

Systematic Review of Staff Morale in Inpatient Units in Mental Health Settings

***Report for the National Co-ordinating Centre for
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Executive Summary

Objectives

The aim of this study was to examine the extent, aetiology, and consequences of poor staff morale in inpatient mental health services, and to identify the clinical and cost effectiveness of strategies to improve morale. Seven project objectives were identified.

Methods

This report involved two interlinked parallel phases as follows:

- the scoping review of the extent, aetiology and implications of low staff morale in health services, scoping out the range and diversity of interventions
- the systematic review of all potential organisational interventions aimed at improving morale.

A brief scoping review of the organisational literature concerning innovative strategies and policy context was also conducted

Results: epidemiology and aetiology

- Heterogeneity within primary outcome measures, population and measurement instruments prevents an accurate analysis of occupational stress indicators with acute and general inpatient mental health care environments.
- The small amount of data that is available suggests that while levels of burnout may be moderate, job satisfaction may be high.
- Studies included in the review suggested that the main factors likely to precipitate occupational stress in inpatient mental health care settings were related either to organisational issues (such as job characteristics and management) or psychological variables (such as adequate social support).

Results: interventions

- Educational interventions – such as skills enhancement, mentoring and supervision – delivered in individual and group format may be beneficial. However, much of this research comes from specialist settings that may not be directly relevant to acute adult inpatient settings.
- Staff being released from work commitments so that they can receive and complete the intervention could be a critical issue.
- There is too little evidence on psychological and structural interventions to comment on their effectiveness.

Practice

- Morale in trusts is generally good. Where morale is poor, a number of common factors have been identified including recruitment levels, leadership qualities, strong working relationships between clinicians and managers and effective communication and information systems.
- In practice there are currently a number of innovative interventions which have no evidential basis.

Recommendations

- New research is required to focus on overcoming the methodological and theoretical shortcomings of previously published work.
- Large-scale, multi-site studies should be conducted to provide a high level of research evidence on the prevalence and aetiological associations of staff morale. Data should be obtained using well-known, validated measures.
- A cohesive programme of intervention research should be commissioned that focuses on acute inpatient settings, uses Level 1 evidence study designs coupled with pragmatic evaluations, and a common battery of measures (for example, Maslach Burnout Inventory (MBI), General Health Questionnaire (GHQ)).

The Report

Section 1 Introduction

1.1 Study objectives

The aim of this study was to examine the extent, aetiology, and consequences of poor staff morale in inpatient mental health services, and to identify the clinical and cost effectiveness of strategies to improve morale. Seven project objectives were identified.

- 1.1.1 Review the published and grey literature evidence on the extent of burnout and poor morale among those working in inpatient mental health services.
- 1.1.2 Identify factors associated with poor staff morale in inpatient mental health services.
- 1.1.3 Identify all strategies aimed at improving the working environment and morale of those working in inpatient mental health services.
- 1.1.4 Examine the effectiveness, cost-effectiveness and practicability of strategies aimed at improving the morale of those working in inpatient mental health services.
- 1.1.5 Identify the active ingredients of diverse strategies to improve the morale and well-being of inpatient mental health workers.
- 1.1.6 Identify which interventions work for which professional groups and in what mental health settings.
- 1.1.7 Identify key areas of research where further work is needed to understand and improve poor staff morale in inpatient mental health care settings.

1.2 Plan of analysis

This report involved two interlinked parallel phases: the scoping review of the extent, aetiology and implications of low staff morale in health services, hereon referred to as phase A (study objectives 1.1.1 and 1.1.2) and scoping out the range and diversity of interventions and the systematic review of all potential organisational interventions aimed at improving morale (hereafter referred to as phase B (study objectives 1.1.3 to 1.1.7)). A brief scoping review of the organisational literature concerning innovative strategies and policy context was also conducted (Section 5).

Section 2 Methods

2.1 Search strategies

All searches were carried out by the information staff at the NHS Centre for Reviews and Dissemination (CRD) (the national centre of excellence for systematic reviews of health care in the UK) under the supervision of Julie Glanville (JG). Two sets of searches were undertaken, one for Phase A and one for Phase B (henceforth referred to as Search A and Search B).

2.1.1 Search A: Epidemiology and aetiology

Search A focused on aetiology/risk factors and the epidemiology of stress/low morale in mental health care workers. The following databases were searched:

- MEDLINE (Ovid interface, 1966 to June Week 3 2003)
- CINAHL (Ovid interface, 1982 to June Week 3 2003)
- EMBASE (Ovid interface, 1980 to 2003 Week 26)
- Sociological Abstracts (ARC interface)
- Dissertation Abstracts (Dialog interface)
- PsycINFO (BIDS WebSPIRS interface, 1978–2003/06 Weeks 2–4.)

The search results were limited to English-language publications (Both Search A and Search B were restricted to English-language publications because the project did not have the resources for translations.). The search approach and strategies are described in detail in Appendix 1.

2.1.2 Search B: Interventions

Search B focused on identifying research around interventions to improve morale and working conditions and focused on searching on changes to outcomes. The search results were limited to publications since 1980 and those in the English language. From the first searches of MEDLINE, EMBASE, CINAHL, Sociological Abstracts, Dissertation Abstracts and PsycINFO (as described above) a list of interventions were derived. Then a second set of searches was undertaken to look for evaluations of specific interventions. The searches were limited to English-language studies published since 1979. Editorials and comments were excluded where possible.

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A wider range of databases was searched:

- MEDLINE (via Ovid gateway, 1966 to September week 2 2003)
- EMBASE (via Ovid gateway, 1980 to week 37 2003)
- PsycINFO (Silverplatter CD-ROM, 1978 to 2003/08)
- CINAHL (via Ovid gateway, 1982 to September week 2 2003)
- Sociological Abstracts (Silverplatter WebSPIRS interface via BIDS, 1963 to 2003/06)
- HMIC (Silverplatter WebSPIRS interface via BIDS, issue 2003/9)
- Management and Marketing Abstracts (Dialog Datastar interface, 1975 to 3 October 2003)
- Management Contents (Dialog Datastar interface, 1986 to 3 October 2003)
- Inside Conferences (Dialog interface, 1993 to September week 4 2003)

The last four electronic databases in the above list were searched to capture the *grey literature* sources. Finally, a search of the Commission for Health Improvement web site was undertaken on 6 October 2003 to identify reports and reviews produced by the CHI which might have assessed staff morale and ways to improve it. Search of grey literature was carried out only for Search B: It was deduced that mining unpublished or hard-to-access literature would be more profitable for identifying innovations in strategies to improve morale but prove to be not so relevant for epidemiological descriptors.

Full details of the search strategies for each database and the search approach used are given in Appendix 1.

2.2 Screening studies for inclusion in the review

Research staff for Phase A (Penny Bee, PB) and Phase B (Jane Cahill, JC; Kate Bonsall, KB) 'sifted' through all references returned by the searches described above. All potentially relevant articles were allocated to an 'in file' and irrelevant articles were allocated to an 'out file'. Full text copies of all potentially relevant articles were obtained by an information officer Clare Doherty (CD). As there was a substantial degree of content overlap between Searches A and B, research staff 'swapped' over the remainder of search outputs once screening had been completed. This ensured that all material potentially relevant to searches A and B was accessed by the two research teams.

2.2.1 Inclusion criteria

The inclusion criteria used at screening were as follows.

General inclusion criteria

- Focus on health care professionals
- Mental health care settings (especially in patient settings)

Search A inclusion criteria

- Measuring the prevalence of an indicator of staff morale (for example, job satisfaction, occupational stress, burnout)
- Investigating the aetiological factors/variables associated with staff morale

Search B inclusion criteria

- Interventions designed to improve the working environment of those working in inpatient mental health care settings
- Delivery and organisation of care for those with mental illness

General exclusion criteria

- About carers
- Non-English-language publications
- Non mental health staff including learning disabilities staff
- Occupational stress relating to specific events (such as hospital closure, post-assault)

2.3 Database management

The Endnote Bibliographic Database system has been set up to be used for all stages of the review, from the creating of the initial endnote library (ENL), selecting and classifying studies, and ordering inter library loans (ILL) to preparing the final ENL for incorporation into the review. The master ENL, used by all review team members was maintained by the information officer (CD) in Leeds. Full details on how the ENL was managed and utilised are given in Appendix 2.

2.4 Selecting studies for inclusion in the review

Full text copies of all studies that had passed screening were examined to determine each study's inclusion for the review. At this stage, background articles (for example, methodological or systematic review papers) were retained as well as studies which would be extracted for the review. Custom fields were annotated accordingly (see Appendix 2).

2.4.1 Inclusion criteria

The following inclusion and exclusion criteria were applied to all potentially relevant studies. The inclusion and exclusion criteria used at this stage of the review involved a greater degree of specificity than those used at screening (2.2). Criteria used at screening were intended to be as inclusive as possible whereas successive criteria were used to focus the questions of the review.

- **Population** All ward-based staff working in inpatient mental health care settings
- **Interventions** All interventions designed to improve the working environment of those working in inpatient mental health care settings
- **Outcomes** Any direct and proxy measures of staff morale, including occupational stress, job satisfaction, burnout, mental well-being, the incidence of psychiatric disorders, staff sickness, staff absenteeism, recruitment and retention of staff.
- **Design** For epidemiological and aetiological studies we included prospective longitudinal, retrospective and cross-sectional designs including studies which measured outcomes cross-sectionally as part of intervention trials. For intervention studies, in accordance with study design inclusion criteria developed by the Cochrane Effective Practice and Organisation of Care (EPOC) review group, randomised controlled trials (RCTs), controlled clinical trials (CCTs), controlled before and after studies (CBAs) and interrupted time series (ITSs) are included. For interventions that have not been evaluated using the above designs, less robust designs are included.
- **Date** All studies date from 1990 onwards. The Community Care Act was passed 1990 resulting in a significant reorganisation of policy. The consequence of this Act was that the culture of mental health care changed from institutional to non-institutional. Therefore any findings pre-dating 1990 would not be pertinent to the current mental health working environment. It is the *current* post-1990 mental health environment which is causing concern, not the historical one. Evidence for this is found in the UK NHS where the development of community-based mental health care services has resulted in a relative neglect of inpatient settings. For example, the number of NHS hospital beds available to mentally ill people has more than halved over the past decade, while consumer demand has simultaneously risen.

2.4.2 Exclusion criteria

We excluded studies on the following grounds.

- **Population** Wards for children, adolescents and older people were excluded for Phase A. (It was considered appropriate to be more prescriptive with regard to population for the phase of the research which is concerned with establishing prevalence findings and specific stress levels.) Community and outpatient settings were also excluded, as were samples of staff working in mixed settings (inpatient and community). For Phase A, staff described as 'hospital-based' were also excluded, since it was possible that these individuals worked with both inpatients and outpatients simultaneously.
- **Interventions** There were no exclusion criteria for potential interventions.
- **Outcomes** Studies which did not measure staff morale were excluded.
- **Design** Studies which fell below the design criteria specified below were excluded.

2.5 Data extraction

Data extraction for Phases A and B of the review is described below. All studies that met the above inclusion criteria were extracted, excepting background studies.

2.5.1 Data extraction: Phase A

All included articles were categorised and data extracted in accordance with the study aims. To guide the data extraction, the following hierarchical classification system was employed:

- studies clearly specifying populations from adult acute inpatient wards; these studies were deemed to be closest to the scope of the review
- studies pertaining to adult general inpatient settings or ward-based staff in general; these studies either do not specify the population as acute inpatient or may include a mix of data
- studies pertaining to specialised adult inpatient environments such as forensic wards and long-stay wards); these studies were deemed to be least relevant to the scope of the review because of the specificity of the populations employed.

