City Research Online

City, University of London Institutional Repository

MORALE IS HIGH IN ACUTE INPATIENT PSYCHIATRY

Len Bowers, Professor of Psychiatric Nursing, City University

Teresa Allan, Senior Lecturer in Health and Care Statistics, City University

Alan Simpson, Senior Research Fellow, City University

Julia Jones, Senior Research Fellow, City University

Richard Whittington, Reader, Health and Community Care Research Unit, University of Liverpool

Address for correspondence:

Dr Len Bowers

Professor of Psychiatric Nursing

St Bartholomew School of Nursing and Midwifery

City University

Philpot Street

London E1 2EA

Tel: 020 7040 5824

Fax: 020 7040 5811

E Mail: L.Bowers@city.ac.uk

MORALE IS HIGH IN ACUTE INPATIENT PSYCHIATRY

ABSTRACT

Background: Morale on acute psychiatric wards has been considered to be problematic, and is reported to contribute to low quality patient care.

Aim: To assess the relationship of staff morale to patient, service environment, physical environment, patient routines, conflict, containment, staff demographics, and staff group variables.

Method: A multivariate cross sectional study was undertaken collecting data on morale and other variables on 136 acute admission psychiatric wards in England.

Results: Morale was higher than published comparison samples. Length of time in post was correlated with low morale, and qualified nurses had higher emotional exhaustion but also higher personal accomplishment. The level of verbal abuse on a ward was associated with low morale, as was a higher level of social deprivation among patients. Higher levels of order and organisation correlated with better morale.

Conclusions: Clear policies relating to the management of verbal abuse by patients, high levels of order and organisation, and staff rotation and education, may all support high morale. Acute inpatient psychiatry is generally a happy and rewarding work environment, and identified problems are likely to be due to other factors.

182 words

Keywords: Inpatient; morale; verbal aggression; social deprivation; demography

BACKGROUND

Over the past ten years a series of negative reports have been issued about the state of care in acute inpatient psychiatric wards in the UK. Every one of these reports have assumed that morale in acute psychiatry is low, a state of affairs accredited to: a high level of demand coupled with low resources [1], shortages of staff, high turnover, high reliance upon bank and agency (temporary) staff, low status of the work [2], and insufficient relevant education and training of staff [3]. The consequences are generally taken to be: high levels of sickness and absence, coupled with the blocking of therapeutic culture development [1], and a diminished reservoir of expertise and competence as staff migrate to more desirable areas [2]. The prevalence of violence on such wards is also reported to be increasing [4] and violence to staff has been linked to lower morale [5-7].

While there are indeed problems in acute psychiatry [8], this does not necessarily prove that morale is low. That might also depend upon how prevalent those problems are, the degree of resilience of staff in the face of difficulty, or even on whether the reported difficulties do affect morale. A recent comprehensive literature review [9] on morale in inpatient wards found few studies reporting data specifically about acute inpatient wards. The identified reports were considered to be of low quality, consisting largely of small, single site studies, poorly reported, with few using valid questionnaires. The review concluded that a large scale multi-centre study, using a well-known and validated measure, should be carried out to yield evidence on the status of inpatient staff morale and its causes.

However, what staff morale <u>actually is</u>, in terms of its definition and how it is operationalised within healthcare organisations, still remains unclear; even Cahill et al [9] were unable to provide a definition of morale in their literature review on the topic. But based on previous literature it can be summarised that morale is a broad and complex concept which is generally taken to be a composite of low stress, low burnout and high job satisfaction but can also include staff sickness, absenteeism and turnover [9]. In this study burnout, as measured by the Maslach Burnout Inventory (MBI) [10], is taken to be a proxy measure of morale as the MBI exhibits strong correlations with many other components of morale, as outlined below. Using the burnout as a proxy for morale has been adopted by previous studies on staff morale in acute psychiatry and accordingly appears to be the most appropriate measure to use, in the current absence of a specific tool to measure 'staff morale' *per se*.

AIM

To assess the relationship of staff morale to patient, service environment, physical environment, patient routines, conflict, containment, staff demographics, and staff group variables.

METHODS

Design

A cross sectional design was utilised.

