

Staff morale in the English mental health workforce

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For submission to the British Journal of Psychiatry

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Abstract

Background

High quality evidence on morale in the mental health workforce is lacking.

Aims

To describe staff well-being and satisfaction in a multicentre NHS sample and examine associated factors.

Method

Questionnaire-based survey (n=2,258) in 100 wards and 36 community teams in England. Measures included a set of frequently used indicators of staff morale, and measures of perceived job characteristics based on Karasek's Demand-Control-Support model.

Results

Staff well-being and job satisfaction were fairly good on most indicators, but emotional exhaustion was high among acute general ward and Community Mental Health Team (CMHT) staff and social workers.

Most morale indicators were moderately but significantly inter-correlated. Principal components analysis yielded two components, one appearing to reflect emotional strain, the other positive engagement with work.

In the models obtained from multilevel regression analyses, factors associated with greater emotional strain included working in a CMHT or Psychiatric Intensive Care Unit (PICU), high job demands, low control, low support from managers and colleagues, age groups under 45 years and more junior grades. Greater positive engagement was associated with high job demands, control and support from managers and colleagues, Black or Asian ethnic group, being a psychiatrist or service manager, and shorter length of service.

Conclusions

Potential foci for interventions to increase morale include CMHTs, PICUs and general acute wards. The explanatory value of the demand-support-control model was confirmed, but job characteristics did not fully explain differences in morale indicators across service types and professions.

Declaration of interest

None

Introduction

The morale of the mental health workforce is important in several ways. Firstly, this large workforce is exposed to substantial stresses and, at times, threats (1): ensuring staff well-being is thus a key challenge for employers. Secondly, high levels of staff sickness in the NHS result in a large economic burden on the nation (2). Thirdly, there is some evidence suggesting links between health staff well-being and patient experiences and outcomes (2). Finally, staff attitudes are a key factor facilitating or impeding implementation of new service initiatives (3). Implementation is highly salient in psychiatric inpatient settings, which are a central focus for the current study, as wards in the UK have been criticised as threatening and unsafe environments in which therapeutic relationships are impoverished and treatment limited. This has resulted in a series of initiatives aimed at service improvement, which are unlikely to succeed unless a skilled and motivated workforce is recruited and retained. Despite its importance, the UK and international literature on staff morale remains limited, with a lack of large multisite studies that encompass all the main mental health professions and include sub-specialties other than services for adults of working age (4;5).

Aims

The aim of the current study is to address this need for large-scale evidence on the prevalence and correlates of staff morale in the mental health workforce. Like previous authors (6), we use morale in this paper as a general term encompassing the main aspects of work-related well-being and satisfaction and engagement with work. In the absence of a well-validated direct measure of morale, our pragmatic approach has been to use a set of measures frequently used in investigations of staff well-being and satisfaction, and then investigate whether these can be reduced to a smaller number of components to be used in further analyses.

Specific objectives are:

1. To describe staff well-being and satisfaction in a large multicentre sample, identifying whether there are sub-specialties or professions where morale problems are especially acutely felt or where morale levels are exemplary.
2. To investigate the inter-relationships of the main measures of staff well-being and satisfaction used in the sample, and whether a smaller number of higher order components onto which several of these indicators load can be identified.
3. To explore how far variations between service settings and professions may be accounted for by job characteristics.

Methods

Setting

Nineteen mental health Trusts across England were the setting for the study, drawn from the regions surrounding the four main participating universities, which were UCL and the Universities of Warwick, Sheffield and Bristol. Demographic and geographical characteristics of catchment areas varied widely. England's 60 mental health Trusts are responsible for delivery of mental health and social care addressing a range of mental health problems, mainly within a defined catchment area.

Sample and procedures

The inpatient sample was recruited on 100 wards, half of them acute general wards serving adults of working age resident within a specific catchment area, the remainder divided between wards for older people (MHCOP), rehabilitation¹, forensic², child and adolescent mental health (CAMHS)³ wards

¹ Rehabilitation wards in England provide longer term, but time-limited care for a severely ill group who have major difficulties functioning in the community.

² Forensic wards care for mentally ill offenders, usually referred via the criminal justice system. Most included in the study were regional secure units, providing secure care for several Trusts,

³ Policy in England is now that all admissions of people aged 18 years should go to CAMHS wards.

and psychiatric intensive care units (PICUs)⁴. The community sample was drawn from 18 community mental health teams (CMHTs)⁵ and 18 crisis resolution teams (CRTs)⁶.

All frontline clinical staff and their immediate managers in the participating teams were approached by researchers and invited to fill in the self-report study questionnaire. Assurances of confidentiality were provided and reminders and tokens of gratitude such as fruit and biscuits distributed. Multicentre ethical approval was from Brighton and Mid-Sussex Ethics Committee.

Measures

Only the measures reported in this paper are described.

