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3 Recruiting for values in healthcare: a preliminary review 4 of the evidence

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9 **Abstract** Compassion, benevolence, respect and dignity are important for any healthcare
10 professional to ensure the provision of high quality care and patient outcomes. This paper
11 presents a structured search and thematic review of the research evidence relating to
12 **AQ1** values-based recruitment within healthcare. Several different databases, journals and
13 government reports were searched to retrieve studies relating to values-based recruitment
14 published between 1998 and 2013, both in healthcare settings and other occupational
15 contexts. Limited published research related to values-based recruitment directly, so the
16 available theoretical context of values is explored alongside an analysis of the impact of
17 value congruence. The implications for the design of selection methods to measure values
18 is explored beyond the scope of the initial literature search. Research suggests some
19 selection methods may be appropriate for values-based recruitment, such as situational
20 judgment tests (SJTs), structured interviews and multiple-mini interviews (MMIs). Per-
21 sonality tests were also identified as having the potential to compliment other methods (e.g.
22 structured interviews), as part of a values-based recruitment agenda. Methods including
23 personal statements, references and unstructured/‘traditional’ interviews were identified as
24 inappropriate for values-based recruitment. Practical implications are discussed in the
25 context of values-based recruitment in the healthcare context. Theoretical implications of
26 our findings imply that prosocial implicit trait policies, which could be measured by
27 selection tools such as SJTs and MMIs, may be linked to individuals’ values via the
28 behaviours individuals consider to be effective in given situations. Further research is

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required to state this conclusively however, and methods for values-based recruitment represent an exciting and relatively uncharted territory for further research.

Keywords Values based recruitment · Selection · Healthcare · Review

Introduction

Historically, selection into healthcare-related education and training (e.g. medicine, nursing, midwifery) has been based primarily on prior academic attainment (Ferguson et al. 2002). Previous reviews conclude that academic indicators are far from perfect predictors of performance (accounting for approximately 23 % the variance in performance in undergraduate medical training and 6 % in postgraduate education and training, Trost et al. 1998). It is argued that academic ability is necessary but not sufficient to ensure that trainees become competent healthcare professionals, as other qualities, attributes and values may need to be present from the start (Patterson et al. 2000, in submission; Patterson and Ferguson 2010).

There exists a large body of international research exploring the impact of caregivers' core values of compassion, empathy, respect and dignity on patients' experience of health and social care services. As an illustration within the UK, although the values and behaviours expected of health and social care professionals are preserved in the National Health Service (NHS) Constitution (2012), recent government enquiries (Cavendish 2013; Francis 2013) have highlighted major concerns about the decline in compassionate care within all healthcare roles, which has relevance internationally. These reports, although UK-based, highlighted the critical role that the workforce plays internationally in ensuring the provision of high quality and safe healthcare services and, in particular, the significance of staff values and behaviours on the quality of patient care and patient outcomes. Undoubtedly, an important first step is ensuring that the right individuals with the appropriate values to work in healthcare are appointed to any educational course, training place or healthcare role.

Given the need for education providers, trainers and employers to refocus selection in this way, an important question is: which selection methods are robust for attracting and selecting individuals whose values and behaviours align with the values necessary to work in healthcare? There will inevitably be significant differences in the design of attraction and selection systems at these various levels with regard to the level and specialisation of knowledge. Crucially, however, the values of candidates should be consistent at all points of entry, as providing high quality, safe and compassionate care remains important throughout education, training, and at the fully-qualified/professional level. As such, attraction and selection at all points of entry to healthcare must be designed to ensure that individuals applying to be future or current healthcare providers have the appropriate values to work in this context.

This structured search and thematic review aims to examine the research evidence regarding which recruitment methods might best address values-based recruitment (VBR) within healthcare settings. Before reviewing this evidence, it is important to consider how values are defined in the research literature, and explore how values relate to other concepts that are often discussed simultaneously (e.g. personality, motivation and behaviours). This is particularly important in the context of recruitment, as there may be important implications regarding the selection methods available to assess each of these constructs.

Within the literature, values are consistently defined as a set of *enduring beliefs* which a person holds about what is good or desirable in life; people hold numerous values and



some may be important to one person but not to another (Schwartz 2012). In general, values research has ascribed to one of two basic models (Ravlin and Meglino 1987): “values as preferences” (or work values) which are seen as attitudes that indicate the preferences individuals have for various environments; and “values as principles” (or personal values) which are guiding principles regarding how individuals feel they ought to behave. In the context of VBR, it is likely that personal values are just as important to consider as work values. In summary, values are *evaluative*, in that they guide individuals’ judgments about appropriate behaviours both for oneself and for others; *general*, since they transcend specific situations, and *ordered by importance*, such that one will tend to act according to the more important value when two values are in conflict (Schwartz 1992).

Research suggests that values develop initially through social interactions with role models such as parents and teachers. Because values are learned, there tend to be similarities in values patterns within cultures, as shared values are passed from generation to generation (Meglino and Ravlin 1998; Oishi et al. 1998). Values are shaped during adolescence but are relatively stable in adulthood (Kapes and Strickler 1975). However, since values are learned initially through social interactions, being exposed to a new social environment can sometimes facilitate changes in one’s values structure. This explains why socialisation efforts in organisations can sometimes change newcomer’s values to become more like those of the organisation (Cable and Parsons 2001).

Until recently there has been limited understanding of how personality and values are related to one another, much less how they might jointly impact on behaviour. Parks and Guay (2009) provide a detailed review of the personality and values literature in terms of how these constructs are distinct, and how each relate to motivation and behaviour. In overview, personality relates to *enduring dispositions*, whereas values relate to *enduring goals*. Values and personality both describe components within individuals, and are both believed to impact on behaviour, decision-making, motivation, attitudes, and interpersonal relations, hence the two are inextricably linked. Yet, there are also important differences. Values include an evaluative component not found in personality. Values relate to what we *believe we ought to do*, while personality relates to what we naturally *tend to do* (dispositions). Personality traits do not conflict with one another (i.e. one can simultaneously express the personality traits of Extraversion and Conscientiousness), yet values do conflict as some are pursued at the expense of others (Parks and Guay 2009). These are important distinctions when considering selection tools and measures of values. Indeed Fig. 1 highlights how personality and values differentially influence goal striving and goal accomplishment, whilst also being closely related. This highlights the importance of assessing the correct construct during a selection process.

