UK participants, all other case studies scored the same or below the UK median in smoking to socialise.

7. Psychosocial motive: Do you smoke to help you cope with boredom?

Case studies 1, 7 and 10 scored higher than the median of the UK participants in the question 'Do you smoke to cope with boredom?' Most case studies scored the same as the UK median. Only case studies 2 and 9 scored below the UK median.

Nicotine dependence

8. Which cigarette do you find the hardest to give up?

With the exception of case studies 5 and 9 (who scored below), all the other case studies had the same nicotine dependence levels as the UK participants, which was quite high. The sample employed in both studies revealed similar addiction levels.

Perceived health and GP advice to quit smoking

9 A. Has your doctor advised you to quit?

All Brazilian participants with the exception of case study 9 were advised by their GP to stop smoking.

1. How do you perceive your health?

All case studies described their health as equal to (5 out of 10) as or better than (5 out of 10) the median of the UK participants.

2. Do you feel that smoking has affected your health? (Illness perception - vulnerability and severity). The majority of the Brazilian participants thought that smoking has affected their health than the median of the UK participants (participants 2, 4, 5, 6. 8 and 10). The remaining four participants did not think smoking has affected their health.

Table 5: Number of Cigarettes smoked before the intervention, CO reading & Smoking Status at four weeks.

Participant number	Number of cigarettes smoked before	CO reading week 3	Abstinent at 4 weeks	Smoking at 4 weeks
1	20	32	√	
2	20	48		√
3	40	44		√
4	22	48		√
5	20	51	√	
6	40	54		√
7	20	34	√	
8	30	44	√	
9	25	38	√	
10	30	43	√	

Participant interviews – Part 2

Smoking Initiation

Smoking initiation positively regarded by society

Most participants said that they were drawn into smoking by their peers and this appeared to be the social norm at that time. They believed their behaviour was socially appropriate in the cultural and historical context and that it was perceived as a socially accepted and desirable behaviour.

"*I was insecure and cigarettes provided me with something to do when I had nothing to say…put it in my mouth and…socialized. My whole generation smoked and it was the cool thing to do. I thought it was beautiful…*" (participant 1, female, 55-year old)

"In the social club with my friends everyone smoked..." (participant 5, male, 46-year old)

"I was 14, 15 years old, out of stupidity...everyone smoked, it was posh. I hated it, I choked, and I got dizzy. It took me well a few months to make it. I rehearsed in front of the mirror, posing..." (participant 9, female, 47-year old)

"...well, it was peer pressure...I wanted to be one of the gang, it was a macho thing" (participant 7, female, 49-year old)

Cigarette smoking was a behaviour which was maintained by participants for psychological reasons. They reported that cigarettes served a second function:

Table 6: Smoking initiation – Participants' characteristics and thematic frequency (Smoking initiation positively regarded by society)

Participant number	Theme: Smoking initiation Smoking initiation positively regarded by society	Abstinent at 4 weeks	Smoking at 4 weeks
1	√	√	
2	√		√
3	√		√
4	√		√
5	√	√	

6	√		√
7	√	√	
8	√	√	
9	√	√	
10	√	√	

Smoking maintenance

<u>Cigarettes as a supporting persona</u>

"*...then I became addicted...cigarettes were more useful than depending on someone*"

(participant 1, female, 55-year old)

"*...and I cannot cope with everything altogether. Cigarettes were my company, when I retired...I had nothing else to do...*" (participant 4, female, 69-year old)

Table 7: Smoking Maintenance – Participants' characteristics and thematic frequency (Cigarette as supporting persona)

Participant number	Theme: **<u>Smoking Maintenance:</u>** <u>cigarette as supporting persona</u>	Abstinent at 4 weeks	Smoking at 4 weeks
1	√	√	
2			√
3			√
4	√		√

5		√	
6			√
7	√	√	
8	√	√	
9	√	√	
10		√	

Smoking facilitating social interaction

Some of the participants use smoking as means to socialise and believe it helps them to engage with people.

"To a certain extent I do smoke to socialise. In media relations, in newspaper, everyone smokes a lot, isn't it? So, every now and then you get out for a cig and meet the rest of your work mates in a more relaxing context. Then the smokers' group develop their own peer support system." (participant 6, female, 50-year old)

"For me it always helped. I have always been really shy and it gave me something to do with my hands. Up to today I really miss it, as I quitted. Sometimes I get embarrassed...I am a little bit introverted, stuck up...cigarettes helped in social situations to get on with people" (participant 10, male, 44-year old)

Table 8: Smoking Maintenance – Participants' characteristics and thematic frequency (Smoking facilitating social interaction)

Participant number	Theme: **Smoking**	Abstinent at 4-weeks	Smoking at 4-weeks

	Maintenance: (Smoking facilitating social interaction)		
1		√	
2	√		√
3			√
4			√
5		√	
6	√		√
7		√	
8	√	√	
9		√	
10	√	√	

Metaphorical representations of cigarette: fulfilment of a psychological need

Some of the participants smoke to fulfil a psychological need for fulfilment and they have projected some difficult emotions into their cigarettes.

"I don't know if I was…if I am addicted…but I need cigarettes. It lifts my depression".

(participant 4, female, 49-year old)

"I was. I cannot fake it, I really was. To a lesser extend physically, as I said, but there was the whole body language thingy. It was kind of a toy, something ludic, playing with the smoke and the colours" (participant 7, female, 69-year old).

"*The greatest part of the problem is the psychological addiction, I finish eating a meal and I feel a bloody urge to light up. I still feel it to a smaller extent…I always identified myself with the dead lad in the tube, in the film Ghost…who would place his rage in many objects as he couldn't smoke"* (participant 10, male, 44-year old)

Table 9: Smoking Maintenance – Participants' characteristics and thematic frequency

(Metaphorical representations of cigarette: fulfilment of a psychological need)

Participant number	Theme: **Smoking Maintenance:** (Metaphorical representations of cigarette: fulfilment of a psychological need	Abstinent at 4 weeks	Smoking at 4 weeks
1		√	
2			√
3	√		√
4	√		√
5		√	

6			√
7	√	√	
8		√	
9		√	
10	√	√	

Non-influential Doctor's advice

Many participants did not feel their doctors' advice has had a major impact on their quitting attempt. Some of them have felt their doctor has done little to help them and hasn't really persuaded them to quit.

"The Doctors always ask you that, but I am under the impression that this is a tick box type question…then they recommend you to stop but they don't really tell you how" (participant 1, female, 55-year old)

"All my life Doctors have told me to quit. But I never took it seriously as I have seen many Doctors who were smokers themselves. My GP smoked cigars! He died but I am still here, doing all I can to quit. We all know it's bad for your health but we just leave this filthy habit when we have one foot in the grave" (participant 2, male, 80-year old)

"*The Doctor told me to but he did not offer me a solution. He said he would not prescribe anything and that it was down to my will power. I don't think they knew what to advise, I mean, it's down to an illness that you still don't have but might get it in the future"* (participant 5, male, 46-year old).

Table 10: Smoking Maintenance – Participants' characteristics and thematic frequency (Non-influential Doctor's advice)

Participant number	Gender Female	Gender Male	Theme: **Smoking Maintenance:** (Non-influential Doctor's advice)	Number of cigarettes smoked before	CO reading week 3	Abstinent at 4 weeks	Smoking 4 weeks
1	√		√	20	32	√	
2		√	√	20	48		√
3	√			40	44		√
4	√			22	48		√
5		√	√	20	51	√	
6	√		√	40	54		√
7	√			20	34	√	
8	√			30	44	√	
9	√			25	38	√	
10		√		30	43	√	

Before contemplating quitting

Smoking socially constructed as intolerable

Participants' views on smoking as means to socialise were polarised. Some of them realised there has been a change in the way smoking is perceived by the society. They realised smoking is no longer a socially desirable behaviour, as it used to be when they initiated their habit. They didn't associate smoking as a means to facilitate social interaction as they acknowledge society views smoking negatively.

"No, not really, this was not very important. After a while it actually became an anti-social thing. We start imitating others when we are teenagers, but after you become an adult it can become embarrassing" (participant 1, female, 55-year old)

"...to look grown-up. I guess the majority of the people started to smoke for that reason. I followed the same path but later on there were other things which would make more sense to help me to socialise and smoking gradually started to be seen as unacceptable". (participant 3, female, 30-year old).

"When I started, I was roughly 14 years old or less. I did it to impress the boys and to pose. Like using lipstick and mascara. But nowadays this would not make sense, It's anti personal marketing" (participant 9, female, 47-year old).

Table 11: Contemplating quitting– Participants' characteristics and thematic frequency (Smoking socially constructed as intolerable)

Participant number	Gender Female	Gender Male	Theme: **Before contemplating quitting:** (Smoking socially	Abstinent at 4 weeks	Smoking at 4 weeks

			constructed as intolerable)		
1	√		√	√	
2		√			√
3	√		√		√
4	√				√
5		√		√	
6	√				√
7	√		√	√	
8	√			√	
9	√		√	√	
10		√		√	

Narratives of physical addiction – perceived impaired control

A further reason brought forward by participants is their experience of addiction. They perceive themselves as having been very addicted to smoking and engaged in a series of narratives illustrating how addicted they have been to smoking.

"Certainly very dependent. Once, I made a journey to a camp in the middle of the jungle and there I realised I had no cigarettes. I came back 200 km to get a pack. Another time, I was in deep in the sea and some friends threw my cigarettes away. I

got back to the beach to get new ones. An absurd..." (participant 8, female 46-year old)

"If I was addicted? If I was addicted? Two packs a day for 64 years and you can work it out yourself!" (participant 2, eighty-year old)

Table 12: Before contemplating quitting – Participants' characteristics and thematic frequency (Narratives of physical addiction – perceived impaired control)

Participant number	Theme: **Before contemplating quitting:** (Narratives of physical addiction – perceived impaired control)	Number of cigarettes smoked before	CO reading week 3	Abstinent at 4 -weeks	Smoking at 4 - weeks
1	√	20	32	√	
2	√	20	48		√
3	√	40	44		√
4	√	22	48		√
5		20	51	√	
6	√	40	54		√
7	√	20	34	√	

8	√	30	44	√	
9		25	38	√	
10	√	30	43	√	

Participants were polarised in relation to the influence their GP's advice had in their decision to quit.

Contemplating quitting smoking

Taking the first step: Doctors as influential

Even though many participants did not feel their doctor's advice has had a major impact on their quitting attempt, some of them did not share the same opinion. For some participants, their doctors played an important role in urging them to stop smoking and making useful suggestions for seeking help.

"For me, GP advice really did the job. I have a whole lot of health problems because of my smoking. My GP prescribed me Zyban. I did not take it, couldn't stand it. My heart doctor said I can't go on like that...I will end up dying. That's why I came to the smokers' clinic" (participant 4, female, 69-year old)

"*They would tell you to quit. My gynaecologist even suggested I look for a Psychologist. Not in a patronising manner*" (participant 3, female, 30-year old)

Table 13: Contemplating quitting – Participants' characteristics and thematic frequency

Taking the first step: Doctors as influential

Participant number	Gender Female	Gender Male	Theme: **Contemplating quitting:** (Taking the first step: Doctors as influential)	Number of cigarettes smoked before	CO reading week 3	Abstinent at 4 weeks	Smoking at 4 weeks
1	√			20	32	√	
2		√		20	48		√
3	√		√	40	44		√
4	√		√	22	48		√
5		√		20	51	√	
6	√			40	54		√
7	√		√	20	34	√	
8	√			30	44	√	
9	√			25	38	√	
10		√	√	30	43	√	

Action Stage: Quitting Smoking

But as time went by their views of smoking and the views of those who surrounded them have changed. There were a few themes which emerged as reasons for quitting smoking:

Health implications and fear

"I enjoy good health, I am not sick or anything like that…but I feel that it was affecting my health. I would wake up with a "hang over", very tricky situation…and it jeopardizes my voice, I am an interpreter and need to have a clear voice, I can't start coughing in the middle of a sentence" (participant 1, female, 55-year old)

"I was afraid of dying…the doctor told me I was going to die…my husband brought me here and you showed me…showed me that I was playing other people's games, who wanted me to die" (participant 4, female, 69-year old)

"*I have emphysema. It's to stop or stop. I am terrified of the perspective of dying asphyxiated"* (participant 6, female, 50-year old)

Table 14: Quitting smoking – Participants' characteristics and thematic frequency (Health implications and fear)

Participant number	Gender Female	Gender Male	Theme: **Quitting smoking:** (Health implications and fear)	Number of cigarettes smoked before	CO reading week 3	Abstinent at 4 weeks	Smoking at 4 weeks

1	√		√	20	32	√	
2		√	√	20	48		√
3	√			40	44		√
4	√		√	22	48		√
5		√	√	20	51	√	
6	√		√	40	54		√
7	√			20	34	√	
8	√		√	30	44	√	
9	√			25	38	√	
10		√	√	30	43	√	

A further reason for participants to take the decision to quit was the perception that smoking had become a socially unacceptable behaviour. They held beliefs they would become socially unaccepted if they pursued this behaviour and felt guilty and ashamed of their habit.

<u>Social cognitions: rejection, shame and guilt</u>

"It is very, very hard…without support, you know…. I don't really know, I can't really believe it. I mean, that I would make it. But I wanted to see it through. I kind of succeeded…kind of…you know? I never made it before. But I really wanted it, I had to…how can I say? I feel ashamed. Old man smoking…" (participant 2, male, 80-year old)

"My boyfriend does not smoke and it was really stressful to disguise the smell – I know he hates it. But I was never pressured, but I was, certainly, motivated to face this challenge for my friends and for the facts, I mean…smoking became an ugly thing…" (participant 3, female, 30-year old)

"…concern with my health, shame. I was afraid my son would get sick because of me. This was my main reason. I must be a role model, my pupils included". (participant 9, female, 47-year old)

Table 15: Quitting smoking – Participants' characteristics and thematic frequency (Social cognitions: rejection, shame and guilt)

Participant number	Gender Female	Gender Male	Theme: **Quitting smoking:** (Social cognitions: rejection, shame and guilt)	Abstinent at 4 weeks	Smoking at 4 weeks
1	√		√	√	
2		√	√		√
3	√		√		√
4	√				√
5		√		√	
6	√		√		√
7	√			√	

8	√		√	√	
9	√		√	√	
10		√	√	√	

The process of quitting smoking

As participants moved into the action stage, they reflected on the factors which were significant during the process of quitting smoking.

<u>Group support as a resource</u>

Participants felt the group support helped them to continue to try to quit in spite of their difficulties. They built alliances with other group members and felt that the interaction reinforced their motivation.

"I was really (motivated)…I could not afford not to keep my promise…then I decided to look for support. It was good, worth it… cheers". (participant 10; male, 44-year old)

"I really enjoyed the programme, in spite of the fact that in the beginning I didn't really believe it…I mean, the interaction amongst the people…this is really important to me, I am very lonely and I felt embraced. They all motivated me." (participant 1, female, 55-year old)

Table 16: The process of quitting smoking – Participants' characteristics and thematic frequency (<u>Group support as a resource</u>)

Participant number	Gender Female	Gender Male	Theme: **The process of quitting smoking:** (Group support as a resource)	Abstinent at 4 weeks	Smoking at 4 weeks
1	√		√	√	
2		√			√
3	√				√
4	√		√		√
5		√		√	
6	√				√
7	√			√	
8	√		√	√	
9	√		√	√	
10		√	√	√	

Positive experiences of therapeutic alliance

The participants also developed a positive regard for the therapist and they viewed therapeutic alliance as a significant factor for their success.

"I was very motivated, but it was also a surprise, I didn't know…I thought…well, I don't know, I thought you would give us a little pill and that's it…but I liked it, I liked it, it seems that you care about us, that you like us…I think the most important is that you

took me seriously and did not treat me as a fool…this helped a lot, the youngsters are not very patient with us…and you motivated me". (participant 2, male, 80-year old)

"It was the right time, that is, the right moment, this connection with a ritual of change…you were great, there were flowers in the vase here, which is beautiful and I had the image of a beautiful place to go. It was all those things. I think there is empathy, sensibility…" (participant 7, female, 47-year old)

"As I said, this was my last resort…no, not really, I trusted it since my first day, I mean I trusted you, I thought it looked like a serious work. You know what motivated me the most? It is incredible, but when you told me it wasn't really easy and that you would not make me quit, (ahnnn)…like, it was down to me, my responsibility…then I knew I stand a good chance of never going back…" (participant 5, male, 46-year old)

Table 17: The process of quitting smoking – Participants' characteristics and thematic frequency (Positive experiences of therapeutic alliance)

Participant number	Gender Female	Gender Male	Theme: **The process of quitting smoking:** (Positive experiences of therapeutic alliance)	Abstinent at 4 weeks	Smoking at 4 weeks
1	√			√	
2		√	√		√
3	√				√
4	√				√
5		√	√	√	

6	√		√		√
7	√		√	√	
8	√		√	√	
9	√		√	√	
10		√		√	

Managing stress smoke-free

During the process of quitting smoking, some of the participants have learned how to deal with stress in a more functional manner. They associate smoking with a buffer zone and have adapted and learned new ways to control their stress without having to rely on smoking.

"I had to learn, it was really hard, the stress would drain me and depression is one step away from it. But I acquired some habits which are healthier ever since the therapy…I wake up earlier and go walking in the park…I make new friends, different from the ones I had before, which were linked to my other life…and in the group…X has invited me to take part in her yoga group. I am still in it, it does me good". (participant 1, female, 55-year old)

"Now it seems I am dealing better with it. I was always very nervous and stressed. I am doing long walks. When I get in a park it seems I get in a world which is difficult to reject. I have been crying a lot… and… incredible as it may appear, it is very relieving. I can cry alone whenever I want without having to prove I am a strong woman, without being requested anything. I will go back to counselling. Conventional therapy with someone I trust". (participant 6, female, 50-year old)

Table 18: The process of quitting smoking – Participants' characteristics and thematic frequency (Managing stress smoke free)

Participant number	Gender Female	Gender Male	Theme: **The process of quitting smoking:** (Managing stress smoke-free)	Number of cigarettes smoked before	CO reading week 3	Abstinent at 4 weeks	Smoking at 4 weeks
1	√		√	20	32	√	
2		√		20	48		√
3	√			40	44		√
4	√			22	48		√
5		√		20	51	√	
6	√		√	40	54		√
7	√		√	20	34	√	
8	√		√	30	44	√	
9	√			25	38	√	
10		√	√	30	43	√	

Denying and re-labelling stress

By contrast, other participants engaged in a process of denial, not acknowledging their stress and sometimes re-labelling with another physical sensation or emotion.

"It's not stress, it's that I get depressed...the world is not like I want it to be. I tried to start lecturing again but people no longer want to learn what I have to teach...nobody values it" (case study 4, female, 69-year old)

"ahh, I don't give a shit for stress, no, I must get on with life and I love what I do...you should see me with the new collection, I am working like mad but selling everything...this is not stress, it is tiredness which is good". (case study 9, female, 47-year old)

Table 19: The process of quitting smoking – Participants' characteristics and thematic frequency (Denying and re-labelling stress)

Participant number	Gender Female	Gender Male	Theme: **The process of quitting smoking:** (Denying and re-labelling stress)	Number of cigarettes smoked before	CO reading week 3	Abstinent at 4 weeks	Smoking at 4 weeks
1	√			20	32	√	
2		√		20	48		√
3	√			40	44		√
4	√		√	22	48		√

5		√	√	20	51	√	
6	√			40	54		√
7	√			20	34	√	
8	√			30	44	√	
9	√		√	25	38	√	
10		√		30	43	√	

Dissatisfaction with body image

Apart from one participant, all the others were displeased with their acquired body image. The recurring themes were changes in satisfaction with body image after putting on weight, using smoking to control weight, and negative view of one's body image.

"I did put on around 6 kg when I quit and I was well upset. But I had decided...and it cost me a lot to quit...I didn't want to spoil it all, but I confess that many times I felt tempted to give it all up and go back to smoking to lose weight... Then I asked for those extra sessions, remember? Roughly 4 months ago I went on a diet with Doctor's control and I went back to my previous weight...truly a bit more, perhaps 2 kg, but I look younger". (participant 1, female, 55-year old)

"I put on weight when I quit smoking, I got a belly which looked like a pregnant woman's...I don't like it, this bothers me...but in my age it shouldn't ...I don't smoke to lose weight, no, but in spite of that, weight is a concern". (participant 4, female, 69-year old)

"Ahh, this is the worst part of it. I put on 6 kg, and I am very angry. I feel like crying, gosh, a lot of effort and it looks like punishment" (participant 8, female, 46-year old).

Table 20: The process of quitting smoking – Participants' characteristics and thematic frequency (Dissatisfaction with body image)

Participant number	Gender Female	Gender Male	Theme: **The process of quitting smoking:** (dissatisfaction with body image)	Abstinent at 4 weeks	Smoking at 4 weeks
1	√		√	√	
2		√			√
3	√		√		√
4	√		√		√
5		√	√	√	
6	√				√
7	√		√	√	
8	√		√	√	
9	√		√	√	
10		√		√	

Discussion

The discussion is divided into two Parts. In Part 1, the discussion is focused on the median differences between Brazilian and UK participants but also refers to the qualitative findings in brief. In Part 2, there is a more in-depth discussion of the qualitative findings.

Part 1

Even though a small sample was employed in the Brazilian study, it matched the UK participants in marital status and level of nicotine addiction.

All ten Brazilian participants scored much higher in motivation to quit ('How important is for you to give up smoking?') than the median of the UK participants. The Brazilian participants in the current study displayed much higher motivational levels than the median of the UK participants. The 'motivation to quit' scale contains four questions. In the first and third question, ten out of ten Brazilian participants scored higher than the UK participants, and in the second and fourth questions, eight of ten Brazilian participants.

Four out of 10 cases scored higher in smoking and stress scale when compared with the UK median. Five out of 10 cases scored the same as UK participants' median. Only case study 2 scored less than the UK median in smoking to cope with stress.

Five out of ten cases scored higher in smoking to control your weight than the median of the UK participants. The only male who scored higher than the UK median was case study 5. All the others were female. However, case studies 1, 4, 6 and 9 are also females and scored much lower than the median of the UK participants. Case study 2, a male, scored below the UK median. Hence, 50 percent of the participants (5 out of 10) scored higher than the UK median (3 out of 5 of those

scored much higher than the UK median). Fifty percent of the Brazilian participants (5 out of 10) scored much lower than the UK median.

With the exception of case studies 7 and 10, who scored much higher than the median of the UK participants, all other case studies scored the same or below the UK median in smoking to socialise.

Three out of ten cases scored higher than the median of the UK participants in the question 'Do you smoke to cope with boredom? Most case studies scored the same as the UK median. Only case studies 2 and 9 scored below the UK median.

With the exception of case studies 5 and 9 (who scored below), all the other case studies had the same nicotine dependence levels as the UK participants, which was quite high. The sample employed in both studies revealed similar addiction levels.

All Brazilian participants with the exception of case study 9 were advised by their GP to stop smoking. Accordingly, nearly all participants in the Brazilian study had the same score as the UK participants' median.

The majority of the Brazilian participants thought that smoking has affected their health as the median of the UK participants (6 out of 10). The remaining four participants did not think smoking has affected their health and scored much below the UK median. All case studies described their health as equal (5 out of 10) or better (5 out of 10) than the median of the UK participants.

It appears that even though the sample was matched to the British sample in many aspects (but not in education as Brazilian smokers were on average educated to a degree level), data collected from the Brazilian participants was somehow skewed in

specific dimensions. These dimensions were; motivation to quit, stress and smoking as means to control one's weight, perceived health status and perceived severity of smoking (smoking affecting one's health).

Extrapolating from the Brazilian sample, it appears that in spite of the fact that most Brazilian smokers have been advised by their GP's to stop smoking, they perceive their health status as better that the UK participants and a great proportion of the sample held the belief that smoking has not affected their health prior to attending the group support. However, qualitative data does not support this as seven out of ten smokers described their personal experiences and attributions of smoking as a threat to their health.

It is possible their cognitions have changed as a result of taking part in a smoking cessation programme, or that reflecting on the implications of smoking before making an actual quit attempt was far too terrifying. However, as those participants moved into the action stage they might started to focus on the disadvantages of maintaining that behaviour. It is also possible that smokers had limited knowledge about the impact of smoking on their health prior to the programme, and the psycho-education elements of the programme raised their awareness to these factors. Their lack of knowledge would not be surprising given that in Brazil, anti-smoking bans, campaigns and anti-smoking advertising are rare. There are no smoking cessation programmes funded by the Brazilian Department of Health. Hence, smokers who decide to quit are normally prepared to seek private support. Private smoking cessation services tend to charge smokers for specialist support. The sample employed in this study did not have to pay for their support. This could have influenced their motivation levels. However, having to contribute to one's treatment could also create an incentive to engage in treatment.

Interestingly, most participants decided to stop smoking as a preventive measure rather than because they had a smoking-related illness. This also explains why so many participants scored below the UK median in the question 'Has smoked affected your health?' and why five out of ten Brazilian participants see themselves as more healthy than the UK ones. This also makes us question the NHS advertising initiatives deeply grounded on appeals to fear. It is likely that the British participants seek NHS stop- smoking services after a smoking-related illness is diagnosed, as their perception of their health status is below the Brazilian participants and they also feel that smoking has affected their health to a much greater extent that the Brazilian sample. It is possible that NHS advertising is far too disturbing to captivate the audience it is trying to target. Hence, many smokers here could engage in denial and unrealistic optimism. By contrast, in spite of the lack of anti-smoking advertising and smoking bans, Brazilian smokers sought support before they perceived their health as having deteriorated as a result of their addiction.

The Brazilian sample used smoking to cope with stress to a greater extent than the UK participants. The most plausible explanation for that social economical situation in Brazil is much less stable than in the UK. Low perceived control is a key concept in health psychology which can affect stress, coping, adaptation amongst other things. Low perceived external control has been associated with uncertainty leading to anxiety and depression. According to Seligman and Martin (1982), according to the concept of learned helplessness, exposure to uncontrollable negative events can bring about stress. Seligman *et al.* (1982) stressed this argument by conducting experiments with rats with cancer which were exposed to shocks which they could not control. The stress caused by the shocks brought their immune system down, promoting cancer progression. Stress is also related to individual appraisal of stressful events – some more than others appraise external events in such a way as

to evoke stress response. In the case of this Brazilian sample, smoking was a response to stress and functioned as a buffer zone to manage stress.

Antonovsky (1987) also associated lower socio-economic status to higher rate of morbidity. So did Marmot, Shipley & Rose (1984) in their longitudinal study with British civil servants, in which administrators presented a lower risk of cardiac heart disease when compared with workers with lower income, education, housing and nutrition.

Another major difference between the British and the Brazilian samples was that Brazilian women were much more likely to use smoking as means to control their weight than the UK median. When probed more closely, the Brazilian women reported a great concern with their weight and in general, lower body satisfaction. It is likely that Brazil being a developing country is much more focused on image than the UK. Moreover, Brazil is a tropical country and accordingly people are more likely to expose their bodies than in the UK. For whichever reason, body image could be a major preoccupation amongst Brazilian women; these issues must be addressed during smoking cessation interventions. Body dissatisfaction due to post-cessation weight gain can put Brazilian women at a greater risk of relapsing.

Part 2

Smoking Initiation

Smoking initiation positively regarded by society

It is not surprising to find that smoking was perceived by society as a desirable behaviour. A previous qualitative study conducted in the UK (Pires, 2003, MSc thesis) employing a Interpretative Phenomenological Analysis (IPA) methodology, found that smoking was a behaviour which was encouraged by society and by the family and friends' system. This is not surprising, given that previous research has

found that the smoking behaviour of family and friends is very influential. Adolescents are more likely to smoke if their parents smoke, if their icons smoke, and if their friends smoke (Leventhal & Cleary, 1980). Moreover, children whose parents smoke are twice as likely to smoke when compared to children whose parents do not smoke (Lader & Matheson, 1991). Having friends who are smokers is the next most important predictor of adopting a smoking behaviour (Mittelmark *et al.* 1987).

The belief that smoking is indeed a desirable behaviour has changed across the years, as information on the hazardous effects of smoking started to be published. The general public has now started to acknowledge that 'tobacco kills more Americans each year than AIDS, car accidents, cocaine, crack, heroin, homicide, and suicide' (Davison & McNeal, 2000). However, it is possible that Brazil took longer to disclose this information to the general public, given that it is a developing country. The Brazilian Department of Health (2003) recognises that the problem was originated by social, political and economic contexts which would regard smokers positively, encouraging smoking incidence and discouraging abstinence.

Smoking maintenance

It seems there were various psychological, physical and social factors functioning as maintaining factors for the smoking behaviour of the participants in Brazil. Half of the participants who took part in the Brazilian study perceived cigarettes as a supporting persona and interestingly these were all females. In their eyes, cigarettes acquired a human characteristic, supporting these women at times of difficulty also providing them with a sense of empowerment. One of the participants who developed a psychological dependence on cigarettes would rather depend on them than on a person. Psychologically this is quite interesting, as it appears that cigarettes became a substitute for human interaction as well as a facilitator of intra-communication in social contexts. Their narratives could be understood from a systems theory approach (Von

Bertalnaffry, 1968). Systems theory proposes that various activities of the body are composed of interconnected but distinct systems of components that operate together in an integrated and coordinated way to maintain stability. These models are also applied to wider systems such as a family, a society or a culture. Smoking as a behaviour and its development across time in Brazil could be understood in light of the initial discourses and beliefs shared by that system and changes in its perception as a result of societal changes and escalating conflicts within this system which initially perceived cigarettes as a social instrument, gradually changing and evolving, perceiving cigarette smoking as increasingly intolerable.

"*...After a while it actually became an anti-social thing. We start imitating others when we are teenagers, but after you become an adult it can become embarrassing*" (participant 1, female, 55-year old).

In the current study, some of the participants perceived cigarettes as having an interpersonal role, functioning as a supportive persona and fulfilling a psychological need such as lifting one's depression (participant 1, female, 55-year old) or being a 'toy' (participant 4, female, 69-year old). For these participants cigarettes acquired an intra-personal role facilitating social interaction and human relations; however conflict started to arise when smoking was no longer a mainstream accepted behaviour. As information spread on the malign effects of smoking on the body, and of passive smoking, many of the participants regarded their behaviour as somehow shameful ("*smoking became an ugly thing...*") (participant 3, female, 30-year old). They started to grow increasingly concerned about the effects on their close family and also worried about playing a role in a society which no longer perceives this behaviour as appropriate.

"*....I was afraid my son would get sick because of me. This was my main reason. I must be a role model, my pupils included*" (participant 9, female, 47-year old).

It is possible these cognitive dissonant cognitions played a part in urging participants to move to a contemplation stage, considering changing their behaviour. This process has been mediated by a range of physical and psychological factors. On the one hand participants perceived smoking as a behaviour in which they had impaired control. Eight out of ten participants perceived smoking as very addictive. This is not surprising given that all participants in the current study were heavy or very heavy smokers. Surprisingly, unlike in the UK study, participants were polarised in relation to doctor's advice. Four out of ten participants did not feel their doctors' advice had a major impact on their quitting attempt. Some of them felt their doctor had done little to help them and hadn't really persuaded them to quit.

"The Doctors always ask you that, but I am under the impression that this is a tick box type question...then they recommend you to stop but they don't really tell you how" (participant 1, female, 55-year old).

However, it is possible that for those smokers who were already in the pre-contemplation stage, their GP's advice functioned as a factor which further escalated their internal conflict, urging them to take the decision to quit smoking. A further factor moving participants into the action stage was their perception of illness and health attributions. The majority of the participants in this study (7 out of 10) perceived smoking as a threat to their health and physical well-being. Some of those were given an ultimatum and felt that quitting smoking was a matter of life or death.

"*I have emphysema. It's to stop or stop. I am terrified of the perspective of dying asphyxiated"* (participant 6, female, 50-year old).

<u>The process of quitting smoking</u>

Understanding the social role of smoking and how this system has changed in the eyes of these participants in relation to their views on smoking, it is common sense that the participants were likely to benefit from social support during their

process of quitting, which could also be understood as a process in which they would have to lose their attachment to a 'supportive persona'. Five out of ten participants perceived the group support as a resource helping them to persevere in their attempt in spite of the difficulties during this process. Research has pointed towards social support playing an important role in attendance and cessation rates. Hajek (1966, 1985) recognised that one of the key reasons for offering interventions in a group context is to create opportunities for social learning, to generate emotional experiences and to convey information and teach new skills (Hajek 1996, 1985).

Kviz, Crittenden, Madura and Warnecke (1994) evaluated the effectiveness of social support in a minimal contact self-help smoking cessation programme. This study suggested that buddy support is helpful in remaining abstinence from smoking and suggested that it should be used in minimal-contact smoking cessation programmes. In a similar study, also conducted on a minimal-contact smoking cessation programme, 25% of participants had a buddy and it was found that those with a buddy were twice as likely to quit as participants without a buddy (Kviz *et al.*, 1994). However, the design of this study, looking at short-term outcomes, falls short in revealing whether its effect would be maintained across time. Fisher (1997) suggested that social support serves as an alternative to smoking only if it is provided continuously. What Fisher stressed was that 'although social support has been repeatedly correlated with abstinence, social support intervention for smoking cessation has not been markedly successful'. In a study conducted by Mermelstein *et al.* (1986) it was found that the longest effect that social support had for remaining abstinent from smoking was three months, since it did not have any significant effect in the twelve-month follow-up. Furthermore it seems that the smoking habits of family and friends might be better predictors of the long-term support they will provide (Fisher, 1997).

In addition to social support, six out of ten participants felt that good therapeutic alliance played an important role for the maintenance of their abstinence throughout the programme.

Another theme which polarised participants is coping without cigarettes and stress levels. Prior to attending the programme all the participants used smoking as a means to cope with stress to a certain extent. During the process of quitting smoking, some of the participants learned how to deal with stress in a more functional manner. Even though they still associated smoking with a buffer zone, they also learned to adapt and found new ways to cope with stress. However, 3 out of 10 (2 females and 1 male) participants denied suffering or even acknowledging the existence of stress. An explanation for that is that perhaps those participants viewed stress as negative or a sign of weakness.

Another emerging theme was dissatisfaction with body image. Initially 5 out of 10 participants (4 of them female) were very concerned about their weight and would smoke to control it. This concern appeared to have been exacerbated during the programme, as 7 out of the 10 participants (6 female) engaged in narratives of dissatisfaction with their body image. This is not surprising as half of the participants would use smoking as a mechanism to maintain or lose weight.

Conclusions

Inferential statistics revealed that, in many dimensions addressed in this study, Brazilian and UK smokers were similar. That takes us back to the question which this study tried to address - do 'one size fits all' approaches suit everyone? It seems that to a great extent, UK evidence-based smoking cessation interventions can be employed in Brazil. However, what this study illustrates is that small components of this intervention should be adjusted to increase the likelihood of maintaining

abstinence and psychological adjustment of the Brazilian smokers. Furthermore those dimensions were further explored using a qualitative methodology and many of the factors which were shown to be significant in the UK also emerged as themes in Brazil. If we try to understand the journey Brazilian smokers took from smoking initiation to going through the process of quitting and managing or not to be successful, we could make recommendations about which interventions should be targeted at different stages of the process.

STAGE 1

Smoking Initiation

positively regarded by society

STAGE 2

Smoking maintenance

- Cigarettes as a supporting persona
- Smoking facilitating social interaction
- Metaphorical representations of cigarette: fulfilment of a psychological need
- Non-influential Doctor's advice
- Smoking socially constructed as intolerable
- Narratives of physical addiction – perceived impaired control

STAGE 3

Contemplating quitting smoking

- Taking the first step: Doctors as influential
- Health implications and fear
- Social cognitions: rejection, shame and guilt

STAGE 4

The process of quitting smoki

- Group support as a resource
- Positive experiences of therapeutic alliance
- Managing stress smoke-free
- Denying and re-labelling stress
- Dissatisfaction with body image

Initially, as a health promotion initiative it would be imported to encourage public places to ban smoking so that smoking ceases to function as an instrument to facilitate social interaction. Psychological interventions also have to address different ways to cope with emotions so that people rely to a lesser extent on cigarettes for support. Doctor-patient communication needs to be audited and medical training should include a module on communicating effectively with patients so that communication is non-patronising and effective, as this was perceived by some of

the participants in this study and influenced them to take the decision to quit smoking.

