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Views of the Therapeutic Environment (VOTE): Stakeholder Involvement in measuring staff perceptions of acute in-patient care

C. Laker[a], **D. Rose**[b], **C. Flach**[c], **E. Csipke**[a], **P. McCrone**[d], **T. Craig**[e,f], **H. Kelland**[g], and **T. Wykes**[h]

[a]Department of Psychology, Institute of Psychiatry, Kings College London, United Kingdom

[b]Service User Research Enterprise, Institute of Psychiatry, Kings College London, United Kingdom

[c]Manchester University, United Kingdom

[d]Department of Health Economics, Institute of Psychiatry, Kings College London, United Kingdom

[e]Department of Psychological Medicine, Institute of Psychiatry, Kings College London, United Kingdom

[f]Department of Health Services and Population Research, Institute of Psychiatry, Kings College London, United Kingdom

[g]University of Oxford, United Kingdom

[h]Department of Psychology, Institute of Psychiatry, Kings College London, United Kingdom

Background

In the U.K. and across the world, mental health hospitals have seen nursing staff shortages, bed shortages and an increase in complex presentations especially in urban areas of high demand (Kinton et al, 2005; Saxena & Barrett, 2007; Knapp et al, 2008). Negative service user reports of acute in-patient settings have emerged describing limited staff contact and the experience of hospital care as non-therapeutic and coercive (McCulloch, 1998; Cory, 2004).Whether staff also perceive the effects of current working practices and the ward environment as non-therapeutic should be explored in more detail both because of negative effects on staff, but also because an untherapeutic environment may have a direct impact on the quality of the interactions between staff and service users and the overall quality of care (Wykes et al, 1997).

A growing body of literature links the stress of working on a ward to low morale, often measured as ‘burnout’ and poor job satisfaction (Prosser et al, 1996; Ward & Cowman, 2007; Seed et al, 2010). Stress, burnout and lack of social support have been described as symptoms of a negative work environment (Cleary, 2004; Jenkins & Elliott, 2004; White & Roche, 2006; Hanrahan et al, 2010). Stressors such as high caseloads of patients, high volume of work and management issues such as poor leadership and low staffing levels (Leiter and Harvie 1996; Cahill et al 2004; Bowers et al, 2009; Hanrahan et al 2010) as well

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as violence on wards (Kindy et al, 2005; McGeorge et al, 2005), have been linked to low morale.

Different staff groups also seem to respond differently to work related stressors. Jenkins & Elliott (2004) reported differences in perceptions of work related stressors according to the occupational status of nursing staff. In this study, qualified staff cited poor staffing levels as the main stressor whilst nursing assistants reported difficult interactions with distressed clients. Burnout was common to both groups. Cushway et al (1996) noted that occupational stress led to poorer mental health outcomes in male nursing staff than in females, perhaps because male staff are more likely to respond to violent situations. Few studies have looked comprehensively at how perceptions of stressors within the workplace can be explained by demographic characteristics, specifically in the nursing population.

Burnout has also been described as affecting job performance and contributing to poor quality care (Maslach et al, 1996; Leiter and Harvie 1996; Hummelvoll & Severinsson, 2001; Happell et al, 2003; Bowers et al, 2009). Both low morale and low job satisfaction result in poor staff retention, which again affects care quality (Coomber & Barriball, 2007; Happell et al, 2003). We therefore propose a model whereby staff perceptions of the daily pressures of working on an acute ward lead to burnout and this affects the quality of care delivered. However, in order to test this model, the specific pressures for mental health nursing staff in maintaining a therapeutic environment and high quality client relationships must first be given more detailed consideration because to date, this construct remains underexplored. This is perhaps because the ward milieu is responsive to continuous organisational and social changes, that is, the client group and staff mix change on a daily basis, and so this is a complex construct to measure. Objective measures reviewed by Sharac et al (2010) have many drawbacks and do not capture the complexity of ward dynamics.

