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Mental health, “burnout” and job satisfaction in a longitudinal study of mental health staff*

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Abstract *Background:* This study examines whether the adoption of a more community based model in an inner city psychiatry service is accompanied by increasing “burnout”, deteriorating mental health and decreasing job satisfaction amongst staff. *Method:* Questionnaires were sent annually for 3 consecutive years to all mental health staff working in three adult mental health sectors in inner London. Main outcome measures were the 12-item General Health Questionnaire, Maslach Burnout Inventory and a general job satisfaction measure. *Results:* There was no significant change over time in the outcome measures, once confounding by job and demographic variables was examined. Being based in the community was associated with higher GHQ-12 scores ($P = 0.02$) when compared to in-patient staff over the 3 years. *Conclusions:* These results suggested that working in the community may be more stressful than working in in-patient services. However, there was no evidence to suggest that levels of stress are increasing over time, either in community-based or hospital-based staff.

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Introduction

There has been increasing awareness of stress in mental health staff, and concern that “burnout” in community staff may make community-based services difficult to sustain (Wykes et al. 1997). Although “burnout” has been conceptualised as a process occurring progressively over time rather than as a state (Maslach and Schaufeli 1993), there are few longitudinal studies (Carson and Fagin 1996; Williams et al. 1998), and no such studies have been published regarding mental health services in Britain. The current study therefore followed up a sample of mental health staff over time, beginning at a time when a much more community based model of service provision was just being established in the catchment area examined. This allowed testing of the hypothesis that community-based services are characterised by levels of stress and demoralisation that rise over time, threatening the sustainability of the service. Also, cross-sectional analysis of findings at the first stage of the present study had suggested that community-based mental health staff were experiencing poorer general mental health than in-patient staff (Prosser et al. 1996). The initial data collection coincided with significant reorganisation of the community mental health service, so that short-term sequelae of this change could not be distinguished from more enduring effects on staff of being based in the community. The current longitudinal study thus allowed us to examine whether community-based mental health staff continued to score higher on measures of stress once the effects of changes involved in establishing new teams had subsided, as well as whether scores on these measures of stress were progressively rising.

Subjects and methods

Sample

All clinical mental health staff in three adult mental health sectors in inner south London were sent questionnaires in July 1994, July

1995 and July 1996. There were approximately 50–60 staff per sector. Questionnaires were collected over each subsequent 3-month period. Staff were assured of confidentiality and questionnaires were coded to allow the same individual's response to be compared at the three different times. At the start of the study the three sectors were at different stages of becoming community based. One sector had established most of its community services in a community team base in the previous year. The other two sectors moved to community mental health centres and community bases for day service provision in December 1994 and April 1995. These facilities replaced a large day hospital at the main hospital site, which closed at much the same time. The new facilities also resulted in most out-patient clinics moving from the main hospital site to community team bases, so that by July 1995 all staff were based either on in-patient wards or in the community. With the change in location there was also a change to a more multidisciplinary model of service provision, including the implementation of the Care Programme Approach and an increased emphasis on assessing and working with patients at home.

Outcome measures and explanatory variables

Detailed descriptions of the items included in the questionnaire have been reported previously (Prosser et al. 1996). Briefly, the main outcome measures used were the 12-item General Health Questionnaire (GHQ-12; Goldberg and Williams 1988) with Likert scoring to measure mental health (Banks et al. 1980), the Maslach Burnout Inventory (Maslach and Jackson 1986) to measure "burnout", and the general job satisfaction item from the Job Diagnostic Survey (Hackman and Oldham 1975) to measure job satisfaction. The Maslach Burnout Inventory (MBI) measures three components of "burnout"

1. Emotional exhaustion: no longer being able to give of oneself at a psychological level
2. Depersonalisation: negative, cynical attitudes and feelings about one's clients, and
3. Reduced personal accomplishment: a tendency to evaluate oneself negatively, particularly with regard to one's work with clients

Burnout is suggested by higher "emotional exhaustion" and "depersonalisation" scores, and by lower "personal accomplishment" scores. In addition to the separate quantitative outcomes, the first principal component obtained from all of the outcome measures (GHQ-12, job satisfaction and the three burnout variables) was used as a summary measure, a higher score on the principal component indicating greater stress and less work satisfaction.

All three outcome measures have been widely used in occupational psychology studies, their reliability and validity having been well described (Hackman and Oldham 1975; Maslach and Jackson 1986; Goldberg and Williams 1988). The GHQ and MBI have been widely used as measures of stress with staff working in mental health settings (e.g. Carson et al. 1995; Leiter and Harvie 1996; Onyett et al. 1997).