Despite the recognised importance of ensuring individual values align with those required within healthcare education and organisational contexts, there has been no review of this concept relating to recruitment for healthcare to date. This represents a significant gap in the selection and recruitment literature. As such, we aim to conduct a preliminary

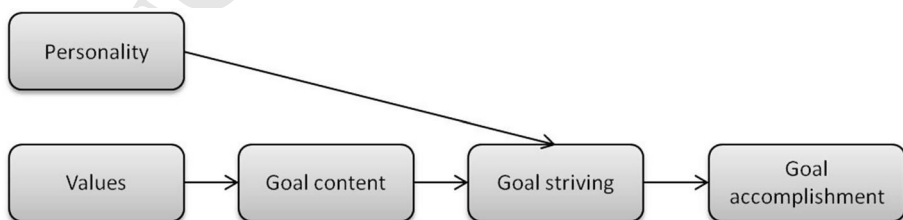


Fig. 1 Model of relationship between personality and values on outcomes (Parks and Guay 2009)



review of the emerging literature on VBR, as a first step to synthesise the developing literature in this relatively new area of research. In our review, we set out to explore three key research questions, as follows:

1. How does values-based recruitment link to existing theoretical contexts?
2. What is the impact of value congruence on outcomes for education providers/students, trainers/trainees and employers/employees?
3. What are the implications for measuring and recruiting for values?

Method

Structured search and thematic review

We conducted a structured search and thematic review in the area of VBR within healthcare and the associated wider literature. This methodology was appropriate as we aimed to address broad research questions in order to synthesise the evidence currently available in an emerging area of enquiry. Additionally, the wide scope of the review allowed us to incorporate multiple types of study design and the wider literature to gain a more complete picture of the currently available research relating to VBR (see Grant and Booth 2009 for a description of a structured search and thematic review methodology).

Data sources

The concept of “values-based recruitment” is relatively new within healthcare and so using this terminology was unlikely to result in a large volume of relevant research evidence. Therefore, to explore the evidence base for VBR we widened the search to other contexts. Additionally, it was anticipated that a search of the academic literature alone may yield a limited number of papers. Therefore, a range of sources were used, including databases (e.g. Medline, Psycinfo, Web of Science), journals (e.g. Medical Education, Medical Teacher, Journal of Applied Psychology), government reports, web searches and expert contacts, to conduct a computer-based search of literature spanning 15 years (from 1998 to 2013). In order to retrieve research relating to VBR and other similar concepts (such as person–organisation fit), search terms included the following key words: *values-based recruitment*; *values-based assessment*; *person–organisation fit*; *professional attributes*. Other terms (e.g. *selection methods*; *values*, *professional standards*; *morals*; *ethics*; *ideals*; *doctor*; *nurse*) were included as additional filters rather than primary search terms. In addition, reference lists from papers were manually checked for other relevant journal articles.

Selection of studies and inclusion criteria

Fifty-one abstracts were initially identified using the search strategies outlined above. Two researchers (LPC and FP) independently reviewed the abstracts to ensure that they met the inclusion criteria. These inclusion criteria required the papers to be relevant to the identified topic, empirical research, evidence based and peer reviewed; papers were rejected if they were opinion pieces, discussion papers or commentaries. Non-relevant papers were rejected at this stage. After the abstracts were examined, 17 papers were retrieved and reviewed by LPC and FP using a full-text version of each article. A further three papers were identified following a review of the reference list within selected articles.



Review procedure

A total of 20 independent articles were retained for the final review. As anticipated, there is limited published research evidence relating to VBR directly. Search results showed that where evidence relating to VBR in the healthcare education context does exist, it is largely focused on medical school admissions. Although largely unique to medical education, these aspects of the literature are integrated into this review, as they may be interpreted with relevance to all levels and roles within the healthcare context. The majority of remaining papers addressing VBR were identified within the personnel selection research literature. Specifically, we argue that the notion of ‘*value congruence*’ between an employee and the organisation (also known as ‘person–organisation fit’), also has relevance when considering a student/trainee’s fit with their education/training provider, respectively.

Despite the literature pertaining to medical school selection, there was an absence of a significant body of evidence from within the context of healthcare education specifically. Given the contextual differences in this literature, results should be interpreted with some caution because outcome criteria may not be directly generalizable to a healthcare context. Whilst the drivers for implementing VBR in the healthcare education context are focused around the need to ensure the best possible care for patients across professional, institutional and geographical boundaries, the literature on individuals’ values in other contexts may have different aims, for example to improve job satisfaction and productivity, or to reduce staff turnover. Nonetheless, the existing body of research regarding VBR across organisational contexts remains pertinent to this review, as the research literature identified provides several important insights regarding the impact of value congruence between students/trainees/employees and education or training providers/organisations respectively, relevant to the implementation of VBR in healthcare. We were able to answer our first two research questions by conducting a thematic review of the papers identified during the structured search, in combination with the wider research literature. We structure the findings under the following headings:

1. What is values-based recruitment and how does it link to existing theoretical contexts, including (1a) attraction and socialisation of students/trainees/employees with appropriate values, and; (1b) value congruence and “fit” theories;
2. What is the impact of value congruence on outcomes for education providers and students, trainers and trainees, and employers and employees?
3. In answering ‘What are the implications for measuring and recruiting for values?’ we were able to identify evidence from the papers identified during the structured search regarding measurement tools for values but little else regarding the implications for measuring and recruiting for values. We felt that there were further issues to consider here, and therefore have summarised the wider literature regarding three related issues: (3a) *The importance of role analysis*; (3b) *Which evaluation criteria should be used for VBR?* (3c) *Which selection methods might be useful for VBR* and as such have outlined some key points under these headings.