Measures of perceptions have an important role to play in evaluating complex situations because they allow for objective stressors and their appraisal by the nursing staff within the social environment, as well as linking cognitions with affective and behavioral components (Eiser, 1986). There are some measures in existence which address attitudes to occupational stress (e.g. The Mental Health Professionals Stress Scale, Cushway et al, 1996; Occupational Stress Indicator, Cooper, 1988) which highlight staff reactions to organisational pressures and team and client relationships. The well known Daily Hassles Scale (Lazarus and Folkman, 1989) also has been used to appraise these stressors. However, these measures neither adequately explore whether staff view daily pressures as impacting on the therapeutic milieu (and therefore on the quality the therapeutic relationship), nor have they been developed using qualitative data generated by staff working within those areas. Further, there is currently no comprehensive and robust measure that evaluates how the complex features of the ward milieu affect the workforce and therefore a new measure is required.

The aims of this paper are threefold:

- The first is to describe a model of stakeholder involvement in developing a psychometrically sound measure which captures staff perceptions of the daily pressures working on an acute ward (or daily ward hassles - VOTE).

- The second is to examine whether there are any key demographic characteristics which might need to be considered as contributing to negative staff perceptions of the daily pressures of working on an acute ward (VOTE).
- The third is to test the first stage of a model of a quality of care model whereby staff perceptions of the daily pressures of working on an acute ward (VOTE) affect burnout after controlling for demographic variables.

Measures

- Staff characteristics including: length of employment, staff grade, education, ethnic group, country of origin, gender and age.
- The Views of the Therapeutic Environment measure (VOTE) is a 20 item measure, answerable by a 6 point Likert scale, which added together forms a total score describing each staff participants' perception of the daily pressures of working in acute in-patient mental health wards.
- The Index of Work Satisfaction (IWS) is a 44 item scale which can be totalled to produce a score which measures health professionals' levels of job satisfaction. It is answerable by a seven point Likert scale.
- The Maslach Burnout Inventory (MBI) can be totalled to produce a score which measures work related 'burnout' over 22 items, answerable by a six point Likert scale.

Methods

Study Design

The study was designed to develop and test a self report measure of the daily pressures for staff working in an acute ward environment, following a process of stakeholder involvement (Rose, 2001, 2008, 2009; Trivedi and Wykes 2002). This approach directly involved nursing staff in order to ensure a measure that captured an accurate picture of an acute care ward from the staff perspective. Following the instrument development phase which used qualitative methods, prototypes of the measure were then assessed for their content validity, acceptability and feasibility prior to psychometric testing on a large sample of inpatient nurses (see table 1). Ethical approval was awarded by Bexley and Greenwich NHS Research Ethics Committee.

Sample and setting

Nursing staff from all grades (including health care assistants and qualified staff as well as levels of nurse management including clinical management and team leaders) were involved in the development of the new measure. They were purposively sampled from acute in-patient mental health wards in an inner London UK mental health trust.

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Instrument Development Phase

The model of stakeholder involvement adopted to develop the Views On the Therapeutic Environment (VOTE) measure is more frequently used in service user research but was adapted here for a nursing setting.

Focus Groups—Staff were involved at all key stages and a nurse researcher led the process. As part of an iterative procedure, an initial reference group of senior nurses met to discuss their perceptions of the core domains in acute inpatient nursing. These views were formulated into a topic guide. This was tested in a pilot study for its scope and flexibility because it was important to encourage the maximum generation of new themes in order to cover all aspects of the topic. Then, nursing staff from an inner London mental health trust attended four, two part focus groups. In the first part, staff met to discuss their views of working on acute in-patient wards. These data were then thematically analysed and the emerging topics were fed back to the group, which reconvened for this purpose (Lincoln & Guba, 1985). The aim was to ensure that the analyses were an accurate representation of the participating staff views.

Qualitative analysis and item generation—The nurse researcher then refined the thematic analyses and constructed the draft measure. Finally, two expert panels met to discuss the design of this new measure, and to inform the ‘instructions for use’. Changes were made to the items and to the layout of the measure on the basis of this feedback. The focus group data generated twenty six items, which were presented back to the original reference group for their comments.