There were many themes which emerged during the process of quitting (stage 4). It appears that the current group format is positively regarded by the participants taking part in this study. What they felt made a difference is that in spite of the intervention taking place in a group, the therapist developed very good alliances with individual group members and they felt supported. There were further recommendations for clinical practice which could be extrapolated from this study. Stress management training and relaxation techniques should be incorporated in the intervention so that smokers in Brazil find more functional ways to cope with stress without having to rely on smoking. Healthy eating and interventions targeted at increasing self-esteem can be incorporated in the interventions in order to prevent relapse as a result of weight gain. These small interventions can easily be incorporated within the current NHS format. It might be the case that one or more sessions will need to be included in the original format so these issues can be addressed. There is a role for a more comprehensive assessment and incorporating psychometric measures of stress and body satisfaction.

Limitations

The main limitation of this study is the number of participants involved. It is hard to say whether these findings can be extrapolated and generalised to the smoking population in Brazil. A second limitation is the design, which is short-term. It would be valuable to conduct further interviews to shed light on what happens after the completion of the programme which could be stage 4.

Future directions

A future direction would be to replicate this study employing a larger sample. It would also be valuable to conduct a randomised controlled trial in which a control group would receive the NHS standardised intervention and the second group would receive the NHS intervention with the relatively minor added interventions recommended in this study. Outcomes should be measured and means compared to investigate whether the second intervention proved to be more successful than the standard care.

It would also be valuable to conduct a qualitative study in the UK shedding light on factors which are significant during the initiation, pre-contemplation, contemplation, action stages and also reflecting on the abstinence-oriented approach.

The strength of this study is that it is the first study which has used quantitative and qualitative methods comparing UK and Brazilian participants. As there are no evidence-based methods in Brazil, this study could be the starting point of a number of other studies setting a standard for best practice in smoking cessation methods in Brazil.

Attaining professional competence through supervision as a Trainee Health Psychologist working in smoking cessation

SECTION C

I started my stage 2 training in Health Psychology in October 2003. My decision to pursue stage 2 training alongside a Psychology Doctorate was based on the acknowledgement that health psychology is a highly competitive area. Hence, in order to work autonomously, I needed to engage in a programme, which provided me with the opportunity to develop a number of health psychology professional skills.

The aim of this report is to describe how a supervised practice helped me to establish professional competence in health psychology.

Supervised practice will be distinguished by:

1) Academic supervision – by pursuing a professional doctorate, I was allocated an academic supervisor who has been my mentor in 4 core areas of professional competence in health psychology and in additional 2 areas, which were optional.
2) Work supervision - my work supervisor provided me with guidance and feedback in all areas of applied psychology within my clinical practice. My work supervisor also fostered me to conduct research in the field to inform local practice.

I will primarily focus on 4 components of the generic professional competence:

1) To implement and maintain systems for legal, ethical and professional standards in applied psychology (1.1)

2) To contribute to the continuing development of oneself as a professional applied psychologist (1.2)

3) Provide psychological advice and guidance to others (1.3)

4) Provide feedback to clients (1.4)

I will also describe how supervised practice contributed to my realisation of areas in which I needed to acquire further training and how I pursued continuous professional development as an applied psychologist. I will describe a series of events in which supervised practice helped me to make better judgements and to adopt a problem solving ethical attitude to deal with daily events within my professional practice.

Moreover, this report will shed light on how all aspects of generic professional competence are interconnected with all other areas of professional competence required to obtain chartered status in health psychology. Finally, I will also reflect on the learning outcomes as a result of supervised practice.

The background

As I was accepted in the stage 2 training in health psychology/Doctorate course, I was hired as a Trainee Health Psychologist and Smoking Cessation Specialist Advisor working for the NHS. It was agreed with my employer that I would be completing 2 years of supervised practice in health psychology. My manager and I arranged that I would be completing an original piece of research at a doctoral level in my field of health psychology, which is smoking cessation. I contracted with my employer that I would be taking time off in continuous professional

activities such as my training workshops and any further training requested by my work supervisor.

My work incorporated most areas of competence as required by a trainee health psychologist to complete in order to obtain the chartered status. My main responsibilities are to provide a specialist health psychology service to clients of the stop smoking service across all sectors of care; providing psychological assessment and behaviour change intervention. It is my role to offer advice and consultation to colleagues of other disciplines and other non-professional carers, working autonomously within professional guidelines and the overall framework of the team's policies and procedures. I also provide teaching, training and supervision to other health professionals and staff of other agencies regarding smoking cessation. Accordingly, I utilise research skills for audit, policy and service development and research within the area served by the team/service.

My roles and responsibilities as a Health Psychologist Trainee

It was my responsibility to provide my academic supervisor with a copy of my working contract so it could be verified that my work activities were appropriate to meet the training needs of a Trainee Health Psychologist. As the fact that I was working as a Trainee corroborated, I provided my supervisor with my workplace contact details. I was also responsible to provide my academic supervisor with a

copy of my new job description, which I re—wrote in the moulds of the NHS Agenda for change. My work manager and the Head of Psychology in the Trust signed my new job description. The reason I had to re-write my working contract was to reveal to what level different components of my work fulfilled different dimensions within the Agenda for Change model. The implications of the new contract are that I could be re-graded and my pay scale might change accordingly. The fact that I was pursuing a continuous professional development

programme (stage2 training/ Health Psychology Doctorate) helped me to understand how I developed in different areas and how these developments contributed to my clinical practice.

To establish and maintain systems for the security and control of information (1.1 a)

In order to establish and maintain systems for the security and control of information, I read the trust's Caldecott rules on patients 'confidentiality and systems, which are in place to ensure information is kept and accessed appropriately. Accordingly, all patients' questionnaires are kept in a locked cabinet in the office. The Administrator enters patients' details in the database and every patient is given a number. It is my responsibility to take administrative tasks and re-code patients' questionnaires in SPSS using the numeric code so confidentiality is maintained. Patients' questionnaires are inserted in the SPSS database upon their consent and for research and auditing purposes.

As part of my stage 2 training in Health Psychology, I attended core workshops with the objective of develop some practical skills and reflect upon my progress. During the generic professional skills' workshop, we were provided with vignettes with ethical dilemmas. We also had an opportunity to discuss ethical issues of our concern. One of the issues I raised was related to maintaining systems for security and control of information. After running evening smoking cessation sessions I normally carried patient's questionnaires and files with confidential information. This information remained in my car until the next day. One of the main problems was that I could not return those files to my base on the same day as the building closes at 5 pm and the alarm is set. We had an open discussion (trainees and supervisors) and I had to reflect upon the implications of my actions. After the workshop I discussed the issue with my external supervisor. These discussions helped me to reflect on security

of information. I decided to implement a new system which would minimise the risk of keeping patients information outside the office overnight. In agreement with my external supervisor, who is my line manager, I decided to keep all patients records in the office. Questionnaires which had to be filled weekly by patients received a code to maintain confidentiality. I would carry a list with names and codes every week to give every patient his/her nicotine withdrawal questionnaire which did not contain other medical and mental health information. After every session the list would be destroyed. Even though I was still carrying some patients' information with me, systems were put in place to ensure that it was confidential. I believe that given the practical constraints, this was the most appropriate solution.

<u>To ensure compliance with legal, ethical and professional practices for self and others (1.1 b)</u>

<u>To establish, implement and evaluate procedures to ensure competence in psychological practice (1.1 c)</u>

During my first year in the stage 2 programme and event took place which made me reflect on professional issues regarding ethics and conduct. The event will be described below.

<u>Background</u>

I was working as a Psychologist in a Stop Smoking Services for one year. I am also training to be a Chartered Health Psychologist with another professional colleague. The colleague in question, worked for another Trust as a Smoking Cessation Advisor. I hold the belief that some of the basic purposes of training to be a Chartered Health Psychologist through a University route were as follows:

1) Having the opportunity to share examples of good practice.

2) Seek personal, academic and professional development through different modes of learning.

Accordingly, learning is not a linear process but a combination of several factors (my own reflection):

1) Active listening to meaningful others (Lecturers, Supervisors, Managers, co-workers, colleagues and "near and dear" ones)

2) Being committed to the continuous pursue of self development

3) Taking responsibility for own actions

4) Reflecting on short-comings and successes of self and on ways to promote a constructive learning environment for self and others

5) Addressing problems as they come. Looking back and trying to understand the core of problems - "desconstructivist" approach

6) Breaking negative patterns of thinking

7) Ascribing a positive meaning for distressful situations

8) Perceiving crisis as an opportunity for progress and change

Key words: Openness, ethics, constructive, perseverance and reflectiveness.

In accordance to the above I tried to have an open relationship with my training colleagues. I also held the belief that trainees can catalyse each other's learning and development process by sharing information, comparing conducts and reflecting on advice. In view of that, I always sought advice and feedback from training colleagues.

<u>The nature of the problem</u>

A Co-ordinator post was advertised within my department. I was initially reluctant to apply for that job given the pressures of the post and its potential repercussions on work life balance and academic life.

I decided to discuss my decision to apply for the post with another trainee. I disclosed information about my application and about the nature of the work I would be doing in order to learn my colleague's views on my decision. I took my colleagues interest and probing as genuine interest in my personal development. The trainee never revealed any interest in applying for the post.

Later I learned from the Commissioner Manager that this trainee applied for the post and was offered the job. I felt that his conduct was unethical and decided to discuss this issue with my academic supervisor. She suggested that we held a meeting in which I would be able to discuss the issue with the other trainee and she would mediate the discussion. My supervisor held a half an hour meeting with both trainees explaining the reason for the meeting. Both parts came together to discuss the issue. The outcome of this meeting was that the issues in question have been partially clarified. Moreover, the meeting helped us to reflect upon the way forward by clarifying the parameters of professional practice in terms of behaviours and attitudes.

<u>To contribute to the continuing development of oneself as a Professional Applied Psychologist (1.2)</u>

As I started working in the Stop Smoking Service and as a Trainee Health Psychologist, I held meetings with my academic and external supervisors to evaluate my learning needs. I felt that one of my basic difficulties was juggling academic work and practice. My external supervisor and manager helped me to make a list of my training needs and plan on how much time I would need to fulfil my academic tasks.

Another concern I had was not having a lot of experience running groups. Initially my manager and external supervisor offered to run the smoking cessation sessions so I would observe her clinical skills and how she provided psychological advice and guidance to others (competence 1.3). As a result of my limited clinical experience, I

needed to undertake courses on group skills, motivational interviewing and running specialist smoking cessation groups. Furthermore, I was not a Specialist Advisor. In addition, I had little confidence of my ability to speak with bigger audiences. Hence my practice learning needs were from a knowledge and practical skills basis:

1) I had limited understanding of Applied Health Psychology in smoking cessation
2) I had very little experience of running groups

As I attended courses, observed sessions and started running groups, I felt more confident about my ability to work autonomously. My external Supervisor decided to let me run groups and she observed sessions providing me with feedback. I critically evaluated my performance and discussed further learning needs.

<u>Providing feedback to clients (1.4)</u>

A skill that I developed within my clinical practice was to provide feedback to clients in a structured and constructive way, being sensitive to their emotional needs. By observing other clinicians and reflecting about their style, I developed my own style. I discussed effective communication methods and monitoring degree of clients understanding and acceptance of the information provided. Motivational interviewing supervision helped me to learn to work with resistance and ambivalence. I also learned to adopt different formats to feedback in accordance to the context it is provided. In a group context, feedback was normally provided in a brief format.

Clients who needed further support and feedback were invited to an individual session where feedback would be more in-depth.

After running a large number of groups and setting up new services I decided to reflect on Health Psychology theories and how they could be implemented in my

clinical practice. For instance, I wanted to understand the role of self-efficacy (Badura, 1977) in smoking cessation and how to build up patient's realistic expectations of treatment, cessation rates and level of commitment. I thought it could be valuable to employ methods to increase self-efficacy from the first individual session (assessment), throughout the last week of group support. I also wanted to understand the role of health locus of control (Rotter, 1966) when quitting smoking; how smokers perceive events. I would like to understand why groups could be so effective, if this was a result of the interaction amongst participants and how successful ex-smokers could function as role models. I also wondered whether having a Nurse co-facilitating sessions, using a more directive approach coming from a medical model, would bring about best outcome amongst smokers with "external/powerful others" locus of control. Accordingly, I conducted a series of small scale studies which contributed to the service by informing clinical practice. The hypotheses formed in those studies were based on Health Psychology literature and needs arisen from my practice. My Academic Supervisor helped me to identify appropriate literature and theoretical models. She also contributed to my understanding of different methodologies and to develop critical thinking and recognise alternative approaches. It was my responsibility to discuss research methodologies and changes in clinical practice based on research findings with my external Supervisor and Manager. Throughout this process, I managed to develop my clinical practice by disseminating research and audit findings locally in steering group, expert panel meetings and to other colleagues in national conferences.

Throughout the years, I developed an in depth and systematic understanding of Health Psychology in smoking cessation. I was responsible for compiling statistics of my clinical practice and inform the Department of Health. My development of group skills and implementation of new services based on assessment of local needs and

Department of Health requirements provided me with opportunities to act as a Trainer and Consultant Psychologist.

Teaching and Training Psychologist

It was my role to offer teaching and training sessions in smoking cessation and other disciplines of Health Psychology to other Health Professionals, Allied Professionals and students. Even though it was in my job description that I should plan, deliver and evaluate teaching and training sessions, initially I had little confidence of my skills to speak in public and design training sessions. Not long after I started working as a Trainee Health Psychologist I was invited to deliver a training session to Health Visitors. As I had to deliver a small teaching session to my training colleagues in the beginning of the course, I could reflect on feedback from my Academic Supervisors and my colleagues on my training skills. Even though the feedback was positive, I realised I had a lot to learn to develop myself as a good communicator and trainer. As a result, I spent a lot of time revising previous training materials, designing training sessions and rehearsing the session. The reason for doing that was because these materials were outdated and not targeted to the needs of my audience. For instance, there was extensive material on Prochaska and Diclementi's Transtheoretical model (). Most Health Professionals from other disciplines appeared to be more interested in the practical issues as opposed to psychological theory. Their off-putting body language during specific parts of the training when we concentrated on psychological theory provided us with some insight on the fact that this was probably not the way to go. This observation feedback was ascertained by written feedback provided by trainees in the end of sessions. I thought the theory was also important but should be delivered using less jargon. The outcome of the next sessions was positive and the feedback I received from the trainees helped me to develop further training sessions.

Throughout the years I had to deliver a wide number of teaching sessions to different audiences. Initially I had very positive feedback. I felt very confident about my ability to speak to different populations and design, implement, deliver and evaluate training sessions. However, I realised I had developed teaching and training sessions on my area of expertise to different audiences which were repeated regularly. Accordingly, I developed a fluency in my sessions and I did not have to re-design materials so often. As a result, I misguidedly felt that I did not need to rehearse sessions. When I delivered 2 presentations which were not specific in my field I did not critically think and plan the sessions according to my audience expectancies. As a result, I received an off-putting feedback. My supervisor helped me to critically evaluate my performance and reflect upon my shortcomings. Upon reflection, I realised that basically I fell short in 2 basic skills:

1) Planning my session thinking about the expectancies of the audience listening to it
2) Rehearsing sessions and critically evaluating my performance before delivering it.
3) Being concise and systematic

My supervisors' feedback made me realise that after delivering quite a few teaching and training sessions I felt confident about my skills and did not plan and rehearsed sessions as well as I should have. This insight was crucial to my understanding that in spite of being experienced in a particular field and that skills are transferable, critical thinking, tailoring information to the audience's needs and planning is essential.

<u>Consultant Psychologist</u>

My contributions to clinical practice through research and audits and my participation in steering group meetings and expert panels provided me with the opportunity to

offer consultancy. I was consulted by service's Commissioner Manager who asked me to improve Pharmacists' Advisors contributions to the stop smoking service. I felt that my undertaking of this project was possible because I learned to develop skills in Health Psychology throughout the years. Throughout workshops and supervision, I had a starting point for my project. Furthermore, I felt that I could count on my Academic Supervisor to offer me support and guidelines on how to conduct my consultancy project. Throughout the consultancy project, I felt I faced some obstacles. My stage 2 training competence provided me with some framework and guidance. As a result, I became aware of my boundaries as a Trainee and Consultant Psychologist. The units of competence provided me with a framework for the planning of meetings, writing up of a contract and negotiating time-frames.

Conclusion

In conclusion, I felt that when I started my stage 2 training I was a Psychologist with potential for development in a number of areas. Working under the supervision of a Consultant Clinical Psychologist urged me to pursue continuous professional development. She also helped me to recognise and develop my clinical skills which were essential for the fulfilment of my working contract. Academic Supervision was crucial for me to progress in a number of areas in Health Psychology. It provided me with a better understanding of how theories of Health Psychology can be implemented in my practice. Accordingly, supervision catalysed a development process which was only possible because I learned to identify some of my strengths and weaknesses and work systematically and constructively to progress professionally and academically. The key benefit of undertaking stage 2 training is to develop myself as a Health Psychologist who will be able to act autonomously. As a result of this process, I feel that I am able to take on new roles and more professional responsibility and accordingly, be able to face new challenges.

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Consultancy: Developing systems and outcomes of smoking cessation intervention based in community pharmacies

The background

Specialist Smoking Cessation Services (SCS) were first established in the UK in Health Action Zones in England in 1999/2000. The evidence base for these services was set out in smoking cessation guidelines published in Thorax (Raw et al.,1998), which recommended that 'intensive smoking cessation support should where possible be conducted in groups, include coping skills training and social support, and should offer around five sessions of about one hour over one month, and follow-up'. Smoking cessation group support became the treatment of choice in the NHS as it was considered 'much more cost-effective'. The abstinence oriented approach adopted by the NHS was developed by the Maudsley Clinic programme (Hajek, 1989).

The national targets for smoking are to reduce from 32% to 26% by 2010, 800,000 by 2006. The high targets compel services to offer diversified support to meet the needs of smokers coming from ethnic minorities, pregnant smokers, smokers in manual socio-economic groups and smokers with mental health problems. Most services aim to provide evidence based smoking cessation interventions combining pharmacological and behavioural support.

Under the NHS, there are 3 levels of advice: level 1 (brief opportunistic advice), level 2 (Community Pharmacies, one-to-one advice) and level 3 (Specialist Service). Brief opportunistic advice from Health Professionals and mainly GPs is offered to all smokers regardless of whether they are seeking help. Under level 1, assistance and support is offered in the use of NRT and Bupropion to those interested in quitting. Under level 2, support is normally provided by Community Pharmacies who offer one-to-one advice. Level 3 advice is offered by specialist advisors. The specialists provide behavioural support and use effective medications to out-patients in a group or as a bed side intervention to in-patients.

However, regardless of the level of advice provided, all health professionals must follow the following recommendations:

- ***Assess** (All)* the smoking status of patients at every opportunity.
- ***Advise** (All)* Smokers to stop (raise awareness to the effects of smoking in person's health; urge them to do what is best for their health). At this stage, there is an opportunity to provide leaflets and/or *refer to Specialist Service or Pharmacy.*
- ***Assist** (Preparation) those interested in stopping. Discuss learning from previous attempts. (Urge positive attitude. Record smoking status, CO monitor if possible and self-report)*
- ***Refer** (Contemplation, Preparation) to specialist cessation services (or specialist advisors) if necessary.*
- ***Recommend** (Contemplation, Preparation, Action) smokers who want to stop to use Nicotine Replacement Therapy (NRT) or Bupropion (Zyban) when appropriate.*
- ***Provide** (Contemplation, Preparation, Action) accurate information and advice on NRT (or Bupropion).*

Pharmacists, who are Community pharmacies, have level 2 advisors, have close contact with a number of smokers. The Primary Care Trust I work for is interested in training as many community pharmacies to become advisors in order to meet Department of Health targets. When trained to become advisors, pharmacists have the advantage of being able to offer yet another service (smoking cessation) to their clients. They are usually trained in-house by specialist advisors. Training lasts from 1 to 3 days and entails a wide range of techniques. The Trust's pursuit in training pharmacists as smoking cessation advisors is based on previous experience of this service suggesting that advisors were successful in delivering 4-week quitters.

Trained smoking cessation advisors offering behavioral support and advice have proved to be effective in aiding smoking cessation in smokers motivated to stop smoking. A randomized controlled trial on pharmacist and pharmacy assistants evaluating a training workshop in Scotland underscores the achievements of level 2 support. The intervention was associated with increased and more highly rated counseling and a trend towards higher smoking cessation rates, indicating that community pharmacy personnel have the potential to make a significant contribution to national smoking cessation targets (Sinclair, Bond, Lennox, Silcock, Wifield, & Donnan, 1998).

Community pharmacists in this Trust are trained to offer a support program, which entails regular contact for 6 to 8 weeks, advice on ways to cope during withdrawal and monitoring of Nicotine Replacement Therapy (NRT) use. NRT significantly improves the outcomes of a range of behavioral interventions form simple advice to intensive clinic based programme. In over half of existing placebo controlled studies, adding NRT at least doubled the success rate of other treatments (Law, & Tang, 1994).

Nicotine Replacement therapy (NRT)

According to a systematic review by Silagy, Mant, and Fowler (2000), NRT reduces the urges to smoke and other withdrawal symptoms following cessation. Moreover, the majority of GPs convey that NRT is effective and encourage their patients to use it. A recent survey of GPs and NRT, found that most recognize it to be effective and either recommend it or prescribe it (McEwen, & West, 2000).

However evidence of nicotine replacement therapy use is limited to adult smokers of 10 or more cigarettes per day who are not suffering from apparent smoking related diseases. There is currently insufficient research on the use of NRT in light smokers, smokers under the age of 18, pregnant smokers, and inpatient smokers.

Furthermore, evidence on the effectiveness of NRT among smokers with manifest smoking related diseases is varied (Lewis, Piasecki, Fiore, *et al.*, 1998).

Pharmacists are trained to advice clients to make their choice of NRT. This practice is in accordance to the NICE guidelines. Moreover, there is currently limited scientific evidence for matching particular smokers to particular forms of NRT (Drug Bull, 1999). Many diagrams and decision aids have been developed to assist health professionals and smokers to make an informed selection of NRT products (gum, patch, inhalator, nasal spray, lozenge, sublingual microtablets). However, the basis for that is simply common sense (Raw, McNeill, & West, 1998)

So why to combine NRT with behavioural support?

According to Raw, McNeill, and West (1998), support from health professionals is probably not essential for NRT to be effective although it is important in its own right. Placebo controlled trials of NRT in a reproduced over the counter (OTC) setting delivered analogous effect sizes to studies offering intensive behavioural support (Hays, Croghan, & Schroeder, 1999; Davidson, Epstein, & Burt, 1998). However, to date studies of this type have typically involved a substantial amount of contact and monitoring which would not occur in true OTC settings. A field study (not a randomized controlled trial) in the US found similar success rates when NRT was prescribed by physicians as when purchased OTC. 1999).

However a study by Law, Sacks, Sze, and Chalmber (1987) advocates that intensive behavioural support is essential for NRT to work.

<u>The Local Scenario</u>

Even though Community Pharmacies working in this Trust receive a thorough training on evidence based methods on how to offer smoking cessation advice, many remain inactive subsequent to training or experience a number of problems when offering advice. Some of the Trust's resources have been allocated to train a large

number of pharmacies. Those resources are used on a number of different things such as to pay Nicotine Replacement Therapy vouchers, stationary, carbon monoxide monitors and it's mouth pieces, advertisement, dedicated administrative staff, level 3 advisors who supervise the intervention, to fund training and in-locum fees amongst other costs. However, for these efforts to be proven to be cost effective it is a key factor that those pharmacies are contributing to targets.

The client

On the 9th August the Commissioning Manager approached me and sought my advice within my professional role as a Trainee Health Psychologist and Specialist Smoking Cessation Advisor proposing a consultancy project.

I accepted to undertake this project and had an opportunity to discuss her expectations, time-frame, funding and reporting mechanisms.

3.1 To assess client's expectations, needs and requirements

On the meeting taking place on the 9th August, the following areas were discussed and the following objectives agreed on:

Aims

The aim of this consultancy was to establish of a good communication channel between the different services, aiming amalgamation and to provide pharmacies with appropriate resources so that they have the motivation and support to fulfil their roles as stop smoking level 2 advisors.

1) Agreeing on reporting mechanism – Client's priorities

Revision of NRT, client's and triplicate forms

Nicotine replacement therapy is provided by pharmacists free of charge for clients attending stop smoking programme. Pharmacists claim the Primary Care Trust for the expenses of NRT dispensed. In order to get paid they must fill in standardised NRT forms and a triplicate form which contains number of sessions client attended and type and quantity of NRT dispensed. They must send 2 copies to the Administrator who compiles the data and sends a report to finance.

The administrator filed a number of complains as the forms received by the Community Pharmacists were incomplete or wrong and she could feedback the information to the financial clerk.

As a result, the client believes that it is crucial that pharmacies understand how to fill those forms properly and meet deadlines for claiming the cost f the NRT back.

The client was concerned about the collection of paper work and believes that a simpler system could be developed in order to rectify that collection issues are properly understood and implemented.

3.2 The planning of the consultancy

The client and I agreed on the creation of protocols. Those protocols could be the writing of a paper aiming to set standards for practice. Amongst those practices, the client is concerned that stationery provision is ascertained.

1) Cost and budget

The total budget allocated for this project was £6000-00, spent on wages, running costs such as stationery, mileage, phone calls and in locum fees for pharmacists attending training (please see consultancy budget in portfolio)

2) Publicity

The client wanted publicity needs to be covered and established that the minimum requirements were the creation of a full-size poster advertising the service. The client also requested for coordination of all publicity requirements to be established. The

client revealed that at that moment in time, there was an indirect link between Pharmacies and the Trust's Communication Manager who was responsible for publicity. This has created problems in the past. Lack of communication meant that some needs have not been met. Pharmacy posters were found to be inadequate by some pharmacists who expressed concerns on the pigs on display on the posters and questioned its appropriateness for Muslim populations. The client agreed that a "process consultancy" must take place to address the needs of pharmacies.

3) Communication

In order to establish, develop and maintain working relationships with clients, visits to all pharmacies have been planned. A community pharmacist, who worked part time for the Trust, has facilitated introductions.

The client was also concerned about the monitoring of the service. It was essential to understand which pharmacies were currently offering the service and how many quitters they were delivering. Further to what, the client has requested me to develop a good understanding of Pharmacist's necessities and finally shape the service so it would be standardised.

4) Training

The client requested me to develop further training packages based on assessment of training needs.

5) Feedback report mechanism

There was a need for process consultancy on Pharmacy Service's progress, systematic data collection and documentation.

It was my objective to develop a recommendations session with actions which should have been implemented.

Based on this initial meeting, as the client's needs had been established, I started my consultancy process. We discussed time scales and agreed that the consultancy project should be initiated on the 9th August to 31st October 2004. Accordingly, I was offered the Pharmacy Service Co-ordination for this period.

To start my project I listed all the community pharmacies in the stop smoking scheme in the borough and made a timetable aiming to visit as many as possible. I sent a letter to all pharmacies in order to introduce myself and request their consent to carry out a visit.

This contact would enable me to understand some of the obstacles to providing the service from pharmacists' perspectives. I would also assess training needs and establish a direct communication channel to assist pharmacist with any problems they might encounter.

Pharmacists would be informed that following every visit a report would be written in order to discuss their needs with my client. In case they wished that some of the information and issues discussed not to be disclosed to the client, they needed to inform me during the visit.

I also decided to hold a meeting with the Pharmacist representative and another Pharmacist who has been successfully providing smoking cessation advice since 2003. The aim of this meeting was to understand what their views on the service needs and what they thought were the priorities for the development of the service. The meeting took place on the 17th August. This meeting helped me to develop an action plan.

During the meeting we had an opportunity to discuss how I could establish systems to deliver the planned advice. As a result of my clients needs and the discussions held in this meeting, I was able to develop a better picture of the project ahead. Accordingly, I devised a Pharmacy Co-ordination Action Plan.

The foundation of this project was agreeing on reporting mechanism standardising all means of communication so administrative and financial tasks would be simplified. In order to accomplish that, I would amend forms (client questionnaires) which had been used by the Pharmacists. The forms were considered by the pharmacists to be too long and complicated. They felt that they were spending far too much consultation time in filling forms. I suggested changing all forms but one of the advisors expressed concern about making too many changes too soon, which could de-motivate the new Pharmacists.

However, we agreed that some changes were crucial at that point. The changes which would not take place at this initial stage were the standardisation between Specialist and Pharmacy forms. This would be proposed at a later stage. One of the pharmacists pointed out that the triplicate forms were printed in great quantities and it would be a waste to dispose of those at this stage. In order to maintain contact with this pharmacist who had a lot of knowledge of the service and for me to be able to understand if their needs have been met, we agreed on scheduling a second meeting. The objective of this second meeting would be to discuss administrative issues and to get their feedback on the revised forms. The next meeting should take place on the week starting on 23rd August.

We also discussed stationary provision during this meeting. According to the Chief Pharmacist, Pharmacists were supposed to request stationary through a form and expect delivery within 2 to 3 weeks. It appeared that this needed to be reinforced (One pharmacy called requesting mouthpieces to be delivered on the following day). I conferred with the Pharmacists, the administrator and my client and suggested that

the way forward would be trying to visit as many as possible of the 22 Pharmacies. The visit's objectives would be to offer training on filling forms and rectify that they are sending them to the administrator following agreed protocols. Further to sending NRT forms, Pharmacists would need to send details of clients seen, CO reading, smoking status, number of sessions attended by client and socio-demographic information as requested by the Department of Health (DoH). This information was crucial for Pharmacists to get paid and also for clients' statistics to be compiled and reported to the DoH, as required. In order to arrange appointments, a letter was sent to all Pharmacies introducing myself and advising them that I would be calling them in order to book a visit. Thus, I have rang all Pharmacists to make appointments. The advisors presence would not be needed. I was able to devise a timetable for the visits starting on the 1st September.

The aim of the visits was to address admin issues and training needs. Moreover they were valuable for the development of an understanding of Pharmacist's concerns in respect to the service delivered. In order to provide Pharmacists with feedback on their sessions with clients, offering them adequate supervision, I offered to sit in sessions when required. Further to the visits, it was my aim to improve publicity to meet the needs of the Community Pharmacists. The Chief Pharmacist pointed out that publicity needs had been discussed and that Commissioning Manager (the client) had agreed on budget and on the creation of the material. This needed to be rectified with the client. After discussing the concerns raised by the Pharmacists, I agreed with the client on the production a full-size poster advertising the service. I held a meeting with Communications manager when she was back from her holidays. Prior to our meeting, I had produced a few drafts and templates as suggestions.

I had a second meeting with my client to agree on monthly reporting mechanism. We agreed that I would be responsible for the creation of reports on Pharmacy's development and comparison graphs. These should have been divulged every month. Pharmacies which didn't meet targets or whose service provision was considered under-standard would be offered further training. Accordingly, the 1st report was publicised in October.

A second objective of this report was to promote a competitive spirit between pharmacies and to help them to communicate amongst each other sharing examples of good practice.

As I started my visits I realised that Pharmacists were in need of further training. They did not have a lot of knowledge of smoking cessation and held many misconceptions. As a result, I developed a new training kit. Time, venue, duration, content and expenses were discussed with the Consultant Clinical Psychologist and the Commissioning Manager at another meeting. Expenses would be minimised having Pharmaceutical companies offering buffet lunch (I had some contacts). We discussed the possibility of using a seminar room which was free of charge as a possible training venue.

Smoking and diabetes

- There were 6 Pharmacies in the smoking cessation scheme which offered diabetes drop-ins. Since I had established a service in the hospital for diabetic smokers, it would have been useful for pharmacists to use the same publicity. Accordingly, during my visits in September, I have distributed leaflets on diabetes and smoking to pharmacies and discussed specific interventions for this target group. As I carried out my visits I realised that I had to make necessary amendments to consultancy plans in the light of evaluated outcomes from the pre-intervention

investigations. In order to amend my plans and discuss difficulties, I held another meeting with the Chief Pharmacy Advisors to revise the work conducted for the consultancy so far.

The pharmacy advisor, the administrator and I attended the meeting. We discussed the forms. I have amended the previous forms according to previous feedback from the Chief Pharmacist, making them shorter and easier to complete. I used a short version of forms used in the specialist clinic, bearing in mind that services should be standardised. The Chief Pharmacist approved of the new forms after we made a few changes on the spot. We concurred to pilot those first for a couple of weeks. The Chief Pharmacist had offered to pilot the forms in his pharmacy

for a couple of weeks. Further training would be needed to assist Pharmacists to fill in those forms.

We agreed that even though further changes were important, it would be better to wait until the triplicate forms were finished for their implementation. The Chief Pharmacist pointed out that we had quite a few boxes of the previous forms and making changes would have implications on the budget.

We also discussed the viability of training provision for staff over the counter. However, the Chief Pharmacist was not convinced that Pharmacists would allow staff to attend level 1 training, given that they would not be paid in locum fees. Nonetheless, he thought it a good idea to have a tier 2 enhanced training for the Pharmacists in the scheme.

<u>TARGETS</u>

I asked the Chief Pharmacist for his opinion on setting Pharmacies targets and divulging information on number of quitters per pharmacy and he approved of the idea. He did not think the target of 20 clients a month, 10 successful quitters was unrealistic. He pointed out the financial reward of having that many clients as an

incentive. This statistics are based on number of pharmacies on the scheme and our annual targets for stop smoking services. We also had an opportunity to revise publicity. The Chief Pharmacist thought that it would be good to have window posters for pharmacies and was keen on the idea of having kits. I had told him that I would had an initial meeting with the communications manager and discussed publicity and as new posters were produced we could pilot the material to get feedback and if necessary make changes.

As the Communications Manager approved of the templates I had produced, I left the material ready to be distributed by the new co-ordinator.

<u>The visits to pharmacies</u>

I wrote a short report with a summary of the issues discussed.

Further to training pharmacists and helping and advising them on filling in the new forms, I got their feedback on the revised forms. Pharmacists found the new forms easier and less time consuming than the previous ones.

Following visits, I devised a newsletter and brief guidelines summarising the main concerns regarding sending forms containing the appropriate information for DoH and payments. The aim of the guidelines was to reinforce issues discussed during visits. Even though I initially developed a more extensive paper, the advisors thought it was far too long and asked me to summarise the main points. They thought that by having a shorter and simpler version would increase the odds of pharmacist actually reading them through.

The guidelines were as follows:

Stop Smoking Pharmacy Service - Guideline for Advisers

<u>Stationery:</u>

All stationery must be requested through a form and posted. Advisers should allow 2 to 3 weeks for delivery.

Administrative:

Payment will not be effectuated before all paperwork is sent.

NRT is paid on a monthly basis. Stop smoking service provision is paid upon rectification of forms. (5th month)

Targets: every Pharmacist has a target of 6 patients a week or 24/25 clients a month. Success rates are normally higher than 60% and are measured upon setting a quit day and 4-week quitters.

Monthly performance reports for all Community Pharmacists in stop smoking scheme will be sent to all Pharmacists.

Training:

All training needs would be addressed upon individual visits. Further training will be provided through a Tier 2 Enhanced Training. Date and venue will be informed in advance.

Based on feedback from pharmacists and information collected during visits I advised the client to conduct a further training to all pharmacists. I devised the "enhanced" training timetable and content and reported some of the concerns Pharmacists expressed regarding attending a second training (ie. receiving in locum fees payment).

I also found it important to evaluate whether changing forms, creating a window poster and publicity material following feedback and providing training and visits had an impact on the outcomes of their services. I decided to compare attendance and smoking cessation outcomes before and after the intervention to acquire a better understanding of the impact of the consultancy. The consultancy has had an impact

on attendance and outcomes of smoking cessation advice. More pharmacies adhered to the scheme and overall all pharmacies had a better performance.

Table 1: Clients attending session 1, quit day and 4 week quitters before consultancy.