The main explanatory variables were: time (1994, 1995, 1996), main site of work (hospital or community, or, in 1994, outpatient clinic at main hospital site) and sector. Other dependent variables measured included demographic variables (sex, age, ethnicity, marital status and children at home) and variables relating to work (profession, level of experience, time in current job, seniority) (Prosser et al. 1996).

Turnover (whether a person was in the same post 1 year later) data were collected from team leaders and the personnel department between 1994 and 1997. Few people changed their job within the same sector or indeed the Trust. The one exception (a job swap between ward manager and community team leader) was not coded as turnover.

Statistical methods

Data manipulation and routine generation of descriptive statistics were carried out using SPSS for Windows version 6.1.

Multiple regression models were used to predict quantitative outcome measures on the basis of the main explanatory variables (time, site of work, and sector) taking into account possible confounding by variables related to sociodemographic or other work factors. These other variables were those that had been found to be most important at the first stage of the study (Prosser et al. 1996) and included profession, ethnic background, years of experience in the profession, and years of experience in the job.

Turnover was modelled in a similar way using multiple logistic regression with both explanatory and the three main outcome variables being entered into the model. Junior doctors were excluded from this sample, since their "turnover" was known to be due to their rotational training scheme.

In both the multiple regression and multiple logistic regression models allowance had to be made for the fact that an individual member of staff might provide information on one, two, or all three occasions. The three waves of the survey of the occupational settings provided an example of a very unbalanced repeated measures data set. Correlations between the repeated measurements on the same staff member were allowed for through the use of a *cluster* sub-command (the cluster corresponding to the staff member's ID) with *robust* fitting procedures for multiple logistic regression within STATA version 5 (Stata Corp 1997).

Results

The response rate was 121/160 (76%) in 1994, 100/166 (60%) in 1995, and 94/152 (62%) in 1996. The characteristics of the responding sample in each of the 3 years are shown in Table 1. There was high turnover, of over 30% annually. Of 121 staff who participated in 1994, only 43 (36%) remained by 1997, of whom only 25 completed the questionnaire on all three occasions.

Sample means for the main outcome measures in each of the 3 years are shown in Table 2. Whilst for the whole sample and for the in-patient staff sub-sample there is little change in the outcome variables between the 3 years, for community staff mean scores decreased for the GHQ-12, MBI "emotional exhaustion", and MBI "depersonalisation", and increased for job satisfaction.

Significant variables in the STATA multiple regression models for the outcome variables with direction of

Table 1 Characteristics of the responding sample

	1994	1995	1996
Team composition			
Nursing staff and NAs	80 (66%)	63 (63%)	64 (68%)
Psychiatrists	23 (19%)	17 (17%)	12 (13%)
Other members of the multidisciplinary team	18 (15%)	20 (20%)	18 (19%)
Main base of work			
In-patient	50 (41%)	35 (35%)	35 (37%)
Community	29 (24%)	65 (65%)	59 (63%)
Day/outpatient in main hospital	42 (35%)	—	—
Turnover ^a			
No. leaving within the year following the survey	37/105 (35%)	30/87(34%)	25/84 (30%)

^a Junior doctors not included

effect for the whole sample are shown in Table 3. "Time" is not significant in any of the outcome variable models. "Based in the community" is associated with

Table 2 Mean scores (and standard deviations) for main outcome measures

	1994 Mean (SD)	1995 Mean (SD)	1996 Mean (SD)
GHQ-12 score			
Whole sample	11.8 (5.6)	12.9 (5.8)	11.8 (5.2)
In-patient	10.9 (4.6)	11.1 (4.9)	11.9 (5.5)
Community	14.4 (6.3)	13.9 (6.1)	11.8 (5.1)
Job satisfaction			
Whole sample	5.8 (6.4)	5.7 (6.0)	7.1 (5.9)
In-patient	5.5 (5.1)	5.0 (5.0)	6.0 (5.6)
Community	4.6 (6.2)	6.1 (6.4)	7.8 (6.0)
MBI emotional exhaustion			
Whole sample	22.9 (11.1)	24.3 (11.2)	21.2 (9.7)
In-patient	20.2 (10.5)	23.3 (9.6)	21.3 (9.4)
Community	27.4 (11.9)	24.8 (12.0)	21.2 (10.0)
MBI depersonalisation			
Whole sample	7.5 (5.7)	8.1 (6.1)	7.5 (5.5)
In-patient	7.6 (6.2)	9.2 (5.8)	8.7 (6.1)
Community	8.8 (5.5)	7.5 (6.2)	6.7 (5.0)
MBI personal accomplishment			
Whole sample	33.5 (6.6)	33.0 (6.5)	34.2 (6.2)
In-patient	33.0 (7.4)	33.9 (6.8)	35.3 (5.2)
Community	33.1 (5.6)	32.5 (6.3)	33.5 (6.6)

higher GHQ-12 scores, and "sector longest in the community" is associated with lower scores of MBI "emotional exhaustion". Three variables are significant in the model combining all the outcome measures: being a nurse, social worker or of white ethnic origin are all associated with higher stress and lower job satisfaction.