(a) Measures of morale

In the absence of a single validated measure of morale, we used a set of frequently used indicators to assess staff attitudes to work and well-being. These were:

1. The **Maslach Burnout Inventory (7)**: This has been the most frequent measure in investigations of mental health staff well-being. The three dimensions of burnout yielded are **emotional exhaustion**, based on nine items about the extent to which participants feel over-burdened by their work, **cynicism**⁷, based on five items about the extent to which they feel emotionally

⁴ Psychiatric Intensive Care Units provide care for patients deemed too difficult to manage or risk general acute wards. Patients are less likely to have committed a serious offence than in forensic wards.

⁵ CMHTs have for 20 years been the main source of continuing care in the community for most adults of working age with severe mental health problems.

⁶ Crisis resolution teams (also called home treatment teams) are available throughout England and provide rapid assessment and short-term intensive home treatment in a crisis.

⁷ We follow other recent authors (e.g. LaSalvia et al. *The British Journal of Psychiatry* (2009) 195: 537-544) in calling this sub-scale *cynicism* rather than the original and somewhat confusing designation of this sub-scale as *depersonalisation*.

hardened and indifferent to patients, and **personal accomplishment**, based on eight items about whether people feel they can work with patients effectively.

2. The **Job-related Well-being Scale** (8): This is frequently used in occupational psychology. The version used generates two sub-scales, conceptualised as partially independent. They are an **anxiety-contentment** scale, on which high scores represent predominance of contentment over anxiety and low scores the reverse, and a **depression-enthusiasm** scale in which enthusiasm predominates at high scores and depression at low scores.
3. **Job satisfaction:** We used a combination of items from the 2004 Workplace Employment Relations Survey(9) and NHS National Staff Survey (Healthcare Commission, 2006) to cover the aspects of satisfaction that we wished to include. This generated a number of satisfaction sub-scores (see Data Supplement Table 2 (DS2)), all on five-item scales.
4. **The General Health Questionnaire – 12 item version (GHQ-12).**(10) This 12-item measure is long established as a brief screening measure of overall psychological ill health. Items cover depression, anxiety, suicidal ideas, happiness and sleep disturbance. Using the Likert version, each item is scored from 0 to 3 and a total score of 12 or more out of 36 is used as the threshold for ‘caseness’, indicating potential morbidity.
5. **Job Involvement Scale:** Job Involvement is defined as the extent to which an individual identifies psychologically with their work and is used as an indicator of motivation (11). We used a 5-item measure previously used by Tummers and colleagues in an investigation of nurses (12), with items assessing how central work is to people’s lives and identities.

(b) Demographic and occupational details

Structured questions elicited (a) demographic details, including sex, ethnic background (using census categories, but subsequently aggregated to obtain

large enough groups for analysis) and marital status; (b) profession, length of service in mental health and on current ward, and seniority.

(c) Job characteristics

Our concepts of perceived job characteristics were based on Karasek's Demand-Control model of work-related strain (13), extended by Johnson and Hall to include support (14). This has been central to work psychology for two decades and has been replicated in many populations (15), though not prior to our study in a multidisciplinary sample of mental health staff (16). Job strain in this model is formulated as resulting from the triad of high demands, low decisional latitude (autonomy), and low support. An extension of this, also with considerable empirical support, is the idea that high motivation and good job satisfaction result from a combination of high demands, high autonomy and high support (15). In our study, demands and control were measured by a set of questions developed by Haynes and colleagues as appropriate for health staff (17). All items were rated on a 5 point scale: seven related to the demands made by jobs, including whether these exceeded available resources, conflicted with one another, and made it impossible to follow best practice. Five related to control, the extent to which respondents had latitude in deciding how to do their work. Three items in the same format measured support from managers, including willingness to listen and helpfulness, and four the extent of support from colleagues.

Analysis

(a) Descriptive analyses

We first estimated unadjusted mean morale indicators by service type and profession and tested for differences using ANOVA. Our original analysis plan involved testing the hypothesis that an aggregated inpatient staff group would have poorer morale than community staff: however, this was not pursued as initial descriptive statistics revealed large differences among inpatient sub-specialties

(b) Investigation of relationships between indicators of morale

We began our examination of the relationship between morale indicators by examining pairwise Pearson's correlations between all the sub-scales listed above. We then used principal components analysis to examine whether components onto which several indicators load could be identified in the data. If plausible components were obtained, our plan was to use these in the subsequent analyses of variables associated with morale; this proved to be the case.

(c) Examination of demographic and occupational variables associated with morale

The next step was to examine the associations of the components of staff morale obtained in the preceding step with service type and profession, also adjusted for other demographic and occupational variables. Mixed effect multilevel regression was carried out using STATA 10 to account for individuals nested within services. Effects both at individual and service level could be simultaneously modelled through this approach, taking account of the non-independence of observations at each level (18).

Multilevel models were then derived with each of the morale components as dependent variables. Initially, profession and service type were included along with the demographic and job-related variables in Table 1. Job demands, support and control variables were then added to the models obtained, assessing how far significant relationships between morale and service type and profession persisted following the addition of these Karasek model variables.