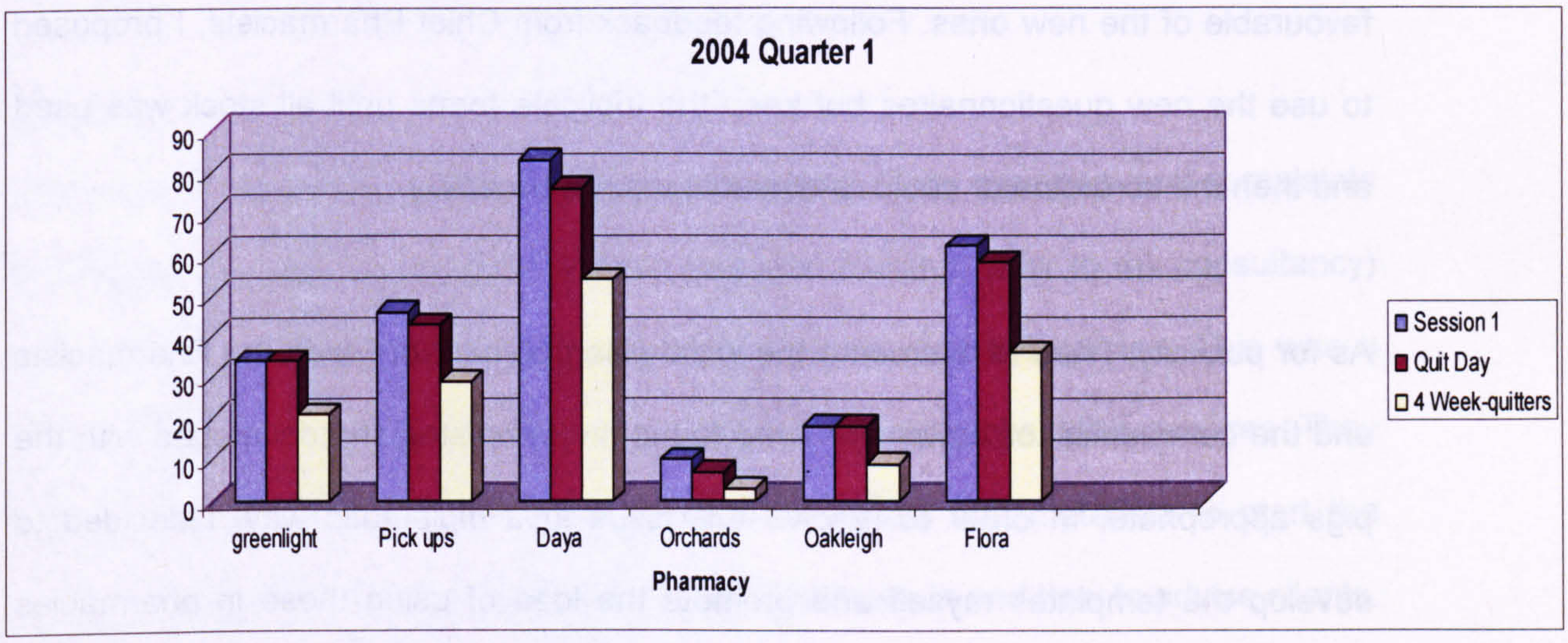
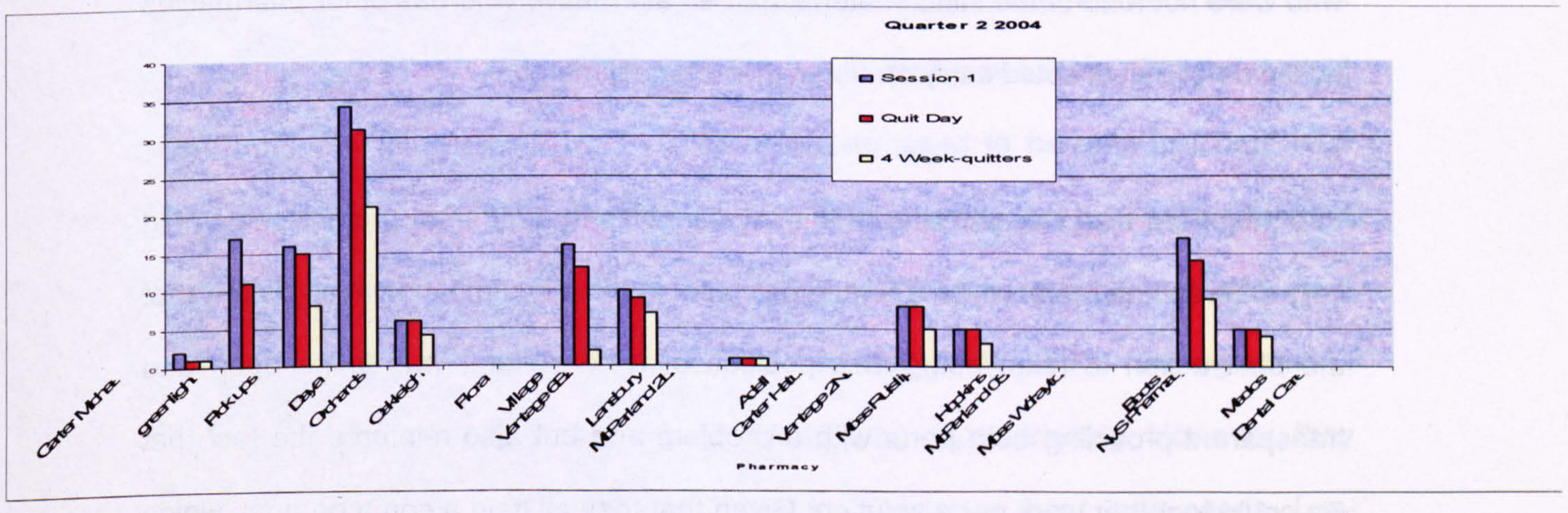


Table 2: Clients attending session 1, quit day and 4 week quitters after consultancy.



Reflective log

The initial aim of this consultancy project was to establish a good communication channel between the different services, aiming to amalgamate them, using protocols and, as a result, standardise the service as a whole. It second aim of this project was to provide pharmacies with appropriate resources, so that they would have motivation and support to fulfil their roles as stop smoking level 2 advisors

My initial objective was to amalgamate services aiming to standardise forms. I encountered some resistance with changing the forms by the Chief Pharmacists as they had hired a previous consultant to perform this task. However, the form developed before was found to be complicated by the Pharmacists who were favourable of the new ones. Following feedback from Chief Pharmacists, I proposed to use the new questionnaires but keep the triplicate forms until all stock was used and then the co-ordinator could re-evaluate their applicability.

As for publicity, I had to overcome the initial disagreement between the Pharmacists and the communication's manager who found the templates she developed with the pigs appropriate. In order to resolve this issue in a diplomatic way, I decided to develop the templates myself and promote the idea of using those in pharmacies only as an alternative publicity material. I explained that they could have a choice of both materials so we would attend to the needs of all advisors. As a result, advisors who were not fond of the initial material had an alternative whereas other pharmacies who did not object could carry on using their original material.

The major learning I acquired from this incident was that different professionals hold very different interests, which sometimes clash. In this circumstance, it appeared that the best action to take, being in a position of a consultant, was to be open and transparent providing both parts with a problem and but also reinforce the fact that we could together work out a solution. Given that they all held a common goal, which was to succeed and fulfil their roles; this should not escalate into a more serious issue. It was my interpretation that they all will need to make some kind of concession and they had to show flexibility attaining a win-win situation. In this case, it was possible to develop some strategies to keep everyone satisfied such as

developing some templates myself and providing pharmacists with a choice. This also raised my awareness to the fact that I had to be multi-skilled and flexible myself

to be able to recognise my limitations as well as my skills in order to step out of my role as a consultant and adopt the role of a designer.

Training

Pharmacists were very keen on attending re-training. They made several complaints that there had been a long gap between their first training (prior to my consultancy) and the time when they got hold of the materials to start the service. This was a major factor discouraging Pharmacists to carry out smoking cessation services. They have stated that in the past, when they got the forms and materials to start the service, they had had little recollection of how to fill them in and how to advise clients. This was a major reason why they had had difficulty filling forms correctly and needed further training.

They also expressed interest in having their staff trained in case they were away from the pharmacy. The secondary gain of having other staff trained was that they would be enthusiastic about the service. They have requested to be paid in locum fees during the time they were away for the training. My client thought it unreasonable that they had requested the fees once they were getting paid to offer the services. As a result, I negotiated with both parties and managed to reach an agreement. Pharmacists agreed to pay for their in locum fees to attend training. However, they were not prepared to send their staff as well. In order to meet their needs, I re-arranged my visit's schedule to fit training for staff as requested.

Motivating pharmacists

I realised that in many cases, pharmacists were not providing services because they had not confidence that they were doing the right thing. They had doubts and

questions which remained unanswered and they felt unsupported. I recommended that in the future pharmacists should have the contact details of a person who was responsible for answering their queries and attending to their needs.

I also created a newsletter publicising tips and announcing the "star of the month" in order to provide them with a sense of unity. It would also keep them updated and would be an open forum for suggestions and questions and answers.

Overall, this project was very rewarding. I developed my skills to learn to communicate with different health professionals, Pharmacists, managers, Salespeople, Marketers, Commissioners and other Trainers who shared very different ideas about the way I should develop my project. I learned from their feedback and had to critically evaluate their views in order to present work which would meet the requirements of my Client and satisfied the Pharmacists. In order to provide further training to Pharmacists, I had to conduct a needs assessment, evaluate previous material and employ a wealth of learning theories.

A great challenge was working with publicity, creating leaflets and designing posters and writing newsletters using appealing language to my audience. I draw from my training in health promotion which is part of my health psychology training. In spite of not having a long period to deliver an ambitious project, I believe I managed to achieve some objective results as Pharmacists who were inactive became part of the Stop Smoking Pharmacy Advisor' scheme and in general subsequent to the consultancy, Pharmacists provided support for more clients to give up smoking and delivered better results.

This project highlighted that it is sometimes difficult to manage to link theory and practice. It takes a lot of reflexive thinking to step on a role of a consultant, being the "expert" on that area. At times, I felt I would not be able to meet everyone's expectations but this was probably due to my initial lack of experience as a consultant. As a trainee health psychologist, I felt I learned a lot about professional

issues learning about my skills and limitations. I learned how to negotiate my role with different health professionals, being aware of professional boundaries, hierarchy within the NHS and having this on the back of my mind, how to mediate and sometimes diffuse disagreements. It was interesting that this project required me to act as what I believe to be an applied psychologist being sometimes a trainer, a clinician, a business person, a publicity designer and a researcher. I attended many meetings and quite a few times said very little and refrained myself, only listening to what others had to say, sometimes summarising and reflecting upon their demands. I normally would need time to reflect upon what their priorities were and how realistic they were. I had to develop trust in my own skills as a health psychologist in training to be able to feedback my understanding of the differences and positions held by the professional. It was challenging to draw a list of priorities which was realistic, inclusive and holistic as opposed to an unstructured and sometimes fragmented wish list.

Now, as I revisit those episodes, I can sometimes think I could have done some minor things different such as negotiating a longer period to run the project and clarified my role a little bit better. By doing so, I would probably avoid getting involved with the designing of publicity material, even though that was an useful learning. Overall, it's my impression that I developed very good alliances with everyone involved in this project and I believe I play a part bringing the service together working towards the same goals. I am sure disagreements will arise but hopefully pharmacists and other health professionals in the service learned a few skills which will help them to make concessions when necessary and put the needs of the service as a whole first.

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Plan, Design, Deliver, Implement Assessment Procedures and Evaluate Training Programmes that Enable students to Learn about Psychological, Knowledge, Skills and Practices

4.1 a Assess training needs

When I started my job as a Trainee Health Psychologist in the Stop Smoking Service I attended a strategic steering group meeting. During that meeting we decided that in order to increase referrals to the stop smoking services it would be advisable to provide training on how to talk to patients willing to give up. Furthermore, it would be appropriate to raise awareness amongst health professionals about the wide range of advice available in the Trust.

This was a new initiative and as a result there was no precedent. Accordingly, I was responsible for carrying out a needs assessment and an action plan for future training. In order to do so, I had to think about the population who should be targeted and what we expected for them to get out of the training. The first step towards agreeing on training needs was to understand what kind of stop smoking services are available in GP Practices and health professional's attitudes towards smoking cessation advice.

I decided to examine an audit of primary care teams' practices and attitudes towards smoking cessation in the borough of Hillingdon.

The audit was conducted in September 2003 and aimed to examine the attitudes and practices of primary care teams in the borough towards smoking cessation and the relevant specialist services.

Questionnaires were posted to all GPs, practice nurses and health visitors. Overall, the audit considered 61 surgeries and a total of 123 GPs, 94 practice nurses and 58 health visitors. From the 275 questionnaires that were sent, 126 were returned, a response rate of 46%. The majority of returned questionnaires were by GPs (56), followed by practice nurses (41) and health visitors (29). Response rates for each of these professional groups were very similar (46%, 44% and 50% respectively).

It was important to see the type of services of which they would consider referring and if there were any differences between health professionals in the choice of services they would recommend to their patients. The findings indicated that the majority of referrals were from GP's. The preferred type of service amongst all health professionals was specialist clinics, pharmacy and helpline.

4.1 b Identify Training programme structures and content: Prospective Trainees knowledge and attitudes towards smoking cessation

The majority of primary care professionals considered smoking cessation services effective and were motivated to help their patients quit smoking. However, health visitors were significantly less confident compared to GPs and practice nurses in their ability to assist patients to stop smoking.

Respondents' attitudes towards smoking cessation were not related to their referral practices (i.e. the number of people they referred). However, their attitudes and specifically their confidence and motivation in assisting people to quit were associated with the use of NRT. Those who were more confident and motivated were more likely to recommend or prescribe NRT.

It should be noted that the majority of the respondents of this survey were non-smokers. Only, 15 people (12%) were current smokers, half of which reported thinking about quitting.

According to these findings we decided that the target group of our training would be primarily Health Visitors as they appeared to be less confident in their ability to assist patients to stop smoking. The second target group of our training would be Practice Nurses as they appeared to have some confidence and would have more time to spend with patients when compared to GP's.

4.1 b Planning the structure of the programmes to fit identified training needs timescales, resources and models of training relevant to learners

When designing the training, I took into account the fact that most health visitors and practice nurses are very busy and would be unlikely to take part in an extensive training. I also decided to create a log book of calls to the service. Whenever a health visitor or practice nurse called our 0800 helpline we asked them if they would be interested in receiving training on providing stop smoking advice. We also sent letters to all practices in the borough raising awareness to the training that would be taking place soon. We asked those interested to call or write to us expressing interest so we could send them a timetable of the imminent training. By doing that we had roughly an idea of how many trainees we could expect in the first sessions.

4.1 c Selecting training methods and approaches

4.1 e Using appropriate media to deliver training materials

In order to select training methods and approaches, I determined the learning objectives of the sessions. Moreover, it was also valuable to put in place a through evaluation form where learners could evaluate how useful they found each element of the training. Based on this form, I could reflect on their training needs and amend future training sessions accordingly.

I also found it useful to use a laptop with Powerpoint and projector and create a good quality of slides which would be eye-catching and concise. I thought training would be more interesting if I could keep the presentation simple in bullet points as reminders of topics for me to talk about instead of reading. I also thought it to be appropriate to get trainees to interact with trainers and amongst each other in order to optimise the learning process and empower them to actively provide smoking cessation advice to patients in the future.

In order to produce training materials I looked at the Hajek's model (1996) and the 3 day Hajek's Specialist training. I selected which were the most relevant elements which could be summarised in a 2 hour session. I also considered that the objective of the session was to increase referrals to the stop smoking services.

4.1 b Submitting advanced plans to relevant others for comment and adjustment before finalising training programmes

4.1d Producing training materials

I proposed to work in partnership with an agency, which has experience in delivering training and health promotion. Together we prepared materials to distribute to trainees during training. The materials covered information provided during training, handouts so trainees could make notes.

The main topics were as follows:

- **F**actors about smoking
- **F**eatures for individuals in PCT
- **R**ecommendations and **G**uidelines for HP's
- **H**illingdon **S**pecialist **S**mokers' **C**linicv**T**reatment **O**utline
- **N**icotine **R**eplacement **T**herapy
- Brupropion (Zyban)
- **C**arbon **M**onoxide **M**onitor

Overview of **S**ervice (Aug '00-Nov '03)

A training timetable was devised and posted/emailed to everyone in all GP Practices in the Primacy Care Trust. As prospective trainees called booking a place we would provide them with directions and take their names, practice address and phone number.

In order to provide trainees with an adequate learning environment, venues where visited and inspected before training session. When it was feasible, lunch and refreshments were provided.

The Co-ordinator of the other agency and I conferred having a fishbowl exercise in the end of every training session and 10 minutes for discussion and questions. We wrote possible difficult situations and excuses clients make for carrying on smoking. During the role-playing component, trainees had to assume the role of the Stop smoking advisor. Contexts were based on real situations which occurred in the past:

1) My grandmother is ninety years old and has been a smoker ever since I can remember. She smokes a pack a day and is alive in perfect health. Smoking is surely not as bad as they say...
2) Can I cut down to 3 cigarettes a day? I wouldn't like to give up smoking altogether...
3) Last time I stopped smoking my husband said I was so grumpy that I should go back to smoking again. So I did! What should I do if I get really ratty?
4) I am pregnant and I don't think smoking is that bad for my baby. I heard the baby might be born slightly under weight but this might make for an easy delivery.
5) I don't want to use any medication to help me to give up smoking...I don't want to put nicotine in my body...
6) I smoke weed and tobacco. Can I only smoke weed and stop normal cigarettes?
7) If I give up smoking will I put on weight? I am already 10 pounds overweight and I don't want to gain any more weight.
8) I gave up smoking and I am feeling a lot worst and coughing more. I think giving up smoking is bad for me.

4.2 Delivering training programmes encompassing psychological, knowledge, skills and practices: The first training session

The first training was not easy but all in all, it went well. I felt I had very little experience in speaking with an audience and was not feeling very confident. Aware of my limitations and in order to overcome these barriers, I decided to practice in front of a mirror as well as tape record myself rehearsing to correct mistakes, change body language and speak more fluently. In spite of all the practicing, I felt nervous in the beginning of the training session. As I started talking I felt a lot calmer and inspired. It wasn't until looking at trainees' evaluation that I had the confirmation that I did not bore or disappointed anyone.

4.3 Plan and Implement assessment procedures for training programmes encompassing psychological, knowledge, skills and practices

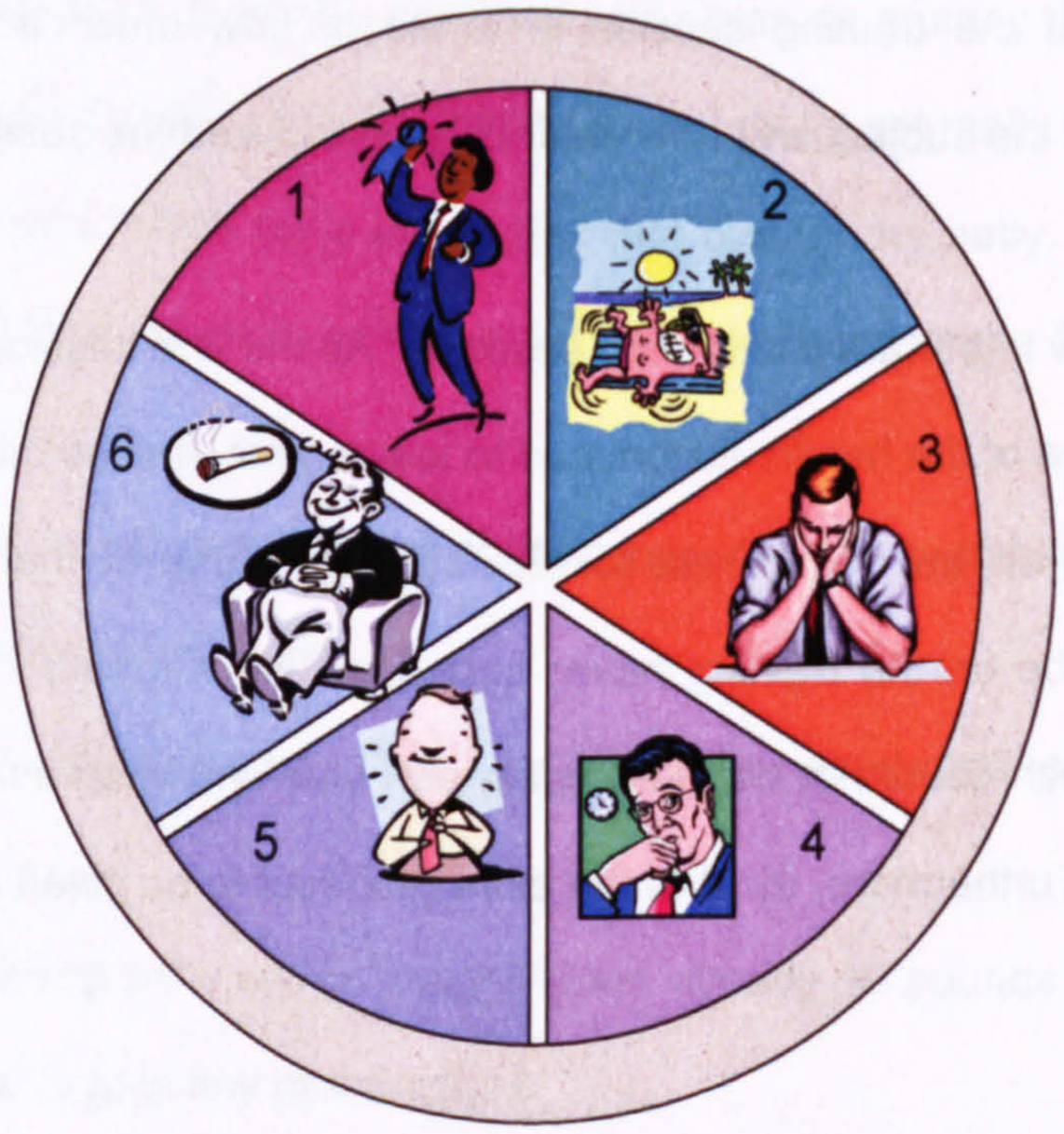
I also found the evaluation sheets useful when revising the content of the training for future sessions. In the evaluation sheet, learners would be able to evaluate each component of the training session in terms of how much it contributed to their knowledge of the subject and how clear they considered the session to be.

I realised how important it is to time sessions. As the first session ran for an extra 15 minutes, some of the health visitors had to leave. I recognized that it would be a good idea to have an attendance list for the training. Many of the people who initially promised to be on the training never turned up. As a result, I had printed a lot of handouts which could not be used again as I was changing some of the content of the training. Furthermore, most of the extra food had to be given away.

4.4 Evaluating training programmes encompassing psychological, knowledge, skills and practices

According to the evaluation forms, Health Visitors found that the most relevant part of the training was being given information on how to use a carbon monoxide monitor, different types of nicotine replacement therapy and zyban and psychosocial factors of smoking. They also found the fishbowl exercise interesting and I found it useful to keep training interactive and fun. They were least interested on cycle of change, Prochaska and DiClementi (1983). As a result, I revised the manner by which I delivered this information in order to make it more accessible to non-psychologist. I decided to draw the cycle and simplify the language:

1. **Non-Smoker**
2. **Contented smoker (Pre-contemplation):I don't want to stop**
3. **Concerned Smoker(Contemplation): I wish I could stop**
4. **Planning to Stop(Preparation): I will seek for help**
5. **Recent Ex-Smoker (Action): I've quitted recently**



WHERE ARE YOU IN THIS DIAGRAM?

Following up from that initial experience, I thought that it could be a good idea to inform future trainees that we would send a letter to their managers with the training program 2 weeks in advance. We would also send letters to trainees who did not attend training. I thought that would at least decrease the number of people who subscribe to training and don't turn up. During a team meeting I put forward this idea. The attendance increased.

Based on feedback from every session, adjustments were made as appropriate. These trainings also inspired presentations, teaching and training for other populations.

Population 2

Teaching MSc Applied Psychology: University Lecture

A London University asked specialist services to teach as invited lecturers to the MSc Applied Psychology course. Accordingly, I was invited to give a 2 hours seminar "How to help smokers to quit"?

4.1 a Assessing training needs/ 4.1b selecting training methods and approaches

In order to prepare the session, I discussed the current training provision of the MSc students with the module leader. I learned that I was teaching the Health Psychology component of the course. Lecturers were invited from different areas of psychology so students could grasp a better understanding of what Psychologist in each division did as practitioners. The module leader and my manager who is an experience lecturer emphasised the importance of relating practice to theories of health psychology.

I had to provide a 2 hours lecture and the topic is very broad. I decided to focus the lecture on shedding light on some basic factors about smoking and progressing into

addiction, health psychology models applied to smoking cessation and evidence based interventions. The lecture covered the following topics:

- ❖ Factors about smoking
- ❖ Nicotine Initiation and Maintenance
- ❖ Nicotine Addiction/ Psychological causes
- ❖ Beliefs and Biases
- ❖ Interventions
- ❖ Nicotine Replacement Therapy/ Brupropion
- ❖ Carbon Monoxide Monitor
- ❖ Specialist Smokers' Clinic
- ❖ Overview of Service (Aug '00-Jan '04)

4.1 c Selecting training methods and approaches

During this lecture I found the opportunity to link smoking behaviour to health psychology models as well as to some cognitive behaviour therapy techniques. Some of these cognitive behaviour therapy techniques are actually employed in the NHS specialist smoking cessation clinics.

4.2 Delivering training programmes encompassing psychological, knowledge, skills and practices

PSYCHOLOGICAL REASONS FOR MAINTAINANCE

TRIGGERS

- ✓ Situations trigger smoking behaviour
- ✓ Smoking is repeated in those contexts and reinforced under those circumstances
- ✓ Situations, conditions and activities will be associated with smoking

- In what contexts do people smoke?

I also linked smoking behaviour with attributions about the reasons of continuing that behaviour such as unrealistic optimism, self-efficacy and locus of control. In the slides I merely explained the concepts but in the context of the lecture I decided to provide students with examples of how quitting smoking increases their self-efficacy, how people

believe that smoking is not a major risk for their health as well as how GP advise might work for some but not for others according to their locus of control ("powerful others loc"). The slides were as follows:

Beliefs & Biases

- **Unrealistic optimism**

In general, individuals tend to have an exaggerated sense of their ability to control their health and may underestimate their own vulnerability

So which factors would influence the likelihood of quitting?

- **Self-Efficacy**

- "Self-efficacy": the belief that one is able to control one's practice of a particular behaviour. Smokers with higher perceived personal control who believe they are likely to succeed are less likely to relapse.

HEALTH LOCUS OF CONTROL Rotter (1966)

How people perceive events?

- Internal: as a result of "their own behaviour or enduring characteristics"
- External: controlled by some other variable such as Luck, God, or Authority (Powerful others)

- Rotter's Social Learning Theory: chances of behaviour occurring is a function of the expectation that it will elicit reward/ value of reward for individual
- Internality is related to adaptive behaviours:
- Awareness of factors which may influence future behaviour
- Take steps to improve their lives
- Resist conformity
-

4.1 e Using appropriate media

I was informed that the lecture would take place in a lecture theatre and around 15 students would be attending. Further to producing handouts to every student, I also ascertained that Powerpoint was available. The module leader informed me that upon arrival at the University, I should contact the IT department so they would be able to set up the laptop with HP.

The lecture was quite interactive. There were a few smokers and ex-smokers in the audience. As they could draw from their personal experience, I tried to probe them on how they found the theories were applicable. I also learned from the nurses training that offering to monitor people's carbon monoxide is considered very valuable by students. Some of the students wanted to find out the effects of passive smoking to their health and I could measure the extent to which they were passive smoking.

A second objective of this lecture was to tell trainees about the role of health psychology in clinical practice. Many students were not clear about what was the role of health psychologists in the NHS. Furthermore, some students had some misconceptions regarding chartership status in health psychology. Some of them seemed to believe that having an MSc in Applied Psychology was enough to go

through stage 2/ Doctorate training in Health Psychology. I found it constructive to talk about my experience as a trainee health psychologist and how my role within the NHS has developed as a result of training. I also explained to students that we could offer them placements in the department so that they could do their research in a field of health psychology as well as shadow someone working in the area.

4.3 Plan and implement assessment procedures for training programmes encompassing psychological, knowledge, skills and practice

I had also to propose 2 essay questions to be answered in 3000 words as part of the course requirement. This was worth 50% of the assessment of the Health Psychology module. I also had to provide students with a reading list for the topic (appendix A)

By reading some of the papers, checking the websites and critically evaluating the evidence, students would have an excellent basis for answering the essay questions.

The questions related to lecture contents but also provided students with the opportunity to draw upon their knowledge of evidence-based interventions for smokers who want to quit as well as social cognitive models. One of the questions had a problem solving approach in which students could apply their theoretical knowledge to a hypothetical patient.

An example of a question is as follows:

1. Why is it so difficult to give up smoking? Which are the most effective evidence based interventions to help smokers to quit and why?

In this multi-component question, students should describe nicotine addiction, reward pathways and neurotransmitters as well as psychological aspects of smoking

(triggers, habit). They could also mention reasons for smoking maintenance (social, genetic, attitude, personality).

Students should also show some knowledge of evidence based interventions such as Cognitive Behaviour therapy or any kind of psychological support allied to Nicotine Replacement Therapy or Bupropion.

I was responsible for the correction and grading of the essays. An external examiner was the second marker for the questions. Eight out of 20 students answered my proposed question given a choice of 8 questions. Some of the questions were extremely well answered. Some students looked at systematic reviews as well as randomised controlled trials and answered the question in a critical manner drawing from evidence based practice. On the other hand, some of the students appeared to have little understanding of smoking and the structure of essays was in many cases confusing and lacking evidence.

4.4 Evaluating training programmes encompassing of psychological, knowledge, skills and practices

In the end of the session I distributed an evaluation form in which students rated in a likert scale every aspect of the training session. The evaluation was in general very positive. I realised that students are least interested in the mechanisms of addiction and the physiological aspects of nicotine addiction. In spite of not appreciating this aspect of the lecture, I find that it is crucial for the understanding of addiction and to envisage why a multi-component intervention taking into account physiological, cognitive and behavioural aspect of smoking is the most effective method to support smokers wanting to give up.

Reflecting upon my experience of teaching

I believe that I significantly improved my training skills since the first training I delivered. I learned how to pace myself, how to speak without reading from notes. I also made a great effort to make training interactive. The quality of slides has also improved as I needed less information in every slide and adjusted colour scheme appropriately. In some cases I had to deliver training without any equipment and had to improvise. As I became more fluent in topics I used slides for students to follow instead of using them to remind myself of topics I had to cover. I will continue delivering training regularly as part of my role as a Health Psychologist. I hope that this will help me to keep on developing my skills and that over the years I can become an experienced trainer.

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ASH

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Quit

17. www.quit.org.uk

No Smoking Day

18. www.nosmokingday.org.uk

Head of Tobacco Control

19. TobaccoControl@roycastle.liv.ac.uk

20. www.roycastle.org

"A Stress Management Session for Cardiac Rehabilitation Out-patients"

Cardiac rehab patients are offered a series of psycho-educational seminars as part of their treatment plan.

As patients are discharged following a cardiac event, many of them feel anxious, depressed and concerned. They might feel that their quality of life has been massively impacted and actively monitor for symptoms of another cardiac event. Psychologists working in the field help patients to achieve a better adjustment by conducting assessments and addressing illness representations. Patients who are discharged are offered support by a multi-disciplinary team as part of a chronic illness management programme. Accordingly, in order to implement patients' intentions to lead a more healthy and active lifestyle, psycho-education is offered through seminars by different health professionals. The sessions address various issues which are relevant to this client group. One of the talks addresses stress and misconceptions about the links between stress and heart attack. This session was normally done by a Clinical Health Psychologist who left the Trust. Thus, another Trainee Health Psychologist was offered the opportunity to take on this task. However, the other Trainee Health Psychologist works on a very tight schedule and could not offer this session on that particular day. The Trainee discussed the issue with her manager and raised awareness to the fact that I was competent to do the session. Thus, the Consultant Clinical Health Psychologist and I agreed that I would do the talk.

Preparation

In order to prepare for the session I had a few meetings with the other Trainee whereby we tried to address CR patient's needs and revised the materials for the session. Together, we looked at patients' feedback forms of other sessions and their own recommendations for future sessions. Feedback material indicated that patients would like to receive some practical advise but in general found sessions very useful.

Initially we had a lot of material and it was difficult to select the appropriate ones to be discussed in a 45 minutes session. We decided to try to make a more interactive session and address different types of stress, its links with cardiac heart disease and provide patients with some practical exercises (see appendix 1).

I also had an opportunity to use a video-camera to record myself delivering the session, which helped me to reflect upon my training skills.

The session

I managed to arrive in the session half an hour before in order to set the video-camera, the laptop with the PowerPoint projector and distribute hand-outs. As the Nurse was very busy

she could not film me. We managed to put the camera is a place where it could film me if I remained relatively stationary.

I was surprised to see so many patients attending the talk (around 25). The patients were not very interactive. Later, I discussed it with the other Trainee who told me that they are used to attending lectures which take a more dialectic format and participation is not encouraged. The reason for that, according to her, is that most of the participants were older adults who and of Asian background, who are more comfortable with a medical model and prefer a less interactive, more authoritative approach.

As I probed the audience about stress, I realised that contrary to my beliefs, they did not have many misconceptions. It appeared that they have been educated on the topic. Every time a patient said something, I would nod my head, smile and repeat it to the audience asking if they shared the same experiences. This really worked motivating others to participate. I also tried to maintain a good posture and an unthreatening body language. I also discussed how to cope with stress and learned from the audience what their experiences of coping are. I taught them to do

diaphragmatic breathing and we tried it a few times together. Moreover, we discussed negative thoughts which can bring about negative affect and dysfunctional behaviours reinforcing stress.

Patients seemed very interested in the session and in the end they applauded and asked questions. The Nurse who also sat on the session provided me with a very positive feedback. She has told me that many of the patients would not engage during psycho-education sessions and stayed very passive. She thought that during the session I presented, they were quite interactive. That made me question the attributions made by the previous Psychologist and my own lack of insight which made me fail to challenge those at that point. It might have been the case that patients have not been interactive before because they were not given opportunities to do so, or were not encouraged to participate in sessions. However, I believe that if, as Health Professionals, we avoid using jargons and listen to what patients have to say, we would be able to devise more tailored interventions and patients would learn to develop to meet their own needs. Instead of holding on to a limiting framework where the Health Professional is the "expert" providing what they believe to be the appropriate information and patients learn, memorise and, if satisfied with the advice follow it (Ley, 1989), they could possibly be empowered by feeling in a comfortable environment to express their ambivalence and their needs and acknowledge that this would not have any implications in the level and quality of their care. Once, an open communication channel is established, patients needs can be understood and, accordingly, be more easily met.

I felt that overall this was a rewarding experience. I never had delivered a session on stress and I was relatively concerned about my skills. I managed to answer all of the patients' queries and discussed simple techniques that could be easily implemented. The most important lesson learned took place after the training, as I reflected on the session. My reflection made me question whether on our own lack of confidence as

Health Professionals and our fears of being challenged by patients, who might realise we don't know it all might be decisive on the way we treat patients. It is more comfortable for us as Health Professionals to put ourselves in a position where our skills or lack of, are not questioned by patients. However, we can only learn if we also take on board patients' feedback. Giving patients a space to express their needs and to discuss their wish list (even if unrealistic), might help us to develop our skills as well as revise the current problems in our health service.

A valuable learning acquired from this session was that Health Psychology models are applicable in many areas and skills are inter-changeable. The same models and techniques that I employ in my area of expertise, smoking cessation, can be used to help cardiac rehab patients to cope with stress. These models can also be used for us as Practitioners to evaluate our communication with patients.

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"Implementing Interventions to Support Smokers to Quit Achieving Long-Term Health Benefits"

In my present post, I work as a Trainee Health Psychologist and Specialist Stop Smoking Advisor in a multi-disciplinary team comprising a midwife and specialist advisor, an administrative officer and a Consultant Clinical Psychologist who line-manages and supervises my work.

5.1 a Assess the suitability of clients for health-related behaviour Intervention

It is my role to conduct assessments of patients as well and the running of group and individual specialist interventions to clients in different diseased groups across the life span in multi-cultural populations.

Research on predictors of smoking cessation, highlights the importance of assessment. In particular, my practice has been influenced by the research which was presented in the Annual Conference of Health Psychology 2004. This research investigated the role of psychological status and self-efficacy in influencing the outcome of hospital-based group intervention in smoking cessation. Findings suggested a link between psychological status and smoking maintenance. There was evidence that high self-efficacy before setting a quit day functions as a significant predictor of relapse. This could be a sign of unrealistic optimism. As a result of these attributions patients are likely to engage themselves in risky situations and might be more reluctant to change habits associated with smoking. Targeting and aiming to alter such beliefs may prove beneficial in preventing relapse during the first month of quitting. This research sheds light on the role of providing clients with a comprehensive assessment where realistic expectations are set. Moreover, this research also highlights the role of a high degree of motivation in the maintenance of behaviours.

I incorporated these findings in my clinical practice. Henceforth, I conduct screening sessions prior to treatment with all clients when possible. When clients are unable to

attend screening, I normally offer them a quick assessment and telephone motivational interviewing. Patients, who suffer from pathological mental health problems, are referred to a Clinical Psychologist. In some cases, patients do suffer from mental health problems but are under treatment or the nature of their pathology allows them to interact in a socially accepted manner towards other members in the group. In this case, these patients are allowed to participate in group therapy. Accordingly assessments are more thorough and I see as my role to build realistic expectations of treatments and outcomes.