Because of the changes in mean scores on the outcome measures for the community staff over the 3 years, STATA multiple regression models for the outcome variables were constructed for the community sample (Table 4). "Time" is not a significant variable in any of these models, suggesting that the higher levels of mental health and job satisfaction, and lower levels of burnout in the community sample over time were accounted for by changes in other explanatory variables.

A logistic regression model predicting turnover in 1994 suggested that both high general job satisfaction scores ($P = 0.002$) and high GHQ-12 Likert scores ($P = 0.01$) were associated with staying for the following year. This finding was not repeated for the subsequent 2 years. In 1995, GHQ-12 Likert scores were not associated with turnover, and general job satisfaction was associated with leaving ($P = 0.05$), with no association being found in 1996. The MBI components were not associated with turnover in any of the 3 years. When all 3 years were considered using a STATA multiple logistic regression model to predict turnover, none of the outcome variables were associated with it.

Table 3 Significant variables in the STATA multiple regression models for the outcome variables for the whole sample over all three timepoints

Dependent variable	Explanatory variable significant in model and direction of effect	Regression co-efficient (with 95% confidence intervals)	P-value
GHQ-12	Higher if: Based in the community White	2.18 (0.41 to 3.96) 2.23 (0.36 to 4.10)	0.02 0.02
General job satisfaction	Higher if: New to job Lower if: Nurse Social worker	1.73 (0.02 to 3.45) -4.1 (-6.53 to -1.67) -8.3 (-12.48 to -4.09)	0.05 0.001 < 0.001
MBI emotional exhaustion	Higher if: Nurse Social worker Lower if: Very new Very experienced in profession In the sector longest in the community	4.03 (0.47 to 7.59) 13.32 (7.10 to 19.56) -3.24 (-6.40 to -0.08) -4.56 (-7.78 to -1.33) -0.34 (-6.31 to -0.38)	0.03 < 0.001 0.04 0.006 0.03
MBI personal accomplishment	No variables significant in model		
MBI depersonalisation	Higher if: Nurse White Lower if: Psychologist Experienced in job	2.34 (0.48 to 4.19) 3.44 (1.61 to 5.27) -3.22 (-5.35 to -1.09) -3.05 (-5.0 to -1.1)	0.01 < 0.001 0.003 0.002
First principal component of combined outcome measures	Higher if: Nurse Social worker White	0.92 (0.29 to 1.54) 1.96 (0.80 to 3.12) 0.82 (0.27 to 1.36)	0.004 0.001 0.004

Table 4 Significant variables in the STATA multiple regression models for the outcome variables for community staff only

Dependent variable	Explanatory variable significant in model and direction of effect	Regression co-efficient (with 95% confidence intervals)	P-value
GHQ-12	No variables significant in model		
General job satisfaction	Lower if: Nurse Social worker	–4.68 (–7.63 to –1.72) –8.08 (–12.39 to –3.77)	0.002 < 0.001
MBI emotional exhaustion	Higher if: Social worker White	11.21 (3.44 to 18.98) 9.21 (3.82 to 14.61)	0.005 0.001
MBI personal accomplishment	No variables significant in model		
MBI depersonalisation	Higher if: White Lower if: Psychologist	4.97 (2.50 to 7.44) –3.33 (–6.52 to –0.14)	< 0.001 0.04
First principal component of combined outcome measures	Higher if: Nurse Social worker White	1.24 (0.36 to 2.12) 1.85 (0.51 to 3.19) 1.04 (0.10 to 1.99)	0.006 0.007 0.03

Discussion

The finding in the first phase of the study that overall staff had relatively high scores for “emotional exhaustion” and poor psychological well-being, but were also relatively satisfied with their work (Prosser et al. 1996), persisted for the duration of the study. However, there is no evidence of a progressive increase in mean levels of stress and burnout over the study period, either for the sample as a whole or among community or in-patient ward staff. Apparent improvements over the 3 years in most of the outcome variables for the community staff appeared to be accounted for by confounding from demographic or work-related variables rather than directly due to the effects of time.