Results and discussion

In this section we outline the findings from the structured search and discuss these, combined with other more established concepts in the literature in order to contextualise the findings and synthesise the existing research (Grant and Booth 2009). This allows us to



provide a more complete picture of the literature, in relation to each of our research questions.¹

1. What is values-based recruitment and how does it link to existing theoretical contexts?

(1a) Attraction and socialisation of students/trainees/employees with appropriate values

Eleven papers were identified that explored attracting applicants with appropriate values. One of these was a review article, with another being a conceptual report. The rest were empirical studies; and of these, only two studies were in the context of healthcare (nursing and allied health profession staff); eight were based in other professional contexts (e.g. banking, finance, utilities, engineering) and one paper used students as their sample.

There are two main theories in the personnel selection literature that relate to employee values within organisations, which would also apply to students and trainees in the context of an education or training provider, respectively. These are Schneider's Attraction–Selection–Attrition (ASA) theory (Schneider et al. 1995; Schneider 1978) and socialization theories (e.g. *Chao et al. 1994). The ASA theory is based on the notion that 'the people make the place' (Schneider 1987), where, over time, the values and personalities of the workforce become increasingly homogeneous. This occurs as individuals are 'attracted' to an organisation based on their values; 'selected' due to value congruence; and where value congruence is low, 'attrition' will occur. Consistent with Schneider's proposal, *Billsberry (2007) found that only applicants with familiarity, proximity and previous exposure to an organisation are *attracted* to it. Conversely, Billsberry found that candidates applied for jobs on the basis of *type* of role (their vocation), rather than attraction to the organisation as such. Implications of these findings within the context of healthcare may be that individuals with previous knowledge of the healthcare organisation to which they are applying (e.g. family working in healthcare, or student placements) may pre-judge its values prior to education, training or employment, and may be attracted (or not) accordingly.

Motivations for choosing education, training or jobs can also be influenced by social and personal circumstances, however they may also be attractive based on extrinsic rewards such as long-term job security and income (*Hollup 2012), rather than on the basis of the organisation and its perceived values. In support of this proposition, researchers in the UK (*Arnold et al. 2003) explored perceptions of the National Health Service (NHS) among 231 potential nursing and allied health professions recruits, and concluded that such individuals do not necessarily personally identify with the NHS's values; rather they wished to pursue their chosen profession regardless of organization: for some people the images and reputation of the NHS may be less crucial in their decision of whether to work for it than the activities and missions associated with their desired occupation (*Arnold et al.; Audit Commission 2002). In terms of VBR, the picture painted by the current research evidence is therefore unclear regarding the extent to which the perceived values of the organisation play a role in attracting students, trainees and employees.

Socialisation theories, which relate to individuals' adaptation to an organisation or role, have been linked to the development of values within an organisation following recruitment (*Bauer et al. 1998; *Cable and Parsons 2001; *Chao et al. 1994). Small changes in individuals' values have been demonstrated following initial employment (*De Cooman et al. 2009; *Meglino and Ravlin 1998) where 'value internalisation' and 'behavioural modelling' impact on an individual's values after entry (*De Cooman et al. 2009;

¹ Research articles identified by the structured search are identified by an asterisk.



*Maierhofer et al. 2000; *Ostroff et al. 2005). Value internalisation is the subtle change in an individual's values over time as a result of experiences; and both trainers/managers and peers/colleagues have an impact on new recruits as role models (*Maierhofer et al. 2000). In terms of VBR, individuals with optimal values for the delivery of high quality, competent and compassionate care who are recruited into education, training or fully-qualified roles, may be at risk of changing their behaviours through either socialisation (value internalisation) (*Cable and Parsons 2001), or attrition if placed within teams where suboptimal values for working within healthcare are evident. In the context of influencing values within an education/training provider or organisation, the evidence shows the need for a multifaceted approach beyond recruitment alone, for example the use of values-based education and training once in the role to reinforce the core values and principles of the education/training provider or organisation (*Rapping 2009). In summary, the evidence suggests that VBR should only be one part of an approach to embed the values of high quality, safe and compassionate care in a healthcare context.

(1b) Value congruence and "fit" theories

Five articles were identified that address the issue of value congruence and "fit" theories. One was a review article, and the others were empirical studies, all of which focused on contexts outside of healthcare: banking, consulting and teaching.

"Value congruence" represents the extent to which an individual's values are concordant with those of the organisation in which they work. This construct is used to measure the level of "fit" an individual has with number of aspects of an organisation, or education/training provider. For example, the extent to which an individual "fits" with the organisation, its culture (values) or the values of the other employees within it, is known as 'Person-Organisation' (P-O) fit (*Kristof-Brown 2000). Value congruence with colleagues has been described as 'Person-Group' (P-G) fit, or 'Person-Person' (P-P) fit, and in terms of fit between an individual's knowledge, skills and the attitudes required for the job, the term 'Person-Job (P-J) fit is often used (Ostroff and Zhan 2012). It is likely that these different types of fit are related. Some researchers argue that organisations do not have 'values' as such, but rather the organisational values are actually represented (and measured) by the workforce (or students and trainees in the case of education and training, respectively) (*Meglino and Ravlin 1998; *Ostroff et al. 2005; *Van Vianen 2000). However, *De Cooman et al. (2009) found that individuals do not distinguish between the values of the organisation, and those of its members, upon entry, but after 2 years within the organisation they were able to distinguish between these entities. Furthermore, employees have been shown to be operating between two different subcultures (concerning their managers and their co-workers) in some instances (*Ostroff et al. 2005; *Van Vianen 2000).

2. What is the impact of value congruence on outcomes for education providers and students, trainers and trainees, and employers and employees?