Some of the patients I work with are not suitable for group work due to severe physical and mental health problems. When appropriate I work with patients in a one-to-one basis. In case of severe physical problems we must establish illness representations by employing Weinman Illness Perception Questionnaire (Weinman, Petrie, Moss-Morris, & Horne, 1996) as well as any co-existing mental health problems in order to provide an appropriate course of treatment minimising aggravation of certain conditions as a result of clinical withdrawal from nicotine and use of anti-depressant (ie. Depression, anxiety, panic attacks).

5.1 b Identify and negotiate the behaviour change goals of the clients: Motivation to quit

It is also crucial to recognize whether a smoker is ready to quit. If they try and relapse too many times that might affect their self-esteem and they might feel helpless. It is therefore valuable to encourage smokers who feel ready, when the rest of their lives seem to be running on a fairly even course. When one really wants to quit, it comes from within. I also use appropriate scales Smoking Self-Efficacy/Temptations (Velicer, 1992), Smoking motives and motivation/determination to quit (Prochaska & DiClemente, 1984) and Psychological distress - General Health Questionnaire (Goldberg, 1978) and screening to make sure that they are open to changes (ie. Incorporating small changes in daily routines to weaken links between

behaviours and smoking). Moreover I motivate patients to see change through a more positive light: Change could be an enjoyable process. Quitting is not easy but gaining control over one's addiction is a highly significant experience.

Different techniques are employed in individual and group sessions such as cognitive behaviour therapy and motivational interviewing. Group sessions follow a more or less fixed format. Most NHS Stop Smoking Services across the UK follow the evidence based Hajek model (1989). The model proposes a withdrawal-oriented treatment for smokers. The treatment outline offers a 7-week hospital out-patient group treatment. The theoretical perspective is as follows:

- **Rationale:** Withdrawal discomfort is seen as the major remediable obstacle to quitting in dependent smokers
- **Goal of treatment**: Maintain abstinence during initial withdrawal discomfort
- **Methods to enhance withdrawal relief**: Behavioural group support and withdrawal relief medication (NRT/Bupropion

5.1 c Assess the cognitive, behavioural and situational determinants of smoking behaviour

In order to assess cognitive, behavioural and situational determinants of smoking I use a questionnaire. Different aspects of smoking behaviour are measured as well as socio-demographics and general health. This extensive questionnaire incorporates Valicier Motivation scale, Fargerstrom scale (Heatherton et al. 1991) looking at nicotine dependence) and General health questionnaire Rosenberg (1983). During sessions, I use some cognitive behaviour techniques (Beck, 1970) such as asking smokers to complete a smoking diary where they identify triggers, thoughts and feelings and alternative, more balanced thoughts. I challenge some of their self-

defeating/dysfunctional thoughts and help them to develop strategies to cope without smoking. I also help them to identify how stressful situations can trigger smoking and how a vicious circle is easily created. I also address ways by which they can break the circle at different points. On the second week, that is 1 week before quitting, I prepare patients to stop smoking. I employ some motivational interviewing techniques to address ambivalence. I also try to improve their likelihood of success bearing in mind that the main component of treatment is to prepare to quit. The stage of preparation is the second session.

Instead of telling patients how to make lifestyle changes, I try to empower them and get them to come up with their own solutions. Firstly I try to get them to tell me why people smoke even though most are aware of the dangers of smoking. As a rule, their answers fall into the following themes:

- Rewarding behaviour
- Immediate gratification
- Addiction
- Rebellious attitude
- Stress buffer
- Sociability
- Habit
- Weight control
- Concentrate
- Boredom

I also propose to do some group work asking them what steps should be taken before quitting. The objective here is to think about change and start breaking habits. I also try to empower them to find possible alternatives or adapting coping strategies to smoking. Some of the ideas are as follows:

- ❖ Alternative rewards (money saved)
- ❖ Healthy snacks
- ❖ Support from "near and dear" ones
- ❖ Get rid of cigarettes around the house
- ❖ Keep busy
- ❖ Stocking on NRT
- ❖ Changing routines

Reflection

When supporting behaviour change, I try to beware of positioning myself as the expert. I believe that the client is the best judge of what works for them and accordingly avoid dictating them what to do. I find it therefore crucial to communicate effectively in order to achieve better outcomes. As a result, try to identify individual problems and behaviour change as the interrelationship between social, physical and psychological factors. I see as my role to facilitate their awareness process so that they acquire a better understanding of smoking patterns and ritualistic behaviour. The key word here would be empowerment:

Empowering clients

I consider empowerment as central to behaviour change. Tones (1995) thought of empowerment as "a process through which people become strong enough to participate, share in the control of, and influence events and institutions affecting their lives". According to Rissell (1994) "Empowerment are the holy grail of health promotion". I also find Beattie's model of health promotion (1993) useful when selecting approaches for the intervention taking into account individual necessities in the context of a group intervention. Having a choice between authoritative, top-down

and negotiated, bottom-up, the smoking cessation intervention adopted is the latter, whereby short and medium term goals are set jointly and re-evaluated. It is more straightforward to employ a flexible approach with individual clients. When the focus of the intervention is collective (group support), the format of sessions is more rigid and some individual goals are less negotiable, ie. The quit day is always on session 3 and it is important that the whole group commits to that.

Reflecting on my experience as a clinician

My experience in group work helped me to develop as a more effective communicator learning how to motivate clients and work with difficult individuals building constructive group dynamics.

Working with clients individually, I had the opportunity to tailor treatment to specific necessities of a client group. In the case of diabetic smokers, I realised there is a need to understand the role of family and carers, to address depression and self care choices, coping mechanisms, exacerbated concern with weight amongst other issues. Some of my clients find it particularly difficult to give up smoking and describe themselves as addictive personalities. It is also important to understand the impact of making too many lifestyle changes too quickly and the risk involved when treating clients with dual diagnoses and history of self-harm.

5.1 d Develop a behaviour change plan based on cognitive behavioural principles

The Cognitive Behavioural Therapy (CBT) approach is used more in-depth with individual clients. The patient is informed that the CBT approach is useful in developing skills to overcome any similar problems and addiction. Homework is assigned: a diary in which patients write every cigarette they have before setting a quit day and the following aspects of smoking are addressed:

1. Where did you smoke
2. With whom were you with,
3. At what time did you smoke
4. How were you feeling before and after the cigarette
5. How much you enjoyed it

By doing their "homework," patients become aware that the major part of the therapy takes place in everyday life and they have an opportunity to practice what is discussed during sessions.

According to Kirk (1983), the collaborative nature of the therapeutic relationship must be debated, and the patient is expected to participate actively by collecting information, giving feedback on the effectiveness of techniques and making suggestions about new strategies.

After setting a quit day, patients are also given assignments: writing up situations in which they found difficult not to have a cigarette, how they coped without one and what have they done in those contexts which they found most and least useful. By learning from their own experiences, they can progress by being aware of internal and external variables which might trigger the behaviour.

Increasing self-efficacy, promoting change

As patients attend the third session which is their quit day, the shift of the therapy is placed on abstinence support. In order to promote a sustainable change I rely on cognitive behavioural techniques and group support to increase their self-efficacy. I try to promote change by helping clients to find their own coping strategies. In order to do that I let patient express their concerns and let them know that they are supported.

I also offer counselling and Pharmacological support. I tell patients about clinical withdrawal from nicotine and how important it is to rely and commit to the group and persevere when cravings come.

When dealing with individual clients I emphasise the importance of having time framed, agreed goals. The best way to do so is to shift from a medical model of compliance to a client-centred model of "concordance".

I also provide patients with a realistic approach to withdrawal. They must be informed about that symptoms normally only lasts 4 weeks and that cravings don't last more than 3 minutes

5.1d develop a behaviour change plan based on cognitive-behavioural principles: the intervention

The intervention adopts a client-centred approach where the focus is placed on support targeted at client's needs rather than teaching/ directive approach by clinicians. In general, groups range between 15-30 smokers quitting on the same day (week 3). During the course of the treatment clinicians recommend clients to use some kind of pharmacological support to "take the edge" off smoking and minimise nicotine withdrawal. Patients receive close supervision and advice on use of NRT/Bupropion. The emphasis of the treatment in on complete abstinence. A carbon monoxide (CO) monitor is used every session after preparation/information to assess smoke intake, verify self-reports of abstinence and motivate clients. Sessions stick to the following format:

- **Session 1: Information session**

  Aims to explain the treatment and build realistic and positive expectations

- **Session 2: Preparation session**

Start building commitment in the groups and prepare clients for quit day

- **Session 3: Quit day**

  Initiate group support and provide advice and strategies for dealing with difficult/tempting situations

- **Session 4-6: Support sessions**

  Group support, continuous motivation and relapse prevention

- **Session 7: Final session**

  Conclude the course, invitation abstinence support meetings

5.1 e Ensure monitoring and support for behavioural change plan

Every session, as patients arrive, their CO is monitored. They also answer a questionnaire measuring urges and withdrawal. This questionnaire is filled in before and every subsequent week following quit day. The reason why it is filled before is to obtain a baseline data. By monitoring their urges and withdrawal (on a likert scale), patients are able to know when to decrease nicotine replacement therapy strength and when they are yet not ready to take risks i.e. going to the pub. All these data is inputted in SPSS and is used for research purposes.

When patients do not attend a session they receive a phone call from the administrator. They are aware that this will happen. This is important for us to monitor possible reasons for dropping out as well as useful to provide the group with feedback when a person is not smoking but for some reason could not attend a particular session.

In spite of the fact that sessions normally follow a given format there is a main concern to provide a high quality service and help clients to achieve sustainable results and become long-term quitters. The message "one size fits all" does not work

is not new, but reaching a consensus of a more effective approach can be more complicated. Limited data exist pertaining to the effectiveness of various smoking cessation interventions based on sociodemographic characteristic (Ockene et al., 2000) and which are the most effective components of interventions. Accordingly, I conducted a research looking at the impact of a group cohesion strategy in attendance and outcome. I incorporated during session methods to boost group processes on the first therapeutic session as mans of enhancing attendance and abstinence from smoking for 4 consecutive weeks following quit date. The methods were as follows:

Sample

- 140 smokers (age: M= 48, sd= 12.45; 47% male, 53% female) who attended the clinic in January to April 2003 (N= 70) and January to April 2004 (N= 70).

Intervention

●Participants were allocated to two conditions; half attended the traditional Hajek group intervention (HGI) and the remaining received (HGI) plus a "breaking the ice exercise" (BIE). BIE involves members being divided into pairs discussing their reasons for quitting smoking and then introducing each other to the group.

In order to evaluate the impact of this intervention the following outcomes were assessed for the control and treatment

- *Abstinence*: Continuous abstinence throughout 4 weeks verified by CO levels in expired breath and Self-reports
- *Attendance*: of at least Session 1 (Introductory) and Session 3 (quit day) and either attendance or telephone contact for at the remaining 4 sessions.

Results

- ❖ Findings indicate the groups with emphasis on social support and where initial rapport was built were significantly more successful

Attendance

- 51 (73%) attended the sessions and 19 (27%) dropped out in the HGI.
- 55 (79%) attended the sessions and 15 (21%) dropped out in the BIE.

There were no significant mean differences in attendance between the control group and the treatment even though there was a raise in attendance in the latter group. [$t(69)= 0.782$, $p> .005$]

Smokers who joined the Clinic from January 2004 to April 2004 when the building rapport intervention was incorporated in the treatment, were more likely to remain abstinent for 4 weeks [$t(69)= 0.2195$, $p< .001$]

Implications of the research

Based on this research, as a practitioner and researcher, I reflected upon my experience of running groups and realised that good rapport, social support and commitment is the main goal of group therapy. Moreover, group methods, effect, rapport and social support play a key role in group dynamics affecting therapeutic outcome. Incorporating an intervention to boost group process had a major impact on smoking cessation outcomes. These findings shed light on the importance of monitoring behaviour change and looking for methods to enhance the efficacy of interventions. By conducting research in the field, we can achieve a better understanding of approaches which could enhance the effectiveness of interventions and best practice can be ascertained.

5.1 f Evaluating outcomes (1)

As withdrawal subsides towards the end of the treatment the shift changes from the negative aspects of quitting (withdrawal, weight gain, and depression) to the 3 spheres of quality of life: physical, social and psychological. Patients normally feel empowered and their self-esteem appears to improve. In many cases other lifestyle changes occur: stop drinking, increase in exercise, adoption of healthier diets. Patients are also aware of physical improvements such as sense of smell and taste, stamina and improved breathing.

Some patients show some negative affect as a result of losing their coping mechanism, difficulties of adjusting and withdrawal from nicotine which promotes dopamine to be released in their bodies. As they stop it takes time for their bodies to adjust and to produce dopamine which used to be artificially induced.

Factors affecting decision making process

In order to understand the likelihood of success I draw upon Rogers' Protection Motivation Theory (1983). Accordingly, I would see different factors shifting the decision balance at different stages:

Response facilitating factors

- Advantages of maladaptive behaviour (controlling weight, having something in your hands when socialising, pleasure...)
- Response efficacy (health benefits as a result of quitting)
- Self-efficacy

- Response inhibiting factors:
- Severity (smoking kills)
- Vulnerability (unrealistic optimism, statistics)
- Costs of Adaptive behaviour

- Threat appraisal & coping appraisal (Adaptive and maladaptive coping)

5.1 f Evaluating outcomes (2)

Patient's questionnaires are anonymised and inputted in 2 different databases. The first database *ACESS* is used mainly by the service administrator. The following information is fed to this database: patient's date of birth, post code, ethnicity, age, gender, number of sessions attended, abstinence and CO reading. This data is summarised by quarter and sent to the Department of Health. This information is required by the DoH which sets targets for 4 week quitters based on the incidence and prevalence of smoking in that area. We also inform patients that their questionnaires are annonymised and inputted in SPSS for research and auditing purposes. Even though it is not a requirement of the Department of Health, we find it useful to monitor long-term quitters in order to understand whether the intervention is cost-effective and outcomes are sustainable.

We also monitor patients' satisfaction with the treatment by asking them to fill in an anonymous evaluation form in the end of the treatment. They have an opportunity to provide us with feedback and suggestions for service improvement and development. Their evaluation and suggestions are summarised are written in a report and shared with stakeholders in steering group meetings (see appendix 1).

5.1 f /5.1g Patient's evaluation of treatment/ Negotiating completion, follow up sessions or referral as appropriate

We also discuss follow-up sessions. Follow-up takes place one month after the completion of the course. In the mean time, patients are welcomed to call us for further support. If they are finding difficult to sustain the behaviour without further

support we ask them to come to a drop-in session. The purpose of this session is to monitor medication, to understand whether there is a dependent relationship between patient and health professional. In case dependence is established as pathological, patients are referred to other health professionals (ie. Clinical Psychologist, GP). We conduct yearly follow ups and compute statistics on long-term success rates.

Conclusion

I believe that Health Psychology training has so far provided me with tools to build up a valuable and comprehensive knowledge base. In my clinical practice I found numerous opportunities to reflect on my need of continuous development as an Applied Health Psychologist. I learned how to facilitate psychological interventions for smokers by using appropriate assessment tolls such as standardised scales and motivational interviewing linking clinical practice to psychological theories. Whenever possible I delivered tailored treatments taking into account that collective approaches can be authoritative and might not promote behaviour change. I therefore, developed my clinical practice by utilising a variety psychological approaches and interventions to address incidence and prevalence of smoking and have developed behaviour change plans with clients. The reason for moving away from "one size fits all" approaches were that through service related research and evidence based practice, I realised that there are components of interventions which need to be reinforced in order to maximise successful outcomes. One of these components is self-efficacy. Service related research indicated that high self-efficacy as measured during assessment could be a sign of "unrealistic optimism". Methods to boost self-efficacy were normally used on session 3 (quit day) and throughout subsequent sessions. As a result of reflection on research findings and clinical experience, those methods started to be incorporated during assessment and on every subsequent

session. Further to that, "unrealistic optimism" has also been addressed in a group context as a theme proposed for discussion. The most important learning for me was that I had to develop my clinical practice using a scientist practitioner model, incorporating a variety of psychological approaches based on evidence based methods, observation and monitoring of outcomes. Initially, having very little clinical experience it was difficult; however, as I got more confident about my clinical skills, it became a lot easier to fluently use a variety of psychological approaches. I believe that skills acquired during Health Psychology training are boundless. During training, I have resorted to supervision, engaging in continuous professional development to develop my skills as an Applied Psychologist. By experiencing different theoretical orientations coupled with working with different populations with adequate supervision and conducting relevant research, I am equipped to develop some of my personal attributes such as self-awareness, organisational skills, empathy, confidence and independence. By becoming a practitioner I am contributing to the development of a better quality of life to my clients. I believe that I have been facing great challenges and so far have conquered some of my fears by working in smoking cessation across the lifespan running groups and conducting assessments as well as one-to-one interventions.

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In spite of research informing clinical practice, many health professionals lack time and motivation to provide intensive counselling programme supporting pregnant women who want to give up. Midwives provide women with a lot of education to support adoption of healthy lifestyle. It is normally their role to advise all pregnant women to quit and assist those who are motivated to quit. However in many cases this role is not fulfilled. According to Raw et al (1998), more research is needed in the UK to establish under what conditions health professionals can give effective support to smokers, addressing training needs.

Extensive material has been created by the NHS tailored to this client group. Midwives have a wide range of booklets, guidelines and advertising and promotional material to sustain their role. Further to providing pregnant women with material which is specific to them, it is crucial to understand their perspectives of receiving stop smoking advice. Once we share light on pregnant women's perspectives, practice can be informed and training needs of staff supporting them can be tailored to respond to those needs. As a result, a borough-wide survey of pregnant women was conducted.

OBJECTIVES

- To understand the attitudes of pregnant women towards smoking and giving up.
- Their perception of the risk of smoking on the health of their unborn child.
- Their needs and concerns with regards to smoking cessation

- Their attitudes towards receiving specialist help.

Method/ Procedure

- ❖ In this cohort study, after debriefing and upon written consent, pregnant women received a questionnaire to be completed whilst attending their routine ante natal clinic appointments

The questionnaire

The measures were as follows:

- ❖ socio-demographics
- ❖ Sample characteristics
- ❖ knowledge of effect of smoking to their health/baby (Perception of harm)

Results

- o Eighty-nine questionnaires were completed, with no women refusing to take part.
- o Of these, 15 women were identified as smokers and 74 were identified as non-smokers.

Table 1 – Socio demographics

Variable		Percentage % of sample
Smoking status	Non smokers	83
	Smokers	17
Marital status	married	87
	single	10
	separated	2
	other	1
Ethnicity	white	81
	Asian	10
	black	3
	other	4

	mixed	1
employment	Paid employment	54
	unemployed	10
	At home	32
	student	1
	other	2
Educational qualifications	none	17
	gcse	44
	A level	18
	degree	20
	other	10

- Of all respondents (smokers and non-smokers), 88% believed that smoking cigarettes would affect their baby either 'very much' or 'quite a bit'.

- Despite this, when questioned in more detail many respondents felt that smoking was not related to specific health problems. Table three highlights the beliefs of respondents about the effects of smoking on their child.

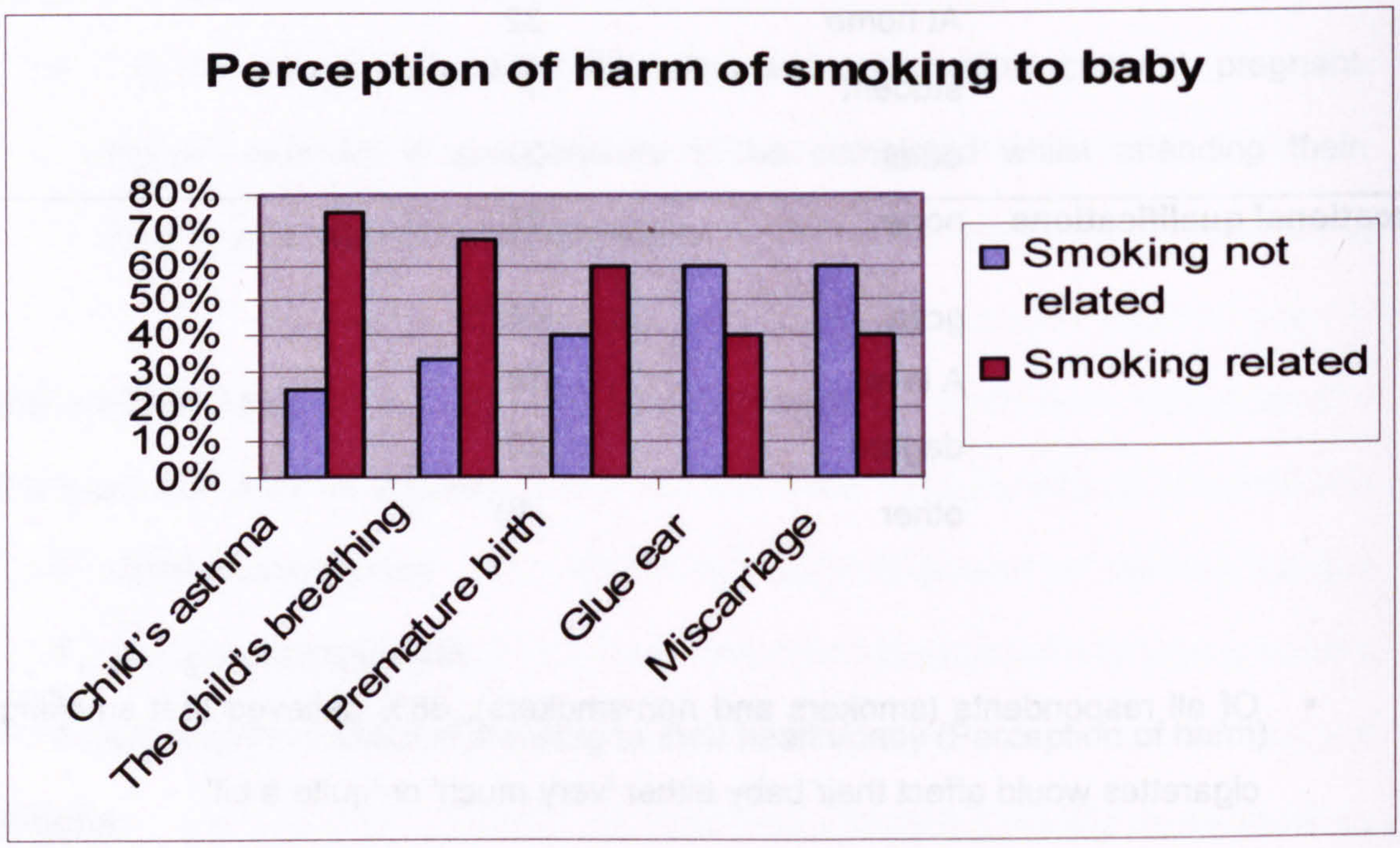
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Table 2: Perception of harm

Smoking related	Smoking not related	Smoking related
Child's asthma	25%	75%
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Diagram 1: Perception of harm of smoking to baby



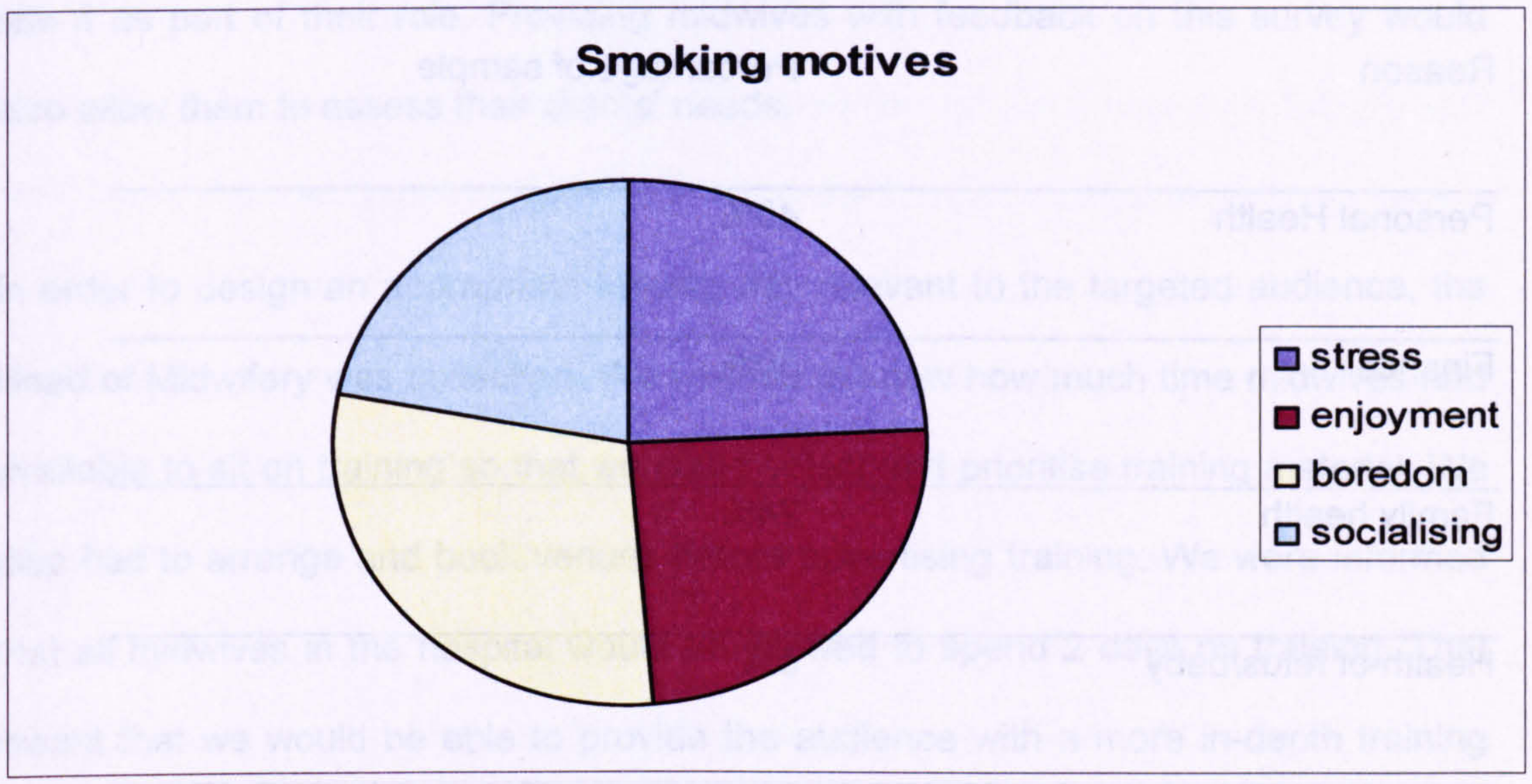
Smoker's characteristics:

- Measured by 'time after waking of first cigarette', nearly 40% of the smokers were highly dependent on nicotine (Fagerstrom).
- 62% of the smokers had partners who also smoke.
- 46% of the smokers had smoked through previous pregnancies.
-

The main reasons given for smoking were:

- To cope with stress (60%)
- Enjoyment (60%)
- Boredom (73%)
- Socialising (54%).

Diagram 2: Smoking motives



Motivation to quit:

- Nearly half of all smokers had attempted to stop smoking before falling pregnant and 80% had tried to stop smoking in this pregnancy. Motivation to stop smoking is evident although attempts to stop are
- largely unsuccessful. This would suggest there is a need for specialist help in stopping smoking.
- When asked, 'How important is it for you to give up?' 66% answered 'important', 'very important' or 'extremely important'. One fifth (20%) of the sample said it was not at all important for them to stop smoking.
- When asked 'How determined are you to give up?' one quarter showed no motivation for giving up and 54% were highly motivated.

Table 3: Reasons for quitting

Reason	Percentage of sample
Personal Health	40%
Finance	30%
Family health	24%
Health of fetus/baby	8%

Use of Nicotine Replacement Therapy

- Of all the smokers, only one woman had ever used NRT previously. This was the nicotine chewing gum. No one had used patches, nasal spray, the inhalator or microtabs.
- Nearly 80% of smokers had no concerns with using NRT

This survey was very elucidating. It revealed that education of the harm of smoking before (family planning), during and after pregnancy could be beneficial and could be easily incorporated as part of midwives routine visit. Furthermore, training midwives on the benefits of quitting so that they can advise women accordingly is crucial. It also became clear that there is a lack of knowledge of support available for pregnant women willing to give up smoking. .Thus, it is important to raise awareness of stop smoking services for pregnant women. Psycho-education could be part of midwives routine. Information on Nicotine Replacement Therapy use and monitoring should be part of midwives training in smoking cessation. However, provision of midwives' training is not enough on itself. Further to training midwives, it is essential to

understand their attitudes towards providing stop smoking advice and whether they see it as part of their role. Providing midwives with feedback on this survey would also allow them to assess their clients' needs.

In order to design an appropriate training day relevant to the targeted audience, the Head of Midwifery was consulted. We needed to know how much time midwives had available to sit on training so that we could select and prioritise training material. We also had to arrange and book venues before advertising training. We were informed that all midwives in the hospital would be allowed to spend 2 days on training. That meant that we would be able to provide the audience with a more in-depth training programme. Following the creation and display of posters in the maternity ward, several midwives subscribed. Given that we had 21 people attending, it was appropriate to have a focus group session. The aim of the focus group was to understand midwives attitudes towards providing smoking cessation advice. Data would be analysed and discussed with trainees at a later stage.

In order to tailor training to the audience we decided to assess the capabilities of the people required to conduct and monitor the intervention. As our team comprises of a midwife, a trainee health psychologist and a consultant clinical psychologist, we decided to use existing skills and expertise. The midwife could cover physiological aspects of smoking such as "systemic effects of nicotine" and "the effect of smoking in pregnancy". The psychologists would cover behavioural aspects of smoking as well as role playing motivational interviewing techniques. We arranged the appropriate material and printed handouts and assessment forms.

Based on needs assessment implemented taking into account several factors such as pregnant women's attitudes towards smoking survey, literature on effectiveness of smoking cessation in pregnancy, time allocated for the delivery of interventions, number of people attending the study day and existing skills we agreed on an

agenda for the training day. The objective of the training was to create opportunities to direct allied health professionals to offer stop smoking support to pregnant women. The desirable outcome would be to enable midwives to become stop smoking advisors. As a result, through training we would make appropriate use of our resources to advise and guide the activities of designated others ensuring that technical support is available and that interventions are appropriately supervised. In order to achieve those objectives, we had to attempt to encourage midwives to perceive smoking cessation advice as part of their visit's routine. Furthermore we had to understand reasons why this would not be the case.

In conclusion, at this initial stage, taking into account several factors, we successfully put together a comprehensive training programme. The subsequent steps would be to plan the supervision plan, feedback midwives on results from focus group and reflect on the problems encountered in the process and develop strategies to overcome them.

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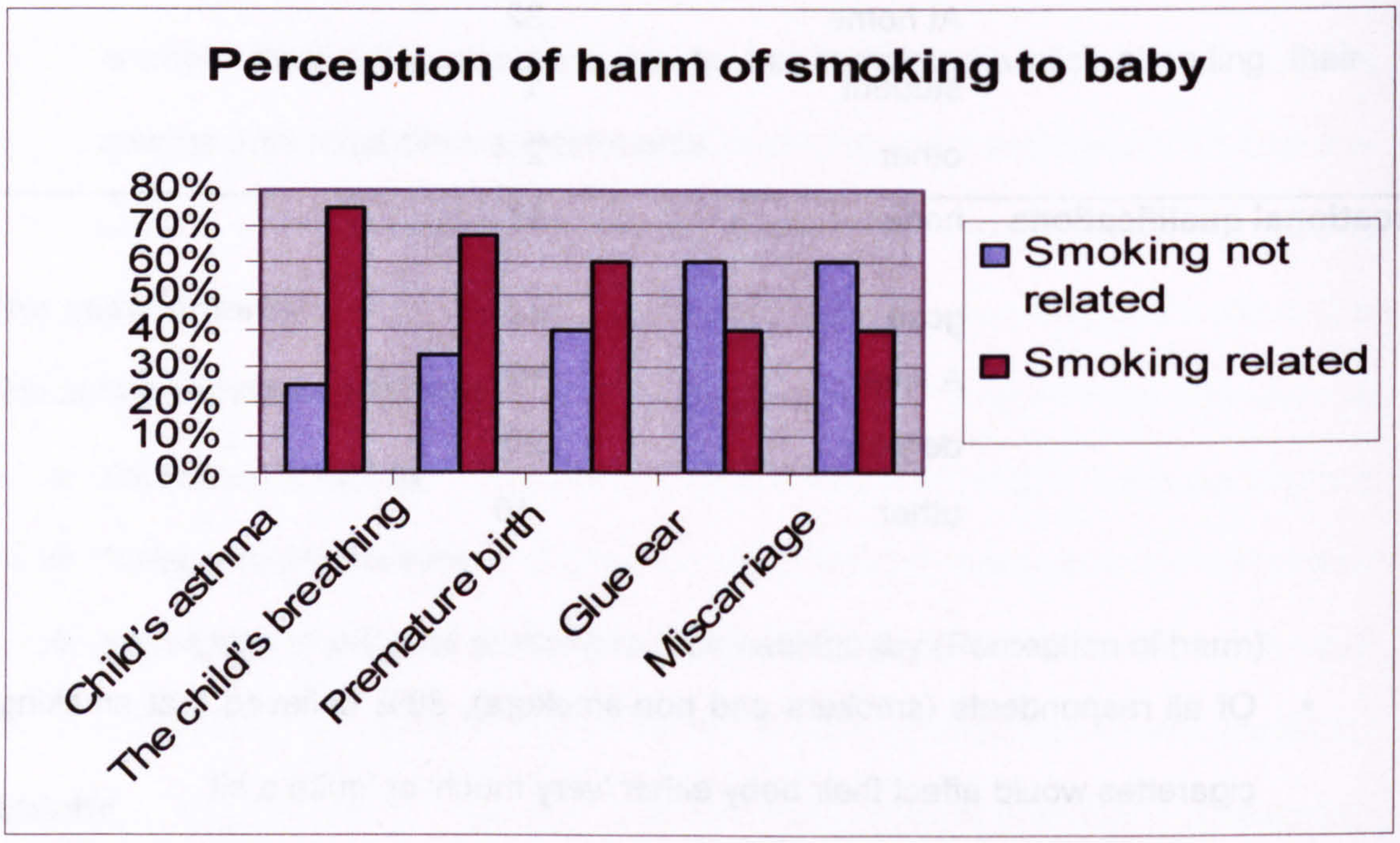
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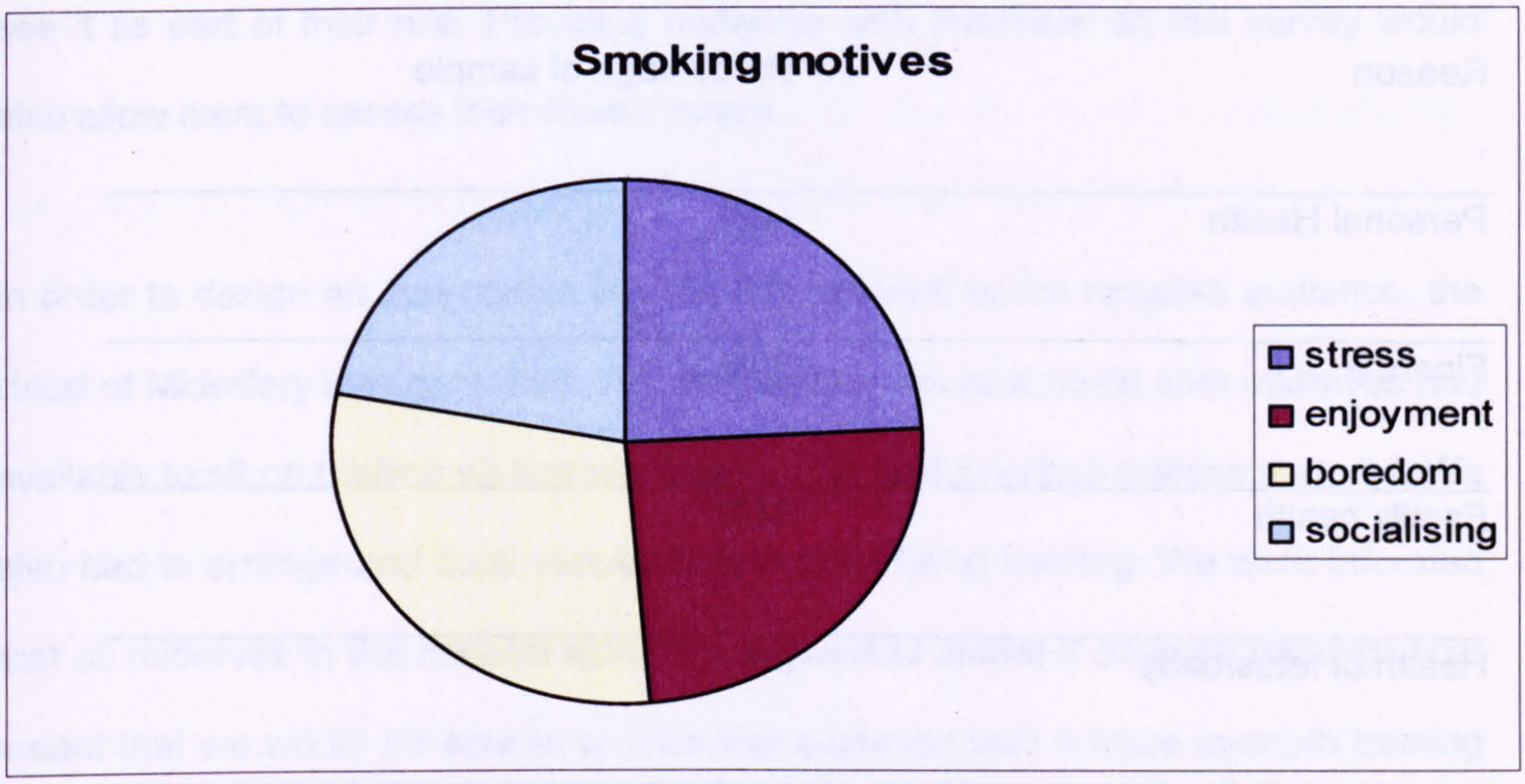
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SECTION D

A systematic review of cognitive and behavioural therapy programmes for smoking cessation

A systematic review of cognitive and behavioural therapy programmes for smoking cessation

Abstract

In the UK, the prevalence of smoking amongst adults is estimated to be at 27% (2001, 1998), 28% men and 26% women. Considering the damage caused by smoking it's understandable that approximately 70% of smokers in UK want to quit (WHO, 1999).