In order to ensure that the data extraction process was standardised within each category, the details from relevant studies were extracted into pre-designed tables (see Appendix 3). Separate data extraction tables were constructed for scoping and quality, prevalence and aetiology (see Results, Section 3). All eligibility judgements and data extraction were carried out by one reviewer (PB) and independently

checked by a second reviewer (DR). No formal measure of the reliability of data extraction was calculated but disagreements were resolved by discussion with a third party.

2.5.2 Data extraction: Phase B

Data extraction was conducted by two reviewers (JC and CD) in accordance with the guidelines specified by the EPOC data collection checklist. Each extracted study was double-extracted by Simon Gilbody (SG), an experienced systematic reviewer. As with the prevalence review, data from each study were extracted into pre-designed tables (see Appendix 4) categorised according to the following hierarchical classification system:

- studies clearly specifying populations from adult acute inpatient wards; these studies were deemed to be closest to the scope of the review
- studies pertaining to adult general inpatient settings/ward-based staff in general: these studies either do not specify the population as acute inpatient or may include a mix of data
- studies pertaining to specialised adult inpatient environments such as forensic wards and long-stay wards); these studies were deemed to be least relevant to the scope of the review due to the specificity of the populations employed.

2.6 Data synthesis

The results of the extracted studies for Phases A and B were described in tabular format. Both teams synthesised studies by setting, and then within setting ordered studies by level of evidence.

2.6.1 Synthesis: Phase A

The quality of each study was appraised according to predetermined criteria. All relevant studies were initially prioritised according to their study design:

- Level 1 prospective, repeated measures
- Level 2 cross-sectional survey
- Level 3 pre-intervention measures as part of an intervention study.

Additional quality criteria on which each study was judged included:

- multiple or singular site
- response rate
- sample size
- sample representativeness.

Prevalence data were extracted for all primary outcome measures defined by the inclusion criteria for the review (for example,

occupational stress, job satisfaction, burnout, psychological well-being, psychiatric disorders, staff sickness and turnover). Because the studies were heterogeneous in their design, population and outcomes studied, a formal meta-analysis of the data was not performed. Instead, reported prevalence estimates were recorded as mean (SD) values or percentage caseness, with 95 per cent confidence intervals being calculated where appropriate. Qualitative aetiology data were also extracted and reported according to the individual study's reporting framework.

2.6.2 Synthesis: Phase B

Studies were classified and grouped according to the level of evidence they produced:

- Level 1 RCTs, CCTs, CBAs and ITSs
- Level 2 Uncontrolled pre-post test designs
- Level 3 Uncontrolled post test designs
- Level 4 Descriptive studies

(NB: Levels 2–4 were only considered for interventions that had not been evaluated using Level 1 evidence).

Interventions were classified according to type and mode of delivery. With regard to **type**, an intervention was classified as:

- **Educational**: involving some kind of training or teaching component (for example, communication skills training)
- **Psychological**: involving some kind of psychotherapeutic component (for example, counselling, stress management courses)
- **Environmental/structural**: involving modifications to the external environment (such as changes to ward design) or organisational structures (such as introduction of flexitime).

With regard to **mode of delivery**, interventions were grouped as:

- **Individual** interventions, targeted at the level of the individual (for example, counselling, clinical supervision)
- **Group** interventions, targeted at the level of the working group (for example, staff communication workshops, stress prevention programmes delivered in group format)
- **Organisational** interventions, targeted and delivered at the level of the organisation as a whole (for example, changes to the setting or physical environment; creation of multidisciplinary teams, integration or services).

All objective measures of staff morale as set out in the original inclusion criteria were classified as primary outcomes of the intervention studies. Other outcomes which were evaluated for the review, but which did not fall into any of the above categories, were classed as secondary outcomes (for example, perception of work environment, rate of assaults against staff).

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The results of studies meeting criteria for Level 1 evidence were synthesised by setting, using descriptive methods. According to criteria developed by the Cochrane EPOC Group, each study was evaluated for the review using the following criteria as guidelines:

- **positive**, if the majority of major outcomes are statistically significant in favour of the intervention
- **borderline positive**, if the majority of outcomes are positive but non-significant or have a unit of analysis error
- **mixed effect**
- **borderline negative**, if the majority of outcomes are negative but non-significant or have a unit of analysis error
- **negative**, if the majority of major outcomes are negative and statistically significant.

The results of studies meeting Level 2 evidence and below were not synthesised in any detail for the present review since they were open to sources of bias and their results are potentially misleading. However, since they may describe potentially informative and useful interventions that have not yet been subject to more rigorous evaluation, they were tabulated in the appendix and considered within recommendations for further research.

Section 3 Results: Epidemiology and aetiology (Phase A)

3.1 Prevalence results

3.1.1 Literature search

From the initial search strategy, a total of 1796 potentially relevant studies were identified, the true number of studies after duplicates were removed being 1096. Of these, 515 were discarded because the abstract denoted that the article did not meet the inclusion criteria for population, date of study or primary outcome measure. Of the 581 studies examined in greater depth, 49 met criteria for inclusion in the review (Table 3.1); 10 studies were purely qualitative in design; the remaining 39 employed a partial or entirely quantitative approach.

Table 3.1 Results of the electronic literature search

Database searched	Total no. of hits (Searches A and B)	No. relevant to Search A
MEDLINE	1018	350
EMBASE	1690	333
CINAHL	522	293
PsycINFO	2458	535
Sociological Abstracts	244	119
Dissertation Abstracts	663	166
Total hits	6595	1796
Relevant hits minus duplicates	–	1096
No. excluded	–	515
Of which: pre-1990	–	351
non-inpatient settings/dissertations	–	164
Total no. articles obtained	–	581
Total no. studies suitable for data extraction	–	48
Of which: adult acute inpatient settings	–	16
general adult ward-based settings	–	22
specialised adult inpatient settings	–	10

3.2 Acute adult inpatient settings

3.2.1 Scope of the included studies

Of the 39 quantitative studies included in the review, 13 focused on some aspect of staff morale within acute adult inpatient wards. The full methodological details of these studies are presented in Appendix 3, Table A3.1; 7 studies were cross-sectional in design and 6 reported baseline data from intervention trials (Table 3.2). The cross-sectional studies were undertaken from 1991 to 2001 and included 4 UK studies (Callaghan, 1991; Chalder and Nolan, 2000; Muscroft and Hicks, 1998; Sullivan, 1993) and one each from the United States (Corrigan *et al.*, 1996), Australia (Farrell and Dares, 1999) and Norway (Severinsson and Hummelvoll, 2001). The trials ranged from 1990 to 2002, with 3 UK studies (Long *et al.*, 1990; Mistral *et al.*, 2002; Rothwell *et al.*, 1997), 2 US studies (Smoot and Gonzales, 1995; Goodykoontz and Herrick, 1990), and one from Australia (Tyson *et al.*, 2002).

Table 3.2 Included acute adult inpatient studies (n=13)

Design	Date	Country	Sample		Outcomes measured*
			Type	Size	
7 cross-sectional	1991–2001	4 UK	5 nurses	15–78	2 occupational stress
		1 US	2 staff		3 job satisfaction
		1 Australian			2 burnout
		1 Norwegian			
6 intervention trials	1990–2002	2 UK	4 nurses	16–34	1 occupational stress
		2 US	2 staff		2 job satisfaction
		1 Australian			2 burnout
					1 staff attitude
					1 staff turnover
					2 staff sickness

*Some studies measured more than one outcome variable

In terms of participants, 2 of the cross-sectional studies included mixed staff groups (Corrigan *et al.*, 1996; Severinsson and Hummelvoll, 2001) and 5 purely nurses, 2 of which were limited to registered nurses (Chalder and Nolan, 2000; Sullivan, 1993), 2 to a mix of qualified and unqualified nurses (Muscroft and Hicks, 1998; Farrell and Dares, 1999) and one in which the authors did not identify participants against this criterion (Callaghan, 1991). Of the trials studied, 2 included mixed staff groups (Mistral *et al.*, 2002; Smoot and Gonzales, 1995) and 4 were limited to nurses (one to a mix of qualification levels (Goodykoontz and Herrick, 1990) and 3 in which this demographic information was not stated (Long *et al.*, 1990; Rothwell *et al.*, 1997; Tyson *et al.*, 2002)). Sample sizes in the cross-sectional studies ranged from 15 to 78 and in

the trials from 16 to 34. Two of the 6 trials did not report sample sizes (Long *et al.*, 1990; Rothwell *et al.*, 1997). Two of the cross-sectional studies had comparison samples (one forensic (Chalder and Nolan, 2000) and one general medicine (Muscroft and Hicks, 1998)) and 2 trials also included comparison groups in their design, one a control non-intervention group of acute staff (Smoot and Gonzales, 1995) and the other a group of staff from a long-stay psychiatric ward (Tyson *et al.*, 2002).

Outcomes assessed in the studies were varied. In the cross-sectional designs, 4 studies measured occupational stress (Callaghan, 1991; Chalder and Nolan, 2000; Muscroft and Hicks, 1998; Sullivan, 1993), 3 job satisfaction (Callaghan, 1991; Farrell and Dares, 1999; Severinsson and Hummelvoll, 2001) and 2 burnout (Sullivan, 1993; Corrigan *et al.*, 1996). In the trials, 2 studies measured occupational stress (Long *et al.*, 1990; Rothwell *et al.*, 1997), 2 job satisfaction (Long *et al.*, 1990; Tyson *et al.*, 2002), 3 burnout (Smoot and Gonzales, 1995; Goodykoontz and Herrick, 1990; Tyson *et al.*, 2002), one staff attitude (Mistral *et al.*, 2002), one staff turnover (Smoot and Gonzales, 1995) and 3 staff sickness (Long *et al.*, 1990; Mistral *et al.*, 2002; Smoot and Gonzales, 1995).

3.2.2 Quality of the studies

In terms of quality criteria, most studies were of low quality. Of the cross-sectional studies, only one was multi-site (Sullivan, 1993) and all had less than 100 participants. Response rates varied from 52 to 100 per cent with the response rate in one study unreported (Callaghan, 1991). The sampling methods used included only one study using a stratified random sample (Muscroft and Hicks, 1998) with another four studies including whole populations of ward staff as their sample (Callaghan, 1991; Chalder and Nolan, 2000; Farrell and Dares, 1999; Severinsson and Hummelvoll, 2001) and two others restricting the sample to day shift workers (Sullivan, 1993; Corrigan *et al.*, 1996). No studies reported any formal means of determining the representativeness of their samples to local or national populations. No data were presented on the non-responders in the studies and one study reported no demographic information at all (Callaghan, 1991). Five studies used at least one valid survey questionnaire supported by referenced development work (Callaghan, 1991, Chalder and Nolan, 2000; Sullivan, 1993; Corrigan *et al.*, 1996; Farrell and Dares, 1999) but only 3 studies reported primary means and standard deviations or their equivalents (e.g., caseness rates) from these measures (Chalder and Nolan, 2000; Sullivan, 1993; Farrell and Dares, 1999). Two of the cross-sectional studies providing prevalence data reported on levels of occupational stress (Chalder and Nolan, 2000; Muscroft and Hicks, 1998) one on job satisfaction (Farrell and Dares, 1999) and one on burnout (Sullivan, 1993).

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In the trials, all were single-site, 4 had fewer than 100 participants (Mistral *et al.*, 2002; Smoot and Gonzales, 1995; Goodykoontz and Herrick 1990; Tyson *et al.*, 2002_ and 2 did not report the sample size (Long *et al.*, 1990; Rothwell *et al.*, 1997). Response rates varied from 61 to 92 per cent, with response rates in 3 studies unreported (Long *et al.*, 1990; Rothwell *et al.*, 1997; Tyson *et al.*, 2002). The sampling method used in all 6 studies was a total population sample of ward staff. No studies reported any formal means of determining the representativeness of their samples to local or national populations and no data were presented on the non-responders in the studies. All but one study (Rothwell *et al.*, 1997) used at least one valid questionnaire supported by referenced development work but primary means and standard deviations or their equivalents were poorly reported. One study reported full data on job satisfaction (Tyson *et al.*, 2002), 2 on burnout (Smoot and Gonzales, 1995; Tyson *et al.*, 2002), one partially reported data on an attitude measure (Mistral *et al.*, 2002) and 3 studies reported sickness rates (Long *et al.*, 1990; Mistral *et al.*, 2002; Smoot and Gonzales, 1995).