Less than 5% of the data were missing, but exclusion of all cases with any missing data would nonetheless have resulted in substantial loss of data from analyses. To avoid this, we used multiple imputation, which fills in the missing values based on values of other variables and a 'missing at random' assumption. Unlike other methods of imputation, multiple imputation acknowledges uncertainty about the missing values by creating several imputed data-sets. We imputed five data sets following the

standard guidance that the number of imputed data sets should exceed the overall proportion of missing data (19). The *ice* command in STATA 10 was used to generate imputed data sets and the *mim* commands to combine them in our multilevel regression analyses (20).

Results

Sample

One hundred wards in 19 mental health Trusts provided the inpatient staff sample. Fifty were general acute wards, 10 CAMHS wards, 9 rehabilitation wards, 9 wards for older people, 12 forensic wards and 10 PICUs. In the community, we recruited 18 CMHTs and 18 CRTs.

3,545 questionnaires were distributed, of which 2,258 valid responses were returned, a 63.7% response rate. At Trust level, response rate varied from 51.9% to 71.8%, with a median of 60%. At ward level, the rate varied from 22.0% to 100%, median 62.3%.

Table 1 about here

Table 1 summarises the characteristics of the study sample. Just over a third were male, three quarters from a White ethnic background and a similar proportion UK-born, and mean age was 40.7.

Nurses were the largest professional group, accounting for just under half the responses. Just over a quarter of participants were nursing assistants or others without a professional mental health qualification. All the other main mental health professions were represented in smaller groups. Five per cent of respondents were ward managers or community team leaders, subsequently referred to as service managers.

Staff who had worked on the ward in a temporary capacity for at least a month were encouraged to participate, but made up only 2% of the final sample.

Staff were classified as being senior if they were at at least the point on NHS national payscales that reflects substantial managerial responsibilities (Band 7), or if they were consultant psychiatrists; 12% met these criteria. Mean length of service on current wards was 4.3 years and mean total time working in mental health care just under 12 years. Numbers of missing values per variable ranged from 13 to 102.

Two hundred and thirteen returned questionnaires had the identifying number removed: this prevented us identifying the originating service. Data for these anonymous respondents could not be included in the multilevel analyses described towards the end of this section, but appears in the descriptive tables.

Levels of morale by service type and profession

Table 2 and 3 about here

Tables 2 and 3 summarise levels of morale by service type and by profession for three key indicators frequently used in previous literature, emotional exhaustion and personal accomplishment measured on the Maslach Burnout Inventory, and whether the GHQ caseness threshold is reached. Scores for all study measures are in Tables DS1-DS4 of the Online Supplement. Mean scores for burnout for most sub-specialties and professions were below the standard threshold for high burnout (7). Exceptions for emotional exhaustion were acute general wards, with a mean just above the high burnout threshold and 49% of staff reaching this level, and CMHTs with a mean almost 3 points above the threshold (on a 54 point scale) and 60% of staff reaching the threshold. Among professions, the mean for nurses and occupational therapists just reached the high burnout threshold, and social workers had the highest mean, 2 points above the threshold. No service type or profession reached high burnout thresholds on cynicism or lack of personal accomplishment.

For the other measures, most service types and professions had mean scores above 3.0 on the depression-enthusiasm and anxiety-contentment scales, indicating inclination towards contentment and enthusiasm rather than depression and anxiety (DS1 & DS3). For anxiety-contentment, exceptions were CMHT staff and social workers, who fell just below this threshold. Proportion reaching 'caseness' on the GHQ ranged from 22% of older adult ward staff to 39% of CMHT staff.

Most satisfaction measures indicated fairly good satisfaction across all groups, with means well above the 3.0 level that indicates neutrality (DS2 & DS4). The exception was satisfaction with pay, with only psychiatrists and clinical psychologists tending to be satisfied rather than dissatisfied. Scores for satisfaction with colleagues were especially high.

Scores for job involvement did not vary significantly by service type⁸ (Table DS2), but did by profession (DS4), with psychiatrists and service managers reporting the highest and nurses and social workers the lowest levels of job involvement. The overall mean was 2.5 and means for all service types and professions fell below 3.0: most participants did not endorse strongly items identifying work as the most important aspect of their lives.

Inter-relationship of morale indicators and principal components analysis

DS5 shows the inter-correlations of the main morale indicators. All are correlated with one another at a high level of statistical significance, although the size of the correlations ranges from weak to fairly strong, with many in the medium range.

Table 4 about here

⁸ The $p < 0.05$ level of significance is used throughout.