Sample

The sample comprised 136 acute psychiatric wards with their patients and staff in 67 hospitals within 26 NHS Trusts (organisational units with common clinical policies and investment levels) in England, proximate to three regional centres, in 2004-05. Acute psychiatric wards were defined as those that primarily serve acutely mentally disordered adults, taking admissions in the main directly from the community, and not offering long-term care or accommodation. It was initially intended to randomly sample wards, with replacement for refusals to participate. However the geographical dispersion of wards outside of London meant that to achieve the requisite sample size, two centres had to recruit all available wards within practical reach for data collection. In London, it was possible to randomly sample from a list of 112 wards. The 136 acute psychiatric wards that participated in the study represented 25% of the estimated total of 551 wards in England. The study was approved by the NW Multi-centre Research Ethics Committee.

Instruments

Morale was assessed by using the Maslach Burnout Inventory [10], a well validated and reliable self-report scale widely used in multiple studies, including mental health services [11]. It is known to robustly inversely correlate with job satisfaction, and positively correlates with absenteeism, lower productivity, and actual turnover [12], thus incorporating the main elements of what is generally regarded as 'morale'. The scale provides three separate scores:

Emotional exhaustion: feelings of being emotionally overextended and exhausted by work.

Depersonalisation: an unfeeling and impersonal response towards patients.

Personal accomplishment: feelings of competence and successful achievement. Because this third score represents a positive quality, higher scores indicate lower burnout.

The Patient-staff Conflict Checklist (PCC-SR), an end of shift report by nurses on the frequency of conflict and containment events [13], was collected for a six month period on all participating wards. This form was also used to collect a limited amount of data on patients (age, gender, ethnicity, diagnosis, reason for admission, and postcode). Postcodes were matched with local area deprivation data to yield deprivation scores for each hospital ward (Index of Multiple Deprivation, IMD) [14]. Additional instruments used included the Attitudes to Containment Measures Questionnaire (ACMQ), used in three countries and found to be related to traditional usage patterns [15,16]; the Attitude to Personality Disorder Questionnaire (APDQ), found to be related to job performance, stress, burnout, sensitive to change over time and with good test-retest reliability [17-19]; the Ward Atmosphere Scale (WAS) utilised and related to outcomes in many studies and displaying good reliability [20,21]; the Team Climate Inventory (TCI) validated with 121 teams from oil companies, psychiatric services, primary healthcare and social services [22]; the Multifactor Leadership Questionnaire (MLQ) is underpinned by the theory of transactional and transformational leadership and has demonstrated good reliability and validity [23].

Analysis

The response rate is described and descriptive statistics provided for each questionnaire score. Results of normality tests (Shapiro-Wilk) and log transformations are reported. MBI scores are compared to scale norms using t tests. Backward stepwise regression was used to analyse associations between demographic variables and morale. This analysis took place at the individual level, i.e. each case was one individual.

In a second regression analysis, mean MBI scores were computed for each of the 136 wards, and these scores were then used as dependent variables. Backward stepwise multiple regression analysis ($p = 0.05$ as the criteria for continued inclusion) was used, with statistical allowance being made for clustering by Trust. In other words, this analysis is conducted at the level of wards with data organised as 136 cases/rows, each representing one ward. Conflict and containment rates are therefore mean rates across the six month sample period, standardised to wards of 20 beds to adjust for patient numbers, and equally weighted for each of the three shifts (AM/PM/NIGHT). This analysis was first conducted separately for each domain (patient, service environment, physical environment, patient routines, conflict, containment, staff demographics, and staff group factors). Variables found to be significant in these domain analyses were then entered into a further regression analysis, resulting in a final model across all domains. Both the domain and across domain results may report valid findings, as some variables in the across domain analysis may be intervening (i.e. interposed between causal variable and effect variable) [24]. Raw coefficients are reported because standardised beta's are not available when a clustering procedure is

applied. Adjusted r-squared is reported as a measure of model fit. Regression diagnostics utilised include the calculation of variance inflation factors, residual plots, and Cooks distance as a measure of leverage. The final modelling was repeated after outlier deletion, to test the robustness of the findings.

These analyses were conducted using STATA version 9.

RESULTS

A total of 1525 MBIs were collected from the 136 wards during this study, representing a mean of 11.21 per ward and a response rate of 56%. The sample consisted mainly of qualified nurses (67%) and Healthcare Assistants (29%), with the majority being female (66%), and white (68%). The mean scores are presented in Table 1 in two forms, firstly the means of individual scores, and secondly the means of the mean score by ward (treating burnout, therefore, as a joint property of the ward teams rather than solely individuals). There was a small amount of missing data in the returned questionnaires (5.32% of items) and mean interpolation was used to calculate scores in these cases. Individual level scores were significantly non-normal by Shapiro-Wilk test; however ward level scores for emotional exhaustion and personal accomplishment were normally distributed.