Aims

The aim of this review is to update Law and Tang (1995) review to 2005 using improved criteria. This review looks specifically at cognitive and behavioural smoking cessation interventions.

We also aimed to establish which smoking cessation methods were employed by each different study.

Search strategy

Studies led by a psychologist or led by any other health professional which had a cognitive and behavioural component were included in this analysis. PsychInfo and Medline databases were searched from 1995 to 2005. Articles were hand-searched in peer reviewed journals for 2005 (tobacco control, Journal of addictions).

Selection criteria

A selection criteria was drawn (participants, interventions, outcomes, study design). Studies which did not fulfil the criteria were excluded.

Search terms: were employed using PsychInfo and Medline databases.

Quality assessment

Studies were quality assessed and scored 0 to 1 on each of the different categories. The maximum score a study could get was 10. The cut-off point for inclusion of studies was 5.

Results

Trial		Intervention Group		Control group		Difference (%)
Author/Year	Quality	Quiters	%	Quiters	%	

	Rating					
Taylor et al, 1996	9	98/315	31	66/313	21	10
Marks et al, 2001	8	21/122	17.2	6/107	5.6	11.6
Simon et al, 1997	7.5	38/139	27	17/132	13	14
Feeney et al, 2001	8	31/79	39	1/62,	2	37
Overall	**8.1**	**188/655**	**28.55**	**90/614**	**10.4**	**18.15**

Discussion

It is surprising to note that out of fourteen hundred and twenty two studies; only 4 were short listed for quality assessment.

This review suggests that employing a number of different techniques is the way forward to success. The components of the interventions which were shared by all the selected studies were telephone follow-up/ help-line, relapse support, use of a manual with high risk relapsing situations, facilitating smokers to recognise triggers and avoid risky situations.

Background

In the UK, the prevalence of smoking amongst adults is estimated to be at 27% (2001, 1998). Over a third of men aged 54 and a third of women under 44 in the UK were estimated to be current smokers. The highest prevalence was amongst men aged 25-34 (40%). Unfortunately, just over one third of adults in the UK were estimated to be ex-smokers with higher rates estimated for men (35%) versus women (28%). Smoking is related to socio-economic status with higher rates of smoking cessation are found in less impoverished areas. Tobacco smoking is also recognised as the single most important cause of avoidable death. Smoking attributable mortality was estimated to claim an annual average of 86,500 deaths per annum in the UK between 1998 and 2002. Men are more affected than women (62 versus 38%). Smoking is responsible for an overwhelming proportion of pulmonary diseases. Over 90% of male lung cancer and 80% of female lung cancer are smoking related. Furthermore, smoking is responsible for 17,400 deaths by chronic obstructive pulmonary disease and 11,500 from ischemic heart disease every year. Considering the damage caused by smoking it's understandable that approximately 70% of smokers in UK want to quit (WHO, 1999). The health and possibly the psychological benefits of quitting are substantial and meeting the challenge of facilitating smokers to become long term quitters has enormous public health implications. Nearly 80% of smokers have made at least one attempt to quit smoking however prospects are not good as the majority (77%) of smokers who tries to quit, relapse within six months (Graham and Derr, 1999).

Extensive research has been conducted in the field of smoking cessation as an attempt to reveal which are the best methods to help smokers to quit and stay abstinent. More recent research (Conuz, Humair, Seematter, Stoianov, Van Melle, Stalder, Pecoud, 2002; Ward, 2001) has focused on identifying the components that

might play a role in sustaining abstinence from smoking. Some research has focused on specific groups of smokers who find quitting especially difficult such as alcoholic smokers (Patten, martin, Myers, Calfas, & Williams, 1998), those suffering from depression as well as gender differences (Pormelau, Brouwer, & Pormelau, 2001). A number of studies point towards gender differences indicating that women have more difficulty stopping smoking when compared to men. Tobacco control has not addressed fully the issue of gender. Is spite of the fact that tobacco industry identified that women represent a different market from men; conventional tobacco control has failed many women because it has too often been designed with men in mind, INWAT (2003). Women start smoking at a later age, compared to men. Smoking starts sooner for women of higher socio-economic status but is spread to all sections of society. Even thou, women in higher economic status who started smoking sooner than the rest are more likely to quit (International Network of Women Against Tobacco, 1999), they are also more concerned about weight gain (Razavi et al., 1999).

Smoking incidence and prevalence has fallen in the last few decades; however, the pattern does not follow amongst least disadvantaged adults (Department of Health, 1998b). Hence, understanding the socio-economic profile of smokers attending an intervention are crucial to enable health professionals to adopt culturally, gender sensitive and age specific approaches to smoking cessation and to target ethnic and social minorities. Smoking levels vary considerably among different ethnic groups in UK. Smoking is a major aggravator of social inequalities. People in lower socio-economic groups normally suffer from poorer health and have a shorter life expectancy. The HAD[1] report highlights that poor living conditions are linked to higher rates of smoking among children. Longitudinal studies illustrate that individuals who initiate smoking when young are likely to continue the behaviour

[1] www.had.nhs.uk

throughout their lives. Whilst it is crucial to consider those major public health issues and mainstream health, education, employment and social policies could be further developed avoiding the adoption of risky behaviours, it is equally important to understand these populations when targeting behaviour change. Higher social groups are more successful in quitting smoking but this is not an indicative of higher motivation to quit as lower social economic groups reveal similar motivational levels, Jarvis (2001).

Among men, smoking is responsible for over half the excess of risk of premature death between the social classes, (Jarvis & Wardle, 1999). Lung cancer is linked to premature deaths amongst unskilled manual work. Unskilled men who are manual workers have a 5 times higher prevalence of lung cancer than professionals, Jarvisal (1999). Furthermore, smoking increases the risk of erectile dysfunction by around 50%, (Whitehead, 1990)

Evidence based methods

Across the NHS, smoking cessation interventions are most commonly delivered through group support programmes normally referred from GP's. The purpose of group programme is to analyze motives for group member's behaviour, to provide opportunity for social learning, to generate emotional experiences and to impact information and teach new skills, Hajek (1996, 1985). Specialist Smoking Cessation Services (SCS) were first established in the UK in Health Action Zones in England in 1999/2000. The evidence base for these services was set out in smoking cessation guidelines published in Thorax (Raw et al 1998), which recommended that 'intensive smoking cessation support should where possible be conducted in groups, include coping skills training and social support, and should offer around five sessions of about one hour over one month, and follow-up'. Smoking cessation group support became the treatment of choice in the NHS as it was considered 'much more cost-

effective'. The abstinence oriented approach adopted by the NHS was developed by the Maudsley Clinic programme (Hajek, 1989). According to Stead and Lancaster (2002), smoking cessation interventions normally include methods to facilitate smokers coping during abstinence, social skills, training, contingency management, self-control and cognitive behavioral interventions. The abstinence oriented approach sees withdrawal discomfort as remediable. Smokers' self-efficacy is built up before setting a quit day and they are empowered and supported to achieve their objective of quitting smoking during initial stage of withdrawal from nicotine.

The evidence for employing these methods was based on a report informed by the "Scientific Committee on Tobacco and Health" (Department of Health, 1998a). The evidence of this report was based on systematic review by (Law and Tang, 1995) by which the effectiveness of various smoking cessation interventions was evaluated. This review evaluated various interventions: 1) Advice and encouragement by doctor during consultation, with additional encouragement/support; nurses in health promotion clinics; support group sessions; in special circumstances; men at high risk of ischemic heart disease 2) Behaviour modification therapy – non specific approaches; aversion; rapid or satiation smoking; silver acetate; sensory deprivation; hypnoses 3) Pharmacological treatments to allay withdrawal symptoms – nicotine replacement therapy; clonidine; tranquilisers and other agents 4) Miscellaneous treatments 5) Gradual reduction of nicotine intake. According to Law and Tang (1995) behaviour modification therapy to assist smokers to quit is not cost-effective. However, they presented no data on cost-effectiveness in spite of recommending doctor's advice based on those grounds. They made no attempt to evaluate the quality of the studies included in their review, thus included good and bad quality papers. Several of the studies included in their review used no biochemical markers. Furthermore, there was no classification of the psychological interventions, they were grouped as non-specific behavioural modification interventions led by a a

psychologist. The nature of the intervention may be more meaningful than the profession of the person leading the intervention. They concluded that doctors should take time to advise all their patients who smoke to quit. Those smokers should be provided with additional support and Nicotine Replacement Therapy.

Aims

The aim of this review is to update Law and Tang (1995) review to 2005 and to rate the quality of studies to be included in the review

Methodology

Systematic review protocol

Following Law and Tang (1995) review, a protocol was created (appendix 1). The aim of this protocol is to devise a framework for the systematic review

Search strategy

Studies led by a psychologist or led by any other health professional which had a cognitive and behavioural component were included in this analysis. PsychInfo and Medline databases were searched from 1995 to 2005. Articles were hand-searched in peer reviewed journals for 2005 (Tobacco Control and the Journal of Addictions). Once articles were identified, they were screened for inclusion.

Study selection criteria

Participants

Adults (>16 years of age) using cognitive and/or behavioural intervention to stop smoking.

Interventions

Psychological interventions with one or more components of cognitive and behavioural interventions which include methods to facilitate smokers to cope during abstinence,such as relaxation techniques, use of diaries, identification of triggers, visualisation, changing routines, rehearsing strategies to cope with withdrawal, identification of thinking errors, cognitive re-framing, focusing on gains of staying abstinent, social support, social skills training, contingency management, self-control.

Outcomes

Cessation for at least 6 months

Study design

Randomised controlled trials

Search terms

The following search terms were employed using PsychInfo and Medline databases.

1. Relaxation
2. visualisation
3. visualization
4. imagery
5. trigger
6. positive reasons
7. self-control
8. psychological
9. behaviour therapy
10. behavior therapy
11. Cognitive therapy
12. randomised controlled trial

13. randomized controlled trial

14. post-treatment follow-up

15. abstinence oriented

16. follow-up study

17. psychotherapy

Quality Assessment Checklist

In order to evaluate the quality of each paper, a quality assessment checklist was devised. Papers were scored based on each individual criterion whereby they were allocated 0 points if the standard was not met and 1 point if it was met. Individual scores were totalled and papers could score a minimum of 0 and a maximum of 10 points. The quality checklist was as follows:

1) adequate randomisation (needs to be specified)
2) adequate participants (including power analyses or over 100 participants per group in each group)
3) Biomarkers confirming self-reported abstinence in 95% of cases (CO in expired breath, saliva or urine sample)
4) Suitable comparison interventions
5) Similar groups at baseline (use of standardise scale to measure nicotine addiction, matched by age and gender)
6) No other confounding intervention
7) Acceptable drop out rate (25% or more)
8) Motivation to quit measured
9) Reliable measurement techniques (test retest/ internal consistency/split half)
10) Appropriate statistical analyses

The quality assessments were conducted independently by 2 researchers. Each researcher had a quality assessment checklist. After all papers have been assessed by both researchers, scores were compared. As there was no disagreement above 2 scores amongst the researchers, the scores were averaged. It was agreed that the cut-off point for the inclusion of a paper was 5 as this was the median score.

Results

Four thousand six hundred and three abstracts were read for inclusion. Out of those, only seventy eight were short listed for inclusion. Those journals were ordered and read. Out of the seventy eight studies, seventy one were excluded for several reasons:

Not being a randomised controlled trial, only incorporating brief advice by a health professional with no cognitive and behavioural components, follow-up for less than 6 months. Seven studies were initially selected for quality assessment. Out of those, three were excluded because they scored below five in the quality assessment (Becona, Valquez, 1997; Steptoe, Kerry, Rink, Hilton, & 2001; Conuz, Humair, Seematter, Stionov, Van Melle, Stalder, & Pecoud, 2002).

Hence, only 4 studies were short listed for quality assessment.

Table 1: Quality Assessments for Trials of Group Sessions Using Cognitive and/or Behavioural Interventions

Study	Rating
Taylor, C.B., Miller. N. H., Herman, S., Smith P. M., Sobel, D., Fisher, L., DeBusk, R. F. (1996). A Nurse-Managed Smoking Cessation Program for Hospitalized Smokers. American Journal of Public Health, 86,11, 1557-1560	**9**
Sykes, C. M. & Marks, D.F. (2001). Effectiveness of a Cognitive Behaviour Therapy Self-help Programme for Smokers in London, UK. Health	**8**

Promotion International, 16, 255-260	
Simon A. J.,Solkowitz N, S., Carmody T. P., Browner, W. S (1997). Smoking Cessation After Surgery. Archives of Internal Medicine, 157, 1371-6	**7.5**
Feeney, G. F, McPherson, A., Connnor, J. P., McLister, A., Young, R. M., Garrahy, P. (2001). Randomized Controlled Trial of Two Cigarette Quit Programmes in Coronary Care Patients after Acute Myocardial Infarction. Internal Medicine Journal, 31, 470-475	**8**

Table 2: Abstinence rates at 6-12 months follow up

Trial			Intervention Group		Control group		Difference (%
Author/Year	Population	Quality Rating	Quiters	%	Quiters	%	
Taylor et al, 1996		9	98/315	31.1	66/313	21	10.1
Marks et al, 2001	Community	8	21/122	17.2	6/107	5.6	11.6
Simon et al, 1997		7.5	38/139	27.3	17/132	12.9	14.4
Feeney et al, 2001	Hospital	8	31/79	39.2	1/62,	1.6	37.6
Overall		**8.1**	**188/655**	**28.7**	**90/614**	**10.3**	**18.4**

A total of 4 trials met inclusion criteria for this review. Two out of the 4 studies were nurse-led or managed smoking cessation programmes in hospitals. One of these studies was administered by a health educator and also took place in a hospital. The remaining 2 studies took place in an out-patients private clinic and a health research centre. The highest cessation rate took place in Australia in a hospital. All the studies selected included group support as part of the CBT intervention. .

Table 3: Facilitator leading the intervention in selected studies

Facilitator	Nurse	Psychologist	Health Educator
Author/Year			
Taylor et al, 1996	x		

Marks et al, 2002	x
Simon et al, 1997	x
Feeney et al, 2001	x

- x= selected option

Table 4: Intervention components and methods of selected studies

Components	Relapse support	Manual with high risk relapsing situations	Recognising triggers/avoiding risky situations	Rating negative beliefs before and after intervention	Coping skills training	imagery	meditation
Author/Year						Relaxation	
Taylor et al, 1996	x	x	x				
Marks et al, 2001	x	x	x	x	x	x	x
Simon et al, 1997	x	x	x	x	x		
Feeney et al, 2001	x	x	x	x	x	x	

Components	Self help manual	Telephone follow-up/ help-line	sensitisation	Music therapy	Recognising Benefits of quitting	Increase activity	Distraction	Total number of components
Author/Year								
Taylor et al, 1996	x	x						5
Marks et al, 2001	x	x	x	x	x	x	x	15
Simon et al, 1997	x	x			x			8

Discussion

It is surprising to note that out of thousands of studies only 4 were short listed for quality assessment. It is possible that the inclusion criteria were too strict. We must also consider the fact that this review selected studies which employed psychological methods, specifically cognitive and behaviour therapy.

The majority of the studies which met the inclusion criteria scored very high on the quality checklist. These studies were all multi-component trials and they used similar methods. There have been many efforts to use randomized controlled trials and compare different smoking cessation techniques using a longitudinal design, (Richmond et. al., 1993; Windsor, Lowe, & Barlett, 1988; Jason, Tait, Goodman, & Buckenberger, 1988; among others). Results of a considerable number of papers indicate that using a combination of techniques is normally more efficacious in helping people to quit than à single therapy by itself. A study by Richmond, Harris and Neto (1994) provided evidence that nicotine replacement therapy is effective as an aid to smoking cessation when used as an adjunct to cognitive behavioral intervention.

The most successful study in terms of outcomes was the one conducted by Feeney et al. (2001) which revealed extremely good cessation rates when compared with the other studies (39%). This percentage was based on 1 year follow-up. The programme used by this study was the Stanford Heart Attack Staying Free Programme. The population selected for this study was very specific. Patients selected had been admitted to the coronary care unit. All of them had suffered AMI, documented by two or more of the following: elevated serum creatine phosphokinase, history of prolonged ischemic chest pain and the appearance of new Q waves or evolving ST segment change on an electrocardiogram. Hence, the population selected for this study was very specific, it had a cardiac heart disease history and it was at risk of further complications due to smoking. Social cognitive models could partially explain why this population was more likely to engage in a smoking cessation

programme as opposed to normal populations. Protection motivation theory (Rogers, 1983) explains why populations who perceived smoking as more severe and perceive themselves as more vulnerable to its consequences are more likely to engage in behaviour change. This study employed a population who has recently been hospitalised for a smoking related disease or in the best case scenario a disease which is exacerbated by smoking. This could partially explain the high success rates. On the other hand, Sykes et al. (2001) conducted their study in a socially deprived area. As statistics indicate that higher rates of smoking cessation are found in affluent areas and the same rule is inversely applied to disadvantaged areas (Health Development Agency, 2004).

The second most successful intervention was found in Taylor et al. (1996) study. The intervention chosen by them incorporated principles of social learning theory combined with nicotine addiction and relapse prevention models. Again, the population employed in this study was smokers who had been hospitalised for various medical and surgical conditions. Likewise the study by Feeney et al. (2001), they were to a great extent susceptible to smoking related illnesses and their complications.

The study conducted by Simon et al. (1997), selected patients who underwent non-cardiac surgery in San Francisco and were hospitalised for a minimum of 2 days. Even though these patients did suffer some kind of health threat, this was less of a threat and possibly less related to smoking as the other 2 studies. The cessation outcome for this intervention was 31%.

In terms of difference between treatment outcomes in intervention and control groups, not surprising, Feeney et al. (2001) study had the highest percentage (37%). This was a much higher percentage when compared to the overall mean of 17%.

All the studies selected for this review were group interventions. No one-to-one support studies were selected in this review. It is likely that one-to-one studies collect a smaller number of participants then group trials and hence they might not be publishable. There is extensive evidence that group support is more cost effective than one-to-one support for smoking cessation. This review supports the use of self-help materials incorporated in group interventions but studies which relied exclusively on self-help materials without further interventions were not shortlisted.

In terms of quality assessment, the study which scored the highest was Taylor et al. (1996). This study attained the maximum possible score in nearly all the items in the quality assessment checklist. The second highest quality scores (8) were obtained by Feeney et al. (2001) and Sykes et al. (2001). The lowest score was only half a point below these. Simon et al. (1997) study scored 7.5. It is not surprising that given a strict inclusion criteria, the studies which have been selected were of excellent quality. In many ways, these studies employed very similar methods and interventions in spite of taking place in different countries and employing very different populations.

All the included trials used multiple components interventions. Therefore we don't know which specific components are responsible for the successful outcomes. The most successful intervention was found in the study conducted by Feeney et al. (2001). Their cessation rates outcomes were far higher when compared with the other short-listed studies. The difference between cessation rates in the control and treatment groups was also very impressive when compared with the other 4 studies. This study was conducted in Australia and led by a Nurse. It did incorporate all the most popular methods shared by the other studies such as relapse support, use of manual with high risk for relapse situations, facilitating smokers to recognise triggers to smoking and avoiding risky situations, some kind of rating, coping skills training,

relaxation techniques and telephone follow-up. However, this study incorporated the least number of components when compared to the others.

Many studies which were read for inclusion had very short term follow-ups (3 months) which is not unanticipated as the Department of Health targets are based on 4-week quitters. However this research indicates that the majority of relapse occurs after 4 weeks. As a result of the short term follow up in the NHS, a revolving door trend may be taking place, in which smokers might be assessing services recorded as 4-week quitters, relapse after that period and come back to the same services. When they take part in a second group intervention they are recounted as successful 4-week quitters. The current NHS evaluation of smoking cessation services is clearly misleading and from at a service level, far from cost-effective. In the long run, if Primary Care Trusts meet their targets but national prevalence of smoking does not change, questions about the current statistics may be raised.

There is sound evidence that using out-patients multi-component psychological support with the aid of self-help manuals brings about good outcomes in terms of medium term self reported abstinence supported by bio-markers. The most popular psychological methods used by the short-listed studies were telephone follow-up/ help-line, relapse support, use of a manual with high risk relapsing situations, facilitating smokers to recognise triggers and avoid risky situations.

<u>Conclusion</u>

In order to sustain long term abstinence from smoking it is crucial that smokers are provided with empowering strategies which increase their self-efficacy and help them to prepare for withdrawal and understand mechanisms of physical and psychological addiction. This study did not offer support for a specific health professional to lead the intervention. The short listed studies employed different health professionals and

obtained good long term outcomes. This review demonstrates that there are very few papers which employ psychological support which fulfils the inclusion criteria. In order to set evidence based standards for practice, it is crucial that more randomised controlled trials designs are carried out using a long term follow up update.

Appendix 1

Systematic review question: **A systematic review of cognitive and behavioural therapy programmes for smoking cessation**

Background

Across the NHS most commonly, smoking cessation interventions are delivered through group support programmes normally referred from GP's. The purpose of group programme is to analyze motives for group member's behaviour, to provide opportunity for social learning, to generate emotional experiences and to impact information and teach new skills, Hajek (1996, 1985). According to Stead and Lancaster (2002), smoking cessation interventions normally include methods to facilitate smokers coping during abstinence, social skills, training, contingency management, self-control and cognitive behavioral interventions. The abstinence oriented approach sees withdrawal discomfort as remediable. Smokers' self-efficacy is build up before setting a quit day and they are empowered and supported to achieve their objective of quitting smoking during initial stage of withdrawal from nicotine.

The evidence for employing these methods was based on a report informed by the "Scientific Committee on Tobacco and Health" (Department of Health, 1998a). The evidence of this report was based on systematic review by (Law and Tang, 1995) by which the effectiveness of various smoking cessation interventions was evaluated. This review evaluated various interventions: 1) Advice and encouragement by doctor during consultation, with additional encouragement/support; nurses in health promotion clinics; support group sessions; in special circumstances; men at high risk of ischemic heart disease 2) Behaviour modification therapy – non specific approaches; aversion; rapid or satiation smoking; silver acetate; sensory deprivation;

hypnoses 3) Pharmacological treatments to allay withdrawal symptoms – nicotine replacement therapy; clonidine; tranquilisers and other agents 4) Miscellaneous treatments 5) Gradual reduction of nicotine intake. According to Law and Tang (1995) there is no reason to support behaviour modification therapy to assist smokers to quit. According to Law and Tang (1995) behaviour modification therapy to assist smokers to quit is not cost-effective. However, they presented no data on cost-effectiveness in spite of recommending doctor's advice based on those grounds. They made no attempt to evaluate the quality of the studies included in their review, thus included good and bad quality papers. Several of the studies included in their review used no biochemical markers. Furthermore, there was no classification of the psychological interventions, they were grouped as non-specific behavioural modification interventions led by a a psychologist. The nature of the intervention may be more meaningful than the profession of the person leading the intervention. They concluded that doctors should take time to advise all their patients who smoke to quit. Those smokers should be provided with additional support and Nicotine Replacement Therapy.

Aims

Systematic review protocol

Following Law and Tang (1995) review, a protocol was created (appendix 1). The aim of this protocol is to devise a framework for the systematic review

Search strategy

Studies led by a psychologist or led by any other health professional which had a cognitive and behavioural component were included in this analysis. PsychInfo and Medline databases were searched from 1995 to 2005. Articles were hand-searched in peer reviewed journals for 2005 (Tobacco Control and the Journal of Addictions). Once articles were identified, they were screened for inclusion.

Study selection criteria

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Interventions

Psychological interventions with one or more components of cognitive and behavioural interventions which include methods to facilitate smokers to cope during abstinence,such as relaxation techniques, use of diaries, identification of triggers, visualisation, changing routines, rehearsing strategies to cope with withdrawal, identification of thinking errors, cognitive re-framing, focusing on gains of staying abstinent, social support, social skills training, contingency management, self-control.

Outcomes

Cessation for at least 6 months

Study design

Randomised controlled trials

Search terms

The following search terms were employed using PsychInfo and Medline databases.

1. relaxation
2. visualisation
3. visualization
4. imagery
5. trigger

6. positive reasons
7. self-control
8. psychological
9. behaviour therapy
10. behavior therapy
11. Cognitive therapy
12. randomised controlled trial
13. randomized controlled trial
14. post-treatment follow-up
15. abstinence oriented
16. follow-up study
17. psychotherapy

Quality assessment

1. adequate randomisation (needs to be specified)
2. adequate participants (including power analyses or over 100 participants per group in each group)
3. Biomarkers confirming self-reported abstinence in 95% of cases (CO in expired breath, saliva or urine sample)
4. Suitable comparison interventions
5. Similar groups at baseline (use of standardise scale to measure nicotine addiction, matched by age and gender)
6. No other confounding intervention
7. Acceptable drop out rate (25% or more)
8. Motivation to quit measured
9. Reliable measurement techniques (test retest/ internal consistency/split half)
10. Appropriate statistical analyses

The quality assessment will be conducted by RP and CS independently. The Delphi method of achieving agreement will be used.

Data Extraction Strategy

A data extraction form will be used to obtain the necessary information from the selected studies.

Data Extraction Form For the Efficacy of Psychological Interventions to Aid Smoking Cessation

General Information

Data of extraction:

Study reference:

Author contact details:

Identification number in systematic review:

Notes:

Study characteristics

Verification of study eligibility

- Participants
- Interventions
- Outcome
- Design

Methodological Quality of Study

Study design:

Quality assessment score:

Interventions

Intervention:

Number of condition groups:

Duration of intervention:

Outcome

What was measured at baseline?

What was measured after the intervention?

Who carried out the measurement?

Analysis

Statistical analysis used:

Follow-up rates for each condition:

Results

	Condition A Mean (SD)	Condition B	Condition C	Condition D
Variable 1 Pre Post				
Variable 2 Pre Post				

Data analysis

Subsequent to the establishment of the feasibility of meta-analyses, the following options will be decided upon:

1) Comparisons to be made
2) Outcomes to be measured
3) Which effect measures will be employed to explain effectiveness

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SMOKERS' CLINIC QUESTIONNAIRE

For staff use only:

Group Number:	**Client Number:**

Please complete this questionnaire and send it back to us in the envelope provided **before** your first visit to the clinic.
All information you provide is strictly *confidential*. The information will be used for service monitoring and evaluation. If you would like to discuss this further please call the clinic on *0800 169 7541.*

Name:	
Date of Birth:	**Age:**
Address:	**Post code:**
Telephone Contact: **Home:** **Work:** **Mobile:**	**E-mail address:** If you are willing to be contacted by e-mail at any point, please tick box ☐
Name/details of a person whom we can contact if you are unavailable:	
GP Details: **Name:** **Address:** **Telephone number:**	

DEMOGRAPHIC DETAILS These questions are to help us monitor the service
(Please tick the appropriate answers)

1. Are you:
☐ 1. Male ☐ 2. Female

2. Are you:
☐ 1. Single
☐ 2. Separated/divorced
☐ 3. Married/living with partner
☐ 4. Other (please specify)
_____

3. If married or living with partner:
Does your partner/spouse smoke?
☐ 1. Yes ☐ 2. No

4. Are you:
☐ 1. In paid employment
☐ 2. Unemployed
☐ 3. Looking after the home
☐ 4. Retired
☐ 5. Full time student
☐ 6. Other (please specify)
_____

5. What is your highest educational qualification?
☐ 1. None
☐ 2.GCSE or equivalent
☐ 3. A level or equivalent
☐ 4. Degree or equivalent
☐ 5. Other (please specify)
_____

6. Do you have any children under the age 18 years old living with you?
☐ 1. Yes ☐ 2. No

7. How did you hear about the clinic?
If you saw an advertisement, please give details of where:
☐ 1. GP
☐ 2. Hospital Doctor
☐ 3. Practice Nurse
☐ 4. Friend/family
☐ 5. Advertisement
☐ 6. Other (please specify)
_____

8. Are you in receipt of free prescriptions?
☐ 1. Yes ☐ 2. No

9. What is your ethnic group? *(please tick one box)*

White
1. ☐British
2. ☐ Irish
3. ☐ Any other White background

Mixed
☐4. White and Black Caribbean
☐ 5. White and Black African
☐ 6. White and Asian
☐ 7. Any other mixed background

Asian or Asian British
☐ 8. Indian
☐ 9. Pakistani
☐10.Bangladeshi
☐11.Any other Asian background

Black or Black British
☐12. Caribbean
☐13. African
☐14. Any other Black background

Other ethnic groups
☐15. Chinese
☐16. Any other ethnic group

Not stated
☐17. Not stated

ABOUT YOUR SMOKING

1. At what age did you start smoking? _____ **years old**

2. Why did you start smoking?

_____

_____

_____

3. How many cigarettes *per day* do you usually smoke? _____ **per day**

4. Do you smoke hand-rolled cigarettes? ☐ **1. Yes** ☐ **2. No**

If yes:
How many do you smoke per day? _____ **per day**
How much tobacco do you usually use per week? _____ **ounces**

5. How soon after waking do you smoke your first cigarette?	☐ 1. Within 5 minutes ☐ 2. Within 6 – 30 minutes ☐ 3. After 30 minutes
6. When do you smoke the most?	☐ 1. Morning ☐ 2. Afternoon ☐ 3. Evening
7. Which cigarette would you hate to give up the most?	☐ 1. The first of the morning ☐ 2. After a meal ☐ 3. After/with coffee or tea ☐ 4. In the pub ☐ 5. Other (please specify) _____

8. Do you find it difficult to stop smoking in no-smoking areas?	☐ 1. Yes	☐ 2. No
9. Do you smoke even if you are ill in bed most of the day?	☐ 1. Yes	☐ 2. No

SMOKING MOTIVES

Please tick one response for each question	Very much 1	Quite a bit 2	A little 3	Not really 4	Not at all 5
1. Do you smoke to help you cope with stress?					
2. Do you smoke to help you socialise?					
3. Do you smoke when you are bored?					
4. Do you smoke to help you concentrate and stay alert?					
5. Do you smoke to help keep your weight down?					
6. Do you smoke because you enjoy it?					

SMOKING TEMPTATIONS

How tempted would you be to smoke in each of the following situations? Please answer by ticking the appropriate response.

How tempted would you be to smoke...	Not at all 1	A little 2	Moderately 3	Very 4	Extremely 5
1. With friends at a party					
2. When you first get up in the morning					
3. When you are very anxious and stressed					
4. Over coffee while talking and relaxing					
5. When you feel you need a lift					
6. When you are very angry about something or someone					
7. With your spouse or close friend who is smoking					
8. When you realise you haven't smoked for a while					
9. When things are not going your way and you are frustrated					

PAST QUIT ATTEMPTS

1. Have you made an attempt to stop smoking before? ☐ 1. Yes ☐ 2. No

   If yes:
   How many times? _____ times
   How long has it been since your last attempt? _____

2. What is the longest time that a quit attempt has lasted in the past? _____ months

   Why did you start smoking again?

   _____

   _____

   _____

3. Have you used any Nicotine Replacement Therapy (e.g. patches, gum, microtab, inhalator, nasal spray etc) or Zyban in the past? ☐ 1. Yes ☐ 2. No

   If yes:
   What did you use? _____

MOTIVATION TO STOP SMOKING *(please tick the appropriate response)*

1. How important is it for you to give up smoking altogether at this attempt?	☐ 1. Extremely important ☐ 2. Very important ☐ 3. Important ☐ 4. Quite important ☐ 5. Not all that important
2. How determined are you to give up smoking at this attempt?	☐ 1. Extremely determined ☐ 2. Very determined ☐ 3. Determined ☐ 4. Quite determined ☐ 5. Not all that determined
3. How high would you rate your chances of giving up smoking for good at this attempt?	☐ 1. Extremely high ☐ 2. Very high ☐ 3. Quite high ☐ 4. Not very high ☐ 5. Low
4. How confident are you in your ability to give up smoking at this attempt?	☐ 1. Extremely confident ☐ 2. Very confident ☐ 3. Confident ☐ 4. Quite confident ☐ 5. Not at all confident

ABOUT YOUR HEALTH

1. How would you describe your health over the past year?	☐ 1. Excellent ☐ 2. Good ☐ 3. Moderate ☐ 4. Poor ☐ 5. Very poor	
2. Do you feel that smoking has affected the state of your health?	☐ 1. Yes	☐ 2. No
3. Has your GP or any other doctor advised you to quit smoking?	☐ 1. Yes	☐ 2. No
4. Are you pregnant or breastfeeding?	☐ 1. Yes	☐ 2. No
5. Do you drink alcohol?	☐ 1. Yes	☐ 2. No
If yes, what and how much alcohol do you consume in a week?		

6. Do you smoke any other drugs e.g. cannabis? ☐ 1. Yes ☐ 2. No

If yes, what do you smoke and how much per week?

7. Do you take any medication? If yes, please list ALL medications in the space below.

8. Have you *ever* suffered from any of the following health problems?	YES 1	NO 2
Heart disease		
Diabetes		
Cancer		
Stroke		
Bronchitis/emphysema		
Asthma		
Stomach or duodenal ulcer		
Epilepsy, seizures or fits		
Brain tumor		
Head injury		
Liver disease		
Kidney disease		
Eating disorder		
Depression		
Anxiety/panic disorders		
Any other psychological or physical health problems		

(If yes, please specify): _____

_____

_____

_____

_____

9. Please read all the questions below and circle the answer which best describes how you have been over the past few weeks.