Descriptive statistics

The mean VOTE scores were computed for the whole sample, and across subgroups including length of employment, staff grade, education, ethnic group, country of origin, gender and age. Pearson’s correlations were also computed to show how VOTE, IWS and MBI are related to the staff characteristics in the sample.

Statistical Analysis

(i) Psychometric testing: is VOTE a robust measure?

Feasibility and acceptability: The final measure was intended as a self-report tool so studies of *feasibility* and *acceptability* were conducted to evaluate the burden of administering and completing the measure. In the feasibility study 40 participants (group 1) completed the measure including two additional questions assessing whether the measure was easy complete and understand. Two additional questions on whether the measure was acceptable were collected from 115 participants. Two tests which indicate readability, the Flesch reading ease test (the recommended score is between 60 and 70%), and the Flesch-Kincaid Grade Level test (the recommended score is between 7.0 and 8.0) were also assessed.

Reliability: The reliability of the measure was assessed by asking staff (N=43, group 2) to complete the measure twice with a six to ten day gap. Test retest reliability was assessed

according to kappa to evaluate the individual items and using Lin's concordance coefficient to evaluate the total scores (Lin, 1989). Generally, kappa scores of 0.21 to 0.4 indicate fair agreement, scores of 0.41 to 0.60 indicate "moderate" agreement, and scores above indicate substantial agreement (Landis & Koch, 1977). Lin's concordance coefficient can be interpreted similarly to a correlation coefficient. Internal consistency was also assessed using Cronbach's alpha, which refers to the correlation between items on the scale. Low scores would suggest that the items are not contributing to the same latent construct, with a score of 0.7 or above considered acceptable (Nunally, 1978).

Validity

Face and content validity: Whether the new VOTE measure truly reflected the experiences of the staff who deliver acute in-patient services (face validity) and covered the full spectrum of staff views (content validity) were explored as a result of the participatory methodology during the instrument development phase.

Criterion validity: In order to assess criterion validity perceptions of the daily ward pressures (VOTE) were predicted to be worse with low levels of job satisfaction measured on the Index of Work Satisfaction (IWS) (Stamps & Piedmonte, 1986). The level was set a priori at 171 which is the average from four studies identified in a literature review of IWS in the health services (Burnard et al, 1999; Jernigan et al 2001; Takase et al, 2001; Tumulty et al, 1994). VOTE was also predicted to be related to levels of burnout using the Maslach Burnout Inventory (MBI). The criterion of level of burnout was set at 63 derived from the mean burnout scores of four acute in-patient mental health nursing studies (Bowers et al, 2009; Levert et al 2000; Prosser et al, 1999; Carson et al, 1999). Criterion validity was assessed with t-tests for the groups of low/high satisfaction and low/high burnout. Pearson's correlations were computed to compare the total scores of the VOTE measure to the total scores of the IWS and the MBI. These analyses were conducted using data from group 3 (N=245) and all analyses were conducted using STATA 10.1.

(ii) Do demographic characteristics affect staff perceptions of the daily pressures of working on an acute ward?—A regression analysis with the VOTE total score as the dependent variable, and all demographic characteristics as the key independent variables was carried out using random effects regression modeling (clustering on ward) to take into account the multi-level nature of the data. The purpose of this model was to identify any significant demographic predictors of negative staff perceptions of the daily stressors in the working environment (VOTE). The demographic variables were: Length of employment (above 3yrs or below 3yrs), qualified nurse or not, education (degree level or not), ethnicity (White or Black minority or ethnic community), country of origin (UK or not), gender, age (median split at age 39yrs).

(iii) Do staff perceptions affect burnout?—A regression analysis with total burnout as the dependent variable, and VOTE as the key independent variables was carried out using random effects regression modeling (clustering on ward). In this model we assessed the effect of staff perceptions of the daily stressors in the working environment (VOTE) on

burnout (MBI) including the same binary demographic variables to examine any confounding effects on burnout.

Results

Sample

The sample involved in the development of VOTE included in-patient nursing staff from all grades, within one London mental health trust. The catchment area of this trust is large and covers four inner and outer London boroughs. In total 376 individuals were involved at the various stages.