3.2.3 Results of the studies

The results of all the studies were difficult to interpret and compare because of the variety of measurement domains and questionnaire instruments used, under-reporting or absent reporting of data, and the lack of comparison to reference populations. Full details of the results of all studies extracted for the review are provided in Table 3.3 In the cross-sectional studies, one study reporting on occupational stress found it to be significantly less on an acute inpatient mental health ward than in a general nurse comparison group (Muscroft and Hicks, 1998); the other found it comparable to the stress of forensic nursing (Chalder and Nolan, 2000). The 2 studies that measured job satisfaction found levels to be 'reasonably high' (Callaghan, 1991) and staff 'mildly satisfied' (Farrell and Dares, 1999), whereas the only other cross-sectional study to report primary data identified high levels of burnout in its sample, with 43 per cent and 44 per cent of staff rating themselves in the top one-third in measures of the negative aspects of burnout (emotional exhaustion and depersonalisation). Only 14 per cent of the staff rated themselves in the top one-third of the scale in measures of personal accomplishment (Sullivan, 1993).

The same difficulty of interpretation existed for the trials. Only one of the 2 studies reported means and standard deviations for a measure of job satisfaction (Tyson *et al.*, 2002). There was only one study reporting prevalence estimates of occupational stress (Rothwell *et al.*, 1997). One study that measured burnout with the Maslach Burnout Inventory (MBI) (Tyson *et al.*, 2002) reported lower group means for emotional exhaustion and depersonalisation and higher personal accomplishment than the cross-sectional study which also used the MBI (Sullivan, 1993), but did not categorise results in terms of the distribution of scores into high, medium or low levels. The other cross-sectional study

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used a different assessment instrument but nonetheless reported that 45 per cent of staff were experiencing high or extreme levels of burnout (Goodykoontz and Herrick, 1990). This prevalence rate is comparable to those obtained in the cross-sectional surveys described above. One paper reported group means for attitude using a published scale (Mistral *et al.*, 2002) but offered no method of comparing this against other reference populations. The 3 studies to measure sickness rates reported an average of between 6 and 12 hours of sickness per month per whole-time equivalent member of staff (Long *et al.*, 1990; Mistral *et al.*, 2002; Smoot and Gonzales, 1995).

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Table 3.3 Adult acute inpatient settings: prevalence findings

Study	Primary outcome(s): instrument	Prevalence		Comments
		Sample	Comparison	
Callaghan (1991)	Occupational stress: not stated	Not reported	–	Sample comprised 39 acute mental health nurses. Response rate and sample demographics not reported. No formal test of external validity. Stress 'not found to be high', job satisfaction 'reasonably high'.
	Job satisfaction: not stated	Not reported		
Chalder and Nolan (2000)	Occupational stress: MHPSS	20.47 (SD not reported)	18.87 (SD not reported)	15 registered acute mental health nurses, grades D–G compared with 23 registered forensic nurses. No formal test of external validity. Combined response rate = 63%, data on non-respondents not reported. No interpretation of scale scores. Stress levels did not differ significantly between groups ($p = 0.67$).
Corrigan <i>et al.</i> (1996)	Burnout: MBI	Not reported	–	Sample comprised 49 day shift workers. No formal test of external validity. 79% response rate, data on non-respondents not provided. No prevalence data provided.
Farrell and Dares (1999)	Job satisfaction: 15-item, 6-point Likert scale	3.86 (SD not reported)	–	Sample comprised 22 full-time acute nursing staff, 59% nursing level 1. No formal test of external validity. 96% response rate, data on non-respondents not provided. Standardised instrument used to measure satisfaction. Staff found to be 'mildly satisfied'.
Muscroft and Hicks (1998)	Occupational stress: visual analogue scale	5.49 (SD not reported)	6.46 (SD not reported)	Stratified random sample of 26 acute nurses compared to a stratified random sample of 26 general nurses. Combined populations represented 15% of all eligible staff. Sample restricted to nurse grades C–E. No formal test of external validity. 52% response rate, data on non-respondents not provided. Non-standardised instrument employed to measure stress. No interpretation of scale scores. General nurses found to experience significantly more stress than acute nurses ($p < 0.05$).
Severinsson and Hummelvoll (2001)	Job satisfaction: 26-item, 6-point scale	Not reported	–	Sample comprised 23 acute staff. 37% of positions temporarily filled by unskilled assistants. No formal test of external validity. 85.2% response rate, data on non-respondents not provided. Non-standardised instrument used to measure satisfaction. No prevalence data provided.
Sullivan (1993)	Burnout: MBI (% high scores)	EE: 20 (7.05) (44.4%) DEP: 7.4 (5.5) (43.2%) PA: 34.5 (6.8) (13.9%)	–	Multi-site survey of 78 acute psychiatric nurses. Sample restricted to trained nurses on day duty only. No formal test of external validity. 100% response rate achieved. Non-standardised instrument employed to measure stress. Authors concluded high levels of burnout apparent in a sizeable proportion of nurses studied.
	Occupational stress: NSI	Total scores not reported		

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Table 3.3 (continued)

Study	Primary outcome(s): instrument	Prevalence		Comments
		Sample	Comparison	
Long <i>et al.</i> (1990)	Occupational stress: NSS	Not reported	–	Sample consisted of nurses working on the admission and pre-discharge wards of an acute unit. Response rate and sample size not reported. No formal test of external validity. No interpretation of pre-intervention scores.
	Job satisfaction: JDI (work subscale)	Not reported		
	Absenteeism/sickness: staff records	Admissions: 7, Pre-discharge: 7.4 average hours/month/WTE qual. staff		
Mistral <i>et al.</i> (2002)	Staff attitude: adapted AAPPQ	Skill adequacy:	–	Sample included 22 mixed staff from one high-care psychiatric ward. No formal test of external validity. 61% response rate, data on non-respondents not provided. Cronbach's alpha of the adapted AAPPQ = 0.89, data only presented for 2/7 subscales. No interpretation of pre-intervention scores.
		8.35 (SD not reported)		
		Self-esteem:		
		5.81 (SD not reported)		
	Staff sickness: staff records	210 days/6-month period		
Smoot and Gonzales (1995)	Burnout: MBI	Not reported	Not reported	31 acute staff allocated to attend an empathy-based training programme were compared with 34 staff from a matched acute unit not attending training. No formal test of external validity. Response rate = 89% (sample), 92% (comparison), data on non-respondents not provided. No interpretation of pre-intervention scores.
	Sick leave: staff records	1470 hours/6-month period	1218 hours/6-month period	
	Resignations/transfers: staff records	11/6-month period	8/6-mth period	
Tyson <i>et al.</i> (2002)	Burnout: MBI	EE: 16.6 (8.13)	EE: 14.1 (10.60)	21 staff from an acute ward of a rural psychiatric hospital were compared with 16 staff from a long-stay ward. No formal test of external validity. Population size and precise response rates not given (estimated at 75%). Data on non-respondents not provided. No interpretation of pre-intervention scores.
		DEP: 5.0 (3.61)	DEP: 7.6 (7.18)	
		PA: 35.9 (6.76)	PA: 6.1 (9.98)	
	Job satisfaction: Job Satisfaction Scale	Intrinsic: 30.0 (8.08)	Intrinsic: 28.5 (8.07)	
		Extrinsic: 32.3 (7.77)	Extrinsic: 34.8 (6.39)	
		Total: 62.3 (14.95)	Total: 63.3 (13.43)	

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Table 3.3 (continued)

Study	Primary outcome(s): instrument	Prevalence		Comments
		Sample	Comparison	
Goody-koontz and Herrick (1990)	Burnout: Pines and Aronson Burnout Scale	Minimal: 11% Moderate: 44% High: 26% Extreme: 19%	–	Sample comprised 27 RNs, LPNS and aides caring for acutely psychotic schizophrenics. No formal test of external validity. 82% response rate, data on non-respondents not provided. Burnout scores arbitrarily divided into four levels.
Rothwell <i>et al.</i> (1997)	Occupational stress: Self-rated 10-point scale	4.9 (SD not reported)	–	Sample comprised acute staff due to move from a psychiatric hospital to a general hospital (sample size and response rate not stated). No formal test of external validity. Stress levels rated at the end of each shift. No interpretation of pre-intervention scores. Significant correlation between self-rated stress on a given day and the following day ($p = 0.001$).

Notes: Prevalence data refer to mean (SD) unless otherwise stated. AAPPQ: Alcohol and Alcohol Problems Preceptions Questionnaire; MBI: Maslach Burnout Inventory; EE: Emotional Exhaustion; DEP: Depersonalization; PA: Personal Accomplishment; MHPSS: Mental Health Professional Stress Scale; NSS: Nursing Stress Scale; JDI: Job Description Index.

3.2.4 Summary of studies of acute inpatient environments

In summary, therefore, the studies which specifically address morale, occupational stress and job satisfaction in acute inpatient mental health units are characterised as small, of poor quality and with incomplete results. Little can be gleaned as to the specific prevalence of indicators of staff well-being and morale within these units.

3.3 General adult inpatient wards

3.3.1 Scope of the studies

Of the 20 studies included in the review, one was a prospective repeated measures design, 12 were cross-sectional and 7 reported baseline data from intervention trials (Table 3.4). The prospective study was undertaken in 1999 in the UK (Prosser *et al.*, 1999). The cross-sectional studies came from 1991–2001 and included 2 UK studies (Fagin *et al.*, 1996; McElfatrick *et al.*, 2000), 5 from the United States (Corrigan, 1994; Corrigan *et al.*, 1998; Donat, 2001; Donat *et al.*, 1991; Stuart *et al.*, 2000), 2 from Australia (Humpel and Caputi, 2001; Munro *et al.*, 1998) and one each from the Netherlands (Tummers *et al.*, 2001), Japan (Ito *et al.*, 2001) and South Africa (Levert *et al.*, 2000). The trials ranged from 1991 to 1999, with 2 UK studies (Carson *et al.*, 1999a; Kunkler and Whittick, 1991), 4 from the United States (Adkins, 1995; Corrigan *et al.*, 1997; Devlin, 1992; Robey *et al.*, 1991) and one from Sweden (Berg and Hallberg, 1999).

Full details of the studies are provided in Appendix 3, Table A3.2. In terms of participants, the prospective study included a mixed group of staff (Prosser *et al.*, 1999). Three of the cross-sectional studies also included mixed staff groups (Corrigan, 1994; Corrigan *et al.*, 1998; Donat *et al.*, 1991), with the other 9 studying nurses only, 5 of which restricted their sample to qualified nurses (McElfatrick *et al.*, 2000; Stuart *et al.*, 2000; Munro *et al.*, 1998; Ito *et al.*, 2001; Levert *et al.*, 2000), one to psychiatric aides (Donat, 2001), 2 to a mix of training levels (Fagin *et al.*, 1996; Tummers *et al.*, 2001) and one in which the sample was not identified by the authors against this criterion (Humpel and Caputi, 2001). Four of the trials studied nurses (one restricting their sample to unqualified nurses (Adkins, 1995), 2 studying a mix of qualification levels (Carson *et al.*, 1999a; Berg and Hallberg, 1999) and one not specified (Kunkler and Whittick, 1991) and 3 studying a mixed staff group (Corrigan *et al.*, 1997; Devlin, 1992; Robey *et al.*, 1991). The prospective study had a sample size of between 35 and 50 participants depending on the time of measurement (Prosser *et al.*, 1999). Sample sizes in the cross-sectional studies ranged from 21 to 1494 and in the trials from 22 to 171. One trial did not report sample size (Kunkler and Whittick, 1991). The prospective study had a comparison group of community mental health staff (Prosser *et al.*, 1999), 4 of the cross-

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sectional studies had comparison samples – 3 community mental health staff (Fagin *et al.*, 1996; McElfatrick *et al.*, 2000; Stuart *et al.*, 2000) and one general medicine (Tummers *et al.*, 2001) – and 2 trials included a comparison group of another psychiatric inpatient ward in their design (Carson *et al.*, 1999a Robey *et al.*, 1991).