A key objective of this review is to explore the evidence base underpinning the effectiveness of value congruence and how this relates to important outcomes; in particular demonstrating care and compassion towards patients. However, most of the literature retrieved describes the impact of value congruence (P-O fit) on other outcomes (largely from the employee perspective in organisations) such as job satisfaction, organisational commitment and employee turnover (*Amos and Weathington 2008; *Hoffman and Woehr 2005), with very little research focusing on educational attainment, training/job performance or specific behavioural outcomes. Nine papers were identified that explore the



impact of employee congruence on various outcomes. Three of these were review articles and one was a meta-analysis. The rest were empirical studies. Of these, two used student participants, and the other professions represented were teachers, bankers, and engineers.

Research shows that when an individual's values closely match those of the organisation (as defined by co-workers or supervisors) they report a significant increase in job satisfaction, satisfaction with the organisation (*Amos and Weathington 2008; *Kristof-Brown et al. 2002; *Meglino and Ravlin 1998; *Saks and Ashforth 2002) and organisational commitment (*Hoffman and Woehr 2005; *Saks and Ashforth 2002). In terms of an individuals' *commitment* to an organisation, their perception of the degree of similarity between the organisational values and their own values is key (*Finegan 2000; *Hoffman and Woehr). There are three aspects of organisational commitment; *affective* (where a person is emotionally attached to an organisation), *normative* (where an individual has feelings of obligation towards an organisation) and *continuance* (where an individual is committed as a result of accumulating investments in the organisation) and these are each predicted by different clusters of values, with 'humanity' values (defined in this study as courtesy, consideration, co-operation, fairness, forgiveness and integrity) being most associated with affective commitment to an organisation (*Finegan).

*De Cooman et al. (2009) showed that where perceived value congruence between an individual and the organisation was low, the individual was more likely to leave that organisation over time. The negative relationship between value congruence and intended turnover or attrition is also evident in other studies (*Amos and Weathington 2008; *Meglino and Ravlin 1998). This is relevant when considering the transition between being a student/trainee to then entering employment in healthcare.

Few studies explore the impact of value congruence on performance outcomes (*Morse and Popovich 2009). *Ostroff et al. (2005) reported that value incongruence was likely to lead to frustration, difficulty in team-working and a lack of role clarity from the perspective of the employee/trainee/student. In addition, values have little impact on actual performance or work behaviours if task or situational variables exist that restrict the behaviour from taking place (*Meglino and Ravlin 1998).

Therefore an appropriately designed VBR system may have benefits for retention and wellbeing of staff, trainees and students in healthcare settings, which in turn could reduce student/trainee/employee dropout rates, and associated turnover costs.

3. What are the implications for measuring and recruiting for values?

(3a) The importance of role analyses

Role analyses are vital to producing an effective selection process (Koczwara and Ashworth 2013), since the aim is to accurately identify appropriate selection criteria. A thorough job analysis helps to identify the key knowledge, skills, values and behaviours associated with competent performance and P-O fit within the target role, and can also be mapped to the agreed organisational or education/training provider's values so that these are clearly represented in the selection system. Having defined these criteria at a level appropriate for the career stage, this information is used to guide choice of selection methods. Role analysis studies conducted in UK healthcare context (Patterson et al. 2000, 2008) have identified a wide range of attributes and values beyond clinical knowledge and academic achievement that are required for success in healthcare roles. These need to be considered and measured at the point of selection to ensure that healthcare workers learn, train and work within a profession for which they have a particular aptitude (Patterson et al. 2008). These findings support the notion that core values common to all roles in the



healthcare environment could be identified. Role-specific competencies that differentiate between different roles and professions in a healthcare context may also inform the development of robust selection criteria and provide the basis of a reliable, valid and legally defensible values-based selection system (Patterson et al. 2008).

(3b) Which evaluation criteria should be used for values-based recruitment?

Several evaluation criteria with which to judge the effectiveness of various selection methods are apparent from our review of the research literature. Table 1 outlines sixteen key evaluation criteria relevant to a VBR agenda. These criteria are not mutually exclusive, and it is also possible for some to be at odds with one another. For example, a highly reliable and valid selection tool may be very expensive. Similarly, a highly valid tool may not be acceptable to key stakeholders and may generate negative candidate reactions. As a result, it is important that the consideration of these criteria should be weighted depending on the recruitment context and the priorities for the education/training provider or organisation.

Feedback from validation studies is important to continually improve accuracy and fairness, and to review the original selection criteria and choice of selection methods. However, research in the healthcare context has tended to focus on the predictive validity of various cognitive factors (e.g. prior academic performance or knowledge tests), rather than values, with respect to subsequent exam performance in educational settings (Ferguson et al. 2002). Best practice selection must also be a two-way process: in order to attract the best students/trainees/employees, education/training providers and employers should assess candidates' reactions to the selection process, particularly in relation to perceptions of fairness (Patterson et al. 2011).

(3c) Which selection methods might be useful for values-based recruitment?

Please refer to Patterson et al.'s systematic review (in submission) for a comprehensive overview of the literature on currently used selection methods within medical education

Table 1 Evaluation criteria relevant to the VBR agenda

Evaluation criteria

Accuracy and effectiveness	1. Evidence of reliability 2. Evidence of validity 3. Arrangements for on-going validation, evaluation and development are in place 4. Susceptibility to coaching 5. Fairness, promotes diversity/widening access 6. Legality
Costs and efficiency	7. Scalability for high volume recruitment 8. Efficiency 9. Utility 10. Generality of use
Practicalities and implementation	11. Practicality (ease of administration) 12. Expertise required for analysis of information generated by the tool 13. Ease of interpretation
Stakeholder acceptance and feedback	14. Positive employee/trainee/student perceptions 15. Generates appropriate feedback 16. Educational impact/value



and training, with regard to the evaluation criteria outlined in Table 1. A summary, and where applicable a brief discussion, of the use of selection methods for VBR in healthcare is provided here.