INSERT TABLE 1 ABOUT HERE

The individual scores were significantly lower than test norms for an overall sample of 11,067 US educators, social services staff, doctors, mental health and other staff [10] for emotional exhaustion ($p < 0.001$) and depersonalisation ($p < 0.001$), and higher for personal accomplishment ($p < 0.001$). They were also lower than Sullivan's 1993 sample of 78 UK acute ward nurses [25] for emotional exhaustion ($p = 0.044$) and depersonalisation ($p < 0.001$). These differences remain the same if all questionnaires with any missing data are excluded from the analysis.

Morale and demography

Several items of demographic information were collected together with the MBI: age, gender, ethnicity, discipline, number of years in current post, number of years experience of working in psychiatry. Exploratory univariate analyses showed significant connections between all demographic characteristics, including ethnicity, and burnout. In order to ascertain the nature of these links to burnout, variables were regressed on the three MBI scores, and the resulting models are displayed in Table 2.

INSERT TABLE 2 ABOUT HERE

The distributions for the MBI scores were skewed at the individual level, and could not be significantly corrected by transformation; therefore they were therefore utilised raw. The variance explained by the independent variables was small (no R-squared value exceeded 0.04). Female gender was associated with lower emotional exhaustion and depersonalisation, but not increased personal accomplishment. Longer periods in the current post were associated with greater burnout, but greater age was associated

9

with lower burnout, indicating distinct and opposite effects for these two related variables. Healthcare Assistants had lower emotional exhaustion but also lower personal accomplishment, or to state this another way, qualified nurses had higher emotional exhaustion but also higher personal accomplishment. Once other variables have been taken into account, few ethnicity related findings were apparent, however what results there were indicated lower burnout for certain ethnic minorities.

Models of morale

Table 3 lists the statistically significant univariate associations of burnout scores with other variables. As previously described, models were first constructed for each domain (patient characteristics, service environment, etc.), then significant variables from these models were used to construct an overarching model. A full list of all variables included in the modelling exercise can be found elsewhere [26].

INSERT TABLE 3 ABOUT HERE

Domain and full models for the three MBI scores can be found in Tables 4-6. Log transformation was used to render Depersonalisation normal prior to analysis; the other two MBI scores were normally distributed. Several consistent features of these models can be identified. Wards serving areas that were more socially deprived were more likely to have higher levels of burnout by all three scores. The only conflict item associated with burnout was verbal abuse. WAS order and organisation was consistently associated with lower burnout by all three scores. While there were relationships with attitudes to personality disordered patients, these were more

complex and varied by MBI score. However with one exception these were in the direction of better attitudes being associated with higher morale.

INSERT TABLES 4-6 ABOUT HERE

Multicollinearity was assessed for the domain analyses prior to conducting the stepwise procedure, by calculating the variance inflation factors. No problems were identified. Outliers were identified for each domain and for the final model by calculating Cooks distances. Observations that were highlighted as outliers repeatedly during this process were deleted from the data set before running the final combined model a second time, to identify the most robust findings. The effects of outliers on the overall models were minimal.

DISCUSSION

Morale on acute wards is good, contrary to reports based on expert opinion rather than empirical study. If violence is increasing on the wards, and there is little real evidence this is so [27], then it does not appear to be having a major impact on morale. In comparison to the available reference groups, staff working in acute psychiatry suffer from less burnout. These results are consonant with a recent survey of hospital based Mental Health Nurses showing that although there were complaints about staffing levels and workload, respondents had high levels of job satisfaction with 80% considering the quality of patient care good and 70% agreeing that nursing was a rewarding career [28].

The mismatch between common belief and these research findings is intriguing, and suggests that policy and opinion related discourse is disconnected from the real state of affairs on the wards. Furthermore, it suggests that a process of 'catastrophising' the situation on acute inpatient wards is common amongst those who have responsibility for managing and setting national policy for these care areas. This may result in inappropriate and potentially excessive anxiety driven attempts to resolve the perceived difficulty, especially when serious untoward incidents occur [29]. In the absence of evidence for a pool of low morale on acute inpatient wards, reported high nursing vacancy rates of 12% nationally [30] are likely to be due to other factors, such as the numbers of nurses trained, the overall job market, the structure of nurse careers, remuneration patterns, and the desirability of shift working versus office-hour positions.