Instrument development phase

Focus Groups (N=35)—The reference group recommended six core headings for the topic guide including: ‘patient care’, ‘core interventions’, ‘team working’, ‘change’, ‘safety’ and ‘ethical issues’. The pilot study, which comprised a mixed group of healthcare assistants and qualified staff, agreed that these topics were broad enough to allow flexibility in bringing in new ideas. Interim analysis of the pilot focus group suggested that occupational seniority might interfere with a full discussion so in order to allow for the maximum emergence of key themes, one ‘health care assistant only’ group was included. Retention at the repeat focus groups was 87% which indicates the high level of involvement in the process (Harvey et al, 2005). In total, 35 staff attended the pilot study and the focus groups.

Qualitative analysis and item generation

Thematic analysis revealed that the staff participants found the following core themes the most important for inclusion on the measure: team working, patient care, core interventions, safety, bed management and continuing professional development. These themes provided the structure for the measure. The individual items were developed from sub themes within these broader domains. The expert panels (N=13) confirmed that the measure allowed a good range of staff perceptions of acute in-patient wards to be expressed. A five point Likert scale was reviewed at the expert panel stage, but those staff participants felt that a wider range of response options would provide more scope and reduce omissions. At this stage there were twenty six items.

Descriptive statistics

Total VOTE scores across the subgroups of the sample—

Total correlations relating VOTE, IWS and MBI are related to the demographic factors—

Statistical analyses

(i) Psychometric testing: is VOTE a robust measure?

Scoring: Total scores were calculated by totaling all items with no missing data. Negatively phrased items were reverse scored so that higher scores indicated a more negative perception

of the ward. Where comparisons to other measures were made, the same rule was applied to their scoring i.e. high scores indicate poorer satisfaction and higher burnout.

Feasibility and acceptability: The feasibility study (group 1, N=40) revealed that 95% of staff agreed that VOTE was easy to complete and easy to understand. Generally, staff found that with minimal explanation the measure could be completed by self report, in around fifteen minutes. Items identified as having confused phrasing were changed and those showing poor consistency (Cronbach's alpha) or poor variability or poor reliability were dropped leaving 20 items.

The acceptability study showed that 76% of staff thought the length was about right and 91% that it was enjoyable and not upsetting; The Flesch reading ease score for the measure was 64 %. The Flesch-Kincaid Grade Level score was 7.6, which means the measure can be read by a twelve year old of average ability.

Reliability: Group 2 (N=43) participated in the test retest study using the final 20 item measure. As items tended to be skewed towards 'agree' or 'disagree' the kappa coefficient is expressed as a proportion of the maximum possible value. Six items showed substantial agreement (kappa max ranged from 0.60 to 0.73). Moderate agreement was shown in fourteen items with kappa max ranging between 0.41 and 0.59. These results indicated moderate and substantial reliability. Concordance between the total scores (N=34) was good (Total score, rho = 0.77; 95% CI = 0.65 to 0.89). Only two members of staff produced total scores that lay outside the Bland & Altman, 1986 limits of agreement (i.e. within two standard deviations of the observed average agreement), indicating strong agreement. The internal consistency of the measure, assessed using data from group 3 (N=200), was good with the overall alpha at 0.82.

Validity

Face and content validity: A high level of staff involvement throughout the process of measure development ensured good face and content validity. This was achieved because staff participants provided feedback on the content of the themes arising from the qualitative data and on the language used in the item generation phase. Staff agreed that the results did capture what they had reported. The use of a flexible topic guide maximised exploration of the construct under study and minimised omissions in the data set.

Criterion validity: A t-test examining whether VOTE scores were associated with an a priori criterion of job satisfaction showed that those with negative perceptions of the daily pressures of the working on an acute ward also had poor job satisfaction $t(157)=-10.34$, $p=0.001$; N=159. The mean VOTE score in the low job satisfaction group was 76.5 (sd: 10.4), and the mean VOTE score in high job satisfaction group was 60.4 (sd: 10.1). The VOTE measure was strongly and significantly correlated with the IWS ($r=0.77$; $p<0.001$; N=159). Overall the mean satisfaction of the group was 163.6 (sd: 31.3).