As the evidence base supporting the impact of VBR is limited, considering approaches to measuring values is important, as selection systems should be designed to make explicit that an individuals' values should fit with those of the target. Some researchers (*Van Vianen 2000) question whether self-report measurement tools for values (e.g. personal statements) should be included during recruitment, since values may be 'fakeable' in a selection process. Conversely, research by *Rankin (2013) suggests that rejecting candidates on the basis of a self-report questionnaire could potentially be unfair; however these types of tools could be more effective for self-selection at the attraction and shortlisting stages of VBR, rather than for making final decisions about candidates' suitability for the role.

Shortlisting methods

1. *Personal statements* Despite widespread use of personal statements and autobiographical submissions in selection, the research evidence suggests they have poor predictive validity (Ferguson et al. 2000), low reliability, and are not likely to reflect candidates' true nature (Oosterveld and ten Cate 2004), as they may present themselves in ways that they believe are favourable or expected, rather than as an accurate reflection of themselves and their values (White et al. 2012).
2. *References* Although references are used widely in selection across a variety of occupations (Zibarras and Woods 2010) including healthcare, large-scale empirical studies consistently show that references tend to be unreliable, biased and ineffective at predicting educational, training and job performance (Ferguson et al. 2003; McCarthy and Goffin 2001; Poole et al. 2009; Stedman et al. 2009). Moreover, Prideaux et al. (2011) question whether references measure anything additional to interviews.
3. *Situational judgment tests (SJTs)* SJTs are an established method of selection for use in high volume selection for many occupational groups, and have been used to reliably select for a range of professional attributes (Lievens and Patterson 2011; Patterson et al. 2012). SJTs offer a standardised method of objectively assessing a broad range of attributes for large numbers of applicants, whilst having face validity since scenarios are based on job-relevant situations. SJTs can also be used in settings where applicants have no prior job specific experience (e.g. entry to University, Motowidlo and Beier 2010).

Longitudinal studies within the healthcare context have shown that an SJT measuring empathy, integrity and resilience (used to select candidates applying for training in UK General Practice) is the best single predictor of subsequent job performance and licensing outcomes compared to other selection methods (Lievens and Patterson 2011; Patterson et al. 2013). Similarly, an SJT has been used successfully to measure applicants' interpersonal awareness in medical and dental school admissions in Belgium (Lievens 2013). Not only might SJTs offer an objective way of reliably assessing these attributes, but they are less susceptible to group differences than other selection methods (Clevenger et al. 2001).

Finally, although the initial design of SJTs may be costly, they are machine-markable and can be delivered on-line to large numbers of candidates, offering significant long-term



cost savings compared to assessments hand-scored by assessors. This is particularly beneficial given that in the past it has been difficult to measure attributes and values on the scale required to assess the large numbers of applicants to Universities and into employment (Cleland et al. 2012).

4. *Personality tests* Using personality tests within recruitment has been a widely debated issue within the research literature (Patterson et al. in submission; Landers et al. 2011; Morgeson et al. 2007a, b). Critics of personality assessment argue that tests have both low predictive validity (Tett et al. 1999; Morgeson et al. 2007a, b), and low face validity (Steiner and Gilliland 1996). Some researchers suggest that in high stakes settings there are concerns that “faking” can compromise the validity of personality assessments (Birkeland et al. 2006). Morgeson et al. (2007a) suggested that faking cannot be avoided in self-report personality tests, and as such their use in selection contexts should be reconsidered. However, Tett and Christiansen (2007), and Ones et al. (2007) argue that of those predictive validity studies conducted in real-life settings, results demonstrate that faking, even if it does have an effect on validity, does not significantly reduce operational validity of personality testing. Although Rankin (2013) posits that rejecting candidates on the basis of self-report measures could potentially be unfair, Ones et al. argue that writing off all self-report measures of personality would be counterproductive and research consistently shows that certain domains, such as conscientiousness to be significantly correlated with subsequent performance, both in education settings and in the workplace (see Lievens et al. (2009).

It should be noted however that a wide range of personality tests exist, designed to tap into a broad range of traits, which is likely to be a contributing factor to the continued debate. Within education in healthcare, the Personal Qualities Assessment (PQA, Powis et al. 2005) has been used to measure traits considered to be relevant to health professionals (Munro et al. 2005), and comprises two tests of non-academic ability. One of these is the Mojac assessment of moral orientation (Bore 2001; Bore et al. 2005a, b). Bore and colleagues suggest that being too liberal or too socially rule-bound would create problems in ethical practice, so optimal candidates would have a balance between the two. The second assessment is the NACE, designed to measure narcissism, aloofness, confidence and empathy as an indication of involvement with others (Munro 1998; Munro et al. 2005). While conceptually the aims of the PQA are to measure attributes relating to individuals' values, research has yet to provide long term evidence of predictive validity. For example, Dowell et al. (2011) found that candidates' PQA scores did not correlate with fourth year medical school rankings or Objective Structured Clinical Examinations, and Gibbons et al. (2007) found no significant relationship between the PQA scores and the likelihood of passing interpersonal skills assessments as part of a social work degree.

Nonetheless, across all occupational groups, several studies have found that the almost universally-acknowledged Big Five personality traits (openness, conscientiousness, extraversion, agreeableness and neuroticism) correlate with various aspects of performance (Salgado et al. 2003; Barrick and Mount 2012), and in healthcare roles specifically (Ferguson et al. 2000, 2003, 2014; Hojat et al. 2013; Lievens et al. 2002). By extension, personality assessment based on the Big Five are more likely to hold promise for demonstrating predictive validity. The widely accepted Big Five template of these traits and their predictive validity across numerous criteria have been converged upon across a large, international body of literature (e.g. Barrick et al. 2001; Hurtz and Donovan 2000; O'Connor and Paunonen 2007; Salgado and Tauriz 2014).