The ways in which demographic variables are related to burnout suggest that qualified nurses have a more meaningful role in acute psychiatry, one that enables them to reap a sense of greater personal accomplishment, but that this comes at the cost of a greater potential for emotional exhaustion, especially as the years in post increase. This increase of burnout with years in post suggest that rotation of staff between wards and perhaps other areas of the service, coupled with opportunities for further education and the development of new skills, might help staff to avoid burnout and improve morale. However lower burnout scores for older staff suggests that maturity may generate resilience, and that recruitment of older age groups into nursing and healthcare assistant roles might produce a workforce with a higher level of morale.

The consistent association of high social deprivation and low morale can be interpreted in different ways. Perhaps wards serving deprived areas are more challenging and emotionally harder to work on, and morale is easier to achieve on wards serving prosperous and/or middle class areas where patients may have problems that can more readily be resolved. Alternatively (or as well) there may be a process in which high morale staff achieve positions on wards serving middle class areas, perhaps because they represent an easier and more desirable working environment. If this explanation is true, then the process of job competition in any locality is likely to result in the most enthusiastic and energetic staff being concentrated on the easier to work on wards serving more middle class areas. This also implies that rotation of staff between wards on a regular planned basis would have a beneficial outcome.

Given the previous research linking violent incidents to low morale [5], it was surprising to find few links between ward morale and the frequency of difficult patient behaviours, and specifically no link to the frequency of physical assaults. Univariate analysis did show relationships between all types of patient violent behaviour and low morale, as well as rule breaking and medication refusal. There were also associations between the admission of difficult patients (those admitted compulsorily and for risk of harm to others). However, in the multivariate analysis with clustering by Trust taken into account, the most consistent association was with verbal abuse. It is possible that teams with higher burnout elicit more verbal abuse from patients because of a tired and impersonal interaction style, however it is difficult to explain why this would not also stimulate greater violence, rule breaking, absconding etc. On the other hand, it is possible that constant verbal pressure might

have a profound psychological effect on staff. It would therefore appear that the patient behaviour that really saps staff morale is verbal abuse. Verbal abuse has been little studied [31,32], and there may be scope for interventions with staff that protect them from this negative impact, or for the introduction of policies on the wards that reduce the prevalence of verbal abuse. Literature from general healthcare settings has demonstrated an association between verbal abuse and decreasing morale, job satisfaction, increased psychological distress and intention to leave [33].

The association between attitudes to personality disordered patients and burnout is complicated. Broadly speaking, positive attitudes are associated with lower burnout, confirming previous findings [19], but the direction of causality cannot be determined. It is possible that both scales tap common latent variables representing emotional response sets to patients, and there are known links between personality type and scores on both the MBI and the APDQ [34]. The positive association between APDQ purpose (representing a sense of meaningfulness and purpose in working with PD patients) and burnout is curious, and may indicate that having high expectations about ones own role might actually lead to greater burnout because of the inherent difficulty in living up to them.

However a well ordered and organised ward seems to promote high morale. The WAS order and organisation score consists of items stressing the neatness and tidiness of wards, staff and patients, coupled with items reflecting the availability programs of activities for patients [21]. A strong externally provided structure and role might give staff a framework to understand and make their contribution meaningful; however this does not fit with the positive association between APDQ purpose and

depersonalisation. An alternative reading is that high morale enables staff to establish high levels or order and organisation, or that the two are interdependent. This cross sectional study does not allow direction of causality to be determined.

Whatever these explanations, these other questionnaire scores explain a much greater proportion of the variance in ward morale than do features of the environment, the patients, or their behaviours, with R-squared values three times higher. This suggests that the main levers for the improvement in morale will be with the staff and how they are managed, rather than through achieving changes in patient behaviour.