Have you recently:

1. been feeling perfectly well and in good health?	better than usual	same as usual	worse than usual	much worse than usual
2. been feeling in need of a good tonic?	not at all	no more than usual	rather more than usual	much more than usual
3. been feeling run down and out of sorts?	not at all	no more than usual	rather more than usual	much more than usual
4. felt that you are ill?	not at all	no more than usual	rather more than usual	much more than usual
5. been getting any pains in your head?	not at all	no more than usual	rather more than usual	much more than usual
6. been getting a feeling of pressure in your head?	not at all	no more than usual	rather more than usual	much more than usual
7. been having hot or cold spells?	not at all	no more than usual	rather more than usual	much more than usual
8. lost much sleep over worry?	not at all	no more than usual	rather more than usual	much more than usual
9. had difficulty staying asleep once you are off?	not at all	no more than usual	rather more than usual	much more than usual

10. **felt constantly under strain?**	not at all	no more than usual	rather more than usual	much more than usual
11. **been getting edgy and bad tempered?**	not at all	no more than usual	rather more than usual	much more than usual
12. **been getting scared or panicky for no good reason ?**	not at all	no more than usual	rather more than usual	much more than usual
13. **found everything getting on top of you ?**	not at all	no more than usual	rather more than usual	much more than usual
14. **been feeling nervous and strung-up all the time ?**	not at all	no more than usual	rather more than usual	much more than usual
15. **been managing to keep yourself busy and occupied?**	more so than usual	same as usual	rather less than usual	much less than usual
16. **been taking longer over the things you do?**	quicker than usual	same as usual	longer than usual	much longer than usual
17. **felt on the whole you were doing things well?**	better than usual	about the same	less well than usual	much less well
18. **been satisfied with the way you've carried out your tasks ?**	more satisfied	about same as usual	less satisfied than usual	much less satisfied
19. **felt that you are playing a useful part in things?**	more so than usual	same as usual	less useful than usual	much less useful

20. **felt capable of making decisions about things?**	more so than usual	same as usual	less so than usual	much less capable
21. **been able to enjoy your normal day-to day activities?**	more so than usual	same as usual	less so than usual	much less than usual
22. **been thinking of yourself as a worthless person?**	not at all	no more than usual	rather more than usual	much more than usual
23. **felt that life is entirely hopeless?**	not at all	no more than usual	rather more than usual	much more than usual
24. **felt that life isn't worth living?**	not at all	no more than usual	rather more than usual	much more than usual
25. **thought of the possibility that you might make away with yourself?**	definitely not	I don't think so	has crossed my mind	definitely have
26. **found at times you couldn't do anything because your nerves were too bad?**	not at all	no more than usual	rather more than usual	much more than usual
27. **found yourself wishing you were dead and away from it all?**	not at all	no more than usual	rather more than usual	much more than usual
28. **found that the idea of taking your own life kept coming into your mind?**	definitely not	I don't think so	has crossed my mind	definitely has

Thank you for completing this questionnaire. Please return it to us in the envelope provided. If you have any queries, please contact the Smokers' Clinic on: 0800 169 7541

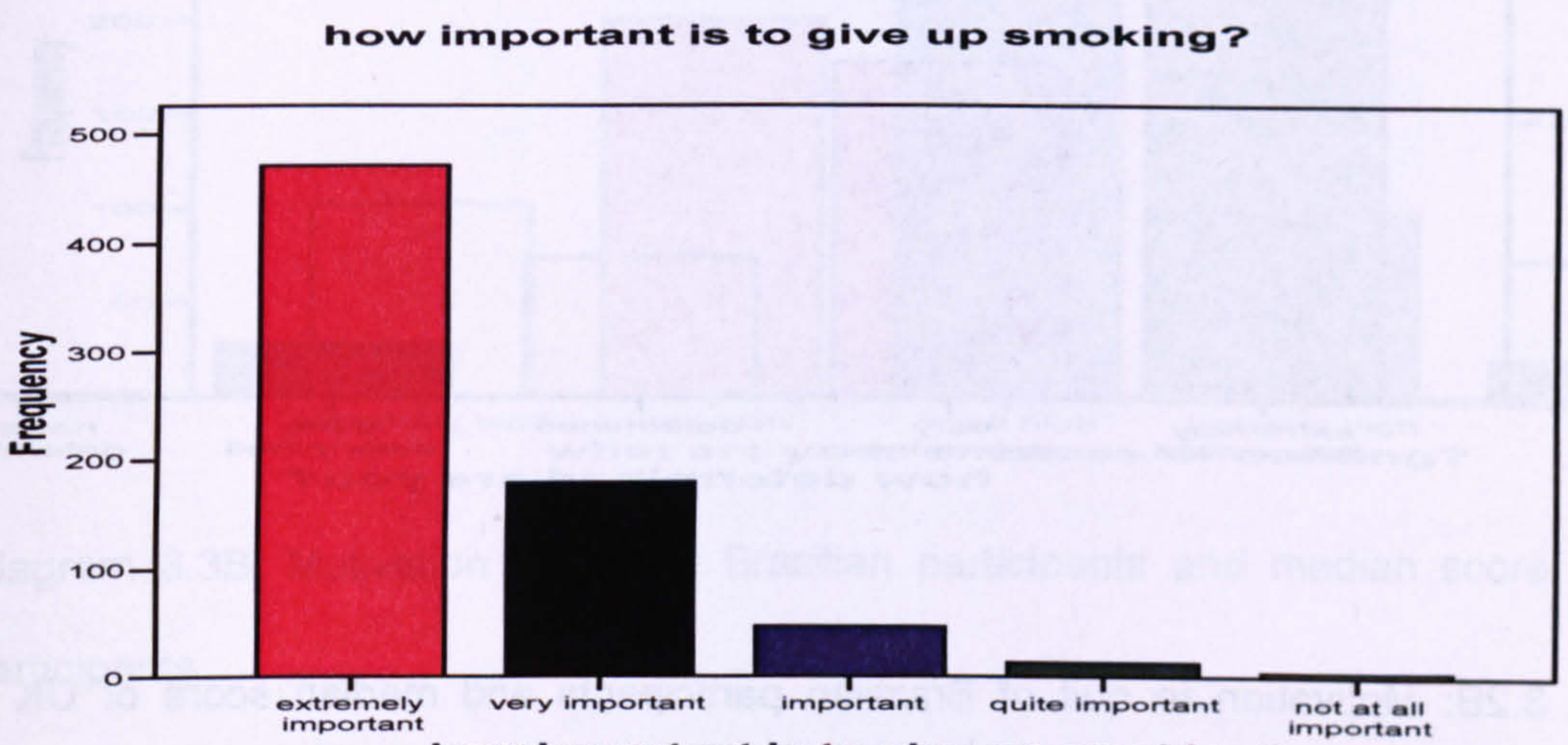
APPENDIX – STUDY 3

Diagrams comparing the means between Brazilian and UK participants:

3. Motivation to quit

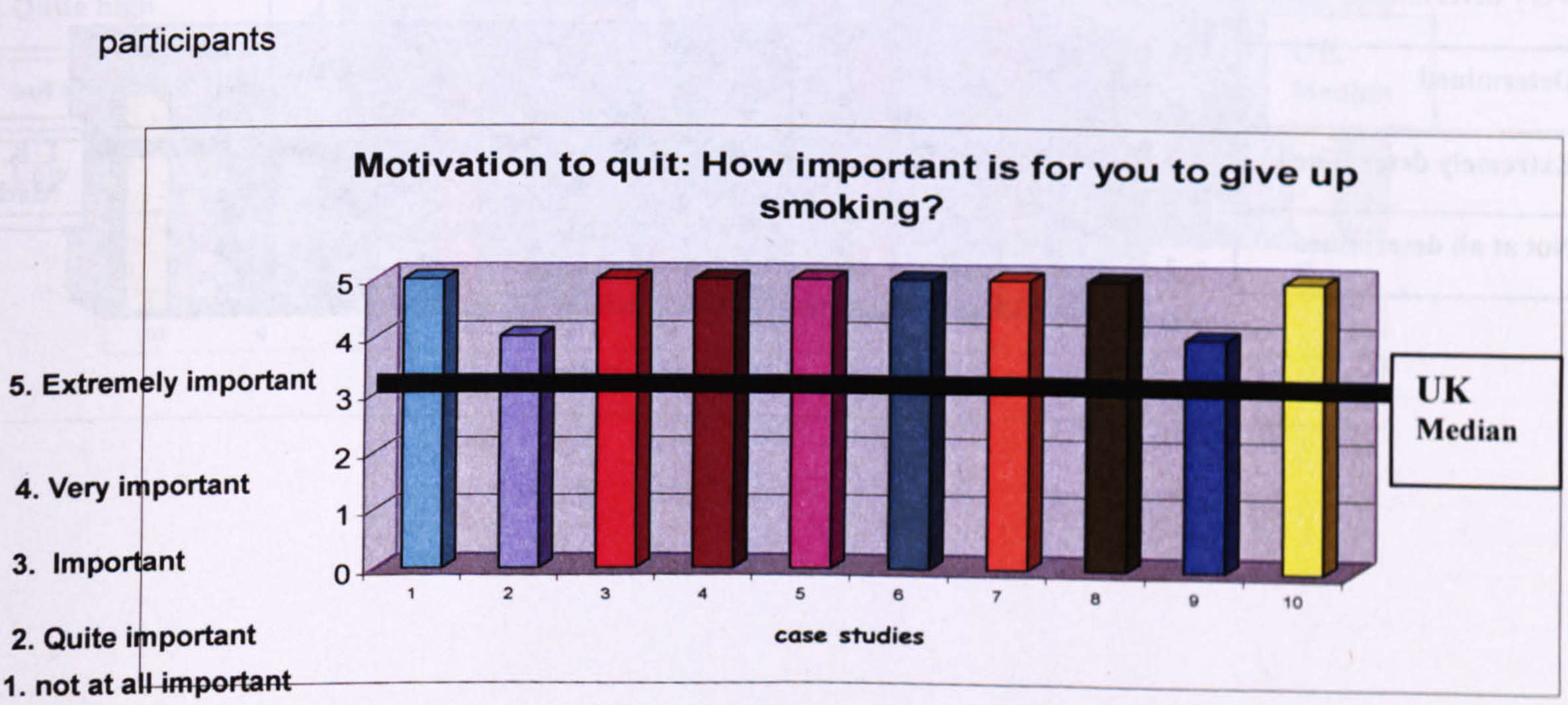
3.1 How important is it to give up smoking?

Diagram 3.1A: Motivation to quit of UK participants (question 1)



how important is to give up smoking?

Diagram 3.1B: Motivation to quit of Brazilian participants and median score of UK participants



3.2 How determined you are to give up smoking?

Diagram 3.2A: Motivation to quit of UK participants (question 2)

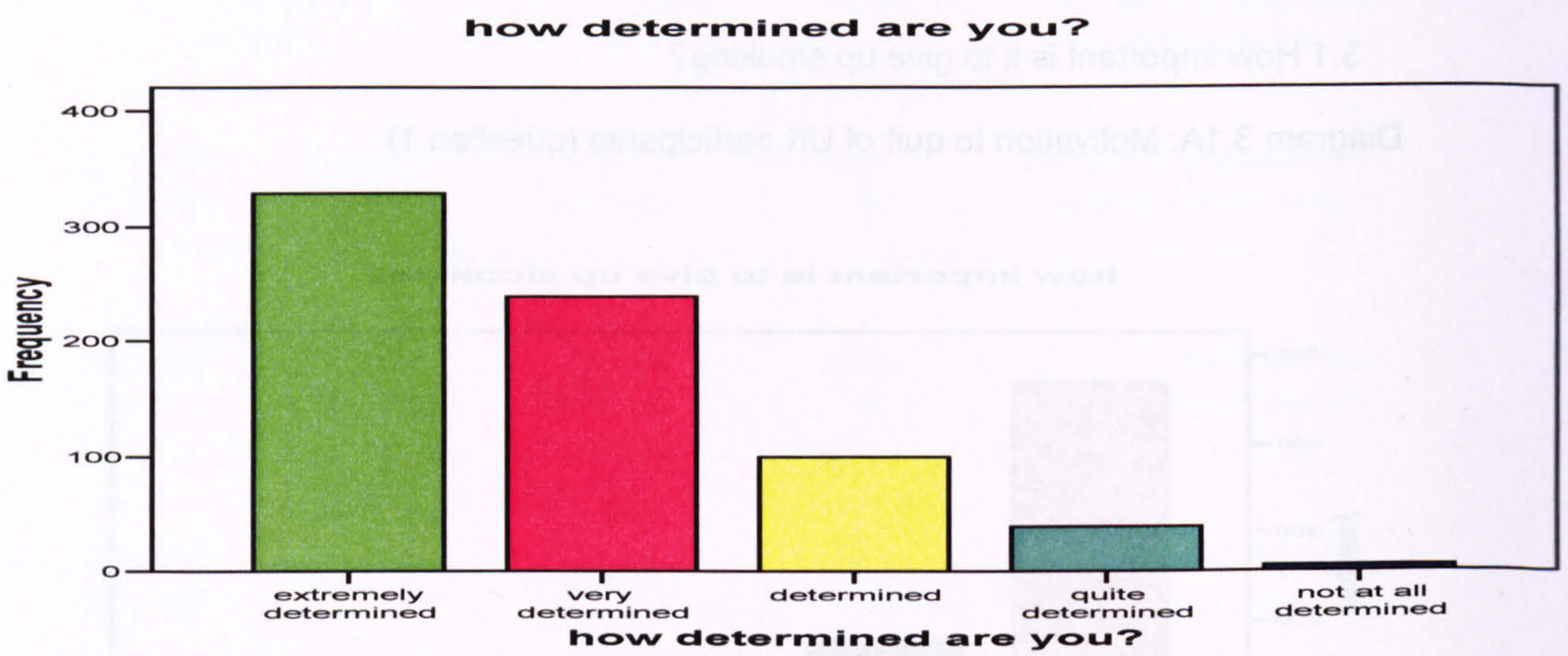
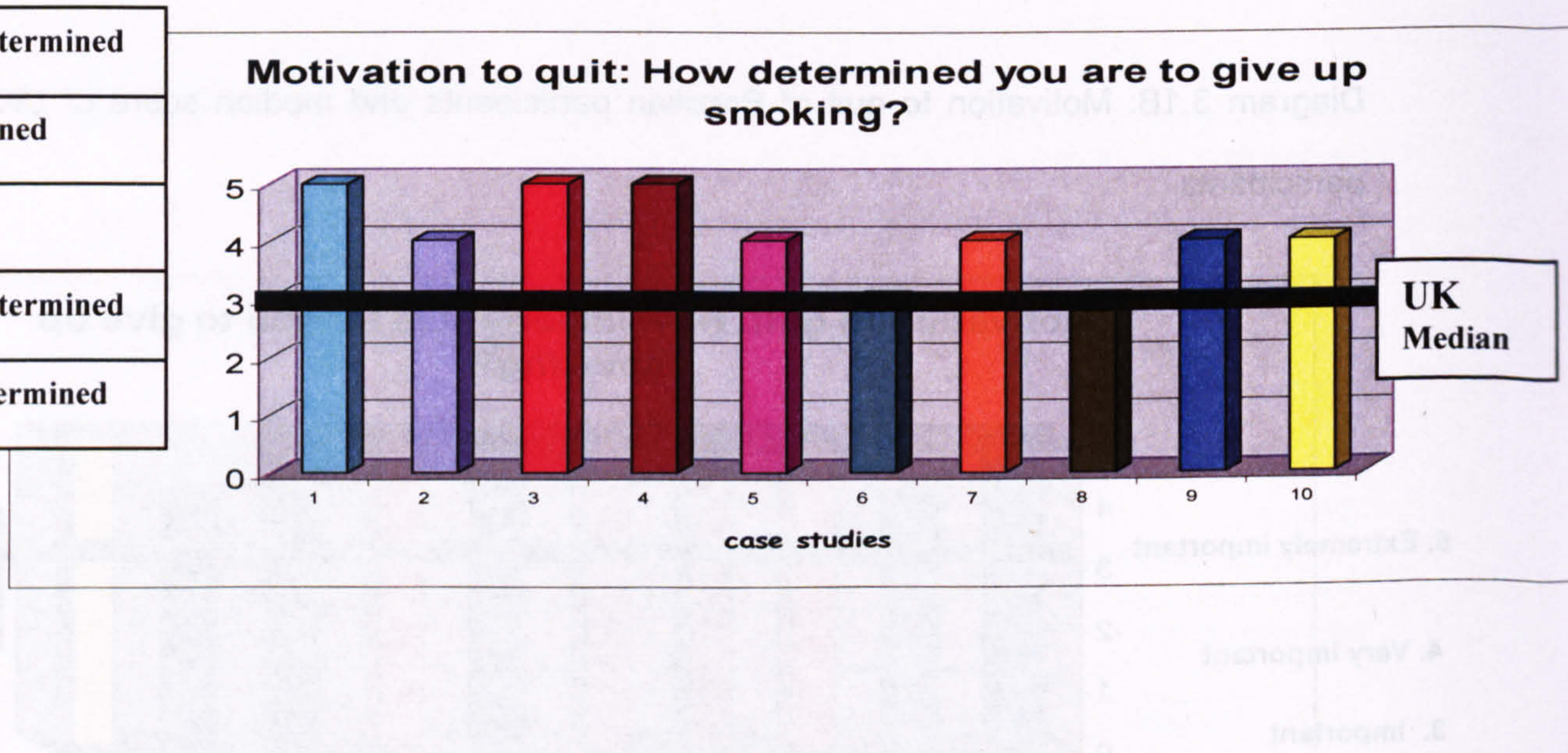


Diagram 3.2B: Motivation to quit of Brazilian participants and median score of UK participants

5. Extremely determined
4. Very determined
3. Determined
2. Extremely determined
1. Not at all determined



3.3 What are your chances of quitting?

Diagram 3.3A: Motivation to quit of UK participants (question 3)

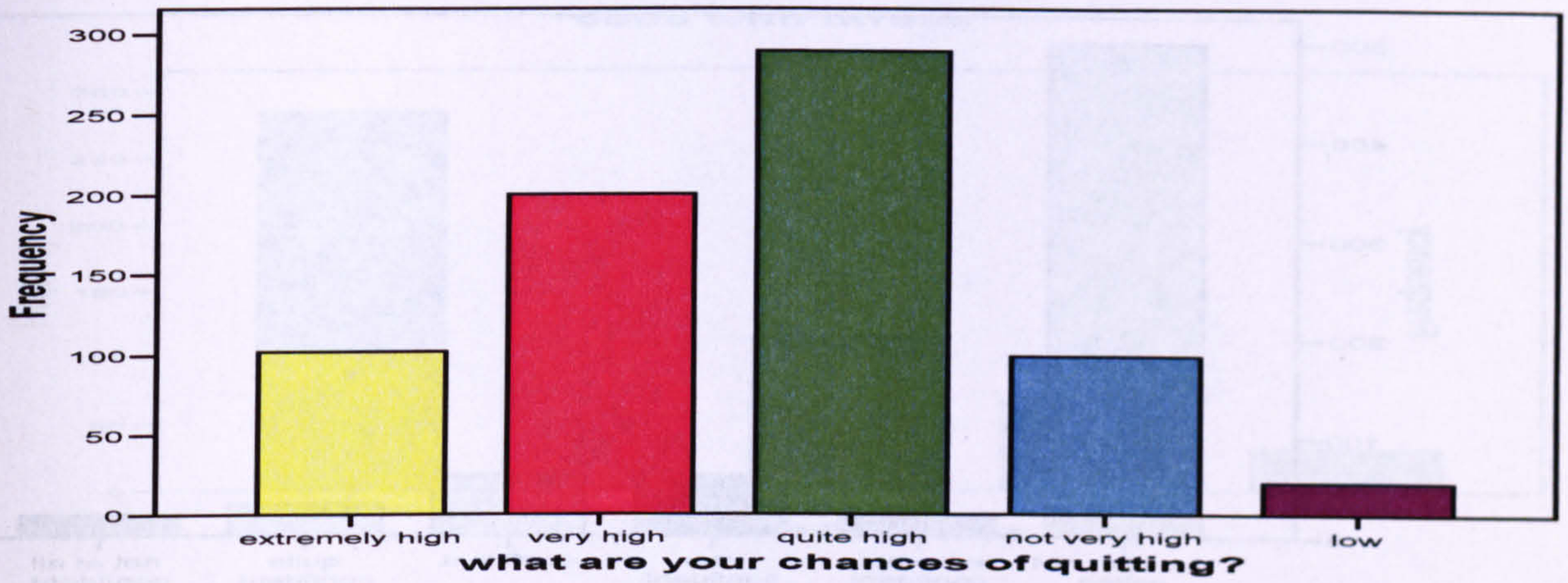
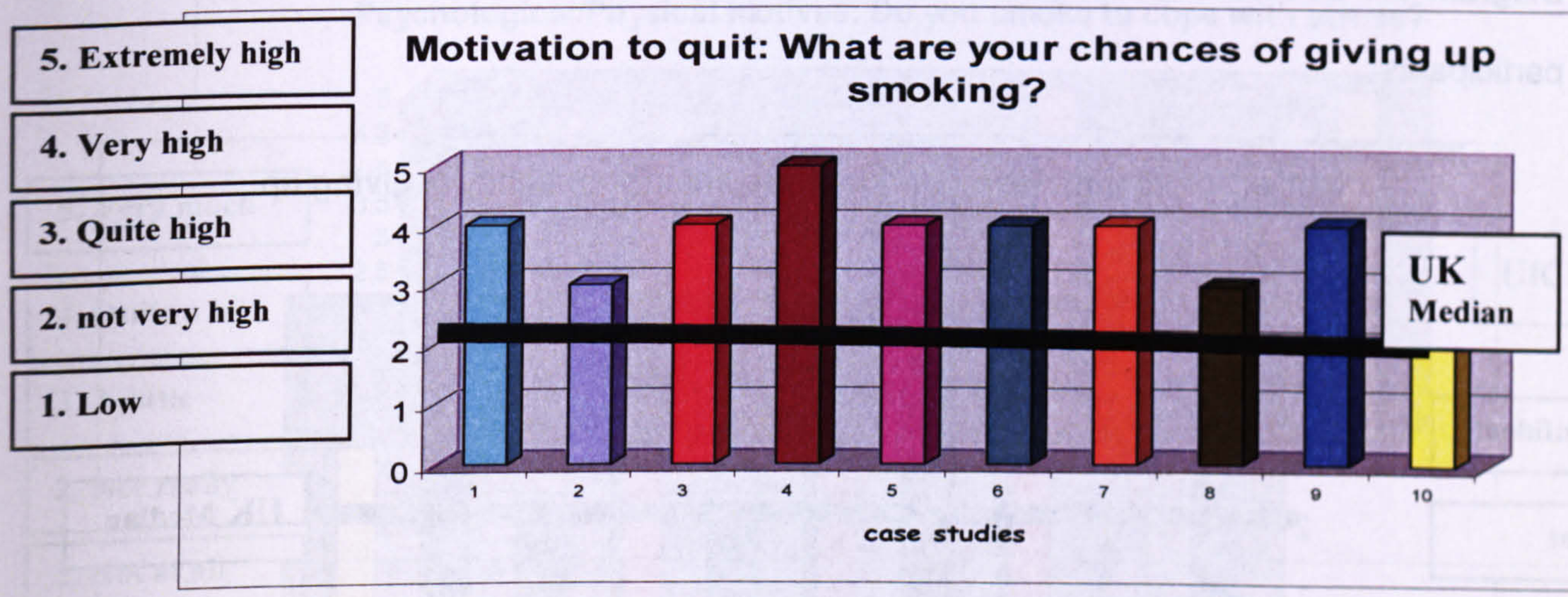


Diagram 3.3B: Motivation to quit of Brazilian participants and median score of UK participants



3.4 How confident are you in your ability to quit?

Diagram 3.4 A: Motivation to quit of UK participants (question 4)

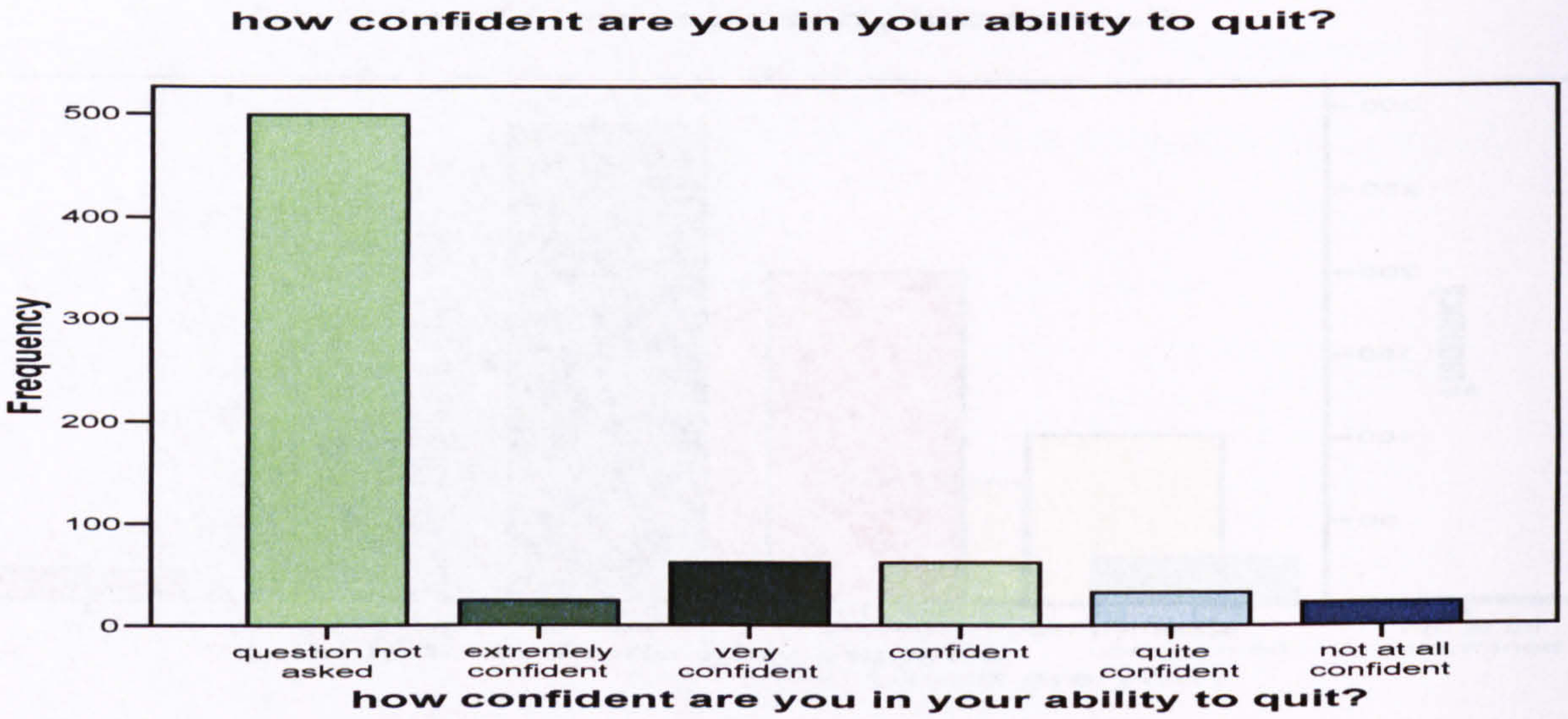
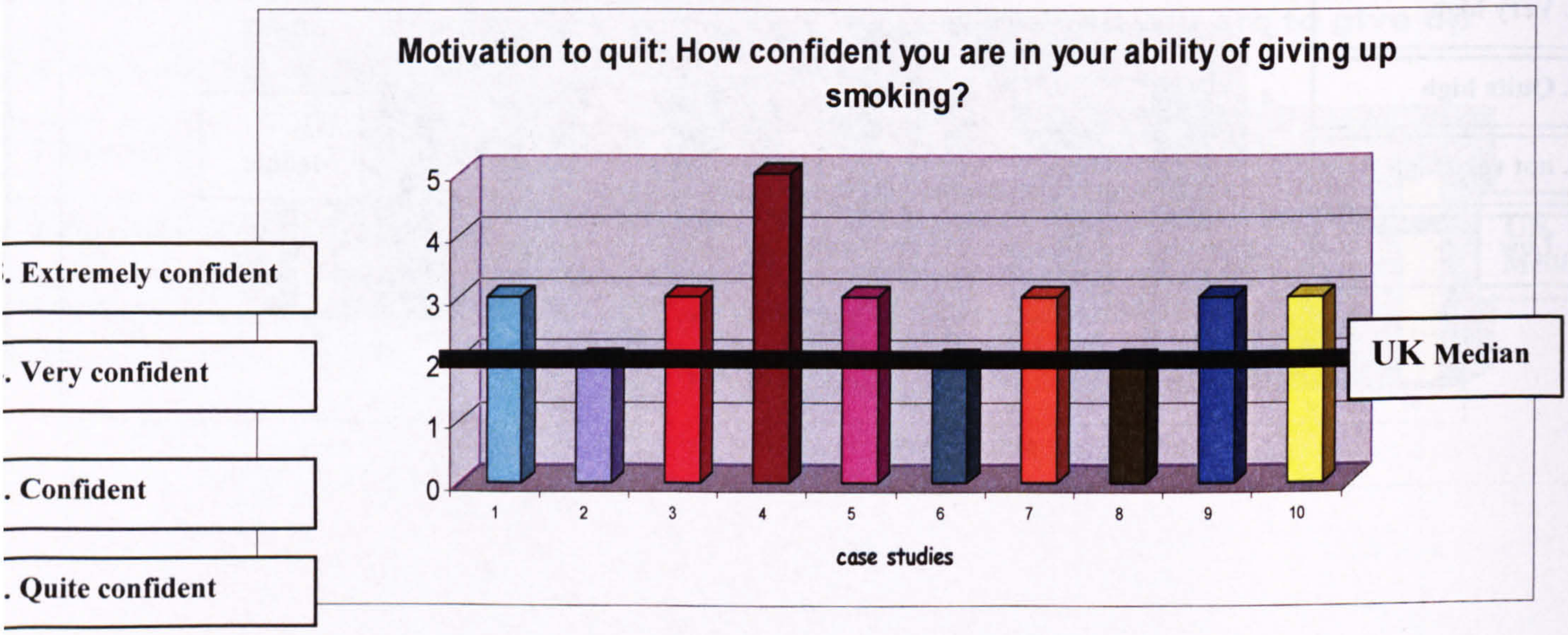


Diagram 3.4 B: Motivation to quit of Brazilian participants and median score of UK participants



Smoking motives – physical, psychological, social

4. Do you smoke to help you cope with stress?

Diagram 4 A: Smoking to cope with stress in UK

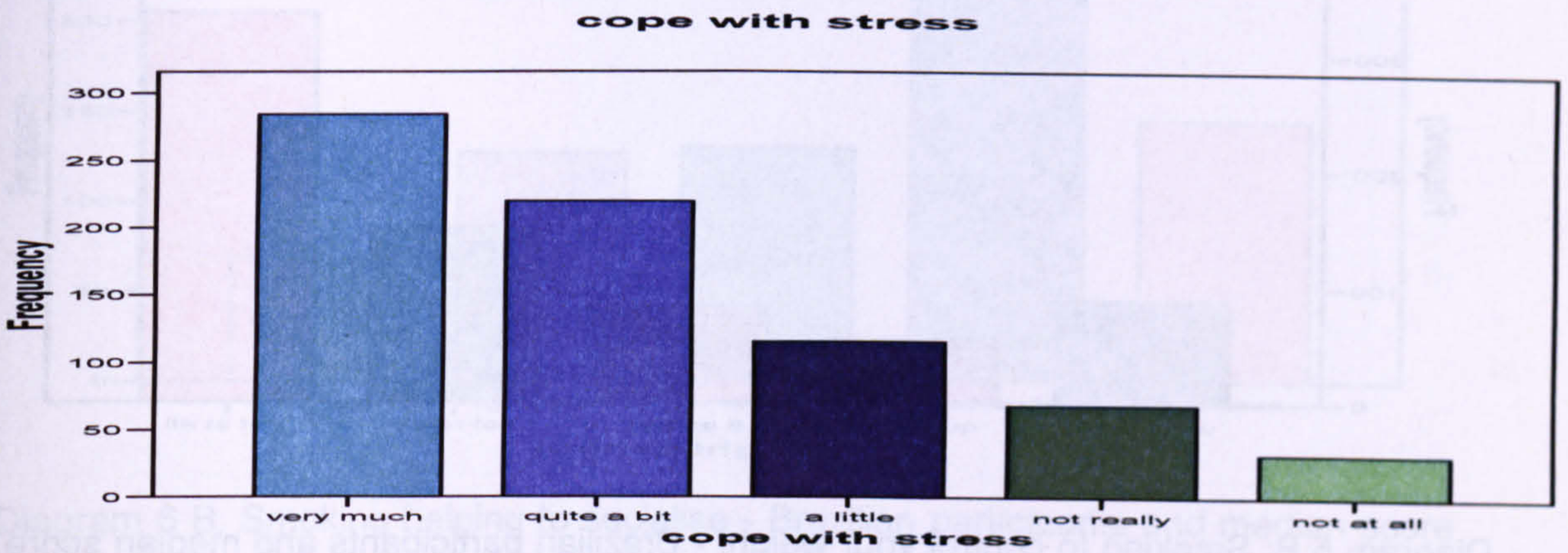
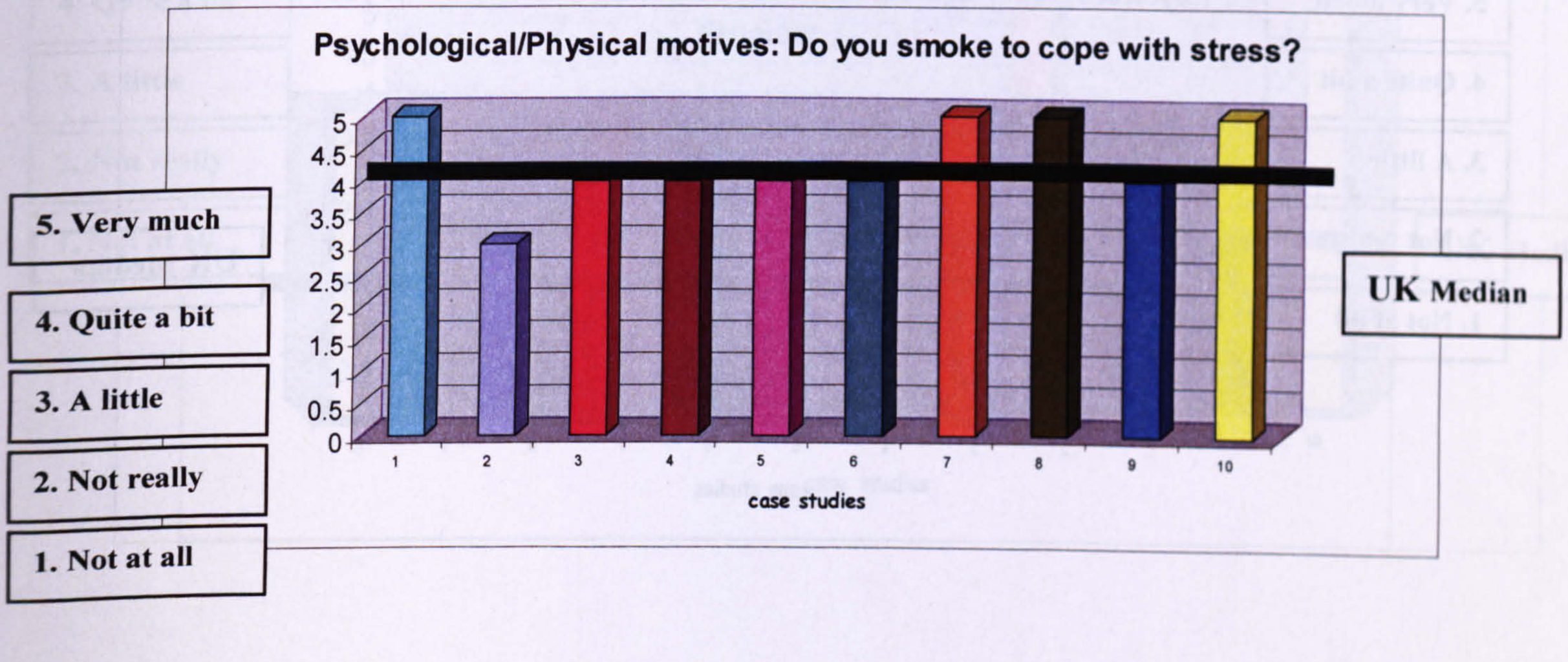


Diagram 4B: Smoking to cope with stress - Brazilian participants and median score of UK participants