A key issue however is the extent to which there exists a relationship between various personality dimensions and important outcome criteria, and to what extent this relationship is linear. For example, Knights and Kennedy (2006) found that the Hogan Development Survey (HDS) may identify negative personality characteristics (such as paranoid, anti-social, sceptical and avoidant) in medical students that have been found to have negative correlations with subsequent performance, that were not detected in the selection interview. Knights and Kennedy (2007) concluded that measures of dysfunctional personality types could usefully and cost-effectively be incorporated into medical student selection, although they did not provide any direct evidence for this assertion. However, there is a dearth of research evidence supporting the long-term validity of such personality traits as negative predictors of role performance within healthcare and beyond. Indeed, some research suggests that 'dark side' traits may also correlate positively with a number of positive performance outcomes, including leadership success (Bollaert and Petit 2010; Harms et al. 2011; Ouimet 2010; Rosenthal and Pittinsky 2006).

Cleland et al. (2012) conclude that when assessing the usefulness of personality assessment, studies relying on early outcome criteria may have underestimated the predictive value of personality. However, it is evident that further research is required to explore the long-term predictive validity of personality traits in healthcare. Where such evidence does exist, results are mixed and paint a complex picture. For example, while Lievens et al. (2009) reported that conscientiousness is an increasing asset for medical students when examining GPA, Ferguson and colleagues (Ferguson et al. 2000, 2014) found that conscientiousness is a significant negative predictor of clinical performance in medical trainees. Thus, closer attention is needed to explore such differential results when exploring different outcome criteria.

In summary, at least two explanations for the conflicting evidence of various personality assessments exist: firstly the large range of personality tests available, of potentially varying quality, designed to measure a wide range of different traits; and secondly that the association between personality traits and performance in healthcare may be complex and possibly non-linear. Nonetheless, personality and values, while conceptually distinct, are linked (Parks and Guay 2009, as discussed earlier in this review), and thus in principle we argue that personality testing may indeed help recruiters to get closer to examining the values of candidates, especially if personality instruments are combined with other selection tools such as structured interviews/MMIs. As such, in concept, personality assessment may be most appropriately used a complimentary tool to use as guidance to focus values-based interview questions (rather than a stand-alone instrument), although evidently this also depends on the quality of the measure being used.

Final stage selection methods

5. *Traditional interviews* Unstructured interviews are still widely used for selection in a variety of occupations, despite their low reliability, low predictive validity, and poor legal defensibility (Klehe 2004; Terpstra et al. 1999; Williamson et al. 1997). Unstructured interviews are prone to potential biases and errors, including: (1) *stereotyping*, (2) *first impressions* (e.g. making a judgment solely on first impressions rather than allowing the candidate a chance to demonstrate their skills (i.e. "I know if they are the right person immediately")), (3) *halo and horns effects* (e.g. selectors being unduly influenced by one positive or negative characteristic of the applicant) and, (iv) *leniency*. All of these aspects are likely to distort interviewer ratings of candidates and their values (Edwards et al. 1990).



6. *Group interviews* Recruiters may be attracted to the nature of the group interview, which allows for an assessment of how well a candidate manages interaction with others during the interview itself. In addition, group interviews require less interviewer resource than traditional one-to-one or panel interviews and may therefore be considered more cost effective in terms of interviewer time. However, evidence for reliability and validity is lacking. The evidence suggests that although group interviews could add value over academic indicators alone (Byrnes et al. 2003), they are of less value compared to one-to-one interviews (Tran and Blackman 2006). In addition, there may be an increased likelihood that candidates will perceive group interviews as unfair compared to other interview techniques due to the influence of others, and assessor load, for example (Tran and Blackman 2006).
7. *Structured Interviews (e.g. competency-based, situational)* Several large-scale meta-analytic studies show that “structured” interviews, with questions developed based on a job analysis, have relatively high levels of validity (Conway et al. 1995; Huffcutt and Arthur 1994; McDaniel et al. 1994). Other studies (Berry et al. 2007; Roth and Iddekinge 2005; Salgado and Moscoso 2002) have examined constructs that interviews actually measure, from cognitive ability to personality. Research suggests that interviews that are better designed and developed specifically to assess particular constructs show greater evidence of construct-related validity (Donnon et al. 2009; Huffcutt et al. 2001).
8. *Multiple-Mini Interviews (MMIs) and Selection Centres (SCs) using work samples (e.g. group exercises, written/in-tray task, presentations, interactive exercises).* Although predominately considered conceptually distinct in the literature to date, MMIs and SCs are considered together here due their similarities of approach, design and implementation. The primary purpose of MMIs/SCs is to overcome problems with the test–retest reliability of traditional panel interview techniques (Eva et al. 2004). The methods allow candidates multiple situations to demonstrate key skills, and to be observed by a number of trained assessors [the multi-trait, multi-method (MTMM) approach, Jansen and Stroop, 2001], allowing a fairer and more reliable assessment to be made. With careful design, the increased reliability of these methods should equate to greater validity and more positive candidate reactions. However, it has been argued that for MMI and SC methods to be valid, the design of stations/tasks should be closely mapped to outputs from a thorough role analysis study and selection criteria (Patterson and Ferguson 2012).

Research evidence for the validity of both MMIs and SCs is good. Psychometric evaluation of MMIs internationally shows good reliability and validity evidence when they are designed appropriately (Eva et al. 2004, 2009; Eva and Rosenfeld 2004), and favourable candidate and interviewer reactions (Dore et al. 2010; Hofmeister et al. 2008; Kumar et al. 2009; Razack et al. 2009; Humphrey et al. 2008). Compared to the large evidence-base related to MMIs, there is less available evidence for SCs in healthcare, and the majority of evidence is emerging at postgraduate level. For example, SCs used to select trainees for UK general practice have shown good predictive validity (Patterson et al. 2005, 2013). This work has been extended to select doctors for postgraduate training in other specialties such as obstetrics and gynecology, and paediatrics (Randall et al. 2006a, b). SCs have also been piloted in the UK for graduate entry to medical school (Kidd et al. 2006), however no research has directly investigated values per se.

Evidence is mixed on the cost effectiveness of MMIs/SCs. Compared to other methods, they are costly to develop, and are significantly more expensive than machine-marked tests



to deliver (Ziv et al. 2008), However, research suggests that MMIs/SCs may provide greater depth and breadth of information about candidates than structured interviews (Randall et al. 2006a, b), suggesting that their cost effectiveness may therefore be good when balanced against the increased validity (and thus reduced extended training costs) they may offer (Pau et al. 2013; Rosenfeld et al. 2008).