Outcomes assessed in the studies were varied. The prospective study measured job satisfaction, burnout, psychological health and staff turnover (Prosser *et al.*, 1999). In the cross-sectional designs, 5 studies measured occupational stress (Fagin *et al.*, 1996; Corrigan, 1994; Donat, 2001; Donat *et al.*, 1991; Humpel and Caputi, 2001), 4 job satisfaction (Fagin *et al.*, 1996; Stuart *et al.*, 2000; Munro *et al.*, 1998; Ito *et al.*, 2001), 5 burnout (Fagin *et al.*, 1996, McElfatrick *et al.*, 2000, Corrigan *et al.*, 1998; Tummers *et al.*, 2001; Levert *et al.*, 2000), 3 psychological health (Fagin *et al.*, 1996; McElfatrick *et al.*, 2000; Munro *et al.*, 1998), one organisational commitment (Stuart *et al.*, 2000), 3 absence and sickness levels (Fagin *et al.*, 1996; Stuart *et al.*, 2000) and one staff turnover (Stuart *et al.*, 2000). In the trials, 2 studies measured occupational stress (Carson *et al.*, 1999a, Berg and Hallberg, 1999), 3 job satisfaction (Carson *et al.*, 1999a; Adkins, 1995; Robey *et al.*, 1991), 3 burnout (Carson *et al.*, 1999a; Kunkler and Whittick, 1991; Corrigan *et al.*, 1997), 2 psychological health (Carson *et al.*, 1999a; Kunkler and Whittick, 1991), one organisational commitment (Adkins, 1995), one staff morale (Devlin, 1992), one staff turnover (Adkins, 1995 and one absence and sickness levels (Carson *et al.*, 1999a).

Table 3.4 Included acute adult inpatient studies (n=20)

Design	Date	Country	Sample		Outcomes measured*
			Type	Size	
1 repeated measures	1999	UK	Staff	35–50	Job satisfaction Burnout Psychological health Staff turnover
12 cross-sectional	1991–2001	2 UK	9 nurses	21–1494	4 occupational stress
		5 US	3 staff		4 job satisfaction
		2 Australian			5 burnout
		1 Netherlands			4 psychological health
		1 Japan			1 organisational commitment
		1 S.Africa			2 staff sickness 1 staff turnover
7 intervention trials	1991–1999	2 UK	4 nurses	22–171	2 occupational stress
		4 US	3 staff		3 job satisfaction 3 burnout 2 psychological health 1 organisational commitment 1 morale 1 staff sickness 1 staff turnover
		1 Sweden			

*Some studies measured more than one outcome variable

3.3.2 Quality of the studies

In terms of quality criteria, most studies were of low quality. The prospective study (Prosser *et al.*, 1999) was a multi-site population study with fewer than 100 patients, had a response rate of between 62 and 76 per cent, presented no data on the representativeness of the sample to local or national populations and no data on the non-responders in the study. The study used valid survey questionnaires supported by referenced development work and reported primary means and standard deviations or their equivalents (for example, turnover rates) from these measures. Of the cross-sectional studies, 6 were multi-site (Fagin *et al.*, 1996; McElpatrick *et al.*, 2000; Stuart *et al.*, 2000; Humpel and Caputi, 2001; Ito *et al.*, 2001, Levert *et al.*, 2000) and 5 studies had more than 100 participants (Fagin *et al.*, 1996; Corrigan, 1994; Stuart *et al.*, 2000; Tummers *et al.*, 2001; Ito *et al.*, 2001). Response rates varied from 18 to 89 per cent, with the response rate in one study unreported (Corrigan, 1994). The sampling methods used in 11 of the cross-sectional studies consisted of including whole populations of ward staff as their sample and one other study restricting the sample to day shift workers (Corrigan *et al.*, 1998). No

studies reported any formal means of determining the representativeness of their samples to local or national populations and no data were presented on the non-responders in the studies. All 12 studies used at least one valid survey questionnaire supported by referenced development work but only 7 studies reported primary means and standard deviations or their equivalents from these measures (for example, caseness rates) (Fagin *et al.*, 1996; Corrigan, 1994; Stuart *et al.*, 2000; Tummers *et al.*, 2001; Ito *et al.*, 2001; Levert *et al.*, 2000).

Out of the 7 trials, one study was multi-site (Adkins, 1995), the rest single-site, 5 had fewer than 100 participants (Carson *et al.*, 1999a; Corrigan *et al.*, 1997; Devlin, 1992; Robey *et al.*, 1991; Berg and Hallberg, 1999) and one did not report the sample size (Kunkler and Whittick, 1991). Response rates varied from 46 to 100 per cent, with response rates in 2 studies unreported (Kunkler and Whittick, 1991; Adkins, 1995). The sampling method used in 6 of the 7 studies was a total population sample of ward staff, while in the seventh the sample was restricted to day shift workers only (Corrigan *et al.*, 1997). No studies reported any formal means of determining the representativeness of their samples to local or national populations and no data were presented on the non-responders in the studies. All 7 studies used at least one valid questionnaire supported by referenced development work although primary means and standard deviations or their equivalents were only reported in 5 (Carson *et al.*, 1999a, Adkins, 1995, Devlin, 1992, Berg and Hallberg, 1999, Corrigan, 1993).

3.3.3 Results of the studies

Like the studies pertaining to acute inpatient wards, the results of the general ward-based studies were difficult to interpret and compare. The studies suffered similar problems of variety in measurement domains and questionnaire instruments used, under-reporting or absent reporting of data and the lack of comparison to reference populations (Table 3.5). In the prospective study (Prosser *et al.*, 1999) occupational stress data were not reported, although staff were reported to be 'relatively satisfied' with their work. Levels of burnout were similar to those reported in other ward-based studies, staff turnover was 30 to 35 per cent (although this was reported for the sample as a whole including the community comparison) and psychological ill health ranged from 10.9 to 11.9 on the GHQ-12, with lower scores being reported in the ward-based sample than the community comparison group.

For the cross-sectional studies, of the 4 studies to measure occupational stress, only 2 reported data (Fagin *et al.*, 1996; Corrigan, 1994), the first indicating that nursing staff were more stressed than clinical staff and the second not fully interpreting the data provided (Fagin *et al.*, 1996). Of the 4 studies to report job satisfaction, one found that inpatient and community staff were equivalently satisfied

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(Stuart *et al.*, 2000), with neither group showing high levels of job satisfaction. A second suggested 'neutral' job satisfaction (Fagin *et al.*, 1996) while another reported staff as '62 per cent' satisfied (Ito *et al.*, 2001). In terms of burnout, two studies did not report data (McElfatrick *et al.*, 2000; Corrigan *et al.*, 1998) and the other three had very varied results ranging from around 30 to 55 per cent of staff in the top one-third in measures of the negative aspects of burnout (emotional exhaustion and depersonalisation) and between 3 and 26 per cent of staff in the top one-third of the scale to measure personal accomplishment (Fagin *et al.*, 1996; Tummers *et al.*, 2001; Levert *et al.*, 2000). One study found higher levels of burnout in mental health ward-based staff than in nurses working in a general hospital (Tummers *et al.*, 2001), one found staff to have lower burnout than community staff (Fagin *et al.*, 1996) and a further study found very high levels of burnout indeed (Levert *et al.*, 2000). This last study was conducted in South Africa, where the specific setting characteristics may have determined the levels of burnout and/or the staff's response to the questionnaire instrument. At 5.3 days per year, sickness and absence rates were higher in one ward-based study than in its community comparison (Stuart *et al.*, 2000), although a second study (Fagin *et al.*, 1996) showed less difference between ward-based and community groups (7.66–9.31 days/year vs. 7.2 days/year respectively). Of the 4 studies to measure psychological health 2 did not report data (McElfatrick *et al.*, 2000; Donat *et al.*, 1991) and a further 2 used different versions of the GHQ (Fagin *et al.*, 1996; Munro *et al.*, 1998). The study using the GHQ-12 (Munro *et al.*, 1998) found similar levels of psychological distress to the prospective study, whereas the study which utilised the GHQ-28 found high levels of 'caseness' (44 per cent) (Fagin *et al.*, 1996). The study to measure organisational commitment found this to be 'neutral' (Stuart *et al.*, 2000).

The trials were equally difficult to interpret and synthesise. Two studies reported occupational stress (Carson *et al.*, 1999a; Berg and Hallberg, 1999) but used different measures, although one reported that levels of stress were equivalent to dementia care nurses (Berg and Hallberg, 1999). Of the 3 studies to measure job satisfaction, one reported means and standard deviations (Adkins, 1995) while the other 2 reported no data (Carson *et al.*, 1999a; Robey *et al.*, 1991). Of the 3 studies to measure burnout, one did not report data (Kunkler and Whittick, 1991), one reported similar means to the prospective study (Carson *et al.*, 1999a) and one reported that clinical staff had higher levels of burnout than 'direct care' staff (Corrigan *et al.*, 1997). One study reported sickness and absence levels at 9.33 days per year (Carson *et al.*, 1999a) whereas the study to measure turnover did not report data (Adkins, 1995). Psychological health was assessed in 2 studies (Carson *et al.*, 1999; Kunkler and Whittick, 1991) but reported only in one study (Carson *et al.*, 1999a) using the Likert-scaled GHQ-28. Organisational commitment was measured and reported in one study (Adkins, 1995), but without comparison to a reference population.

3.3.4 Summary of studies of general inpatient environments

In summary, therefore, the studies which specifically address morale, occupational stress and job satisfaction in general ward-based mental health environments are also characterised as of poor quality and with incomplete results. The three areas where there are most data are burnout, sickness absence and psychological health. Levels of burnout are variable depending on the chosen population, comparison group and country of research, although there is some broad similarity to levels in other mental health care settings. The measures of psychological health are marred by the use of different versions of the same instrument. Even where the same version of the GHQ-28 is utilised, different studies use different scoring systems. It is therefore difficult to draw any firm conclusions from the incomplete data presented in these studies.