Table 4 and Data Supplement Figure 1 show the results of a principal components analysis, carried out to explore whether this large number of variables could be adequately captured by a smaller number of components. With an eigenvalue threshold of 1.0 for retention of components and following varimax rotation, two components emerged. The first accounted for 43.2% of the variance, with loadings of more than 0.5 for all variables except personal accomplishment and job involvement, exceeding 0.7 for emotional exhaustion, GHQ score and the two job-related well-being variables. Thus this component appeared to reflect emotional strain and/or distress. The second component accounted for 19.5% of the variance: job involvement and personal accomplishment had the largest loadings onto this, with substantial relationships also for intrinsic satisfaction and depression-enthusiasm, but not for other variables. Thus this second component could be conceptualised as reflecting positive engagement with and sense of achievement from work. These components were used in further analyses and are subsequently referred to as the emotional strain and positive engagement components. The two components were scaled to the standard normal distribution so that mean differences are measured in standard deviations.

Multiply adjusted analyses

Table 5 about here

Table 5 summarises and Data Supplement Table 5 (DS6) shows in full the associations between emotional strain and positive engagement and service type and profession, adjusted for demographic and other job-related variables. These results are derived from multilevel regression analyses. The proportion of variance at the service rather than individual level was estimated and was 3.9% for Emotional Strain and 4.3% for Positive Engagement. We initially also included Trust as a higher level within our analyses, but omitted it in the final version as the proportion of variance at Trust level did not reach 1% for either component.

Variables associated with emotional strain

Emotional strain varied substantially by service type, with CAMHS, PICU, older people's, forensic and rehabilitation wards and CRTs all having significantly lower adjusted levels than acute general wards. CMHTs had higher levels. The largest adjusted effect was for rehabilitation wards, 0.41 standard deviations below general adult wards. Variations by profession were less marked: the only significant differences ($p < 0.05$) were for nursing assistants/staff without professional qualifications and for other qualified staff, 0.2 and 0.21 standard deviations respectively below qualified nurses. Other differences (DS6) were substantially lower emotional strain among older staff, married or cohabiting staff, and staff on temporary contracts. Emotional strain tended to be higher among staff employed on the current wards for longer and those having worked longer in mental health services.

Variables associated with positive engagement

The positive engagement component did not vary significantly by service type in these adjusted analyses. It was significantly associated with profession, with psychiatrists having a mean score 0.31 above and service managers 0.4 above nurses (Table 5). Another strong association was with ethnic group (DS6), with staff from Black groups and from Asian groups having adjusted means for positive engagement 0.32 and 0.37 standard deviations respectively above White staff. The other significant associations related to length of service, with those with longer total employment in mental health services tending to have lower engagement, as well as lower adjusted scores for staff who had worked in their current team for more than one year.

Levels of demand, control and support by service type and profession

Tables DS7 and DS8 in the on-line data supplement describe variations by service type and by profession in the demand, support and control variables. There were highly significant variations between service types in demand and control, with CMHT staff scoring substantially higher than the rest on both.

Rehabilitation ward, CAMHS and CRT staff also reported relatively high levels of autonomy in their work. Rehabilitation ward, PICU and CRT staff were at the lowest end of the range for demands, and forensic, older adult and PICU staff for control. Means for support from colleagues and managers varied less by service type and profession, but differences still reached statistical significance.

Demand and control variables varied still more widely by profession. Social workers and service managers reported the highest levels of demands and nursing assistants and other staff without professional qualifications the lowest, while the latter group also scored lowest for autonomy. Clinical psychologists reported levels of autonomy more than half a standard deviation above all other groups. Support again varied less between professions than demand and control, and differences between professions for support from colleagues are not statistically significant.

Models including demand-control-support variables

Table 5 shows the effects on associations between emotional strain and positive engagement and service type and profession of adding the demand, support and control variables to the relevant multilevel regressions: DS9 shows these relationships in full. For emotional strain, Karasek's model is upheld, with highly significant associations with job demands, control and support from both managers and colleagues. The relationship with job demands is especially large, with an increase of one point in work demands associated with half a standard deviation greater emotional strain. Some of the associations between emotional strain and service type or profession are no longer significant now adjustment has been made for demand, control and support variables, including the associations between lower emotional strain and being a nursing assistant/other unqualified staff member and working on CAMHS, rehabilitation and older adult wards or in a CRT. However, the association between greater emotional strain and working in a CMHT remained unchanged, and a previous non-significant association between

emotional strain and being a psychiatrist became significant once the Karasek variables were added.

All the Karasek model variables were again associated with the positive engagement component, but with the direction reversed for job demands: greater demands were associated with greater engagement. The association with control was especially strong, with an increase of one point on control score associated with 0.38 standard deviations increase in positive engagement. Adding the demand, support and control variables to the model made little difference to the associations previously described, indicating that perceived job characteristics do not explain differences in positive engagement between professions and demographic groups.