CONCLUSIONS

The main limitation of this study is the cross sectional nature of the dataset. The significant correlations reported cannot identify the direction of causality. Firm conclusions cannot therefore be drawn from these correlations, which are subject to a variety of different interpretations. In addition, the modelling strategy used is likely to identify some variables as significant purely by chance. However the large scale of the study, the number of potential confounding variables incorporated in the analysis, and the statistical allowance made for the clustering of responses by organisation, all increase the accuracy and the reliability of the findings. A further limitation is that this study in reality measured staff burnout, used as a proxy for staff morale, within the context of researchers still not knowing exactly what 'morale' is or how to measure it with a specific tool. This is clearly an area where further work is needed.

In this study it was found that burnout on acute wards in England during 2005 was low, indicating that contrary to what might be expected from negative reports about the field, morale is actually high. Possible reasons for this include the regular influx of newly trained, energetic and enthusiastic staff. For those who have been working in acute psychiatry for some years, greater support and opportunities to take on new challenges may help to maintain morale. Rotation of staff between wards might assist this, and prevent the pooling of staff with lower morale on the wards where patients have more challenging problems. Verbal abuse appears to have a pernicious impact on morale and hospitals should develop policies that lead to greater patient self-control, and which are supportive to staff who are on the receiving end of such abuse. A well organised ward with a high degree of structure seems to enhance morale, and should therefore be a priority for the ward staff team. Acute inpatient psychiatry offers considerable scope for felicitous working and great personal accomplishment, and is therefore not as awful as the depressing picture portrayed in many recent reports.

3072 words

ACKNOWLEDGEMENT

Table 1. Summary results by individual and by ward

	1525 Individuals		136 Wards	
	Mean	sd	Mean	sd
Emotional exhaustion	17.78	11.39	18.05	5.23
Depersonalisation	5.49	5.09	5.55	2.21
Personal accomplishment	35.46	8.16	35.77	3.06

Table 2. Results of regressing demographic variables on burnout scores.

	Coef.	Std. Err.	p
Emotional exhaustion, adjusted R-squared = 0.040			
One year or less in current post*	-2.54	0.76	0.001
Between 3 and 5 years in current post*	2.21	0.99	0.025
More than five years in current post*	1.80	0.82	0.029
50-59 compared to 30-39 years of age	-2.33	0.90	0.01
60 and over compared to 30-39 years of age	-5.96	1.89	0.002
Female gender	-2.19	0.63	p<0.001
HCAs compared to qualified nurses	-2.20	0.66	0.001
Depersonalisation, adjusted R-squared = 0.035			
20 or under compared to 30-39 years of age	3.85	1.69	0.022
40-49 compared to 30-39 years of age	-1.20	0.31	p<0.001
50-59 compared to 30-39 years of age	-1.62	0.40	p<0.001
60 and over compared to 30-39 years of age	-2.05	0.84	0.015
One year or less in current post*	-0.95	0.30	0.002
Female gender	-0.93	0.28	0.001
African compared to white	-1.13	0.39	0.004
Personal accomplishment, adjusted R-squared = 0.032			
Working between 1 and 2 years in psychiatry compared to more than 5 years	1.38	0.60	0.021
Caribbean compared to white	2.55	0.61	p<0.001
One year or less in current post*	1.07	0.47	0.023
HCAs compared to qualified nurses	-1.85	0.48	p<0.001
Other disciplines compared to qualified nurses	-2.99	1.09	0.006

*Compared to between 1 and 3 years in current post

Table 3. Significant univariate associations (Spearman correlations).