5. Do you smoke to control your weight?

Diagram 5 A: Smoking to control your weight in UK

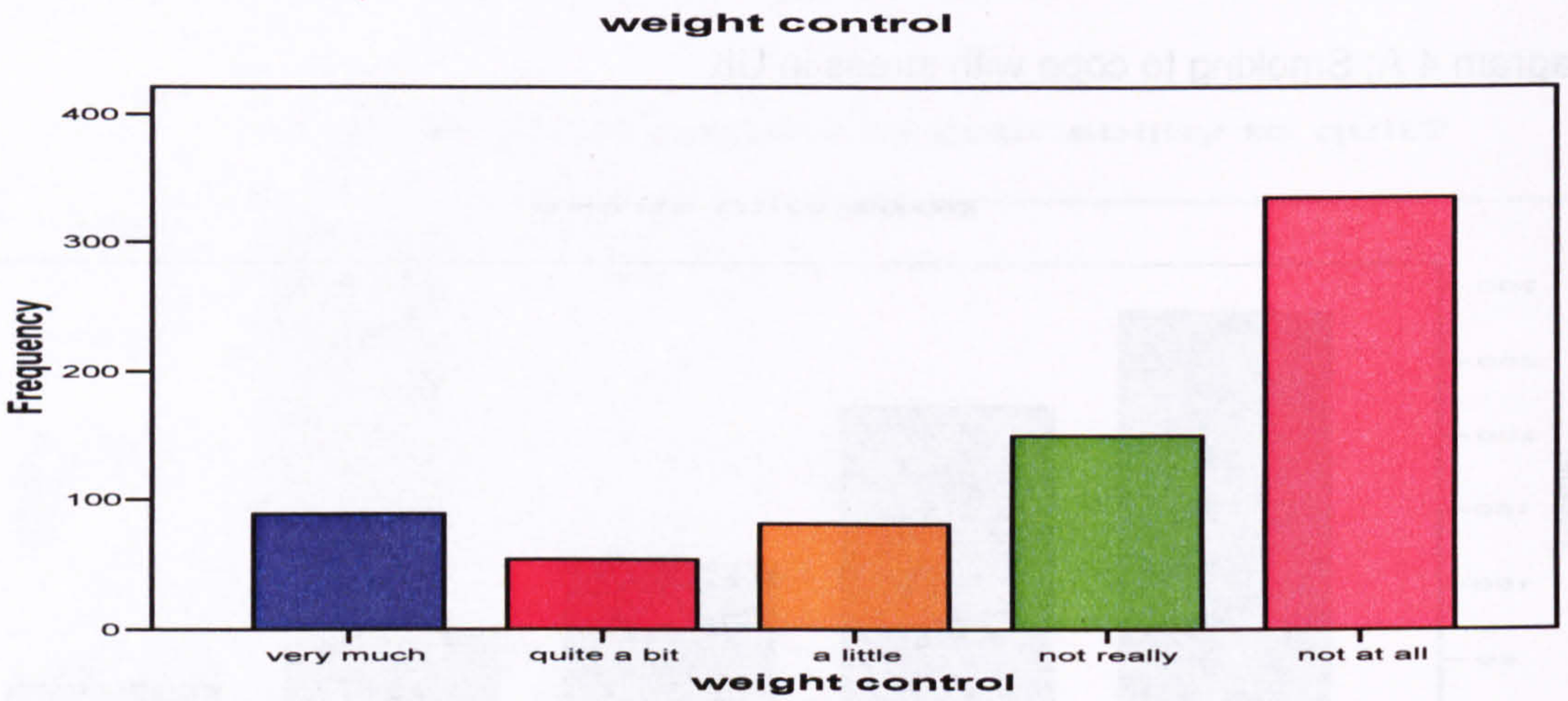
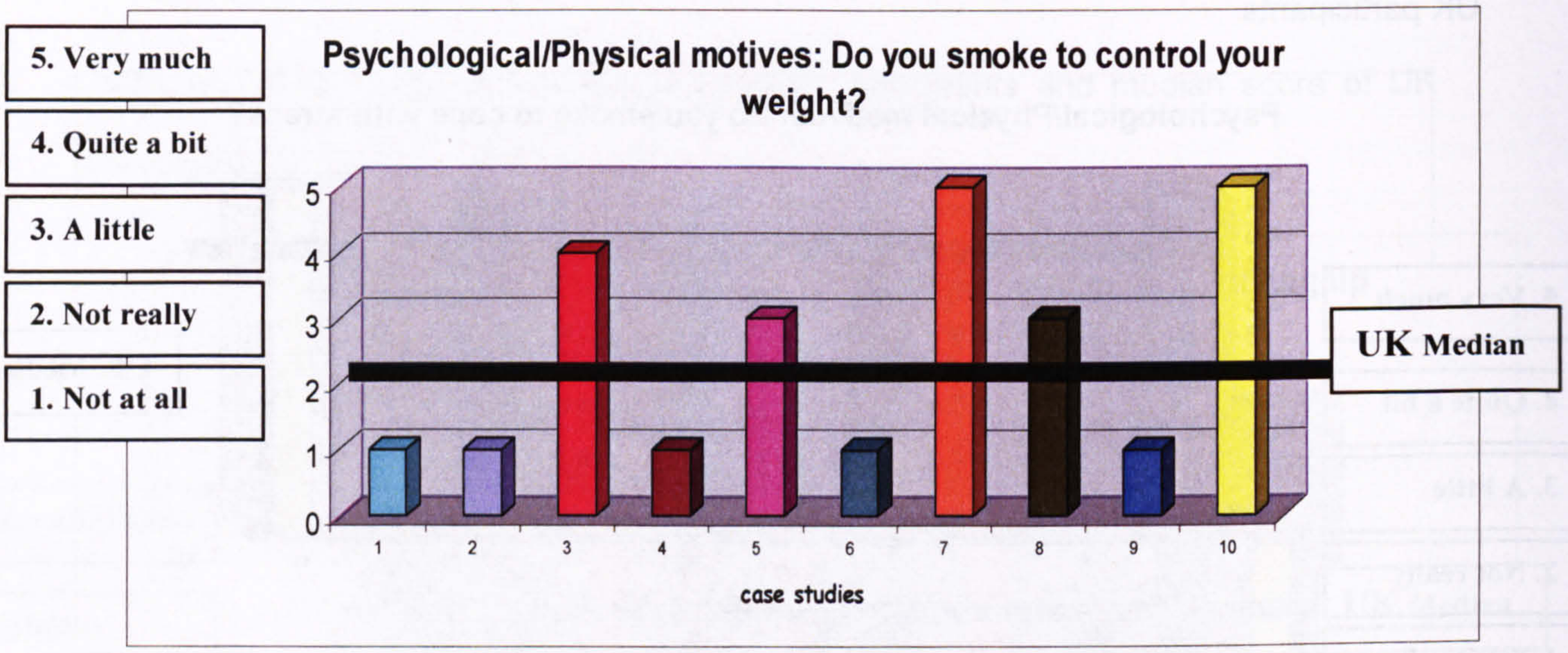


Diagram 5 B: Smoking to control your weight - Brazilian participants and median score of UK participants



6. Does smoking help you to socialise?

Diagram 6 A: Smoking to socialise in UK

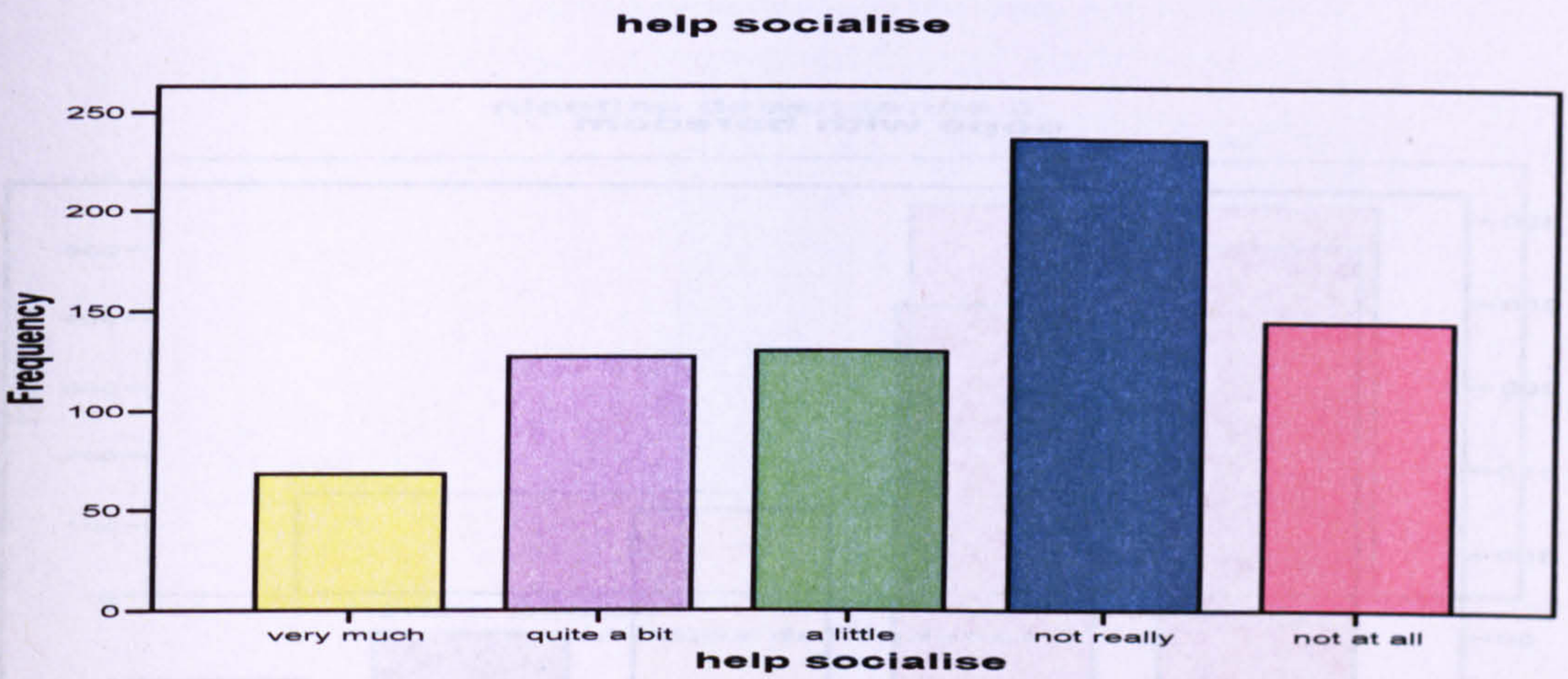
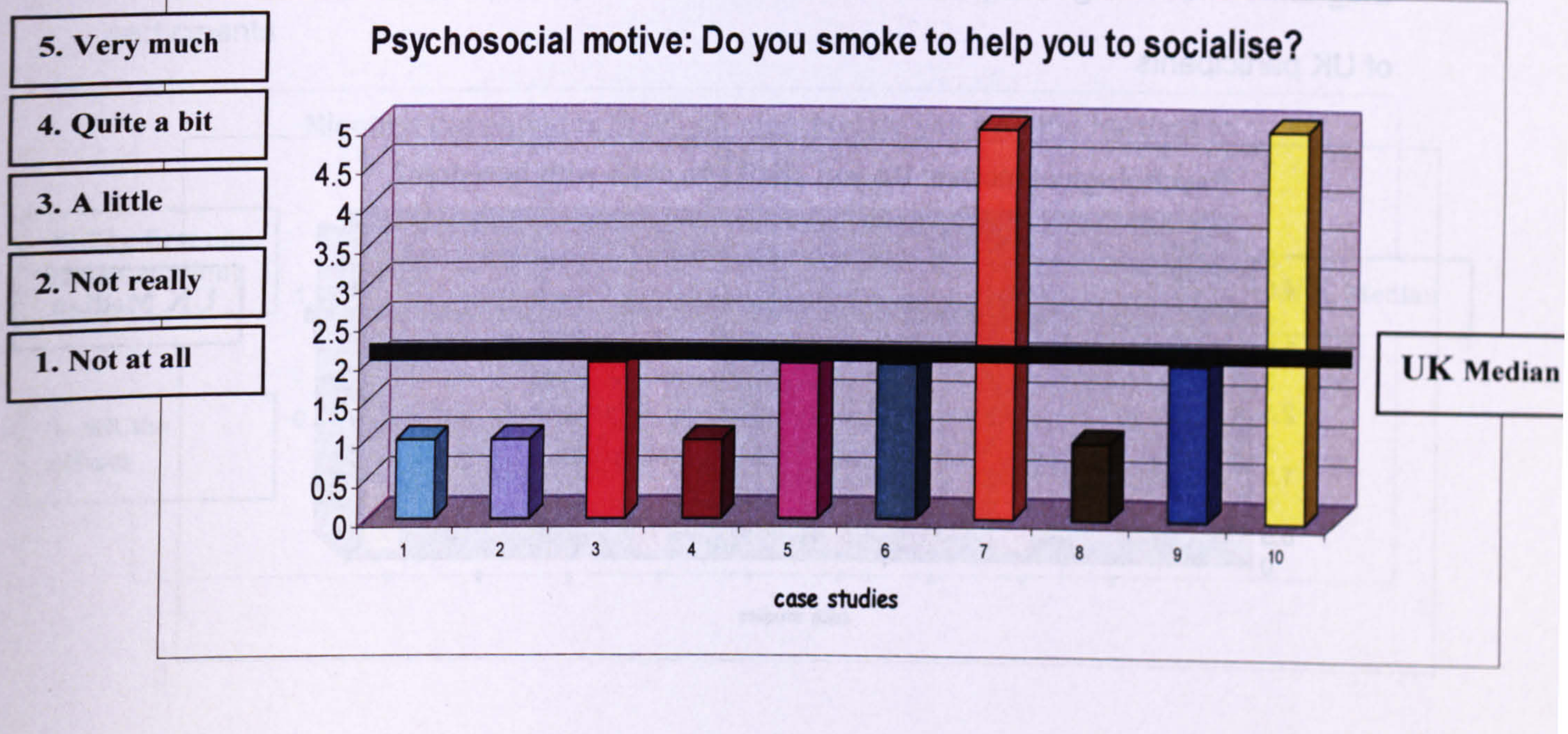


Diagram 6 B: Smoking helping to socialise - Brazilian participants and median score of UK participants



7. Psychosocial motive: Do you smoke to help you cope with boredom?

Diagram 7A: Smoking to cope with boredom – UK participants

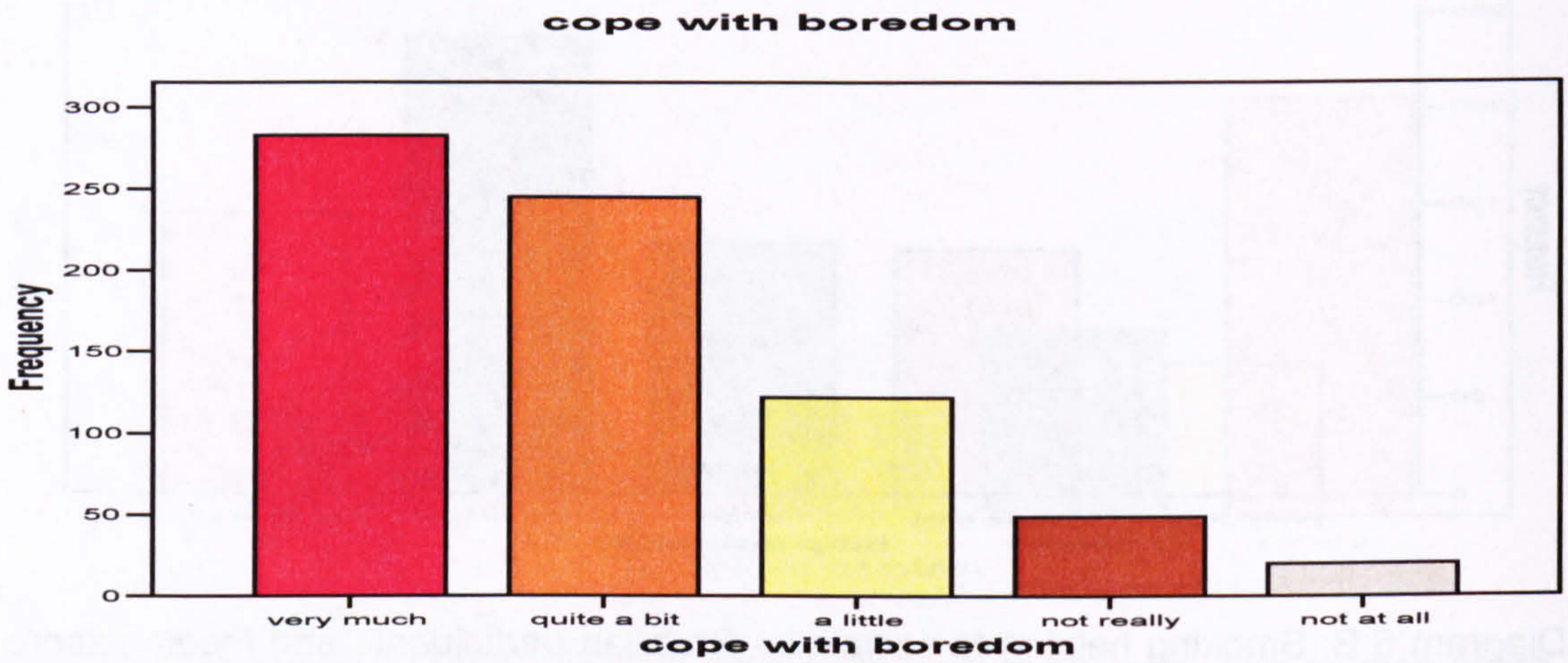
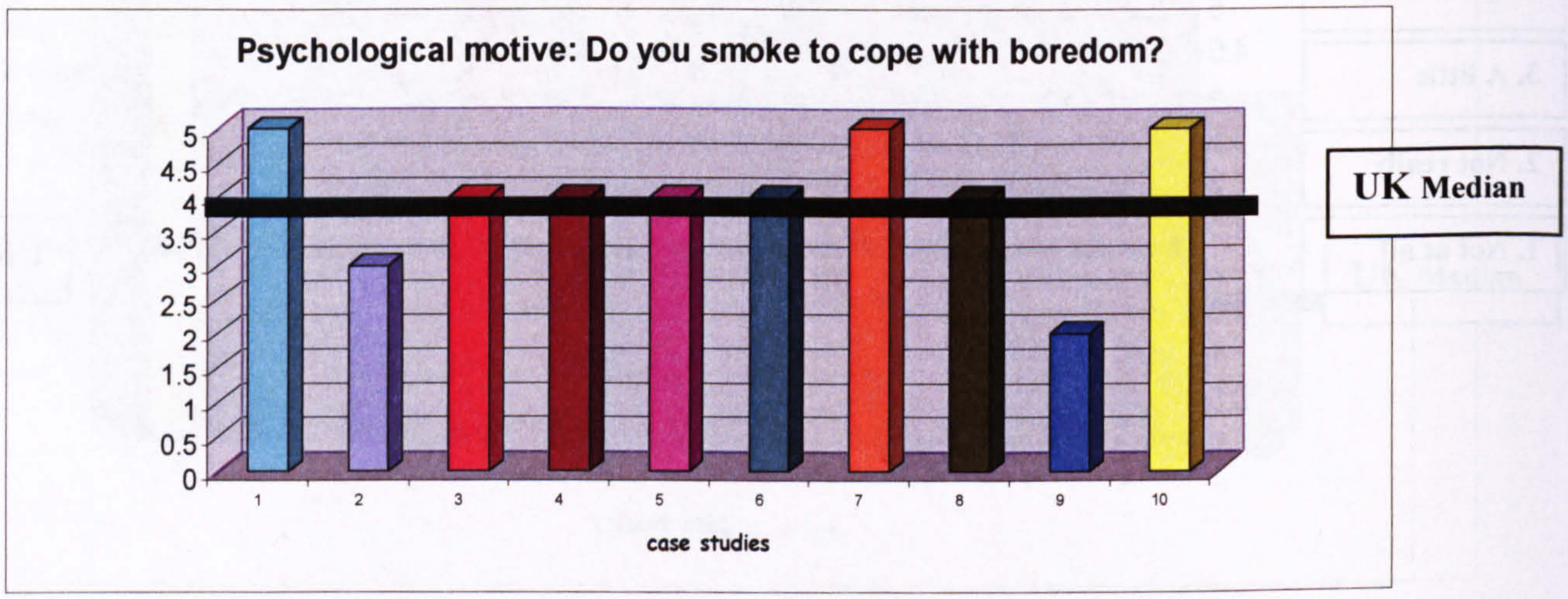


Diagram 7B: Smoking to cope with boredom - Brazilian participants and median score of UK participants



Nicotine dependence

8. Which cigarette do you find the hardest to give up?

Diagram 8A: Nicotine dependence – UK participants (question 3)

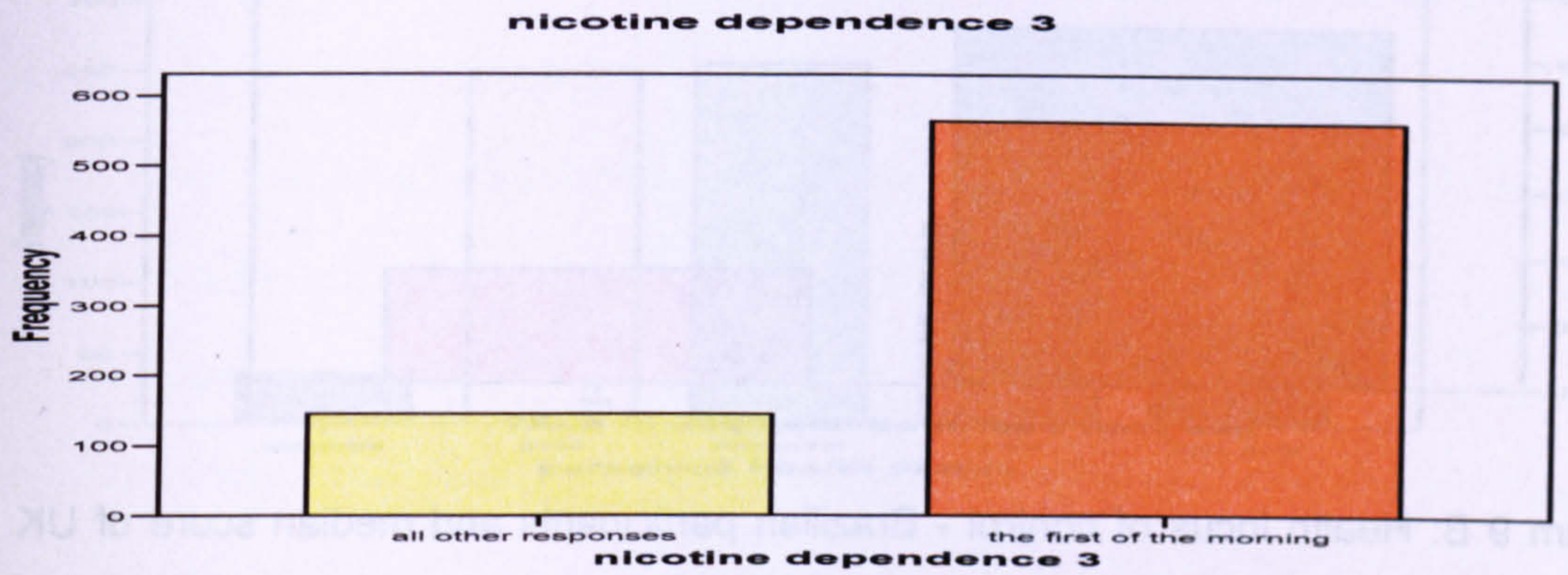
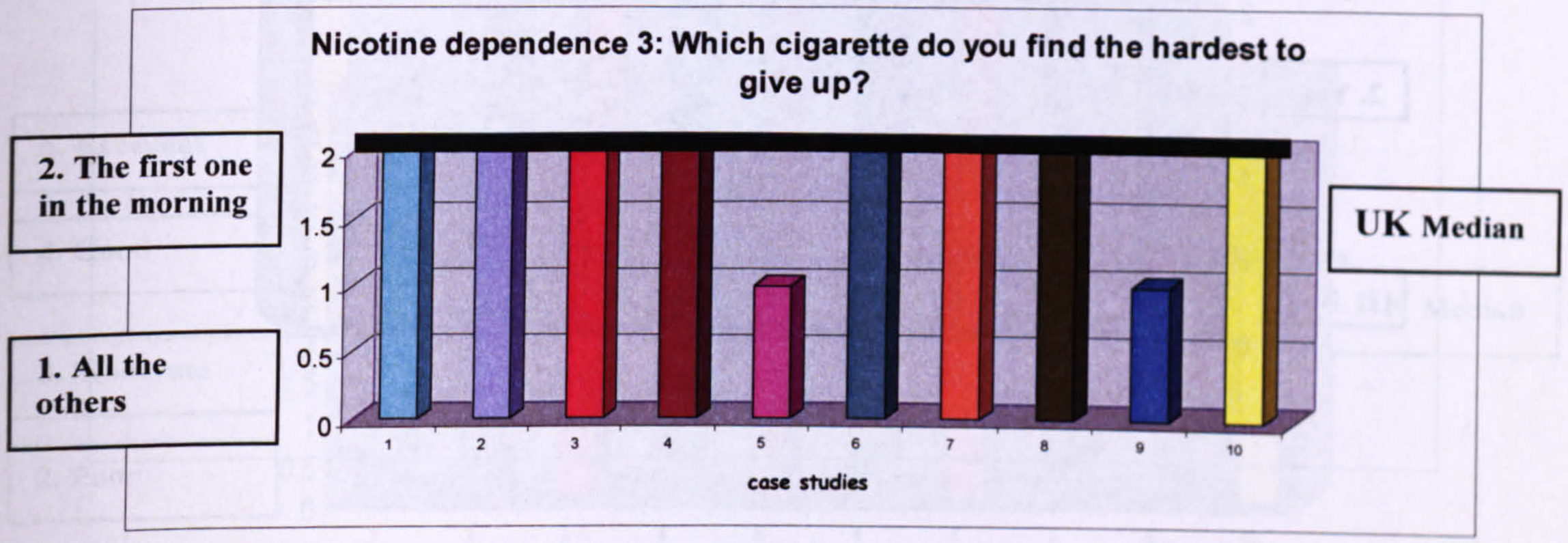


Diagram 8B: Nicotine dependence - Brazilian participants and median score of UK participants



Perceived health and GP advice to quit smoking

9 A. Has your doctor advised you to quit?

Diagram 9A: Doctor's advice to quit – UK participants

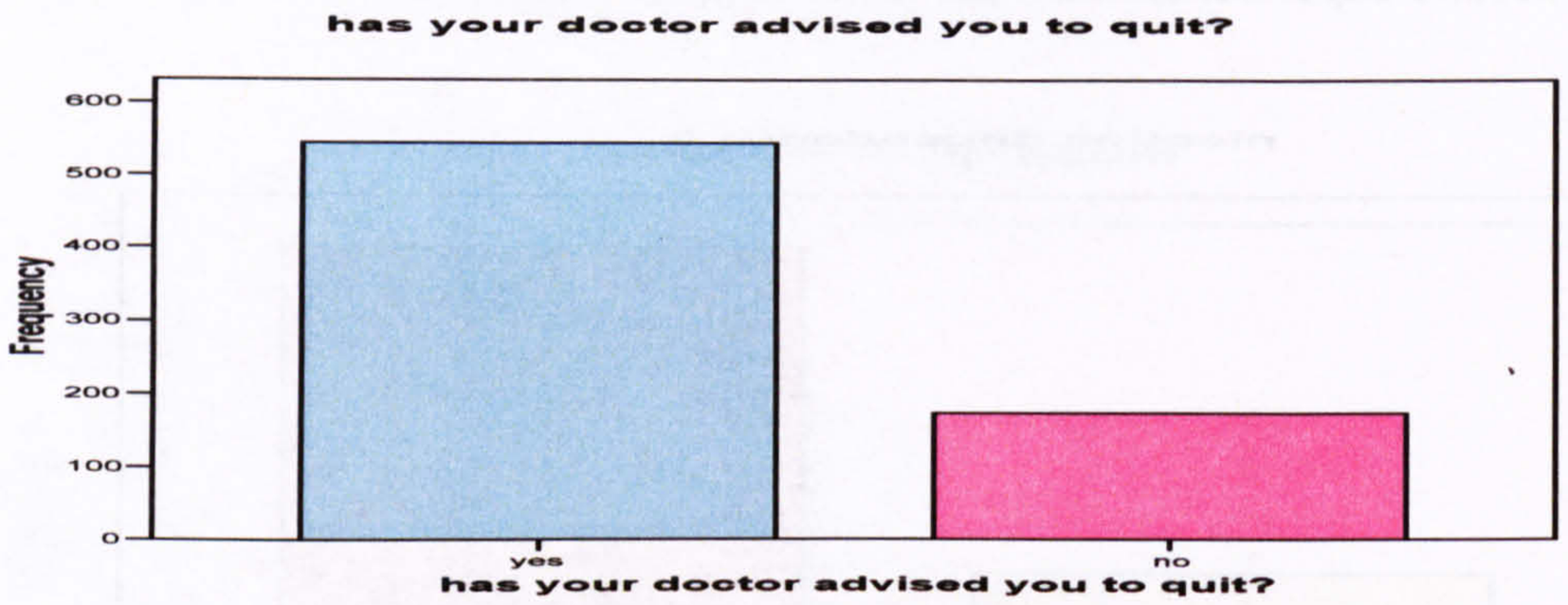
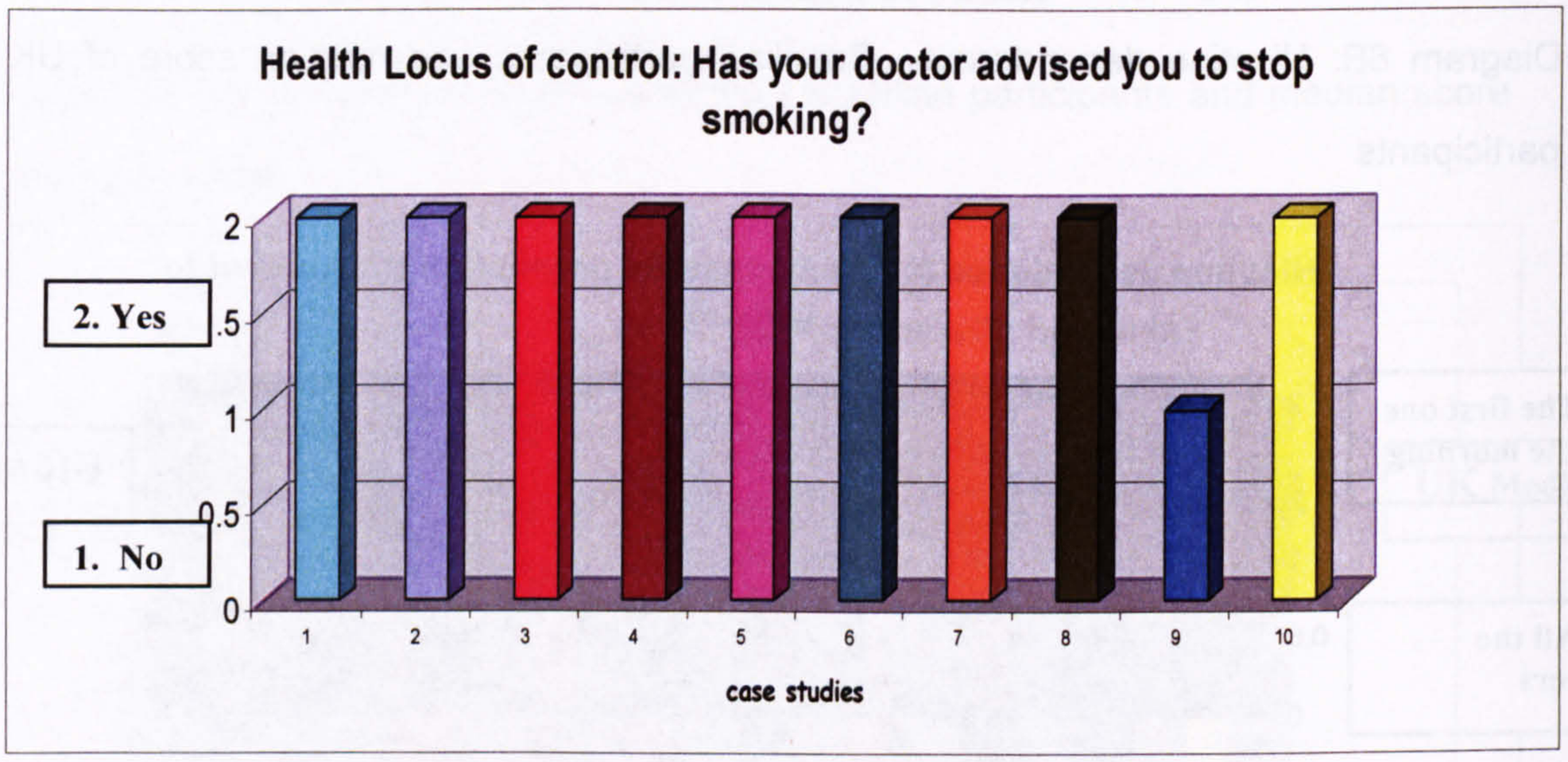


Diagram 9 B: Health locus of control - Brazilian participants and median score of UK participants



1. How do you perceive your health?

Diagram 10A: Self perceived health status – UK participants

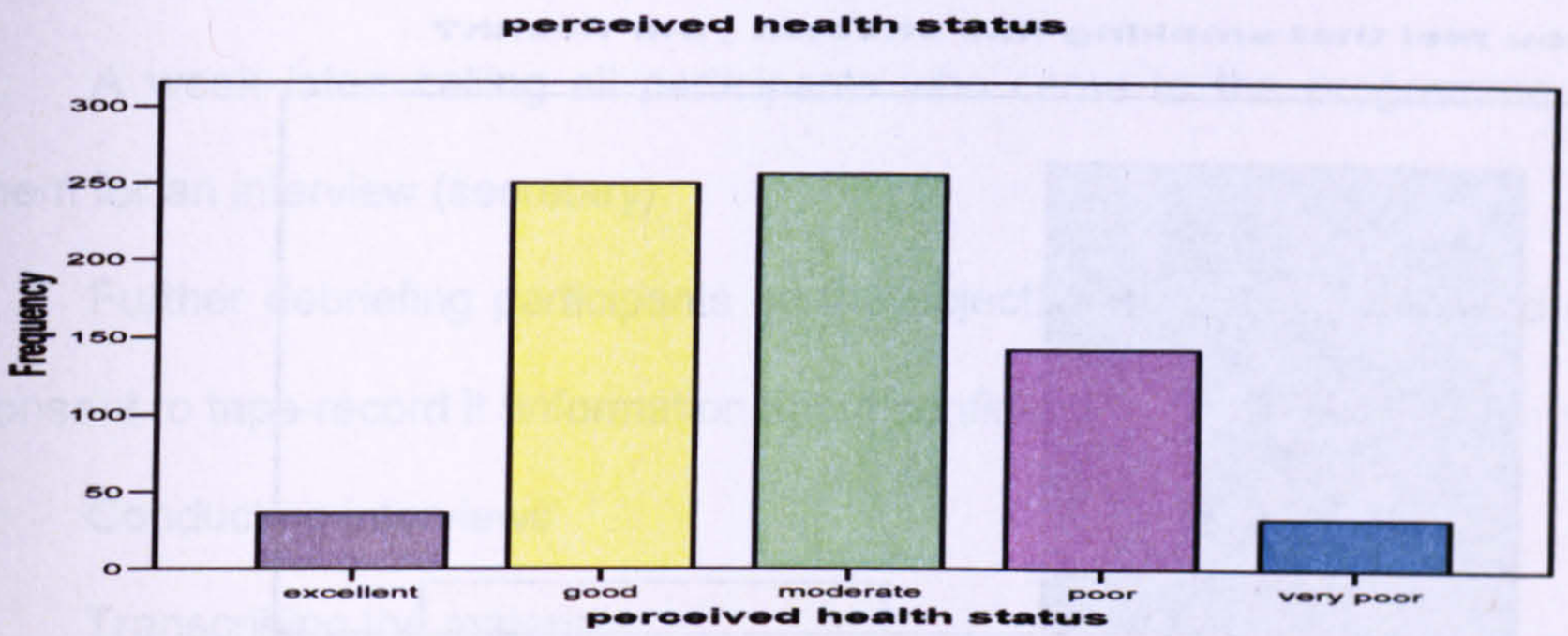
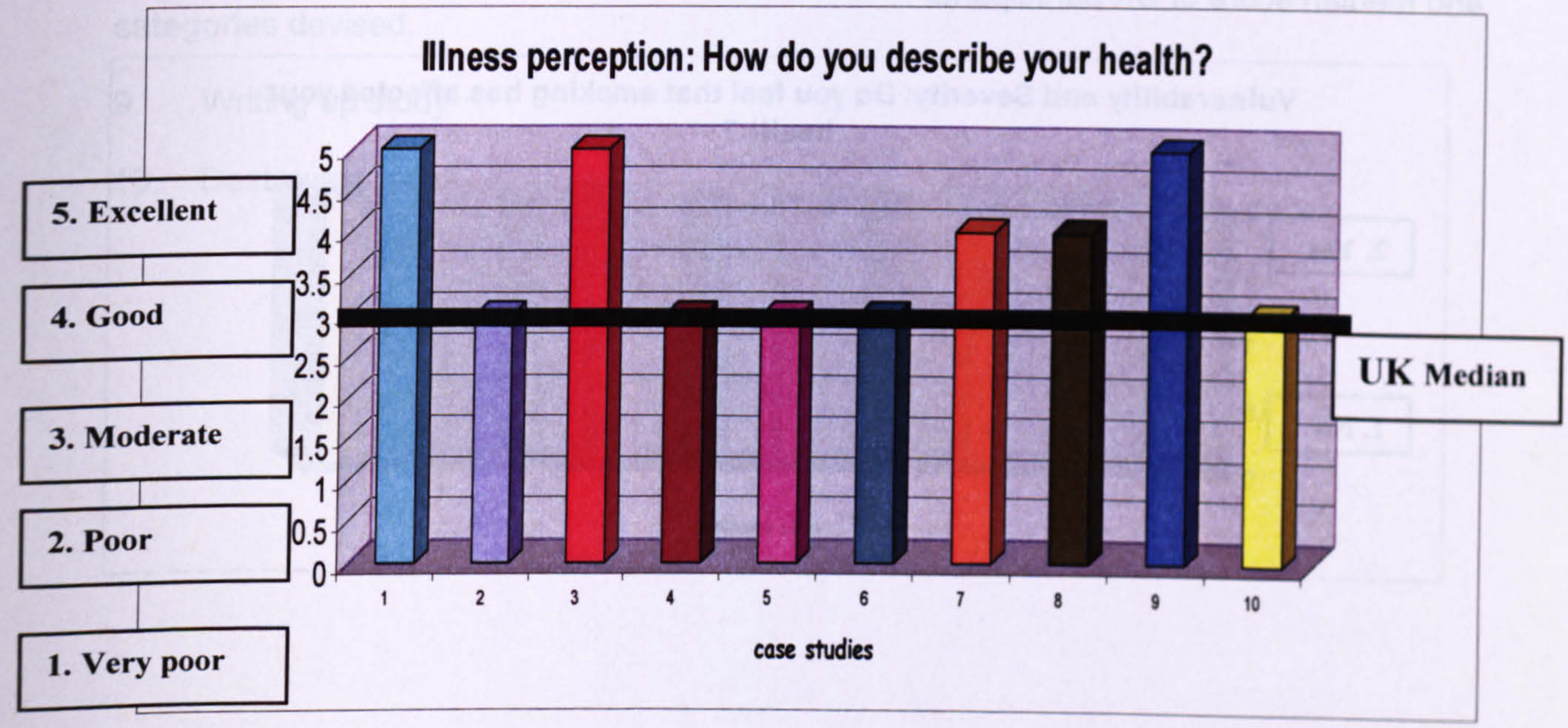