Limitations of the study

The sample was characterised by high turnover, with few staff participating on all three occasions. Statistical modelling for the missing values (with STATA) was used to transform what would have been three cross-sectional studies into a longitudinal study. This can only be done when the missing values are non-informative (Everitt 1998). Was this the case in our study or was there an association between turnover and the outcome measures over the 3 years? The logistic regression models used for predicting turnover for each subsequent year failed to show any association with any of the MBI component scores, and in 1994 found leaving to be apparently associated with better mental health. Leaving was associated with lower job satisfaction in 1994, but greater job satisfaction in 1995. The STATA model predicting turnover for the 3 years failed to find an association with

the outcome measures. It therefore seems unlikely that the most stressed and least satisfied staff were leaving, biasing the questionnaires returned.

Was there a response bias in our study related to those staff who were non-responders but who stayed? The response rate dropped from 76% in 1994 to 60% in the following 2 years. We attempted in two ways to establish whether the characteristics of non-responders were different from responders. Firstly we contacted non-responders in 1994 to ask the main reasons that they did not participate in the study (Prosser et al. 1997). They cited concern about confidentiality and insufficient time as the main reasons, which may suggest they feel more “stressed” than respondents. However, we also examined the characteristics of staff who responded in the 1st year but not subsequently (even though they stayed) with logistic regression models and found neither outcome measures nor explanatory variables were associated with response status. This suggests little difference between responders and non-responders on the variables we collected.

Increased stress in the community and other groups at risk

Whilst staff were not becoming increasingly “burnt out” over time, being based in the community was associated with poorer mental health over the 3 years. Why may working in the community be more stressful? When we examined sources of stress in this sample of staff in 1994 (Prosser et al. 1997) we found “overload” to have been significantly higher when based in the community. Both in-patient and community teams may face staffing problems (the high turnover was associated with a high number of vacancies within the service), but whilst there

will always be a limit to the number of beds on a ward, the same may not be true of referrals to a community team or community psychiatric nurse caseloads. Factors that may lead to high "emotional exhaustion" among community-based staff are explored further in the companion papers by Reid et al. (1999a, b).

Although we found nurses, social workers and "white" staff to be significantly more stressed and less satisfied than others on the basis of the combined outcome measure, we should be cautious about generalising these findings. The sample was from a well-known postgraduate teaching hospital, with a highly selected group of psychiatrists and psychologists whose clinical work and morale may be unrepresentative of these professions in less prestigious organisations. This may have led to the apparent differences in the outcome variables between the professions. Onyett et al. (1997) found psychiatrists to have some of the highest "emotional exhaustion" scores amongst staff sampled from 57 community mental health teams. In our sample, ethnic background seems to be an important variable, as it was when we looked at sources of stress (Prosser et al. 1997). The Maslach Burnout Inventory, when originally validated, was found to have higher burnout scores for white Americans than black Americans (Maslach and Jackson 1986) and it is unclear whether the significance of ethnic background with the MBI is related to a response bias (such as "social desirability") or some other factor.

Implications for mental health services

What are the implications of these findings for mental health services? Firstly, although there is evidence of burnout and poor mental health among these staff, it is encouraging that, certainly across the community-based staff group as a whole, the prevailing level of "burnout" does not appear to be increasing. This also seems to be true at an individual level, although we have to be more cautious about stating this because the high turnover limits the use of statistical modelling. There was also little evidence to show that the most stressed or "burnt out" staff were leaving, although again caution is needed, as our data provide little evidence about why staff turnover in the sectors examined was so high. These findings taken together suggest generic community mental health teams may be sustainable, although high turnover may be a concern and still requires explanation. We suspect that "burnout" can be offset by the benefits of experience and adaptation at both an individual and organisational level. Our finding that variables related to experience ("experienced in job", "very experienced in profession", and "sector longest established in the community") were associated with reduced "burnout" supports this suggestion, although it remains unclear which aspects of experience (such as clinical work or management) can be protective against stress. Skynner (1989) suggests that there are similarities

between how healthy families and healthy mental health organisations work. We suggest that more research on staff in health services should focus on the qualities of healthy organisations, rather than solely on negative factors.

Secondly, it is important to establish why community staff may have worse mental health than in-patient staff so that their work environment can be improved. The related qualitative study reported in the companion papers examines this issue. Thirdly, our sample was characterised by very high turnover over the 3 years. Wykes et al. (1997) found a similarly high rate, with only 28% being in the same post over 5 years. Our finding that leavers in 1994 had lower job satisfaction, but in 1995 had higher job satisfaction, may indicate that both negative experiences of work (such as dissatisfaction) and positive experiences of work (competence leading to promotion) can lead to turnover. The reasons for high turnover, and its effects on patients, do require further investigation, particularly since continuity is seen as a key component of care in the community for the severely mentally ill.

Finally, we must be cautious about generalising these findings to less deprived or more rural locations, where psychiatric morbidity, organisation of mental health services and staff turnover may be very different. Replication studies with longitudinal designs are required in a variety of settings.

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