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Table 3.5 Adult general inpatient settings – prevalence findings

Study	Primary outcome(s): instrument	Mean (SD) prevalence		Comments
		Sample	Comparison	
Prosser <i>et al.</i> (1996, 1999)	Psychological health: GHQ-12	Time 1 = 10.9 (4.6)	Time 1 = 14.4 (6.3)	Repeated measures, multi-site comparison of 35–50 inpatient mental health staff and 59–71 community staff. No formal test of external validity. 60–76% sample response rate, data on non-participants not provided. Authors conclude that overall staff had relatively high emotional exhaustion and poor psychological well-being yet were also relatively satisfied with their work.
		Time 2 = 11.1 (4.9)	Time 2 = 13.9 (6.1)	
		Time 3 = 11.9 (5.5)	Time 3 = 11.8 (5.1)	
	Burnout: MBI	EE:	EE:	
		Time 1 = 20.2 (10.5)	Time 1 = 27.4 (11.9)	
		Time 2 = 23.3 (9.6)	Time 2 = 24.8 (12.0)	
		Time 3 = 21.3 (9.4)	Time 3 = 21.2 (10.0)	
		DEP:	DEP:	
		Time 1 = 7.6 (6.2)	Time 1 = 8.8(5.5)	
		Time 2 = 9.2 (5.8)	Time 2 = 7.5 (6.2)	
		Time 3 = 8.7 (6.1)	Time 3 = 6.7 (5.0)	
		PA:	PA:	
		Time 1 = 33.0 (7.4)	Time 1 = 33.1 (5.6)	
		Time 2 = 33.9 (6.8)	Time 2 = 32.5 (6.3)	
		Time 3 = 35.3 (5.2)	Time 3 = 33.5 (6.6)	
	General job satisfaction: JDS	Time 1 = 5.5 (5.1)	Time 1 = 4.6 (6.2)	
		Time 2 = 5.0 (5.0)	Time 2 = 6.1 (6.4)	
		Time 3 = 6.0 (5.6)	Time 3 = 7.8 (6.0)	
	Turnover: staff records	Sub-sample scores not reported	Sub-sample scores not reported	

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Table 3.5 (continued)

Study	Primary outcome(s): instrument	Mean (SD) prevalence		Comments
		Sample	Comparison	
Corrigan (1994)	Occupational stress: IJSQ	<i>Clinical staff:</i> Admin stress: 15.3 (7.0) Practice stress: 20.1 (8.6) <i>Nursing staff:</i> Admin stress: 18.9 (7.8) Practice stress: 24.3 (9.5)	–	Sample comprised 210 nursing and 80 clinical staff. Although not specifically stated, this number may include learning disability workers. No formal test of external validity. Response rate not reported. Stress prevalence scores not interpreted. Nursing staff found to report more stress relating to administrative issues ($p < 0.001$) and clinical practice stress ($p < 0.001$) than clinical staff.
Corrigan <i>et al.</i> (1998)	Burnout: MBI	Not reported	Not reported	Sample comprised 90 nursing and clinical staff of 5 inpatient programmes. Sample represented 88.9% of all day shift staff. No formal test of external validity.
Donat (2001)	Occupational stress: IJSQ	Not reported	–	Sample comprised 21 psychiatric aides. Sample restricted to 2/3 shifts. No formal test of external validity. Sample represented 18% of all psychiatric aides at the facility. Data on non-respondents not provided. No interpretation of prevalence data.
Donat, <i>et al.</i> (1991)	Psychological health: POMS	Not reported	–	Sample comprised 100 direct care residential staff. No formal test of external validity. Sample represented 28% of all potential participants. Data on non-respondents not provided.
Ito <i>et al.</i> (2001)	Job satisfaction: NIOSH job stress questionnaire	V. satisfied: 9% Satisfied: 53.1% Dissatisfied: 32.5% V. dissatisfied: 5.4%	-	Multi-site study of 1494 licensed nurses. Sample excluded nurse managers and nurse aides. No formal test of external validity. 76.5% response rate, data on non-participants not provided.

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Table 3.5 (continued)

Study	Primary outcome(s): instrument	Mean (SD) prevalence		Comments
		Sample	Comparison	
Fagin <i>et al.</i> (1995, 1996)	Psychological health: GHQ-28	Total sample: 3.77 (5.0) (31%)	4.8(5.8) (41%)	Multi-site study of ward-based nurses (n=144–323). No formal test of external validity. Response rate <20–47%, data on non-respondents not reported. Authors conclude 3 in 10 ward nurses are experiencing significant psychological distress. Sample 1: Ward nurses from study 1 scored significantly higher DEP (p <0.0001) and lower PA scores (p <0.05), lower GHQ scores (p <0.05), and lower intrinsic (p <0.0001) and total job satisfaction (p <0.0005) than CPNs.
Carson <i>et al.</i> (1995, 1996a, 1996b, 1997, 1999)				
Brown <i>et al.</i> (1994)				
	(% caseness)	Sample 1: 3.41 (4.75) (27%) Sample 2: 3.60 (4.65) (32%) Sample 3: 4.54 (5.62) (38%)		
	Burnout: MBI (% high)	EE: Sample 1: 20.38 (11.99) (31%) Sample 2: 19.31 (11.40) (28%) Sample 3: 21.25 (10.35) (32%) DEP: Sample 1: 7.40 (6.21) (17%) Sample 2: 5.46 (5.41) (13%) Sample 3: 7.93 (6.40) (22%) PA: Sample 1: 32.33 (8.84) (27%) Sample 2: 32.84 (7.81) (26%) Sample 3: 32.85 (7.57) (26%)	EE: 21.5 (11.5) (48%) DEP: 5.4 (5.3) (24%) PA: 34.4 (7.3) (20%)	

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Table 3.5 (continued)

Study	Primary outcome(s): instrument	Mean (SD) prevalence		Comments
		Sample	Comparison	
	Job satisfaction: Minnesota scale	Sample 1: intrinsic: 40.1 (7.3) 70% satisfied extrinsic: 16.5 (4.6) 60% dissatisfied Total: 62.6 (11.7) 'neutral' Sample 2 and 3 not reported	Intrinsic: 44.1 (6.4) Extrinsic: 16.4 (4.6) Total: 66.1 (10.2)	
	Occupational stress: DCL scale	Sample 1 not reported Sample 2: 52.50 (22.90) Sample 3: 52.43 (19.47)		
	Staff sickness: staff records	Sample 1: 8.57 (days/year) Sample 2: 7.66 (days/year) Sample 3: 9.31 (days/year)	7.2 (days/year)	
Humpel and Caputi (2001)	Occupational stress: MHPSS	Total sample scores not reported	–	Multi-site study of 43 mental health inpatient nurses. No formal test of external validity. 83% response rate, data on non-respondents not provided. Only three subscales of the MHPSS used. No interpretation of prevalence data provided.
Lever <i>et al.</i> (2000)	Burnout: MBI (% low, average, high)	EE: 29.9 (12.93) (18.7%, 26.4%, 54.9%) DEP: 9.63 (4.63) (26.4%, 28.6%, 45%) PA: 19.16 (8.26) (93.4%, 3.3%, 3.3%)	–	Multi-site study of 94 qualified inpatient nurses. No formal test of external validity. Response rate=27%, data on non-participants not provided. Authors concluded that high levels of burnout on all three dimensions of the MBI indicate that the role of the psychiatric nurse is a stressful one.
McElfrick <i>et al.</i> (2000)	Burnout: MBI Psychological health: GHQ-12	Not reported Not reported	Not reported Not reported	Multi-site comparison of 98 qualified ward-based and 70 community mental health nurses. No formal test of external validity. 25% combined response rate, data on non-respondents not presented.

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Table 3.5 (continued)

Study	Primary outcome(s): instrument	Mean (SD) prevalence		Comments
		Sample	Comparison	
Munro <i>et al.</i> (1998)	Psychological health: GHQ-12	20.19 (6.01)	–	Sample comprised 60 registered nursing staff. No formal test of external validity. 60% response rate, data on non-respondents not provided. No interpretation of prevalence data.
	Job satisfaction: job satisfaction scale	50.88 (10.68)		
Stuart, <i>et al.</i> (2000)	Job satisfaction: managerial opinion scale	2.7 (0.9)	2.7 (0.9)	Multi-site study comparing 222 inpatient nurses with 108 community nurses. No formal test of external validity. Combined response rate= 41%, data on non-respondents not provided. Inpatient staff reported a significantly greater number of days missed work ($P<0.001$). Organisational commitment reported as neutral. Authors concluded both samples failed to show high job satisfaction.
	Organisational commitment: OCQ	4.4 (0.6)	4.1 (0.4)	
	Staff absences : self-report	5.3 (15) days/year	2.7 (10) days/year	
Tummers <i>et al.</i> (2001)	Burnout: MBI-NL (EE subscale)	EE: 3.05 (0.78)	EE: 2.65 (0.73)	178 ward-based mental health nurses were compared to 196 ward-based general nurses. Sample comprised 85% registered MH nurses and 15% student nurses. No formal test of external validity. 63.6% response rate, data on non-respondents not provided. MH nurses found to exhibit significantly more emotional exhaustion than general nurses ($p < 0.05$).
Adkins (1995)	Job satisfaction: JDS	12.74 (2.02).	–	Multi-site study of 171 mental health specialists. No formal test of external validity. Response rate not specified. No interpretation of prevalence data provided.
	Organisational commitment: OCS	57.52 (6.41)		
	Turnover: staff records	Not reported		
Berg and Hallberg (1999)	Occupational strain: WRSI	35.7 (7.4)	–	Sample comprised 22 inpatient nurses allocated to undergo one year of clinical supervision. No formal test of external validity. Response rate = 100%. Mean WRSI score comparable to that obtained by hospital nurses working in dementia care (34.2 (SD 5.4)).
Carson <i>et al.</i> (1999a)	Occupational stress: DCL scale	57.04 (17.86)	49.31 (23.25)	27 ward-based nurses allocated to receive a social support intervention were compared to 26 nurses allocated to feedback-only condition. Groups did not differ significantly in terms of dependent and independent variables. No formal test of external validity. Response rate = 83%, data on non-respondents not provided. DCL stress scale not referenced. No interpretation of pre-intervention scores.
	Psychological health: GHQ-28	3.85 (4.67)	5.35 (7.39)	
	Burnout: MBI	EE: 20.04 (9.91) DEP: 8.37 (6.45) PA: 33.52(7.15)	EE: 21.29 (11.39) DEP: 8.96 (6.07) PA: 33.46 (7.53)	
	Job satisfaction: Minnesota scale	Not reported	Not reported	
	Staff sickness: staff records	9.33 days/year	10.65 days/year	

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Table 3.5 (continued)

Study	Primary outcome(s): instrument	Mean (SD) prevalence		Comments
		Sample	Comparison	
Corrigan <i>et al.</i> (1997)	Burnout: MBI	<i>Clinical staff:</i> EE: 24.7 (10.9) DEP: 4.9 (3.9) PA: 40.1 (7.2) <i>Direct care staff:</i> EE: 18.4 (11.6) DEP: 4.1 (5.3) PA: 35.8 (6.3)	–	Sample comprised 13 direct care and 22 clinical staff from 3 residential programmes for severe mental illness. No formal test of external validity. Sample represented 56% of all day shift workers. Participants did not differ from non-participants in terms of gender, ethnicity, age or tenure. No interpretation of pre-intervention prevalence scores.
Devlin (1992)	Staff morale: 1-item, 5-point scale	Ward A/B: 3.06 Ward C: 4.14 Ward D: 3.40	–	Sample comprised 37 ward-based staff from 4 wards. No formal test of external validity. 49% response rate, data on non-respondents not provided. Morale instrument not referenced. %-point Likert scale ranged from very high to very low. No other interpretation of pre-intervention prevalence data.
Kunkler and Whittick (1991)	Psychological health: GHQ-28 Burnout: Burnout checklist	Not reported	–	Sample comprised inpatient staff from 3 residential programmes for severe mental illness. No formal test of external validity. Sample size and response rate not reported.
Robey <i>et al.</i> (1991)	Job satisfaction: 20-item, 5-point Likert scale	Not reported	Not reported	26 residential staff allocated to attend one-day retreats were compared with 36 staff not attending retreats. No formal test of external validity. 46% and 47% response rates respectively, data on non-respondents not provided. Sample and comparison did not differ from one another in age or sex. Satisfaction measure not referenced. No interpretation of pre-intervention prevalence data.

Note: Prevalence data refer to mean (SD) unless otherwise stated. DCL scale: DeVilliers Carson Leary stress scale. WRSI: Work Related Strain Inventory. OCQ: Organisational Commitment Questionnaire. MBI-NL: Maslach Burnout Inventory Dutch version. NIOSH: National Institute for Occupational Safety and Health Job Stress Questionnaire. IJSQ: Inpatient Job Stress Questionnaire. MBI: Maslach Burnout Inventory. MHPSS: Mental Health Professional Stress Scale. JDS: Job Satisfaction Survey. OCS: Organisational Commitment Scale. GHQ: General health Questionnaire. POMS: Profile of mood states.