Discussion

Levels of morale in the mental health workforce

Regarding the inpatient workforce, the overall pattern of morale was fairly encouraging. Staff tended to be satisfied with their work and very satisfied with their relationships with their colleagues, and they reported low levels of cynicism and good personal accomplishment. Where they were burnt out, as in most previous investigations among mental health staff, this tended to be on the emotional exhaustion component of burnout, and the numbers reaching threshold for caseness on the GHQ-12 were also substantial. That mental health work should have a relatively high emotional impact is unsurprising, but a better understanding of this finding, its antecedents, its impact on patients and any available means of alleviating psychological strain is nonetheless desirable.

There were considerable variations between types of ward, and acute general wards scored relatively high on emotional exhaustion, with a mean just above the threshold for burnout. This is of concern as these wards are numerous and have a key role in the mental health system. We have compared these findings with other inpatient samples in a previous systematic

review (5). Compared both with the mixed inpatient samples and the acute ward samples included in this review, emotional exhaustion in our study was at the higher end of the range. However, many of the previous studies had small samples and low response rates, so that more confidence might be placed in our findings. Less explicably, the level of burnout we found is also around 3 points higher than that found on acute inpatient wards in the one previous large multicentre investigation of acute inpatient ward morale (21). Potential sources for this difference include a slightly higher response rate in our study, a mixed professional sample and the period of around 4 years that elapsed between the other study and our data collection period. One of the only prospective cohort studies on mental health staff morale showed relatively stable burnout over 2 years follow up (22): nonetheless, it may be that differences between our study and others reflect a tendency for overall workforce morale to fluctuate over time, especially where longer time intervals have elapsed or in times of considerable change in the NHS.

Very little evidence has previously been published on variations between ward types (5). On the whole, morale indicator profiles were more positive on specialist wards, rehabilitation wards showing a particular exemplary pattern of high personal accomplishment and low emotional exhaustion.

Turning to the community staff within our sample, findings confirm a previous observation from a study in several London teams that CRT morale is generally good, despite the potential stresses of working with an acutely ill group in community settings (23). CRT staff rated support from colleagues very highly, suggesting that arguments in the previous study for the positive effects of the team model on workforce well-being are plausible.

Our findings on CMHTs give cause for concern, as this was group for which evidence of psychological strain was greatest. Despite good levels of satisfaction, 60% reached the threshold for burnout on emotional exhaustion and 39% were GHQ stressed 'cases'. These findings resemble some findings from the 1990s of high levels of burnout among CMHT staff (24), but burnout levels in the investigations of the past decade have tended been lower (25;26).

Thus they seem to have reverted to a level that caused substantial concern about the teams' sustainability in the 1990s when they were relatively new (27).

Relationships between morale indicators

Regarding our aim of carrying out a preliminary exploration of the inter-relationship of commonly used morale indicators, most correlations were moderate, suggesting constructs that are partially independent of one another. However, two principal components were identified which captured 62% of the variation in the indicators, one that appeared to reflect emotional strain, the other explaining a lower proportion of variance and appearing to reflect positive engagement with work. This structure is in keeping with the recent theory based on a range of occupational samples that work-related well-being has two distinct underlying higher order dimensions – negative states of burnout and positive engagement with work (28). Future research in this area should ensure good coverage of these two dimensions.

Explanatory value of the demand-support-control model

As in many other occupational samples (14), the explanatory value of the demand-support-control model was confirmed in this sample. As in previous studies (29), high levels of work demands were strongly associated with the component reflecting negative emotional states at work. The extension of Karasek's theory (16) that suggests that good job satisfaction and engagement are associated with high demands, high control and high support was also supported by our findings on positive engagement. Autonomy in carrying out job roles emerged as a key factor in the well-being of mental health staff, strongly associated with both emotional strain and, especially, positive engagement. Support from colleagues and managers was also confirmed as associated with both components, though more modestly than the other Karasek variables. One might hypothesise based on this that such support may modify the effect of other variables on emotional strain and on positive engagement, but that it may not be directly on causal pathways.

An aim in our analysis was to explore how far variations in demands, control and support might account for differences between service types and between professions. The Karasek model had considerable explanatory value in accounting for variations on the emotional strain component: many of the differences among service types and professional and demographic groups on this component were no longer significant once the Karasek variables were added to the model. Thus, for example, the substantially lower Emotional Strain reported by rehabilitation and crisis team staff can be accounted for by the finding that staff in these services report both substantially lower levels of job demands and greater control (DS7) than general acute ward staff. Higher levels of emotional strain in CMHTs, however, persist unchanged when the Karasek variables are added to the model, suggesting that explanations need to be sought in terms of other aspects of the culture and working environments of these services.

Addition of the Karasek variables to the model for positive engagement had less influence on relationships with other variables, suggesting a need for alternative explanations of variations in positive engagement. For example, the striking relationship between greater positive engagement and non-White ethnic groups did not appear related to differences in demand, support and control variables.

Limitations and strengths of the study

Strengths of our study include its large size and scope: it has exceeded any other investigation of the mental health workforce in the national and international literature (4,5) both in the sample size and its geographical reach and coverage of different professions and sub-specialties. The overall response rate (64%) is respectable, and we have included a range of morale indicators, allowing comparison both with previous mental health investigations and other samples in occupational psychology.