Diagram 10B: Self perceived health status - Brazilian participants and median score of UK participants



2. Do you feel that smoking has affected your health? (Illness perception - vulnerability and severity)

Diagram 11A: Self perception of health status – UK participants

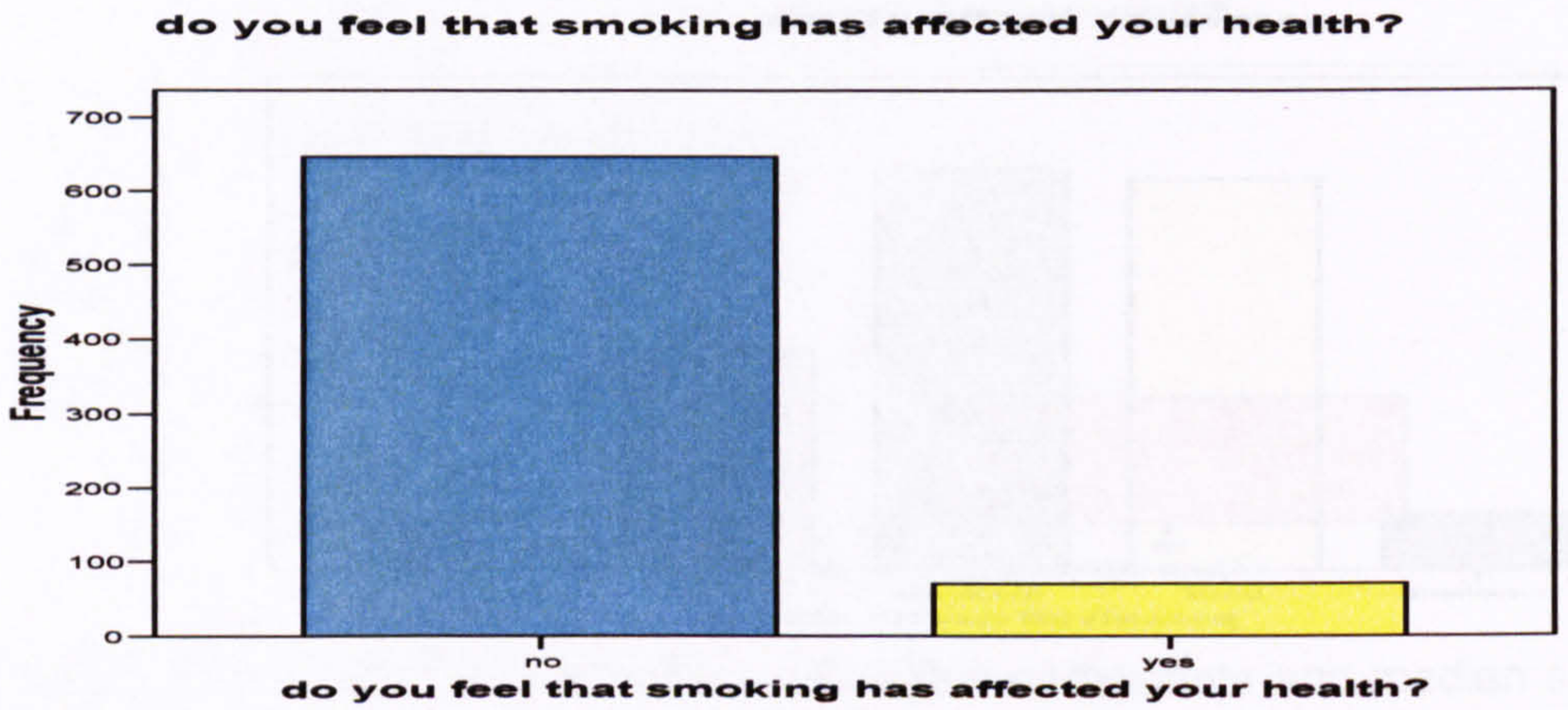
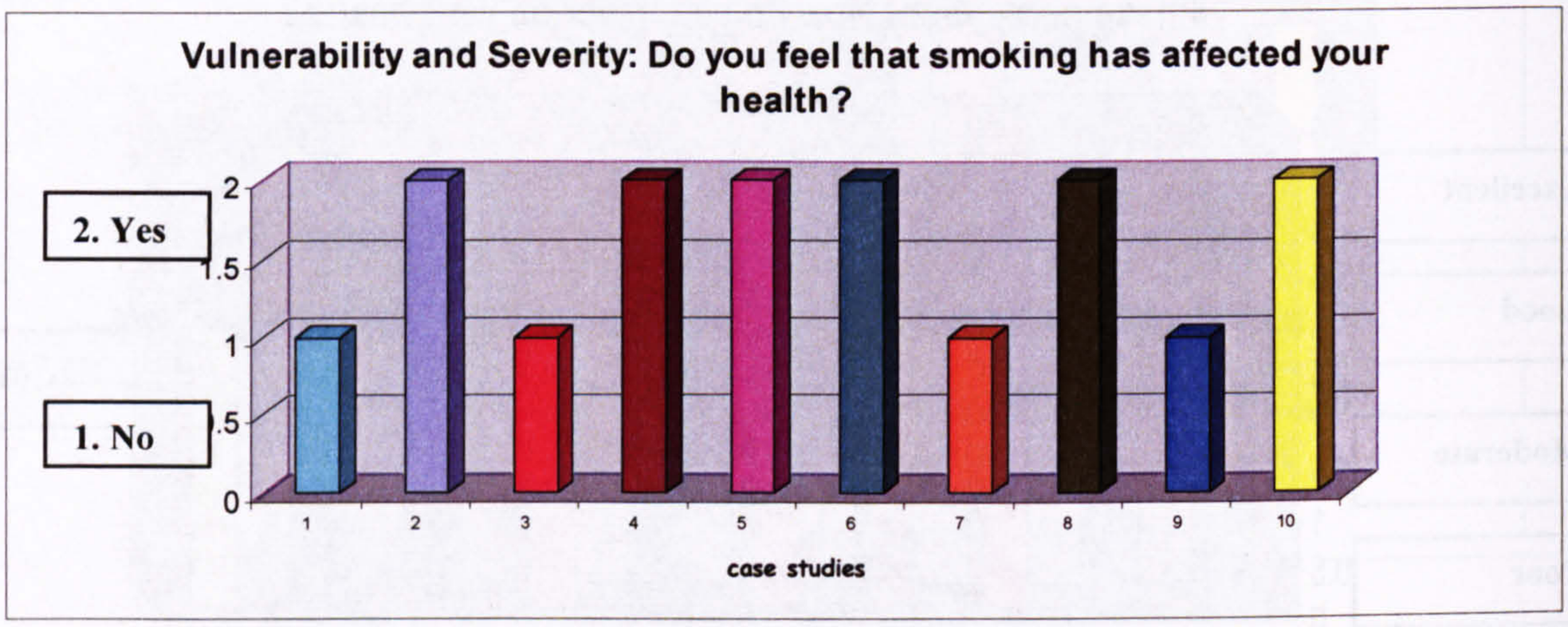


Diagram 11B: Do you feel smoking has affected your health? - Brazilian participants and median score of UK participants



The timetable was as follows:

1. Sending a letter to participants informing them about the objective of the interview, its duration and ethical issues (see below)
2. A week later: calling all participants who came to the programme and inviting them for an interview (secretary)
3. Further debriefing participants on the objective of the interview and getting their consent to tape-record it (information about confidentiality provided)
4. Conducting interviews
5. Transcribing the material
6. Backing up data
7. Analysing the data
8. Discussing findings with a second researcher and reaching an agreement on categories devised.
9. Writing up study
10. Destroying tapes.

The schedule of questions for the interview

1. Why did you decide to stop smoking?
2. Would you have described yourself as addicted to smoking? (physical factors)
3. Do you feel that your health suffered because of smoking? (physical factors)
4. Which cigarette do you miss the most? (physical factors)
5. How do you deal with stress? (psychological factors)
6. Did you smoke to regulate your mood/ to cope with stress/ boredom? (psychological factors)
7. Did you smoke to socialise? (psychosocial factors)
8. Did you ever smoke to control your weight? (psycho-physical factors)
9. Were you motivated to stop smoking? (psychological factors)

How to help smokers to quit?

12th March 2004

Renata Pires

OVERVIEW

- ❖Factors about smoking
- ❖Nicotine Initiation and Maintenance
- ❖Nicotine Addiction/ Psychological causes
- ❖Beliefs and Biases
- ❖Interventions
- ❖Nicotine Replacement Therapy/ Brupropion
- ❖Carbon Monoxide Monitor
- ❖Hillingdon Specialist Smokers' Clinic
- ❖Overview of Service (Aug '00-Jan '04)

Factors about smoking - DoH 2001

- In 2001, 27% of adults aged 16 and over smoked cigarettes in England; 28% of men and 25% of women

- In 2001 prevalence of cigarette smoking continued to be higher for people in manual than non-manual socio-economic groups (32% compared with 21%)

- In 2001, 66% of smokes in England wanted to give up smoking

- More than 120,000 deaths were caused by smoking in UK in 1995 (1/5 of all deaths) ***Department of Health 2003***

The health risks of smoking

✓Wrinkles, cancer of nose and mouth, increasing coughing an wheezing, shortness of breath, lung cancer, leukaemia, chronic bronchitis and emphysema, cancer of the kidney, cancer of the bladder, affected sexual function, gangrene, stroke, defective vision, cancer of the larynx, cancer of the throat, aortic aneurysm, CHD, cancer of pancreas, peptic ulcer, peripheral vascular disease.

Group Work

- Why do you think people smoke?

- Why do you think people find it hard to quit?

Causes of Smoking Initiation

- Social influences: peer pressure, social conformity, family environment

- Attitudes: image of a smoker as rebellious, mature and tough

- Personality: low self-esteem, powerlessness

- Genetic Influences: innate differences in personality/innate sensitivity to properties of nicotine or tobacco

Causes of Smoking Maintenance

Nicotine Addiction

Definition of Addiction:

Behaviour over which an individual has *"lost control"*.

Product of the: *drug, situation* and *person*

Signs:

-Continued use despite knowledge of harmful effects

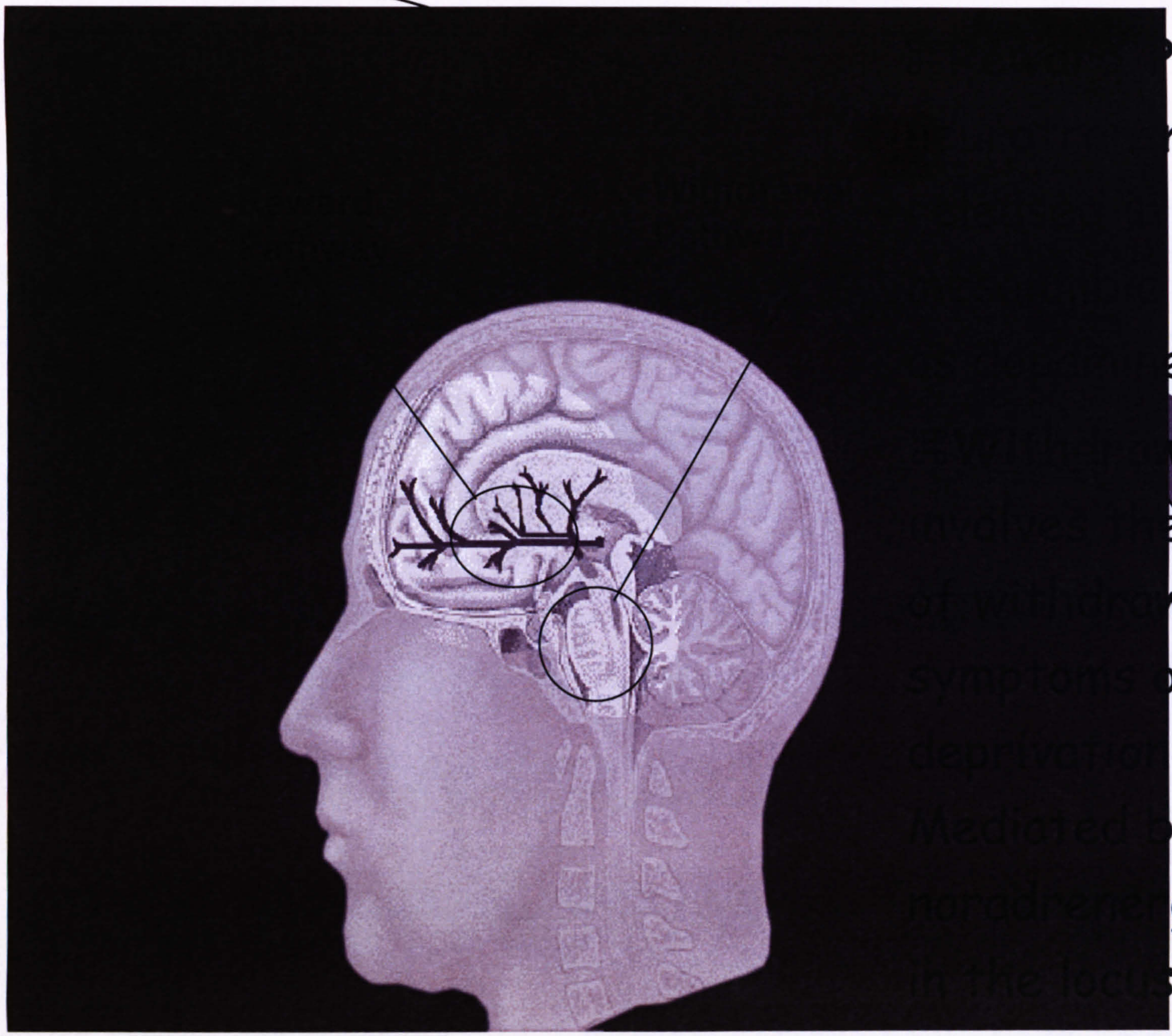
-Cravings during abstinence

-Failure of attempts to stop

-Withdrawal symptoms

-Compulsive use

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REWARD PATHWAY

⌘Nicotine → Mesolimbic system → release of neurotransmitters (dopamine, DA & noradrenaline, NA)

✓Dopamine induces feelings of pleasure or elation

✓Noradrenaline release is associated with improved alertness, concentration and memory

Nicotine provides immediate 'positive reinforcement'. The smoker is motivated to repeat the behaviour

Evidence of Nicotine Addiction

1. >80% of smokers acknowledge the health risks
2. Urges to smoke are as strong as craving for alcohol, heroin and stimulants
3. <25% of quit attempts last more than a week and only about 3% last a year
4. <10% of smokers go a day without having a cigarette
5. Symptoms of withdrawal include depressed mood, increased appetite, aggression, restlessness, poor concentration and are reversed/eased by nicotine

WITHDRAWAL

❖A product of physical or psychological adaptation to long term drug use

❖Physical and mental changes that occur following the interruption/termination of drug use

❖Normally temporary - 4 weeks for the body to eliminate tobacco components

❖Experience of withdrawal symptoms or a need to take the substance to relieve/avoid withdrawal symptoms - NRT "takes the edge"

Psychological Causes

- **Habit**
  - -Automatic in nature
  - -Part of individuals' lives and daily routines
  - -Associated with positive emotions *(relaxation, unwinding, stress buffer)*
- **Immediate gratification**
  - -Smoking is associated with immediate positive effects but has no apparent and immediate consequences on health and physical functioning

PSYCHOLOGICAL REASONS FOR MAINTAINANCE

TRIGGERS

- ✓Situations trigger smoking behaviour
- ✓Smoking is repeated in those contexts and reinforced under those circumstances
- ✓Situations, conditions and activities will be associated with smoking
  - o*In what contexts do people smoke?*
  - o*Can you identify at least 5 situations in which people smoke?*

•Beliefs & Biases

❖Unrealistic optimism

In general, individuals tend to have an exaggerated sense of their ability to control their health and may underestimate their own vulnerability

So which factors would influence the likelihood of quitting?

❖Self-Efficacy

•"Self-efficacy": the belief that one is able to control one's practice of a particular behaviour

Smokers with higher perceived personal control who believe they are likely to succeed are less likely to relapse.

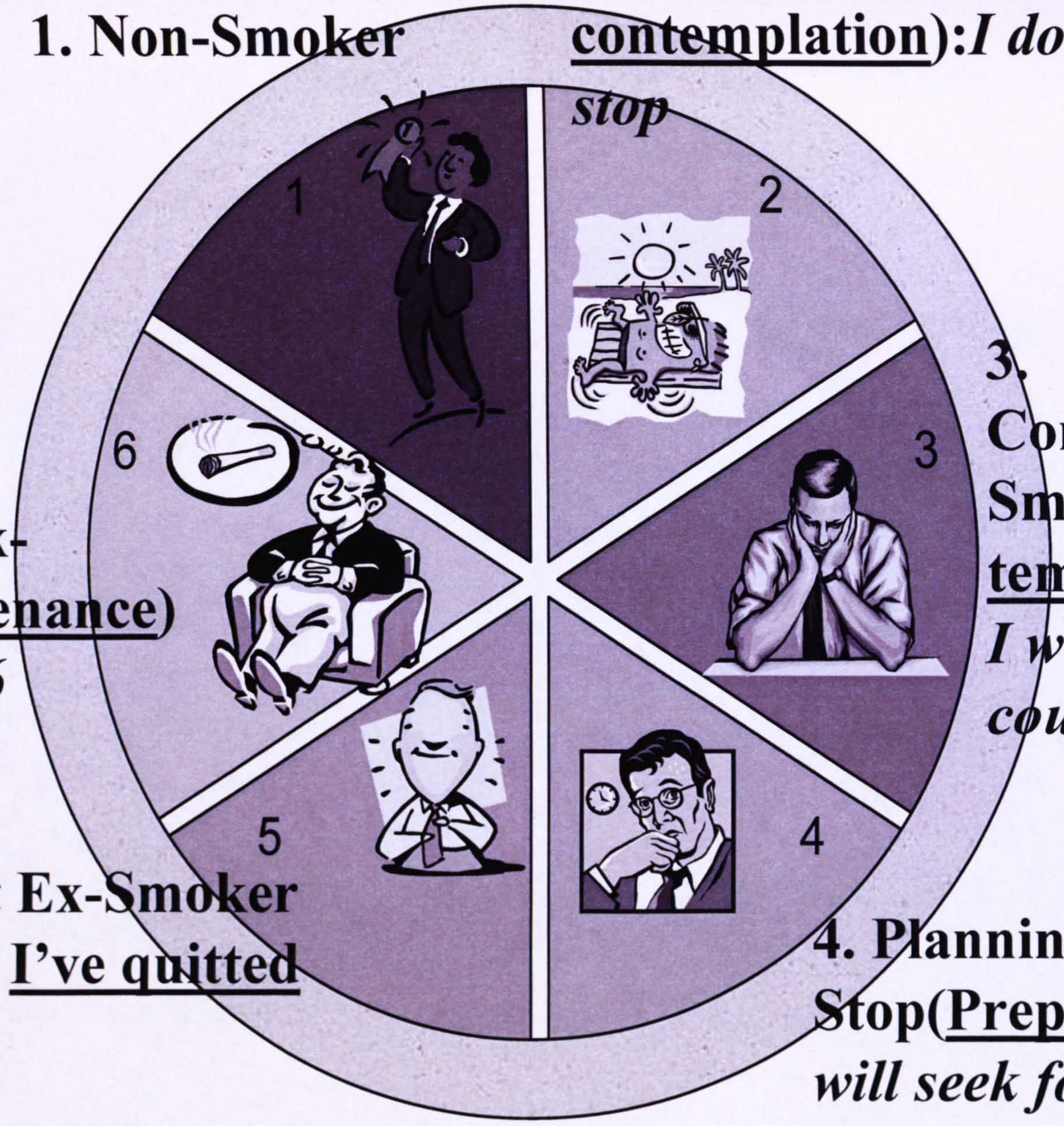
HEALTH LOCUS OF CONTROL Rotter (1966)

How people perceive events?

- Internal: as a result of "their own behaviour or enduring characteristics"
- External: controlled by some other variable such as Luck, God, or Authority (Powerful others)
- Rotter's Social Learning Theory: chances of behaviour occurring is a function of the expectation that it will elicit reward/ value of reward for individual
- Internality is related to adaptive behaviours:
- Awareness of factors which may influence future behaviour
- Take steps to improve their lives
- Resist conformity

1. Non-Smoker

2. Contented smoker (Pre-contemplation):*I don't want to stop*



3. Concerned Smoker(Contemplation): *I wish I could stop*

4. Planning to Stop(Preparation): *I will seek for help*

5. Recent Ex-Smoker (Action): I've quitted recently

6. Contended Ex-Smokers(Maintenance) "I *stopped over 6 months ago*"

WHERE ARE YOU IN THIS DIAGRAM?

INTERVENTIONS

- Brief opportunistic advice from HPs and mainly GPs to all smokers

- Assistance and support in the use of NRT and Bupropion provided by all HPs

- Behavioural support offered by specialist counsellors to hospital patients/pregnant smokers wishing to quit

- Specialist Smokers' Clinics providing behavioural support and using effective medications to out-patients in a group

- One-to-one support

NICOTINE REPLACEMENT THERAPY

➢It is vital that NRT products are used correctly and at an effective dosage. Using too little NRT, especially at the start, can lead to early relapse

- ***Nasal Spray***

Very fast acting,plasma profile mimics that of cigarettes,high dose Nicotine

- ***Microtabs Lozenges***

Fast acting, oral stimulation,discreet and good control

- ***Gum***

Fast acting,oral stimulation and good control

- ***Inhalator***

Fast acting, oral stimulation, hand to mouth activity

- ***16 Hour Patches***

Once daily application, discreet

- ***24 Hour Patches***

Once daily application, discreet, 24 hour cover (no breakthrough craving)

BUPROPION (ZYBAN)

- Can be obtained on NHS prescription

- Bupropion is as effective as NRT. In one study (Jorenby et al 1999) Zyban was shown to be twice as effective as a nicotine patch in achieving abstinence at one year.

- Effective in reducing major withdrawal symptoms. Its efficacy has been proven when accompanied by frequent behavioural support.

CARBON MONOXIDE MONITOR

- *To assess smoke intake*

Co in expired breath is measured in particles per million (ppm)

Cut-off point for abstainers is 10 ppm

Average for Clinic patients >25

- *To motivate abstinence*

Seeing benefits of stopping is encouraging

- *To verify self-reports of abstinence*

Monitoring verifies self-reports and improves their accuracy

Hillingdon Specialist Smokers' Clinic

Theoretical Perspective

Withdrawal-Oriented Treatment for Smokers *(Hajek, 1989)*:

- **Rationale:** Withdrawal discomfort is seen as the major remediable obstacle to quitting in dependent smokers
- **Goal of treatment**: Maintain abstinence during initial withdrawal discomfort
- **Methods to enhance withdrawal relief**: Behavioural group support and withdrawal relief medication (NRT/Bupropion)

Treatment Outline

- 7-week hospital out-patient group treatment
- Group-oriented (focus on support by group members rather than teaching by clinicians)
- Groups of 15-30 smokers quitting on the same day (week 3)
- Close supervision and advice on use of NRT/Bupropion
- Emphasis on complete abstinence
- Use of carbon monoxide (CO) monitor to assess smoke intake, verify self-reports of abstinence and motivate clients

OUTLINE OF 7 SESSIONS WITHDRAWAL-ORIENTED TREATMENT

- **Session 1: Information session**

  Aims to explain the treatment and build realistic and positive expectations

- **Session 2: Preparation session**

  Start building commitment in the groups and prepare clients for quit day

- **Session 3: Quit day**

  Initiate group support and provide advice and strategies for dealing with difficult/tempting situations

- **Session 4-6: Support sessions**

  Group support, continuous motivation and relapse prevention

- **Session 7: Final session**

  Conclude the course, invitation abstinence support meetings

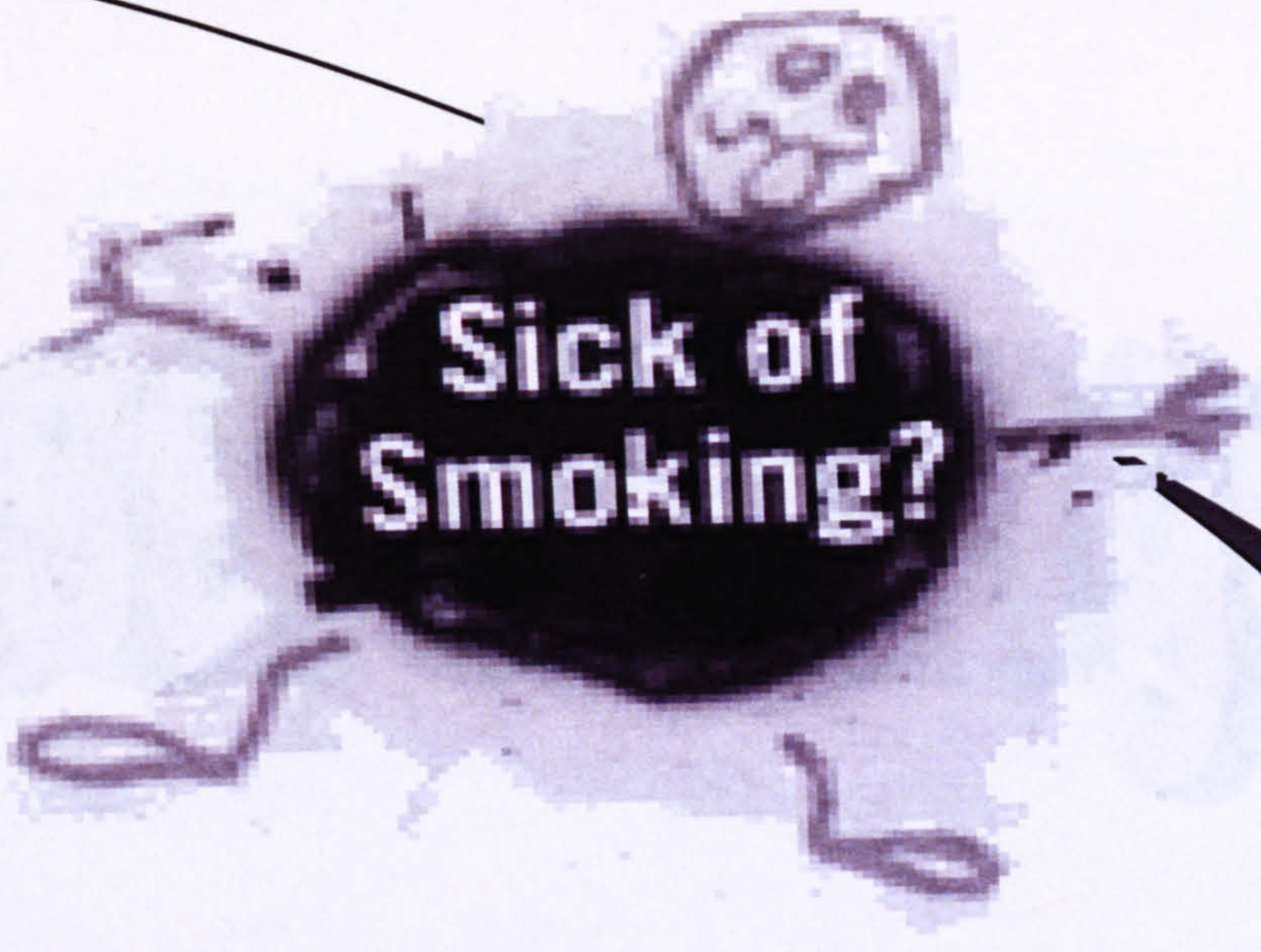
Overview of Service (Aug '00-Jan '04)

	N groups	*N* invited	N set quit day	*N* abstinent	Success rate
2000	4	195	68	39	57%
2001	13	568	277	192	69%
2002	9	421	170	101	60%
2003	8	294	126	80	63%
Jan2004	3	148	50	39	78%
Total	**37**	**1623**	**691**	**451**	**65%**

Results across clinics:

4-weeks → 28% of those invited & 65% of those setting a quit day are successful

12-months → 33% of successful 4-week quitters are non-smokers at 12 months

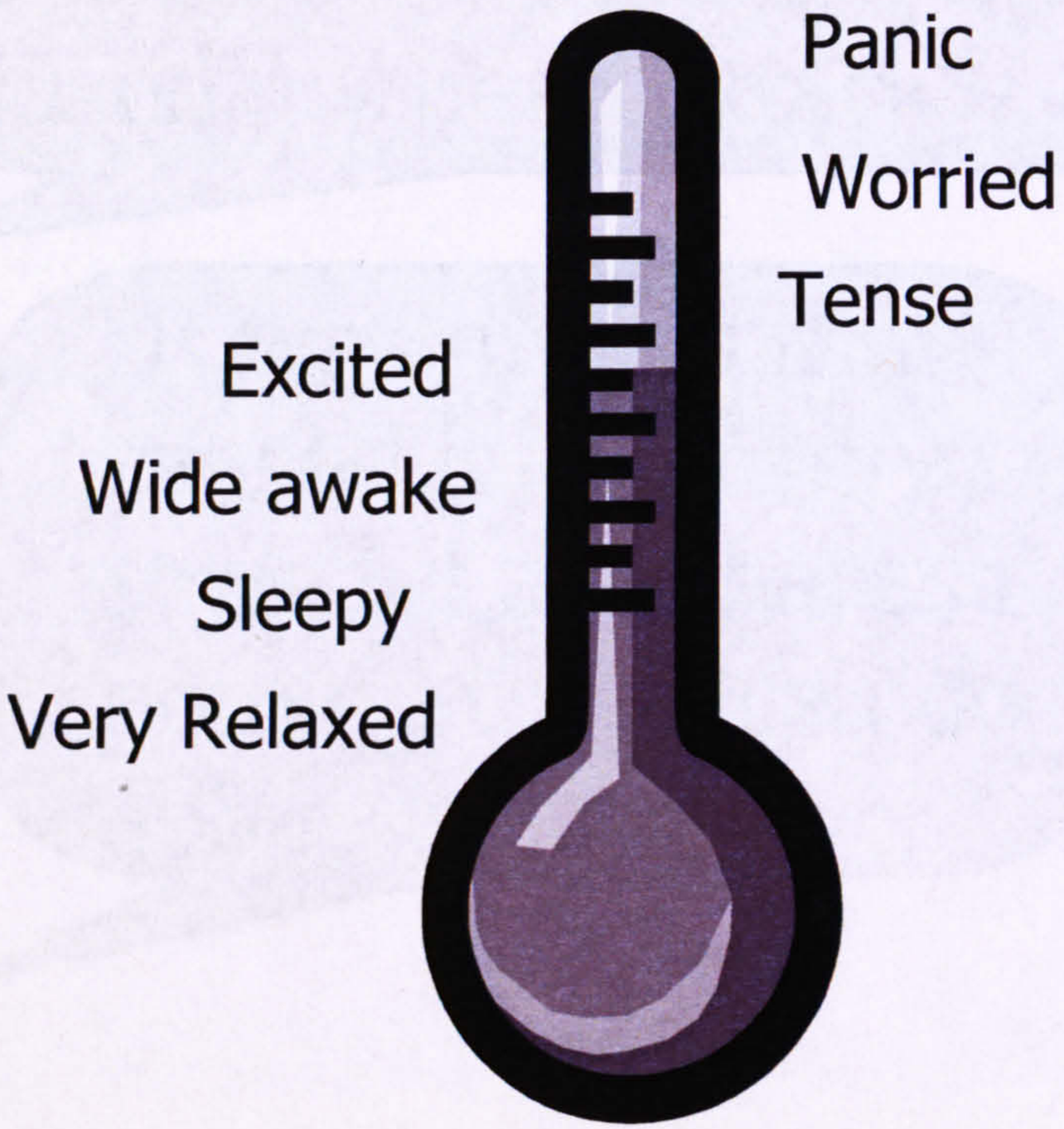


Don't give up giving up.

Stress management

What is stress?

- "Feeling unable to cope with the demands placed on us"



Does stress cause heart disease?

"I enjoy working hard and always being under pressure, but that built up stress which caused my heart attack"

"It was my job that caused it – it's very stressful and there is nothing that I can do about it"

"I've just got so much on at the moment, and the constant arguments at home aren't helping matters – I knew I'd eventually end up with heart disease"

Stress and heart disease

- Stress is NOT a major cause of heart disease

....BUT <u>long-term stress</u> can make you miserable and lead to bad habits like smoking, drinking, not exercising, unhealthy eating, all of which DO cause heart disease.

....ALSO stress can increase blood pressure, increase pulse and encourage clotting of the arteries

Long-term stress is a risk, not one offs as depicted on soaps, media etc.

What causes YOU stress?

Emergencies (e.g. fall, car crash, burglary etc.)

Life events (e.g. bereavement, illness, marriage, holiday, change job)

Daily hassles (e.g. stuck traffic jam, arguments, queue in supermarket etc.

Which of 3 categories is most harmful to health? Why?

How does your body react when stressed?

Adrenaline is released which gets us ready to fight or run when we perceive we are in danger (fight or flight response)



Sweat more to cool down muscles

Increases breathing – to get more O_2

Shuts down stomach

Speeds up heart rate

Reduces blood supply to hands and feet

Problem when get this reaction but can't fight or run away….

How does it make you feel?

- Any worrying thought, memory or event turns on adrenaline…

"There is something wrong with my heart again"

"I'm not getting better, I'm getting worse"

"I'm going to die"

"I feel faint, I may be going to pass out"

"It's dangerous for people with heart problems to argue"

The actual thought or memory goes through our minds so quickly that we don't realise it has happened. We just get the feeling it produces

Coping with stress

- Need to be aware when more tense and stressed (we may be the last person to notice it – becomes habitual)
- Can prevent physical build up of stress

  – Diaphragmatic breathing

Breathe in → Stomach out
Breathe out → Stomach in

– Relaxation – progressive muscle relaxation
guided imagery / visualisation

Coping with stress

How good at you at….

- saying NO to some things?
- Making time for enjoyable things?
- Prioritising activities?
- Letting other people help?
- Switching off from thoughts/worries?
- Slowing down, taking your time?
- Thinking about what you have achieved, not worrying about what you haven't?


THANK YOU!!
and... keep cool!