3.4 Forensic inpatient wards

3.4.1 Scope of the studies

Three studies, 2 from the UK (Kirby and Pollock, 1995; Ewers *et al.*, 2002) and one from Sweden (Rask and Levander, 2002), were included in the review (Appendix 3, Table A3.3); 2 were of a cross-sectional design (Kirby and Pollock, 1995; Ewers *et al.*, 2002) with the other reporting baseline data from an intervention trial (Ewers *et al.*, 2002). The cross-sectional study dates from 1995 to 2002 and the trial from 2001. In terms of participants, both the cross-sectional studies included mixed groups of trained and untrained nurses, whereas the trial included only trained nurses. The sample size in the cross-sectional studies ranged from 38 to 242 while that in the trial was 10 each in the sample and comparison group. The comparison sample in one cross-sectional study was a staff group working on long-stay inpatient wards (Kirby and Pollock, 1995) while in the trial it was another group of forensic staff not receiving the specified intervention. The outcomes assessed in the cross-sectional studies were occupational stress (Kirby and Pollock, 1995) and job satisfaction (Rask and Levander, 2002) while the outcome in the intervention trial was burnout.

3.4.2 Quality of the studies

All studies were single-site with one cross-sectional design (Kirby and Pollock, 1995) and the trial having less than 100 participants. Response rates were 69–80 per cent in the cross-sectional studies and 61 per cent in the trial. One cross-sectional study used a stratified sample (Ewers *et al.*, 2002), the other using a small population sample. The trial restricted its sample to nurses working full time with no experience of previous psychosocial interventions training. None of the studies reported any formal means of determining the representativeness of their samples to local or national populations, nor did they provide data on non-responder characteristics. All studies used a valid survey questionnaire supported by referenced development work but only the trial reported primary means and standard deviations.

3.4.3 Results of the studies

Only the trial reported data suitable for inclusion (Table 3.6). Burnout levels were somewhat lower than other studies in this review, particularly for emotional exhaustion in the pre-intervention staff group.

3.4.4 Summary of studies of acute inpatient environments

The included studies in forensic care add very little to the data in this review, being restricted to data from a very small intervention trial collected before the intervention was implemented.

3.5 Long-stay inpatient wards

3.5.1 Scope of the studies

Of the 3 studies included in the review (Appendix 3, Table A3.3), one was a prospective repeated measures design (Corrigan *et al.*, 1994) and 2 were cross-sectional designs (Shepherd *et al.*, 1996; Melchior *et al.*, 1997). The prospective study was undertaken in the USA in 1994 and the cross-sectional studies between 1995 and 1997 in the UK and the Netherlands.

In terms of participants, the prospective study included a mixed staff group, as did one of the cross-sectional studies (Shepherd *et al.*, 1996). The other cross-sectional study included a mix of qualified and unqualified nurses (Melchior *et al.*, 1997). Sample sizes in the studies ranged from 35 in the prospective study to 361 in one of the cross-sectional studies (Melchior *et al.*, 1997) with the sample size in the other cross-sectional study unreported (Shepherd *et al.*, 1996). The prospective study and one cross-sectional study did not have a comparison group (Melchior *et al.*, 1997) while the other cross-sectional study compared its sample with community residential facility staff. In terms of outcomes, burnout was assessed in the prospective and one cross-sectional study (Melchior *et al.*, 1997), satisfaction and psychological well-being in a cross-sectional study (Shepherd *et al.*, 1996) and anxiety in the prospective study (Corrigan *et al.*, 1994).

3.5.2 Quality of the studies

In terms of quality criteria, the studies were all of low quality. The cross-sectional studies were multi-site, whereas the prospective study was single-site. Only one study – a cross-sectional design – had more than 100 participants (Melchior *et al.*, 1997). Response rates varied from 61 to 78 per cent. All studies were population samples although one cross-sectional study randomly sampled available wards (Shepherd *et al.*, 1996). No studies reported any formal means of determining the representativeness of their samples to local or national populations and no data were presented on the non-responders in the studies. All 3 studies used at least one valid survey questionnaire supported by referenced development work and all studies reported primary means and standard deviations or their equivalents (for example, caseness rates) from these measures. Two reported burnout (Corrigan *et al.*, 1994; Melchior *et al.*, 1997), one anxiety (Corrigan *et al.*, 1994) and one psychological caseness (Shepherd *et al.*, 1996).

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Table 3.6 Adult specialised inpatient settings – prevalence findings

Study	Primary outcome(s): instrument	Prevalence		Comments
		Sample	Comparison	
Forensic				
Kirby and Pollock (1995)	Occupational stress: OSI	Not reported	Not reported	Sample comprised 38 qualified and unqualified nurses on a secure unit. No formal test of external validity. 81% response rate, data on non-participants not provided. Authors concluded staff showed high degree of satisfaction in the workplace.
Ewers <i>et al.</i> (2002)	Burnout: MBI	EE: 13.53 DEP: 6.02 PA: 35.37	EE: 18.82 DEP: 5.74 PA: 33.81	Stratified sample of 10 qualified nurses allocated to receive PSI training were compared with a stratified sample not allocated to receive training. No formal test of external validity. Response rate, data on non-respondents not provided. No interpretation of pre-intervention prevalence data.
Long-stay				
Corrigan <i>et al.</i> (1994)	Burnout: MBI	Time 1 EE: 15.94 (12.44) DEP: 5.82 (5.30) PA: 34.88 (7.90) Time 2 EE: 16.00 (11.42) DEP: 5.91 (5.83) PA: 34.88 (7.78)	–	Sample comprised 35 staff working on extended care units. No formal test of external validity. 61% response rate, data on non-respondents not provided. 8-month interval between measures. Authors concluded MB scores were in the middle third of mental health personnel norms for EE and DEP and lower third for PA.
	Anxiety: STAI(S)	Time 1 32.62 (7.95) Time 2 30.94 (7.33)		
Melchior <i>et al.</i> (1997, 1996, 1995)	Burnout: MBI	EE: 17.22(7.67) DEP: 6.51 (4.02) PA: 31.97 (4.14)	–	Sample comprised 361 nursing staff from 35 long-stay wards of 5 psychiatric hospitals. No formal test of external validity. 73.4% response rate, data on non-respondents not provided. Sample found to exhibit moderate levels of burnout.
Shepherd <i>et al.</i> (1996)	Job satisfaction: Minnesota scale	Sample scores not reported	Sample scores not reported	Staff from 5 randomly selected rehabilitation wards in long-stay mental hospitals were compared with staff from 20 randomly selected community residential homes. No formal test of external validity. 78% response rate, data on non-respondents not identified. Authors state hospital staff were not particularly dissatisfied although they did report quite high levels of psychological distress.
	Psychological health: GHQ-28 caseness	44%	Not reported	

Note: Prevalence data refer to mean (SD) unless otherwise stated. OSI: Occupational stress Indicator. MBI: Maslach Burnout Inventory.

3.5.3 Results of the studies

In the prospective study (Corrigan *et al.*, 1994) and the one cross-sectional study to report burnout (Melchior *et al.*, 1997), rates were broadly similar, only slightly higher in the cross-sectional study (Table 3.6). Anxiety in the prospective study ranged between 31 and 33 on the Spielberger State Anxiety Inventory (Corrigan *et al.*, 1994). Psychological caseness as measured in the other cross-sectional study was 44 per cent (Shepherd *et al.*, 1996).

3.5.4 Summary of studies of long-stay ward environments

Of the 3 studies included in the review, all are of poor quality although one large cross-sectional study does provide some reasonably comprehensive data. The level of burnout in these populations appears slightly lower than the other settings assessed in this review. GHQ caseness rates in one cross-sectional study are high (Shepherd *et al.*, 1996) but this study provides so little information on the population and sample that its results are difficult to interpret.

3.6 Summary of prevalence studies across inpatient settings

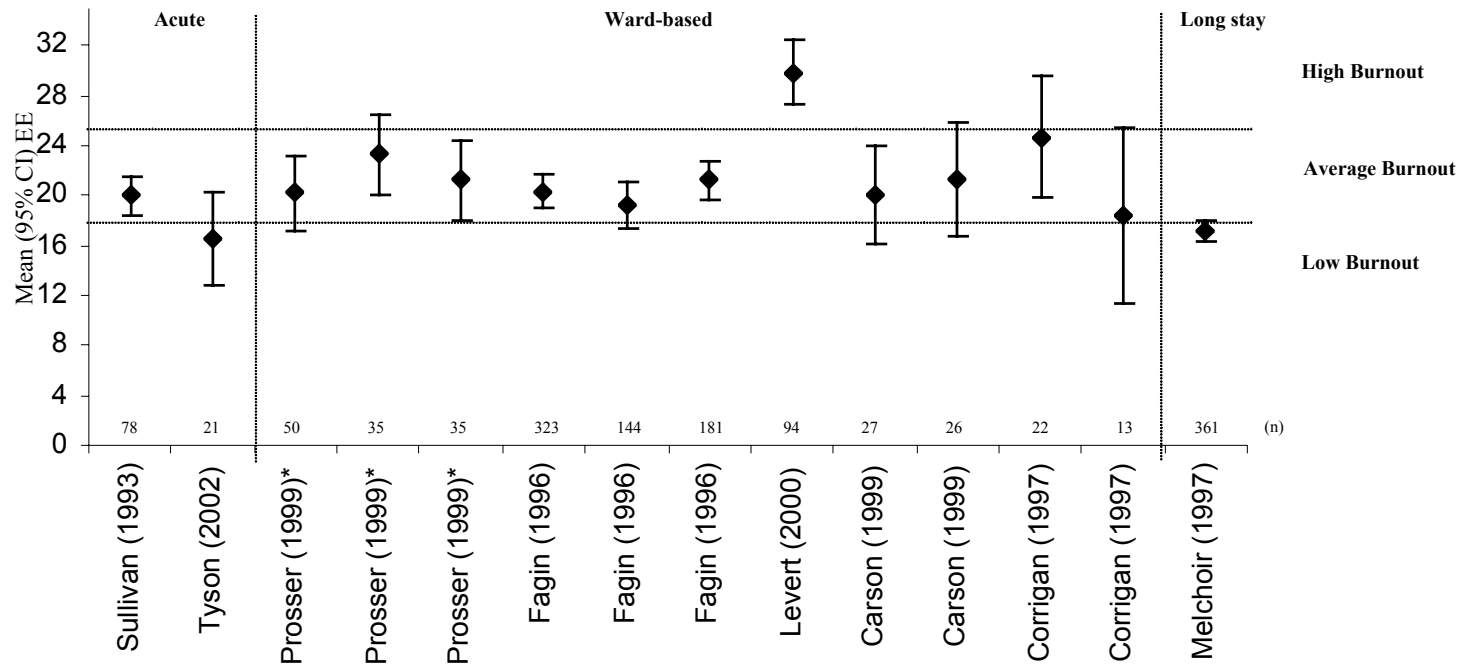
The review provides some preliminary evidence that stress prevalence is moderate to low among inpatient staff. However, the studies on which that preliminary conclusion is based are limited. There are two main problems that appear consistently. First, most studies are small and 95 per cent confidence intervals for estimates of prevalence are practically never presented. Confidence in the internal validity of some of the findings is thus limited and the available results can at best only be considered as suggestive prevalence estimates. Secondly, the overall methodological quality of the studies included in the review was relatively low. In terms of external validity, very few of the studies identified the characteristics of the eligible staff who did not participate, nor did they make a comparison between the demographics of the final sample and wider regional or national populations. It thus remains unclear whether the samples studied were representative of all eligible staff at a facility or even psychiatric inpatient staff more generally. Moreover, it is important to realise that the studies are heterogeneous both in terms of the populations studied and the outcomes assessed. This heterogeneity leads to difficulty in summarising reported prevalence figures. The most commonly measured outcome was staff burnout, with the vast majority of studies using the MBI as their preferred screening tool. Figures 3.1 to 3.3 summarise the reported burnout prevalence estimates for staff across the different inpatient settings. In this instance, however, the addition of 95 per cent confidence intervals demonstrates that, as yet, no firm conclusions regarding the level of staff burnout can be made. An insufficient

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number of studies prevented a comparable cross-setting examination of job satisfaction, staff attitude or turnover.