A t-test examining whether VOTE scores indicated low/high levels of burnout showed that those with negative perceptions of the daily pressures of the working on an acute ward also had high levels of burnout ($t(173) = -4.41$, $p<0.001$; N=175. The mean VOTE score in the

high burnout group was 73.1 (sd: 12.9) and the mean VOTE scores in the low burnout group was 64.8 (sd: 12.2). The VOTE measure was strongly and significantly correlated with the MBI (r=0.60; p<0.001; N=175). Overall the mean level of burnout was 64 (sd:15.8).

(ii) Do demographic characteristics affect staff perceptions of the daily pressures of working on an acute ward?—In this first analysis we assessed any independent demographic predictors of VOTE using random effects modeling and a forward selection procedure with the level of significance set at 0.05. The results showed that one variable was a significant predictor: country of birth (N=180; groups=17).

Staff who were born in countries outside of the U.K had more positive perceptions of the daily pressures working on an acute ward than those who were U.K. born. Sigma_u corresponds to the standard deviation of the average VOTE total score across wards; sigma_e is a measure of the "unobserved variance" or the residual standard deviation and the rho measures the percent of variability in the VOTE total scores due to ward heterogeneity Vittinghoff et al. 2005).

(ii) Do staff perceptions affect burnout?—The second model investigated whether the VOTE total score predicts the MBI total score after controlling for all demographic variables.

This model shows that perceptions of the daily pressures of the working on acute wards (VOTE) significantly affect burnout. Occupational status and age also significantly affected burnout. In our data qualified staff were more likely to have higher levels of burnout and older staff were less burned out than younger staff.

Discussion

The twenty item VOTE measure identifies the daily hassles of staff which affects staff engagement with service users, with colleagues and with their professional identity and these are all areas which are important to stakeholders (see www.perceive.iop.kcl.ac.uk). VOTE shows acceptable agreement, according to Cohen's kappa, across the twenty items. The total for the entire scale showed good test retest concordance and subscale test retest concordance was good. VOTE also demonstrated strong internal consistency, both on the entire scale and the subscales. VOTE also showed good criterion validity in differentiating low and high satisfaction and low and high burnout. The high degree of feedback and involvement during all stages of the development process succeeded in creating an outcome measure with high face validity because the items truly reflected the experiences of the staff who deliver acute in-patient services. Content validity, indicated by the relevance and acceptability of VOTE to staff was also demonstrated.

In this study, staff had slightly more positive perceptions of job satisfaction than staff in other studies (Burnard et al, 1999; Jernigan et al 2001; Takase et al, 2001; Tumulty et al, 1994);) but they had similar levels of burnout (Bowers et al, 2009; Levert et al 2000; Prosser et al, 1999; Carson et al, 1999). In previous studies, work stressors have differed between occupational status and gender (Jenkins and Elliot, 2004; Cushway, 1996). Of all the

demographic characteristics included in this study only country of birth showed a significant effect on staff perceptions of the daily pressures of acute ward working, with staff born outside of the U.K showing more positive perceptions than those born within the U.K. This may be a direct result of the inner London location of the Trust under study since a large percentage of the client group and the nursing workforce are not U.K born. However, the mean VOTE scores were most negative overall in the staff nurses group followed by the nursing assistants group, compared to more positive scores in those who occupied more managerial roles (clinical charge nurses and team leaders). Although this paper does not address whether the stressors differ between these groups, it is true that both nursing assistants and staff nurses spend the most time in direct client contact. Therefore, their more negative perceptions might be one of the inevitable aspects of delivering therapeutic acute care for patients with severe mental illness at their most distressed. This important issue, revealed through stakeholder involvement requires further exploration to discover key drivers for these perceptions which might then be subjected to management and other interventions.