Variable	Mean or proportion	sd	Univariate assoc. with emotional exhaustion		Univariate assoc. with depersonalisation		Univariate assoc. with personal accomplishment	
			r	p	r	p	r	p
Patient characteristics								
Proportion of admissions with schizophrenia	0.32	0.15	0.175	0.041	0.104	0.227	0.043	0.623
Proportion of admissions detained under MHA	0.30	0.15	0.213	0.013	0.207	0.016	-0.005	0.950
Proportion of patients admitted for risk of harm to others	0.32	0.15	0.166	0.053	0.194	0.024	0.016	0.856
Proportion of admissions Irish	0.03	0.05	0.183	0.033	0.121	0.162	0.083	0.338
Index of Multiple Deprivation	33.68	12.08	0.321	< 0.001	0.263	0.002	-0.227	0.008
Social Fragmentation Index	0.55	0.64	0.246	0.004	0.162	0.060	-0.097	0.265
Service environment								
Ward served by assertive outreach team	82%		-0.214	0.012	-0.170	0.048	0.019	0.825
Physical environment								
Nil significant								
Patient routines								
Nil significant								
Conflict (rate per 24 hours)								
Verbal aggression	2.41	1.40	0.219	0.010	0.253	0.003	-0.129	0.136
Physical aggression against objects	0.47	0.30	0.211	0.014	0.218	0.011	-0.101	0.242
Physical aggression against others	0.33	0.22	0.221	0.010	0.187	0.029	-0.114	0.187
Smoking in non smoking area	2.47	2.72	0.093	0.279	0.213	0.013	-0.043	0.619
Refusing to attend to personal hygiene	1.34	1.02	0.151	0.079	0.228	0.008	-0.082	0.343
Refusing to get out of bed	0.74	0.52	0.114	0.185	0.217	0.011	-0.088	0.306
Refusing to go to bed	0.46	0.30	0.131	0.129	0.200	0.020	-0.067	0.437
Refused regular medication	0.89	0.52	0.142	0.098	0.255	0.003	-0.022	0.801
Refused PRN medication	0.30	0.19	0.139	0.107	0.246	0.004	0.038	0.663
Containment (rate per 24 hours)								
PRN medication	2.16	1.12	0.115	0.183	0.173	0.044	-0.084	0.330
IM medication (enforced)	0.15	0.11	0.191	0.026	0.238	0.005	-0.077	0.372
Show of force	0.28	0.24	0.100	0.249	0.209	0.015	-0.059	0.495
Manually restrained	0.20	0.15	0.129	0.134	0.162	0.060	-0.174	0.043
Time out	0.31	0.34	0.195	0.023	0.266	0.002	-0.236	0.006
Staff demographics								
Number of Cons. Psychiatrists locums	0.71	0.95	0.157	0.068	0.093	0.282	-0.198	0.021
Proportion staff over 30 years of age	0.76	0.16	-0.095	0.270	-0.233	0.006	0.201	0.019
Proportion of staff white	0.63	0.35	-0.017	0.841	0.052	0.549	-0.193	0.024
Proportion of staff African	0.18	0.24	0.024	0.781	-0.067	0.439	0.237	0.005
Staff group factors								
APDQ enjoyment	3.00	0.34	-0.198	0.021	-0.227	0.008	0.302	0.000
APDQ security	4.64	0.31	-0.327	0.000	-0.273	0.001	0.234	0.006
APDQ acceptance	4.78	0.32	-0.311	0.000	-0.346	0.000	0.357	0.000
APDQ purpose	4.23	0.43	-0.154	0.074	-0.176	0.040	0.335	0.000
APDQ enthusiasm	3.58	0.48	-0.363	0.000	-0.344	0.000	0.371	0.000
WAS order and organisation	6.57	1.08	-0.212	0.014	-0.295	0.001	0.290	0.001
WAS program clarity	6.59	0.96	-0.227	0.008	-0.245	0.004	0.251	0.003
TCI support for innovation	3.50	0.38	-0.166	0.053	-0.226	0.008	0.105	0.225
TCI vision	3.59	0.42	-0.201	0.019	-0.251	0.003	0.190	0.027
TCI task orientation	3.52	0.48	-0.172	0.045	-0.225	0.008	0.157	0.068

Table 4. Domain and combined stepwise regression analyses for emotional exhaustion

	DOMAIN MODELS				FINAL MODEL			
	Coef.	Std. Err.	p	R-squared	Coef.	Std. Err.	p	R-squared
Patient								
Index of Multiple Deprivation	0.140	0.026	p<0.001	0.103	0.115	0.022	p<0.001	0.306
Service environment								
ACT team	-2.884	1.226	0.027	0.046	-2.261	0.953	0.026	
Physical environment								
Nil significant								
Patient routines								
Community meeting	-2.683	1.254	0.042	0.030				
Conflict								
Verbal abuse	0.822	0.342	0.024	0.048				
Containment								
Banned items	0.202	0.077	0.015	0.027				
Staff demographics								
Proportion male	4.856	2.234	0.039	0.034				
Staff group								
APDQ security	-5.264	1.139	p<0.001	0.244	-3.943	1.101	0.001	
APDQ purpose	4.403	1.099	p<0.001		4.375	1.107	0.001	
APDQ enthusiasm	-4.264	0.889	p<0.001		-4.755	0.855	p<0.001	
WAS order and organisation	-0.938	0.319	0.007					