In conclusion, therefore, there are now a considerable number of studies describing the prevalence of occupational stress on small populations (less than 100 members of staff). Further small-scale cross-sectional studies assessing rates of stress are therefore unlikely to be informative. Rather, there is a need for well conducted, multi-site cross-sectional studies that use validated measures to assess the prevalence of different indicators of occupational stress in specified inpatient settings.

Figure 3.1 Reported levels of emotional exhaustion across inpatient settings

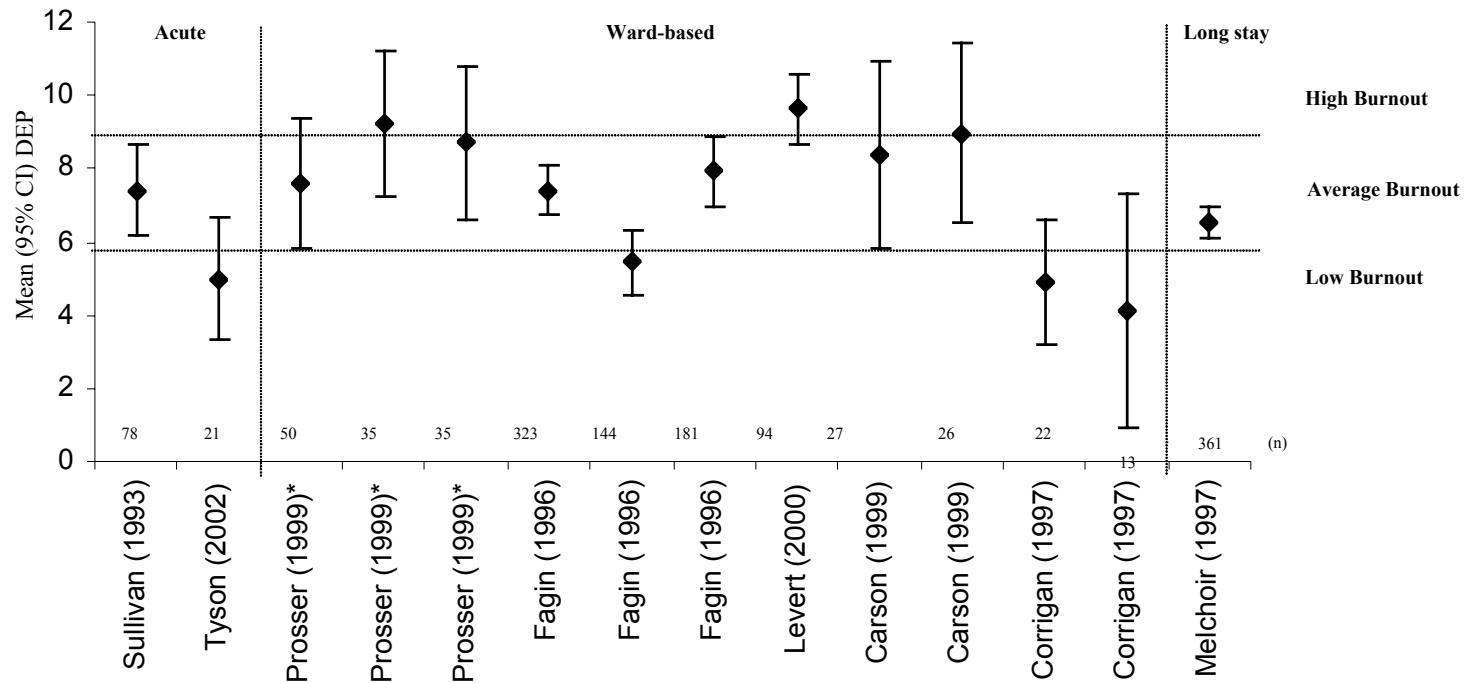


Only studies providing full prevalence data (Means and SDs) are included.

*Repeated measure of the same sample.

Levels of burnout refer to Maslach and Jackson (1986) norms.

Figure 3.2 Reported levels of depersonalisation across inpatient settings

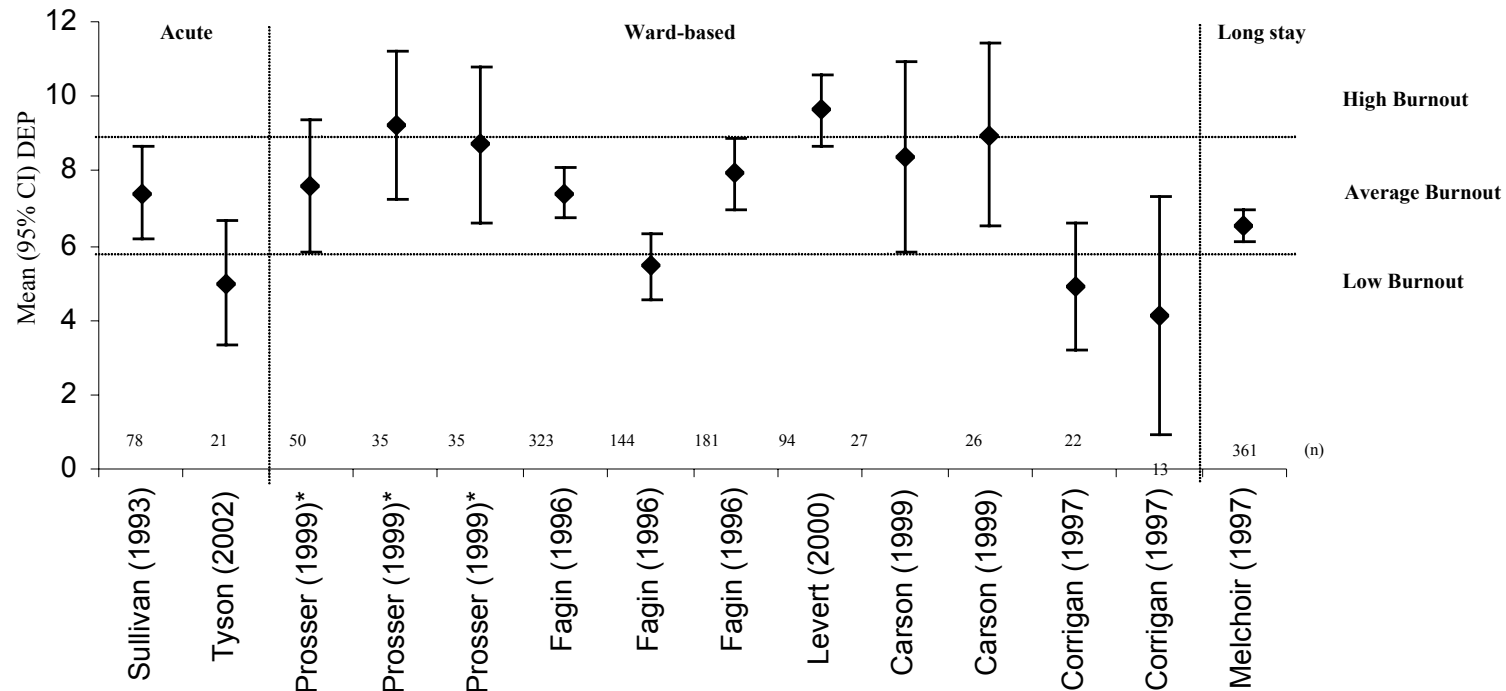


Only studies providing full prevalence data (Means and SDs) are included.

*Repeated measure of the same sample.

Levels of burnout refer to Maslach and Jackson (1986) norms.

Figure 3.3 Reported levels of personal accomplishment across inpatient settings



Only studies providing full prevalence data (Means and SDs) are included.

*Repeated measure of the same sample.

Levels of burnout refer to Maslach and Jackson (1986) norms.

3.7 Aetiological factors in staff morale

3.7.1 Literature search

The literature search previously documented (see Section 3.1.1) was utilised for aetiological factors.

3.8 Acute adult inpatient settings

3.8.1 Scope of included studies

Six of the 13 quantitative studies included in the review reported some aetiological data (Table 3.7). All data were retrospective, collected during the cross-sectional or pre-intervention phase of the studies. Samples sizes ranged from 22 to 78 subjects, 4 samples comprised nurses (Callaghan, 1991; Muscroft and Hicks, 1998; Sullivan, 1993; Farrell and Dares, 1999) and the other 2 mixed staff groups (Corrigan *et al.*, 1996; Severinsson and Hummelvoll, 2001). Studies either explored the nature of staff stress (Muscroft and Hicks, 1998; Farrell and Dares, 1999), correlated aetiological factors against prevalence data (Callaghan, 1991; Corrigan *et al.*, 1996; Sullivan, 1993) or used a combined approach (Severinsson and Hummelvoll, 2001). Factors measured were usually limited to concepts specific to the hypothesised relationships being examined by the studies' authors. The studies all suffered from the same methodological shortcomings highlighted in the prevalence section of this report (Section 1).

3.8.2 Results of the studies

The 2 studies which explored the nature of staff stress reported that factors intrinsic to the job, relationships at work, communication in the workplace, personal development and work role were all aspects of job satisfaction (Muscroft and Hicks, 1998; Farrell and Dares, 1999). Mental health nurses in one study were less likely to use formal or informal support structures to talk about stress (Muscroft and Hicks, 1998). The correlational data reported in the 3 other studies showed that burnout was correlated with factors related to the organisational environment, relationships with others at work, types of coping, gender and patient psychopathology (Callaghan, 1991; Sullivan, 1993; Corrigan *et al.*, 1996). One further study showed that stress was related to the experience of ethical conflicts in the workplace (Severinsson and Hummelvoll, 2001).

3.9 General inpatient wards

3.9.1 Scope of the studies

Twelve of the 20 included studies reported some aetiological data (Table 3.8). These studies all suffered from the methodological shortcomings highlighted in the sections on prevalence in this report. All data were retrospective, collected during the cross-sectional or pre-intervention phase of the studies. Samples sizes ranged from 22 to 648 subjects, 9 samples were nurses (McElfatrick *et al.*, 2000; Donat, 2001; Humpel and Caputi, 2001; Munro *et al.*, 1998; Tummers *et al.*, 2001; Levert *et al.*, 2000; Adkins, 1995; Berg and Hallberg, 1999; Carson *et al.*, 1999b) and the other 3 mental health workers (Corrigan, 1994; Corrigan *et al.*, 1998; Donat *et al.*, 1991). One study explored the nature of staff stress (Donat *et al.*, 1991) while the other 11 studies correlated aetiological factors against prevalence data. Factors measured were usually limited to concepts specific to the hypothesised relationships being examined.

3.9.2 Results of the studies

The study that explored the nature of staff stress concluded that factors intrinsic to the job (relating to treating patients), relationships with others and organisational factors were all aspects of staff stress (Donat *et al.*, 1991). The other studies reported correlations between large numbers of factors and measures of morale. Occupational stress was correlated with length of service, sense of coherence, creativity and flexibility, workplace atmosphere, career development and attitudes to behaviour therapy (Corrigan, 1994; Donat, 2001; Humpel and Caputi, 2001; Berg and Hallberg, 1999). Job satisfaction was correlated with the organisational environment, role ambiguity, social support within and outside the workplace, competence and physical fitness (Munro *et al.*, 1998; Adkins, 1995; Carson *et al.*, 1999b). Burnout was correlated with the organisational environment, relationships with others at work, social support, role coherence, conflict and autonomy, workload, coping, alcohol and cigarette consumption, physical fitness, attitude to life, and attitude to behaviour therapy (McElfatrick *et al.*, 2000; Corrigan *et al.*, 1998; Tummers *et al.*, 2001; Levert *et al.*, 2000; Carson *et al.*, 1999a). Psychological health was correlated with the organisational environment, relationships with others at work and coping (McElfatrick *et al.*, 2000; Donat *et al.*, 1991; Munro *et al.*, 1998; Carson *et al.*, 1999a); staff sickness absence with coping and physical fitness (Carson *et al.*, 1999b); and organisational commitment with role ambiguity and conflict (Adkins, 1995).