In terms of the first stage of a model of quality of care we have, in addition to describing perceptions of the general daily hassles of acute ward working and their appraisal by staff, been able to isolate that nurse perceptions do predict levels of burnout which we know are related to quality of care. This is consistent with the findings from other studies that stressors in the work environment increase levels of burnout (Jenkins & Elliott, 2004; Cleary, 2004; White & Roche, 2006; Hanrahan et al, 2010). Even if occupational status and age also play a part in explaining burnout, VOTE is still an independent predictor. Although the age and level of qualification of the staff seems to have some relationship neither of these variables is as strong a predictor of burnout as VOTE. If staff view the ward environment as stressful and untherapeutic and this results in burnout, then this has negative implications for the quality of therapeutic interactions between staff and service users. This is an important consideration which has been underexplored and which might be examined through the addition of an outcome variable which captures service user perceptions of acute in-patient settings as a measure of care quality (Evans et al, 2011). This would allow an assessment of whether the effects of daily ward stressors on nursing staff levels increase burnout and whether this has a negative impact on the quality of care delivered.

Conclusion

The psychometric properties of VOTE have been investigated. VOTE succeeds in combining the emotional impact of working in an acute inpatient settings on nursing staff with organisational (e.g. resource allocation) and professional (e.g. ethical and personal values) aspects of the nursing role. It also takes the therapeutic nature of these nursing practices into consideration. VOTE is a new measure of staff perceptions of the daily stressors of working in acute in-patient settings to the evidence base. VOTE is recommended as a concise, twenty item measure which when totalled, produces a psychometrically sound score representing staff perceptions of the daily pressures of acute ward working. This study does not isolate whether different staff groups perceive different stressors. More work is required in this area, particularly around those stressors which relate

to direct client contact. Further, there is currently no evidence to show whether VOTE has any predictive value.

Implications for nursing practice

VOTE can be used to promote staff involvement by identifying staff valued work pressures that might affect burnout and interfere with quality of care as well as being used to highlight the impact of service changes in acute wards.

Implications for nursing research

In future research the effects of the ward environment on the workforce might be evaluated through an exploration of staff perceptions. Whether VOTE can also be linked to environmental factors such as incidents, staffing levels, and the amount of time that staff spend engaged in therapeutic interaction with clients should be explored. VOTE might be a useful tool for staff to assess the feasibility of delivering new interventions, and exploring whether longitudinally, they can be sustained.

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What is already known about the topic?

- In-patient mental health services have experienced major re-configurations resulting in reductions of resources.
- This has been linked to low job satisfaction and increasing levels of burnout.

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What this paper adds

- A new measure (VOTE) which captures staff perceptions of the daily pressures of in-patient working developed using a stakeholder participation model.
- An exploration of the relationship of the new measure to burnout.

Variables	Length of employment	Occupational status	Education	Ethnicity	Country of birth	Gender	Age
VOTE total score (N)	0.08 (175)	0.06 (193)	0.02 (160)	0.10 (190)	-0.12 (180)	0.08 (184)	-0.05 167)
p value	***0.31***	***0.42***	***0.78***	***0.19***	***0.12***	***0.29***	***0.53***
IWS total score (N)	0.07 (162)	0.01 (176)	0.11 (149)	-0.06 (177)	0.00 (170)	0.08 (172)	-0.06 (158)
p value	***0.35***	***0.85***	***0.18***	***0.46***	***0.9***	***0.28***	***0.46***
MBI total score (N)	-0.07 (177)	0.25 (197)	0.13 (161)	0.12 (199)	-0.06 (188)	-0.15 (191)	-0.18 (174)
p value	***0.34***	***0.001****	***0.09***	***0.10***	***0.40***	***0.04***	***0.01****

Figure 1. correlation coefficients describing the relationships between VOTE, IWS and MBI and the staff characteristics

*p>0.01 **p>0.001

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Table 1

Study design

Instrument Development Phase
• Reference group, focus groups, expert panels (instrument development group)
• Qualitative analysis and item generation (face & content validity)
Descriptive statistics
• Total VOTE scores across whole sample and subgroups
• Correlation coefficients describing the relationships between VOTE, IWS and MBI and the staff characteristics
Statistical Analysis
(i) ***Psychometric testing: is VOTE a robust measure?***
• Feasibility and acceptability (group 1)
• Reliability (test retest, internal consistency – group 2)
• Criterion validity - (group 3)
(ii) ***Do demographic characteristics affect staff perceptions of the daily pressures of working on an acute ward?***
• Random effects model exploring the effects of staff characteristics on VOTE
(iii) ***Do staff perceptions affect burnout?***
• Random effects model exploring the effects of VOTE and all demographic variables on MBI