Value-for-money may be further improved by examining the number of stations in an MMI or SC, and reducing the number of stations/tasks if reliability remains unaffected. Practically, however, there may be a trade-off between cost and reliability (i.e. the more stations/tasks, the higher reliability, but also increased interviewer/rater time and cost). Dore et al. (2009) acknowledged a key limitation of MMIs (which also pertains to SCs), which is that they may only be administered to a limited number of on-site candidates. In an attempt to address this limitation, the researchers developed the Computer-based Multiple Sample Evaluation of Noncognitive Skills, using the same psychometric principles used in MMI development. The tool correlated .60 with MMI when piloted on a sample of undergraduate medical students. As such, this preliminary work suggests that a psychometrically sound MMI- or SC-style computer-delivered tool may be used to measure non-cognitive attributes at the shortlisting stage, as well as the 'traditional', face-to-face MMI or SC at the final stage of selection for healthcare roles.

In Table 2 we outline implications of the above evidence for each selection tool, with regards to implementing VBR in healthcare contexts.

Implications

The research evidence supports the use of VBR as only one part of embedding values in healthcare education and practice and emphasises the need for a multifaceted approach to organisational values beyond recruitment issues alone. The term "values-based recruitment" is relatively new which has arisen in this context, and as such the current evidence relating to VBR directly is limited. As such, in line with the structured search and thematic review methodology (Grant and Booth 2009), our review provides links to other more established concepts in the literature that inform our understanding of how to best assess values in recruitment. The design of a selection system to achieve VBR will concern an overall programme of assessment comprising a combination of methods (each with their distinctive psychometric properties) to make decisions about candidate selection. The focus of selection system design is not on how much validity a single assessment method adds, but rather on whether a particular selection method is going to be useful in identifying the presence or absence of certain selection criteria in candidates (Lievens and Patterson 2011); that is, which selection methods may identify relevant values in a specific context.

Theoretical implications

The results of our preliminary structured search and thematic review of the selection literature show that there is a significant research gap in the theory used to inform VBR, and this area warrants further investigation. In understanding how selection methods could measure values however, we propose that section methods that access an individual's *prosocial implicit trait policies* (ITPs; which are beliefs about the utility of prosocial expressions) will allow a richer understanding of the theory behind selection methods designed to measure non-academic attributes and how selection methods are best

Table 2 Review of selection methods for values-based recruitment

Selection method	Implications of the evidence for implementing VBR
<i>Shortlisting methods</i>	
Personal statements	Candidate acceptability is high, but susceptibility to coaching is also high. (<i>Ineffective method for VBR</i>)
References	Use of references remains widespread despite little research supporting validity or reliability (<i>Ineffective method for VBR</i>)
Situational judgment tests (SJTs)	Improved validity over other selection tools (IQ and personality tests), and can be mapped to organisational values. Whilst SJTs can be relatively costly to design, SJTs are machine-markable & can be delivered on-line, producing cost savings in high volume selection (<i>Effective method for VBR</i>)
Personality assessment	Where there is a high risk of susceptibility to faking and/or coaching, personality assessment is best used to drive more focused questioning at interviews (rather than a stand-alone instrument without verification). (<i>Personality assessment may be more useful at the attraction phases of VBR as part of self-assessment/selection</i>)
<i>Final stage selection methods</i>	
Traditional interviews	Across most evaluation criteria, traditional interviews perform poorly. (<i>Ineffective for VBR</i>)
Structured interviews (e.g. competency-based and situational)	When interviews are structured and based on a thorough role analysis, with standardised questions with trained interviewers, and appropriate scoring they can be reliable and valid. Candidates prefer interviews to other methods although they are relatively resource intensive. (<i>Effective method for VBR</i>)
Group interviews	Whilst group interviews appear more cost efficient in terms of assessor time, evidence for reliability, validity and fairness is lacking. (<i>Ineffective method for VBR</i>)
Multiple-mini interviews (MMIs), selection centres (SCs) using work samples, e.g. group exercises, written/in-tray task, presentations, interactive exercises	When designed appropriately (using a multi-trait, multi-method approach with work samples), SCs and MMIs are valid predictors of job performance. Candidates are positive towards SCs and MMIs as they have multiple opportunities to perform. SCs and MMIs are relatively expensive to design & implement (<i>Effective method for VBR</i>)

constructed to achieve VBR (Motowidlo and Beier 2010). Such methods would include SJTs and MMIs and/or personality assessments in combination with structured interviews, for example.

Theoretically, ITPs are beliefs about the *costs/benefits of expressing certain traits* in certain situations. Thus, ITPs are related to targeted trait *expression*, and therefore guide behavior and are related closely to values. Within healthcare education and practice, prosocial implicit trait policies (ITPs) are beliefs about the professional utility of acts expressing compassion, caring, and respect for patients. Whilst personality generally



represents the behaviors that come most naturally, and therefore do not require effort, behaviour which is linked to values also requires effort and a personal choice to be made to behave in a certain way. For example, one does not generally think about or choose to be agreeable or disagreeable. However, there is an element of personal choice involved when one behaves consistently with one's own values (Parks and Guay 2009). For example, making a judgment that generally being agreeable in a situation (e.g. towards a patient, a colleague or a supervisor) might be a more successful strategy in dealing with the situation than being disagreeable. It may be possible to measure individuals' ITPs (and therefore their values) using appropriately designed assessments to assess an individual's awareness about appropriate behaviour in given situations.