Table 5. Domain and combined stepwise regression analyses for depersonalisation

	DOMAIN MODELS				FINAL MODEL			
	Coef.	Std. Err.	p	R-squared	Coef.	Std. Err.	p	R-squared
Patient								
Index of Multiple Deprivation	0.048	0.013	0.001	0.069	0.023	0.010	0.032	0.316
Service environment								
Seclusion room on site vs none	0.689	0.314	0.038	0.053				
Physical environment								
Nil significant								
Patient routines								
Nil significant								
Conflict								
Verbal abuse	0.400	0.111	0.001	0.064				
Containment								
Time out	1.706	0.505	0.002	0.071				
Staff demographics								
Proportion mature	-3.508	1.291	0.012	0.082				
Actual other doctors	0.118	0.039	0.005		0.085	0.033	0.018	
Staff group								
APDQ Acceptance	-2.237	0.596	0.001	0.295	-1.815	0.674	0.012	
APDQ Purpose	1.463	0.652	0.034		1.508	0.629	0.024	
APDQ enthusiasm	-1.335	0.517	0.016		-1.612	0.574	0.010	
WAS order and organisation	-0.463	0.110	p<0.001		-0.361	0.122	0.007	
ACMQ safe for patients	-0.368	0.119	0.005		-0.325	0.114	0.009	
ACMQ prepared to use	0.271	0.090	0.006		0.229	0.084	0.011	

Table 6. Domain and combined stepwise regression analyses for personal accomplishment

	DOMAIN MODELS				FINAL MODEL			
	Coef.	Std. Err.	p	R-squared	Coef.	Std. Err.	p	R-squared
Patient								
Index of Multiple Deprivation	-0.057	0.023	0.018	0.052				0.200
Service environment								
Nil significant								
Physical environment								
Nil significant								
Patient routines								
Nil significant								
Conflict								
Nil significant								
Containment								
Door always locked vs open	1.267	0.593	0.043	0.090				
Time out	-2.483	0.677	0.001					
Staff demographics								
Locum consultants	-0.481	0.200	0.024	0.120	-0.629	0.190	0.003	
Proportion staff white	-2.203	0.949	0.029					
Proportion staff Irish	-10.614	3.961	0.013					
Actual Clinical Psychologists	-1.772	0.765	0.029					
Staff group								
WAS order and organisation	0.615	0.200	0.005	0.214				
APDQ enjoyment	1.481	0.713	0.048		1.497	0.697	0.042	
APDQ enthusiasm	1.687	0.614	0.011		1.806	0.661	0.011	

References

1. Standing Nursing and Midwifery Advisory Committee: Mental Health Nursing: Addressing Acute Concerns. London, SNMAC, Department of Health, 1999.

2. Department of Health: Mental Health Policy Implementation Guide. Adult Acute Inpatient Care Provision. London, Department of Health, 2002.

3. Clarke S. Acute Inpatient Mental Health Care: Education, Training and Continuing Professional Development for All. 1-61. 2004. London, Department of Health and National Institute for Mental Health England.

Ref Type: Report

4. Noble P, Rodger S: Violence by Psychiatric In-patients. British Journal of Psychiatry 155:384-390, 1989.

5. Kindy D, Peterson S, Parkhurst D: Perilous work: Nurses' experiences in psychiatric units with high risks of assault. Archives of Psychiatric Nursing 19:169-175, 2005.

6. Goodykoontz L, Herrick CA: Evaluation of an Inservice Education Program Regarding Aggressive Behavior in a Psychiatric Unit. The Journal of Continuing Education in Nursing 21:129-133, 2003.

7. McGeorge M, Lelliott P, Stewart J, et al: Managing Violence in Psychiatric Wards: Preliminary Findings of a Multi-centre Audit. Mental Health Care 31:366-369, 2001.

8. Brennan G, Flood C, Bowers L: Constraints and blocks to change and improvement on acute psychiatric wards – lessons from the City Nurses project. Journal of Psychiatric and Mental Health Nursing 13:475-482, 2006.

9. Cahill J, Gilbody S, Barkham M, et al: Systematic Review of Staff Morale in Inpatient Units in Mental Health Settings. Report for the National Co-ordinating Centre for NHS Service Delivery & Organisation R & D (NCCSDO). Leeds, NCCSDO, 2004.