Table 2
Demographic characteristics of participants

		Instrument development group N= 48 (%)	Group 1 N=40 (%) (N=31 fully completed)	Group 2 N=43 (%) (N=39 fully completed)	Group 3 N=245 (%) (N=200 fully completed)
Staff	Healthcare assistants	16 (33%)	13 (32.5%)	14 (33%)	72 (29%)
	*Staff nurses	23 (48%)	18 (45%)	16 (37%)	100 (41%)
	*Clinical charge nurses	9 (19%)	7 (17.5%)	8 (18.5%)	44 (18%)
	*Team leaders	0	2 (5%)	5 (11.5%)	17 (7%)
Ethnic group	White British/Other	13 (27%)	15 (37.5%)	16 (37%)	67 (27%)
	Black/Minority ethnic group	35 (73%)	25 (62.5%)	27 (63%)	178 (73%)
Gender	Male	15 (31%)	21 (52.5%)	20 (47.5%)	111 (45%)
	Female	33 (69%)	19 (47.5%)	23 (53.5%)	116 (47%)
Age	mean (sad)	37 (9.8)	38 (8.9)	39 (8.9)	39 (9.6)
	range	21-58	22-55	24-61	20-67

*(Note: Staff nurses, clinical charge nurses and team leaders were all qualified nursing staff, as opposed to the 'unqualified' nursing assistants group. In terms of occupational status, staff nurses are at the first rung of the profession. Charge nurses and team leaders occupy managerial roles).

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Table 3
Total VOTE scores across the subgroups of the sample

	Mean VOTE scores (sd)	
Staff	Whole sample	68.54 (12.77)
	Healthcare assistants	67.25 (12.55)
	Qualified nurses	70.81 (13.33)
	Clinical charge nurses	66.55 (11.46)
	Team leaders	64.23 (10.51)
Ethnic group	White British/Other	70.43 (13.53)
	Black/Minority ethnic group	67.74 (12.57)
Gender	Male	67.63 (12.18)
	Female	69.58 (12.93)
Age	39 yrs and above	67.93 (13.94)
	39 yrs and below	69.17 (11.69)
Country of origin	UK	70.01 (13.00)
	NON UK	66.96 (12.95)
Length of employment	3 years and above	69.26 (12.98)
	3 years and below	67.25 (12.93)

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Table 4

Variables	Coef.	S.E	P	95 % CI:	95% CI:
				UL	LL
Country of birth: UK or not	**−4.03**	**1.82**	**0.03**	−7.59	−0.46
cons	70.14	1.85	0.00	66.51	73.77
sigma_u	5.08				
sigma_e	11.61				
rho	0.16				

* p<0.05

** p>0.01

*** p>0.001

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Table 5

N (number of groups)	**87 (8)**				
Obs per group (min, average, max)	**8, 10.9, 15**			**95% CI**	
Variables	**Coef.**	**S.E**	**p**	**UL**	**LL**
VOTE total score	**0.44**	**0.10**	**0.001*****	0.25	0.64
Length of employment: −41months/42+	−3.09	2.76	0.26	−8.50	2.32
Occupational status: Qualified nurse or nursing assistant	**6.10**	**3.08**	**0.05***	0.06	12.14
Education: Degree_orNOT	1.75	2.65	0.51	−3.44	6.94
Ethnicity: White_BME	2.60	3.63	0.47	−4.51	9.70
Country of birth: UK or not	6.48	3.75	0.08	−0.87	13.84
Gender: M/F	−3.48	2.73	0.20	−8.84	1.88
Age: −39years/40+	**−7.66**	**2.87**	**0.01****	−13.28	−2.04
_cons	30.80	8.30	0	14.53	47.07
sigma_u	0				
sigma_e	13.79				
rho	0				

* p<0.05

** p>0.01

*** p>0.001