Like values, Motowidlo and Beier (2010) suggest that ITPs are shaped by experiences in fundamental socialisation processes, such as in parental modelling during childhood. This may teach the utility of, for example; *agreeable expressions*, that is, helping others in need, or turning the other cheek; or *disagreeable expressions*, that is, showing selfish preoccupation with one's own interests, holding a grudge/"getting even" or advancing ones own interests at another person's expense. Considering ITPs in the context of education and training in healthcare, the challenge of educational supervisors is to teach students the utility of effective behavior in the role of, for example, nurse or doctor. This socialisation is tutored during supervised clinical practice during education and training, regarding effective behavior by a healthcare practitioner in any given situation. By extension, it is possible that behavior may change if an individual is working within an environment that does not promote the desired values (e.g. care and compassion).

Practical implications

Key issues in a selection system design for healthcare, where there may be large numbers of applicants, are scalability, utility and cost efficiency. These could seriously constrain the opportunities to use certain (robust) selection methods such as MMIs (Dore et al. 2009; Prideaux et al. 2011). The initial investment in the development of bespoke selection measures however may be expensive at the outset, but in the medium- to long-term, this investment can translate into significant gains in utility. For example, switching from a hand-scored application form personal statement method to a machine-markable and/or computer-delivered test developed in partnership with key stakeholders could significantly reduce costs in the long-term, despite high costs in the short-term (Lievens and Patterson 2011; Plint and Patterson 2010). Stakeholder buy-in is also an important consideration (Patterson and Zibarras 2011). At present, there are some selection practices that display little or no predictive validity (e.g. referees' reports), yet these practices continue to be viewed as acceptable by many because various groups of important stakeholders consider them credible.

Our review of established evidence on the selection methods available for VBR shows much of the evidence base on selection methods in healthcare comes from the medical and dental recruitment literature with some contributions from nursing. As a result we also draw upon evidence from the broader international occupational research literature. The selection methods reviewed included personal statements, references, SJTs, personality assessments, traditional interviews, group interviews, structured interviews, MMIs and SCs. From our review, it appears that, at the shortlisting stage, SJTs (depending on appropriate design), and to some extent appropriately designed personality assessment, could offer utility in addressing VBR. At interview stage, appropriately designed MMIs are likely to be an effective tool for VBR. There also exists good evidence from healthcare



settings that SJTs and MMIs are reliable methods to evaluate a range of important non-academic attributes (e.g. Lievens and Patterson 2011; Dore et al. 2010).

When used in combination with structured interviews, personality assessment (depending on the instrument) could also provide useful information that is complimentary to VBR (e.g. assessing agreeableness and conscientiousness) where applicants' self-reported preferences may help interviewers to focus questions more specifically with regard to candidates' goal choice and goal striving (hence values), for example.

Both SJTs and personality assessments can be machine-markable and delivered on-line, and once developed, they can offer significant cost savings for delivery compared to other methods that are hand-scored by trained assessors, such as in interviews and personal statements. However, the design parameters for non-academic assessments linked to values will vary depending on whether the purpose is for attraction versus assessment. In addition, a single tool for all roles is unlikely to be appropriate: although there may be "core" values, it is likely that individual healthcare roles will have more specific value requirements within the broader values. For example, a learning disabilities nurse may need enhanced values in some areas compared to a nurse working with the general populations of adults. It should also be noted that non-academic selection methods will be effective only if they are developed in a robust way, including being based on a role analysis.

At the interview stage of selection, research suggests that MMIs and structured interviews may be appropriate selection methods for VBR. Evidence implies that MMIs may be more easily implemented and more cost efficient for high volumes of recruitment. Research suggests that appropriately designed structured interviews (such as in MMIs) are likely to be capable of assessing values since interviews have been shown to measure a variety of constructs from cognitive ability to aspects of personality (Berry et al. 2007; Salgado and Moscoso 2002). Further research (Cable and Judge 1997) has also examined the possibility of assessing values during the interview process, where interviewers assess value congruence based on perceptions of applicants' and their own organisation's values.

In considering the implementation of a values-based approach for interviews (including MMIs), attention should be given to helping recruiters understand how this differs from a competency-based approach to recruitment. A values-based interview might appear similar to a competency-based interview in that the format will often involve asking applicants to provide examples of behavior they have demonstrated based on past experiences. For example applicants may be asked to "Describe a situation when..." or "Tell me about a time when...". However, it is the probing questions, designed as part of the values-based interview, that are used to elicit detailed evidence in relation to learning and reflection that differentiate it from a competency-based interview, thus providing insight into a candidate's values or what they consider to be important (NSPCC 2013). Such probing questions should focus on how and why a candidate makes particular choices (goal choice), providing insight into the reasons and motivations for their behavior (values).

Practically, any values-based selection method should be carried out by inappropriately trained recruiters/assessors who are well educated in the process and techniques of observing, eliciting and identifying a candidate's values. Whilst it can be observed that values-based selection methods offer considerable benefits to the recruitment process and in ensuring the most suited candidates are selected, it is however important to note that such techniques should not replace the need for other forms of assessment focusing on the technical knowledge, aptitude and skills required for a role. A values-based selection process is therefore likely to represent one element of a broader recruitment process to determine a candidate's overall suitability for a target role, at all levels of entry in both the healthcare setting and beyond.



Conclusions

This preliminary review of the emerging literature on VBR identifies four key implications regarding selecting for values in healthcare. The first is that it is very important to understand exactly what constitutes a “value” and how this differs from other, possibly similar, constructs such as personality. Understanding this has wide-reaching implications for the measurement of values in a recruitment context. Second, there is limited published research relating to the concept of VBR in healthcare and selection methods that might identify values in a healthcare context; and yet of critical importance is the ability to identify those students, trainees, and employees who will deliver high quality, compassionate and safe care. Third, our review demonstrates that this area is a fruitful avenue for future research. There appears to be a significant gap in literature as to how we can accurately measure values during recruitment/selection, and more specifically within a healthcare education context. Fourth, there is very little research *generally* on which selection methods would be most useful to measure values. We put forward some suggestions based on current research and literature more widely which indicates some utility in using SJTs, personality assessment, MMIs and SCs. Far more research is required however to state this conclusively, and methods for VBR present both a relatively uncharted territory and exciting for further research.

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