Limitations include that there may have been systematic differences between non-responders and responders. There were wide differences in response rates per ward, with outliers at 22% and 100% response rates; thus it is possible that scores for some wards with low response rates were particularly unrepresentative. Even with excellent numbers overall, it should be borne in mind that some groups within the sample are relatively small. The cross-sectional nature of the study is also a significant limitation, especially in examination of the demand-support-control model where causality cannot be established: for example, we cannot ascertain whether those with high work demands develop high levels of emotional strain, or whether the emotionally exhausted perceive work demands as high.

Implications for further research and service development

Our study suggests a number of questions for further investigation. The inter-relationship of morale indicators, the extent to which they are distinct and their potential reducibility to a smaller number of main dimensions bears further exploration using more sophisticated psychometric techniques both within this and in other datasets. Further candidate explanatory variables in variations in morale include organisational context, negative events, built environments, patient population and staff personality attributes: some of these will be explored in further papers from this study. Prospective examination of the relationship between explanatory variables and morale indicators is also desirable. Links between staff morale and patient outcomes also remain poorly understood.

Our study suggests a particular need to focus on CMHT staff, and, to a lesser extent, those on acute general wards in further research and development of interventions. Our study findings do not adequately explain the high levels of emotional strain in CMHTs – further quantitative and qualitative work on the antecedents of this, including an analysis of the many organisational changes experienced or anticipated by CMHT staff in the NHS may help produce such an understanding.

Although not all differences between groups can be accounted for by them, the Karasek variables have substantial associations with both morale components, making this model a potential basis for development of interventions to raise morale. Mutual and managerial support tend to be the basis for interventions to improve morale in the mental health workforce and this is supported, but the effects for support are smaller than for job demands and for control over how job roles are carried out. Designing interventions to reduce demands is a challenge in the current climate of austerity in the NHS (28). Nonetheless, initiatives such as the Productive Wards programme (30), involving redesign of working environments and practices aimed at increasing time available for direct patient care and reducing other demands, may have some potential to reduce emotional strain. The substantial relationship between autonomy and both emotional strain and positive engagement suggests that this might be an appropriate focus for interventions, examining in detail the organisation of jobs and teams to identify ways in which autonomy might be increased, especially in groups of staff reporting low levels.

Acknowledgements

This project was funded by the National Institute for Health Research Service Delivery and Organisation Programme (project number/08/1604/142). The views and opinions expressed in this paper are those of the authors and do not necessarily reflect those of the NIHR SDO or the Department of Health. We wish to acknowledge the contribution of the other members of the Inpatient Staff Morale Study research team, and are also very grateful for extensive support received from the North and South London, South-West, East of England and Heart of England Hubs of the Mental Health Research Network, and for the helpfulness of staff in the 136 participating services.

Declaration of interest

The authors have no relevant interests to declare.

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Table 1: Sample characteristics

| Characteristics | N=2258 |
|---|-------------|
| <i>Service type</i> | |
| Acute general ward | 721 (35%) |
| Child and adolescent mental health service ward (CAMHS) | 189 (9%) |
| Forensic ward | 219 (11%) |
| Mental health care of older people (MHCOP) ward | 157 (8%) |
| Rehabilitation ward | 137 (7%) |
| Psychiatric Intensive Care Unit (PICU) | 148 (7%) |
| Community mental health team (CMHT) | 258 (13%) |
| CRT | 216 (11%) |
| <i>Professional group</i> | |
| Nurses (%) | 1054 (47%) |
| Doctors (%) | 135 (6%) |
| Psychologists (%) | 44 (2%) |
| Occupational therapists (%) | 82 (4%) |
| Nursing assistant/support worker/others without professional qualifications (%) | 640 (29%) |
| Social Workers (%) | 86 (4%) |
| Ward managers and team leaders (service managers) | 111 (5%) |
| Other occupations | 93 (4%) |
| <i>Sex</i> | |
| Males (%) | 803 (36%) |
| Females (%) | 1421 (64%) |
| <i>Ethnic group</i> | |
| White groups (%) | 1606 (75%) |
| Black African, Caribbean or British (%) | 329 (15%) |
| Asian groups (%) | 177 (8%) |
| Other or mixed (%) | 30 (1%) |
| <i>Mean age (SD)</i> | 40.7 (10.4) |
| <i>Marital status</i> | |
| Single (%) | 502 (23%) |
| Married/cohabiting (%) | 1463 (67%) |
| Divorced/widowed/separated (%) | 234 (11%) |
| <i>Place of Birth</i> | |
| Born in the UK | 1664 (76%) |
| <i>Whether has any dependants (as parent or carer)</i> | |
| Has dependants | 1066 (49%) |
| <i>Whether at senior grade</i> | |
| Agenda for Change Band 7 or above (see text) or consultant psychiatrist | 251 (12%) |
| <i>Whether working on a locum basis</i> | |
| On a short term(locum, bank or agency) contract | 52 (2%) |
| <i>Tenure in current service</i> | |
| Mean time working on current ward or in current team (years) (S.D.) | 4.3 (4.6) |
| Median | 3.0 |
| <i>Length of time working in mental health services</i> | |
| Mean length of time working in mental health service (years) (S.D.) | 11.5 (8.8) |
| Median | 8.9 |