10. Maslach C, Jackson S: The Maslach Burnout Inventory. Palo Alto, CA, Consulting Psychologists Press, 1981.

11. Fagin L, Carson J, Leary J, et al: Stress, coping and burnout in mental health nurses: findings from three research studies. International Journal of Social Psychiatry 42:102-111, 1996.

12. Maslach C, Schaufeli WB, Leiter MP: Job Burnout. Annu Rev Psychol 52:397-422, 2001.

13. Bowers L, Douzenis A, Galeazzi G, et al: Disruptive and dangerous behaviour by patients on acute psychiatric wards in three European centres. Social Psychiatry and Psychiatric Epidemiology 2005.

14. Noble M, Wright G, Dibben C, et al: The English Indices of Deprivation 2004. West Yorkshire, OPDM Publications, 2004.

15. Bowers L, Simpson A, Alexander J, et al: Cultures of psychiatry and the professional socialization process: the case of containment methods for disturbed patients. Nurse Education Today 24:435-442, 2004.

16. Bowers L, Van der Werf B, Vokkolainen A, et al: International variation in attitudes to containment measures for disturbed psychiatric inpatients. International Journal of Nursing Studies 44:357-364, 2007.

17. Bowers L, Allan T: The Attitude to Personality Disorder Questionnaire: psychometric properties and results. Journal of Personality Disorders 20:281-293, 2006.

18. Bowers L, Carr-Walker P, Paton J, et al: Changes in attitudes to personality disorder on a DSPD unit. Criminal Behaviour and Mental Health 15:171-183, 2005.

19. Bowers L, Carr-Walker P, Allan T, et al: Attitude to personality disorder among prison officers working in a dangerous and severe personality disorder unit. International Journal of the Law and Psychiatry 29:333-342, 2006.

20. Moos R: Ward Atmosphere Scale Manual. Palo Alto, CA, Consulting Psychologists Press, 1974.

21. Moos R: Evaluating Treatment Environments. New Brunswick, Transaction Publishers, 1997.

22. Anderson N, West M: Team Climate Inventory (TCI): user's guide. Windsor, NFER-NELSON Publishing, 1999.

23. Bass B, Avolio B: Multifactor Leadership Questionnaire. Redwood City, CA, Mind Garden, 1995.

24. Kiely J: Some conceptual problems in multivariable analysis of perinatal mortality. Paediatric and Perinatal Epidemiology 5:243-257, 1991.

25. Sullivan P: Occupational stress in psychiatric nursing. Journal of Advanced Nursing 18:591-601, 1993.

26. Bowers L, Whittington R, Nolan P, et al: The City 128 Study of Observation and Outcomes on Acute Psychiatric Wards. Report to the NHS SDO Programme. London, NHS SDO Programme, 2007.

27. Foster C, Bowers L, Nijman H: Aggressive behaviour on acute psychiatric wards: prevalence, severity and management. Journal of Advanced Nursing 58:140-149, 2008.

28. Ball J: Untapped Potential: A survey of RCN members working in mental health. London, RCN Policy Unit & RCN Mental Health Nursing Forum, Royal College of Nursing, 2007.

29. Bowers L, Simpson A, Eyres S, et al: Serious untoward incidents and their aftermath in acute inpatient psychiatry: the Tompkins Acute Ward Study. International Journal of Mental Health Nursing 15:226-234, 2006.

30. Garcia I, Kennett C, Quraishi M, et al: Acute Care 2004. A national survey of adult psychiatric wards in England. London, Sainsbury Centre for Mental Health, 2005.

31. Adams J, Whittington R: Verbal aggression to psychiatric staff: traumatic stressor or part of the job? Perspectives in Psychiatric Care 2:171-174, 1995.

32. Werner PD, Yesagave JA, Becker JMT, et al: Hostile words and assaultive behaviour on an acute in-patient psychiatric unit. Journal of Nervous and Mental Disease 171(385-387): 1983.

33. Sprigg C, Armitage C, Hollis K: Verbal abuse in the National Health Service; impressions of the prevalence, perceived reasons for and relationships with staff psychological well-being. Emergency Medicine 24:281-282, 2007.

34. Bowers L, Carr-Walker P, Allan T, et al: The Right People for the Job: choosing staff that will adjust positively and productively to working in the new personality disorder (PD) services. Report to the Home Office. London, City University, 2003.