Table 2: Emotional exhaustion, personal accomplishment and GHQ score in the English mental health workforce by type of service

| | Acute general wards N =721 | CAMHS wards N=189 | Forensic Wards N=219 | Older adult wards N=157 | Rehabilitation wards N=137 | PICUs N=148 | Community Mental Health Teams N=258 | Crisis Resolution Teams N=216 | All | P for difference across service type (ANOVA or X ²) ⁹ |
|--|-------------------------------------|----------------------|-------------------------|----------------------------|-------------------------------|----------------|--|----------------------------------|---|--|
| Maslach Emotional Exhaustion Mean (SD) N=2224 Max score 54 | 21.1 ¹⁰ (12.7) | 18.3 (10.1) | 19.0 (10.8) | 19.3 (13.0) | 16.1 (11.3) | 20.0 (11.1) | 23.8 (11.0) | 17.7 (10.7) | 20.1 (12.0) Average burnout ¹¹ | F=8.87 p<0.0005 |
| Maslach Personal Accomplishment N=2216 Max Score 48 | 33.1 (8.4) | 34.8 (8.1) | 32.1 (8.9) | 33.1 (8.7) | 35.1 (7.9) | 34.7 (8.1) | 34.3 (7.4) | 35.0 (7.7) | 33.7 (8.3) Average burnout | F=4.38 p<0.0005 |
| Number (%) reaching threshold for GHQ 'caseness' N=2140 | 199 (29%) | 57 (31%) | 47 (23%) | 33 (22%) | 30 (24%) | 37 (27%) | 98 (39%) | 46 (23%) | 559 (28%) | 24.9 P=0.001 |

⁹Where ANOVA results are reported, it should be noted throughout that adjustment has not been made for multiple testings.

¹⁰Results presented in bold in this table fall above the 'high burnout' threshold according to the Maslach Burnout Inventory's standard thresholds for mental health staff.

¹¹Indicates that the mean for the whole sample falls into the average burnout range according to standard norms for mental health staff.

Table 3: Emotional exhaustion, personal accomplishment and GHQ in the English mental health workforce by profession

| | Nurses (qualified) N=1054 | Nursing assistants & others without qualification N=584 | Occupational therapists N=82 | Psychiatrists N=135 | Clinical psychologists N=44 | Social workers N=86 | Service managers N=111 | Other occupations N=149 ¹² | P for difference across profession (ANOVA or χ^2) |
|---|-------------------------------------|--|------------------------------------|------------------------|-----------------------------------|---------------------------|------------------------------|---|--|
| MBI Emotional Exhaustion Mean (SD) N=2222 Max score 54 | 21.2 ¹³ (12.2) | 17.9 (11.81) | 21.1 (11.19) | 20.5 (11.82) | 20.1 (9.27) | 23.0 (12.15) | 20.7 (17.18) | 17.2 (10.87) | F=6.56 P<0.0005 |
| MBI Personal accomplishment N=2200 Max Score 48 | 33.6 (8.13) | 32.7 (9.27) | 34.4 (7.36) | 34.9 (6.64) | 35.3 (7.69) | 33.4 (8.03) | 35.8 (6.38) | 35.0 (8.17) | F=2.87 P=0.006 |
| Number (%) reaching threshold for GHQ 'caseness' N=2140 | 295 (29%) | 131 (24%) | 32 (40%) | 29 (23%) | 7 (16%) | 31 (37%) | 32 (32%) | 35 (25%) | $\chi^2 = 21.01$ P=0.004 |

¹²This group was a mixed group of staff with qualifications relevant to mental health work who did not fit into any of the other categories. The largest group were therapists of various types, including art, drama and music therapists, child psychotherapists and physiotherapists.

¹³Results presented in bold in this table fall above the 'high burnout' threshold on standard norms for mental health staff on the Maslach Burnout Inventory.

Table 4: Components obtained from morale indicators with Principal Components Analysis with Varimax rotation

| | Component 1 (Emotional Strain) | Component 2 (Positive Engagement) |
|---------------------------------------|---------------------------------------|--|
| <i>Component loadings</i> | | |
| Emotional exhaustion | -0.88 | -0.03 |
| Anxiety-contentment | 0.80 | 0.24 |
| GHQ 12 score (log transformed) | 0.80 | 0.24 |
| Depression-enthusiasm | 0.79 | 0.40 |
| Cynicism | -0.65 | -0.03 |
| Intrinsic satisfaction | 0.58 | 0.51 |
| Personal accomplishment | 0.21 | 0.64 |
| Job involvement | -0.02 | 0.80 |
| <i>% of variance</i> | 43.2% | 19.5% |
| <i>Cumulative % of variance</i> | 43.2% | 62.7% |

Table 5: Adjusted associations between morale components and service type and profession – see Data Supplement Tables 5 and 6 for full multilevel models with all variables for which adjustment made.

| | Emotional strain component | | Positive engagement component | |
|---|--|---|--|---|
| | Adjusted for demographic and occupational characteristics from Table 1 | Additionally adjusted for job demands, support, control | Adjusted for demographic and occupational characteristics from Table 1 | Additionally adjusted for job demands, support, control |
| Service type (reference group: general acute) | Coefficient (95% CI), p= | Coefficient (95% CI), p= | Coefficient (95% CI), p= | Coefficient (95% CI), p= |
| PICU | -0.02 (-0.19 to 0.15) p=0.85 | 0.19 (0.06 to 0.33) p=0.005 | 0.09 (-0.12 to 0.31) p=0.34 | 0.11 (-0.08 to 0.29) p=0.25 |
| CAMHS | -0.28¹⁴ (-0.44 to -0.12) p<0.0005 | -0.03(-0.15 to 0.09) p=0.64 | 0.18 (-0.02 to 0.38) p=0.07 | 0.14 (-0.03 to 0.31) p=0.11 |
| Forensic | -0.21 (-0.36 to -0.06) p=0.005 | -0.11 (-0.24 to -0.00)p= 0.05 | -0.05 (-0.23 to 0.24)p= 0.56 | -0.04 (-0.20 to 0.12) p=0.62 |
| Rehabilitation | -0.41 (-0.58 to -0.23) p<0.0005 | - 0.09 (0.23 to 0.05) p=0.22 | 0.04 (-0.17 to 0.25) p=0.71 | -0.06 (-0.25 to 0.13) p=0.54 |
| Older adults | -0.25 (-0.42 to -0.08) p=0.003 | -0.12 (-0.25 to 0.01) p=0.08 | 0.01 (-0.20 to 0.22) p=0.92 | -0.03 (-0.21 to 0.15) p=0.73 |
| CMHTs | 0.20 (0.05 to 0.35) p=0.008 | 0.22 (0.10 to 0.34) p<0.0005 | 0.14 (-0.03 to 0.32) p=0.11 | -0.09 (-0.25 to 0.06) p=0.25 |
| Crisis teams | -0.32 (-0.48 to -0.17) p<0.0005 | -0.01 (-0.14 to 0.11) p=-0.85 | 0.15 (-0.03 to 0.33)p = 0.10 | 0.09 (-0.07 to 0.25) p = 0.25 |
| Occupation (reference group; qualified nurses) | | | | |
| Nursing assistants and other unqualified staff | -0.20 (-0.31 to -0.08) p=0.001 | 0.09 (-0.00 to 0.18) p=0.05 | -0.10 (-0.20 to 0.02) p=0.09 | 0.03 (-0.07 to 0.14) p=0.53 |
| Occupational therapists | -0.02 (-0.25 to -0.21) p=0.89 | 0.05 (-0.13 to 0.24) p=0.57 | 0.03 (-0.20 to 0.26) p=0.81 | -0.24 (-0.45 to -0.02) p=0.03 |
| Psychiatrists | 0.08 (-0.10 to 0.27) p=0.37 | 0.16 (0.01 to 0.31) p=0.03 | 0.31¹⁵ (0.13 to 0.50) p=0.001 | 0.19 (0.02 to 0.36) p=0.03 |
| Clinical psychologists | -0.11 (-0.47 to 0.23) p=0.50 | 0.10 (-0.17 to 0.38) p= 0.47 | 0.06 (-0.30 to 0.42) p= 0.74 | -0.16 (-0.49 to 0.17) p=0.33 |
| Social workers | 0.12 (-0.12 to 0.36) p=0.32 | -0.01(-0.20 to 0.18) p=0.91 | -0.13 (-0.37 to 0.10)p=0.27 | 0.07 ((-0.29 to 0.14) p=0.51 |
| Ward managers/team leaders: | 0.08 (-0.18 to 0.35) p=0.54 | 0.08 (-0.15 to 0.30) p=0.49 | 0.40 (0.15 to 0.65) p=0.002 | 0.27 (0.04 to 0.50) p=0.02 |
| Other occupations | -0.21 (-0.39 to -0.02) p=0.03 | 0.09 (-0.06 to 0.23) p=0.26 | 0.17 (-0.01 to 0.36), p= 0.07 | 0.09 (-0.09 to 0.26), p= 0.34 |

¹⁴ Negative scores indicate lower levels of emotional strain than the reference group, in this case general acute wards.

¹⁵ Positive scores indicate higher levels of positive engagement than the reference group.