3.10 Forensic inpatient environments

3.10.1 Scope of the included studies

Of the studies focusing on forensic settings, only one considered the possible aetiological factors of low staff morale (Rask and Levander, 2002). The sample consisted of 242 forensic mental health nurses and explored both the nature of staff stress and correlated aetiological factors against prevalence data. Data were collected retrospectively during a cross-sectional survey and the study suffered from the methodological shortcomings highlighted previously.

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Table 3.7 Adult acute inpatient settings – aetiology findings

Study	Primary outcome(s): instrument	Secondary outcome(s): instrument	Significant correlations / main findings for sample	Comments
Callaghan (1991)	Occupational stress: not stated Job satisfaction: not stated	Role ambiguity and overload: not stated Non-participation: not stated Patients' psychopathology: not stated	Non-participation strongly correlated with low levels of satisfaction (P-value not stated), high patient psychopathology significantly related to high stress and low satisfaction. Females reported higher satisfaction than males (P-value not stated).	Sample comprised 39 acute mental health nurses. Authors conclude that nurses faced with high levels of acutely disturbed patients are likely to report higher stress levels.
Corrigan <i>et al.</i> (1996)	Burnout: MBI	Barriers to behaviour therapy: BIBT Social support: SSQ	EE and BIBT institutional constraints ($r = -0.61$, $p < 0.001$), EE and BIBT lack of collegial support (-0.51 , $p < 0.001$), DEP and BIBT institutional constraints (-0.39 , $p < 0.01$).	Sample comprised 49 day shift workers. Authors concluded that staff who were more emotionally exhausted or depersonalised at work were more likely to believe that institutional barriers and lack of cohesive treatment teams were significant impediments to innovative rehabilitation programmes.
Farrell and Dares (1999)	Job satisfaction: 15-item, 6-point Likert scale	–	3 highest-ranked items for job satisfaction = having interesting work, having responsibility and having good interpersonal relationships with colleagues.	Sample comprised 22 full-time acute nursing staff. Authors suggest working within cohesive environments with good supervisory relationships may be an important determinant of job satisfaction.
Muscroft and Hicks (1998)	Occupational stress: Visual analogue scale	Personal stress: visual analogue scale Coping methods: 5-point scale	Psychiatric nurses less likely to talk to someone about their stress ($p < 0.05$), to talk to colleagues ($p < 0.05$), and to use work based counselling ($p < 0.01$) than general nurses.	Stratified random sample of 26 acute nurses compared to a stratified random sample of 26 general nurses. Primary and secondary instruments not referenced. Authors suggest there may be a 'collective refusal' to acknowledge stress, which is exacerbated in psychiatric nurses.

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Table 3.7 (continued)

Study	Primary outcome(s): instrument	Secondary outcome(s): instrument	Significant correlations / main findings for sample	Comments
Severinsson and Hummelvoll (2001)	Job satisfaction: 26-item, 6-point scale	Ethical dilemmas: 27-item, 7-point scale	Analysis of job satisfaction scores revealed 5 factors: stress and experience of shortcomings, general satisfaction, managerial support, communication and co-operation, and professional development. Significant correlations between stress and shortcomings and experience of ethical conflicts (Spearman's $\rho = 0.71$, $p < 0.01$), total satisfaction and ethical conflicts (0.48 , $p < 0.05$), total satisfaction and following rules (-0.49 , $p < 0.05$).	Sample comprised 23 acute staff. Authors concluded that working in an organisation where values coincide with one's own is an important determinant of job satisfaction.
Sullivan (1993)	Burnout: MBI (% high scores) Occupational stress: NSI	Coping: 40-item questionnaire	EE and NSI patient care subscale ($r = 0.53$, $p < 0.05$), EE and work environment (r - and P -values not stated), EE and lack of support (0.6 , $p < 0.05$). EE and emotion-focused coping (0.43 , P -value not stated), PA and organisational satisfaction (0.52 , P -value not stated), PA and problem-focused coping (r - and P -values not stated), total NSI scores and problem-focused coping (-0.5 , P -value not stated).	Multi-site survey of 78 acute psychiatric nurses. Authors conclude that acute nurses are exposed to the same stressors as other areas of nursing but face additional problems related to their unique client group.

Note: BIBT: Barriers to Behaviour Therapy Test. SSQ: Modified Social Support Questionnaire.

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Table 3.8 Adult general inpatient settings – aetiology findings

Study	Primary outcome(s): instrument	Secondary outcome(s): instrument	Significant correlations/ main findings for ward-based mental health nurses	Comments
Corrigan (1994)	Occupational stress: IJSQ	Knowledge of behavioural treatment: BVT Barriers to behavioural therapy: BIBT Social learning principles: OMI social learning subscale	<i>Clinical staff:</i> IJSQ (practice) and BIBT ($r = -0.41$, $p < 0.005$) <i>Nursing staff:</i> IJSQ (practice) and BIBT ($r = -0.22$, $p < 0.01$)	Sample comprised 210 nursing and 80 clinical staff. Although not specifically stated, this number may include learning disability workers. Authors conclude both groups were likely to perceive potent barriers to behaviour rehabilitation hen they were more stressed on the job.
Corrigan <i>et al.</i> (1998)	Burnout: MBI	Barriers to behavioural therapy: BIBT Social support: SSQ Participation in behavioural treatment: ITQ	LISREAL analysis demonstrated a direct effect of collegial support on burnout ($\beta = -1.80$). Burnout found to affect attitudes towards behaviour therapy ($\beta = -0.66$).	Sample comprised 90 nursing and clinical staff on 5 inpatient programmes. Authors suggest that staff who perceive little collegial empathy and assistance are more likely to be burned out, with relatively high burnout , and particularly high emotional exhaustion, leading to negative attitudes about behaviour therapy.
Donat (2001)	Occupational stress: IJSQ	Knowledge of behavioural methods: KBM-CC Barriers to behavioural therapy: BIBT Perceived utility of behavioural methods: PUBM	KBM-CC and ISQ ($r = -0.48$, $p < 0.05$)	Sample comprised 21 psychiatric aides. Authors conclude that self-reported job stress increases as behavioural knowledge decreases.
Donat <i>et al.</i> (1991)	Psychological health: POMS	Stressors: stress situation survey	8 factors identified from the stress situation survey: staff conflict over duties/treatment decisions; inability to control resident behaviour; lack of treatment control; inconsistent/unfair work conditions; lack of co-worker respect; inadequate staff care; lack of administrative support and working with unco-operative/incapable residents.	Sample comprised 100 direct care residential staff. Authors conclude stressful situations encompass a broad range of external conditions which focus around resident behaviour, co-worker behaviour and organisational issues.

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Table 3.8 (continued)

Study	Primary outcome(s): instrument	Secondary outcome(s): instrument	Significant correlations / main findings for ward-based mental health nurses	Comments
Carson <i>et al.</i> (1999, 1996b, 1997)	Psychological health: GHQ-28 (% caseness) Burnout: MBI (% high) Job satisfaction: Minnesota scale Occupational stress: DCL scale Staff sickness: staff records	Self-esteem: Modified Rosenberg self-esteem scale Coping: Cooper coping skills questionnaire Fitness level: 4-point scale	Low-burnout group older ($p < 0.05$), drank fewer units of alcohol ($p < 0.01$), smoked fewer cigarettes ($p < 0.01$), reported happier outlook on life ($p < 0.01$), used more social support ($p < 0.01$), coped more through task organisation ($p < 0.01$) and involvement with work aims ($p < 0.001$), and scored higher on total coping ($p < 0.01$). High-burnout group felt less able to discuss problems with colleagues ($p < 0.01$) and regarded line manager as less supportive ($p < 0.0001$). High-fitness group less EE, DEP and PA, greater job satisfaction, greater coping skills and less sickness absence ($p < 0.01$). Low-coping skills group had higher GHQ-28 scores ($p < 0.01$) and more sickness absence ($p < 0.05$). Most common coping strategies for total sample = having stable relationships, separating home from work, recognising limitations, dealing with problems immediately.	Sample comprised 648 ward-based nurses. Authors conclude high- and low-burnout groups differ on a range of variables. Nurses who employ more coping skills experienced significantly less stress and took less time off sick than colleagues with restricted coping skills. Fitness levels may be an important moderator of stress in mental health nurses.
Humpel and Caputi (2001)	Occupational stress: MHPSS	Emotional competency: Multifactor Emotional Intelligence Scale Work experience: self-report	Higher MHPSS-PSD subscale scores in nurses with 2+ years' experience compared to 0–2 years experience ($p < 0.012$).	Multi-site study of 43 mental health inpatient nurses. Authors concluded that nurses with less than two years' experience were more stressed in terms of professional self doubt.
Levert, <i>et al.</i> (2000)	Burnout: MBI (low, average, high)	Workload: questionnaire subscale Lack of collegial support: questionnaire subscale Role conflict and ambiguity: questionnaire Sense of coherence: OTLQ	36.6% EE variance explained by sense of coherence and workload. 21.3% DEP variance explained by sense of coherence and workload. 6.1% PA variance explained by role conflict.	Multi-site study of 94 qualified inpatient nurses. Authors conclude that nurses with a strong sense of coherence and manageable workload will be far less likely to experience emotional exhaustion and depersonalisation. Other factors play a role in personal accomplishment.

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Table 3.8 (continued)

Study	Primary outcome(s): instrument	Secondary outcome(s): instrument	Significant correlations/ main findings for ward-based mental health nurses	Comments
McElfattrick <i>et al.</i> (2000)	Burnout: MBI Psychological health: GHQ-12	Coping: PsychNurse and OSI coping scales	Psychnurse scores varied between high, medium and low groups for EE, , DEP and PA ($p < 0.01$) and high and low groups for GHQ-12 ($p < 0.01$). OSI scores varied between high and low GHQ-12 groups ($p < 0.05$)	Multi-site comparison of 98 qualified ward-based and 70 community mental health nurses. Validation study of Psychnurse scale. Results demonstrated the wider the coping range the lower the amount of burnout and stress experienced.
Munro <i>et al.</i> (1998)	Psychological health: GHQ-12 Job satisfaction: job satisfaction scale	Job control: job control scale Job demand: quantitative workload scale Social support: 17-item scale	Main effects for non-work support, work support and job control on psychological health ($p < 0.01$, 0.05 and 0.05) and job satisfaction ($p < 0.01$, 0.05 and 0.01 respectively).	Sample comprised 60 registered nursing staff. Authors concluded that social support made the greatest contribution to worker health and job satisfaction. Increased control over tasks, job execution and the work environment diminished the ill effects of nurses' work.
Tummers <i>et al.</i> (2001)	Burnout: MBI-NL(EE subscale)	Work autonomy: MAQ Workload: 8-item, 5-point scale Social support: VOS-D Job involvement: 4-item, 5-point scale	EE and autonomy ($r = -0.20$, $p < 0.01$), workload (0.43, $p < 0.01$) and social support ($r = -0.31$, $p < 0.01$).	178 ward-based mental health nurses were compared to 196 ward-based general nurses. Authors conclude that high workload and limited social support appear to increase emotional exhaustion, a pattern that was invariant across the two samples.
Adkins (1995)	Job satisfaction: JDS Organisational commitment: OCS Turnover: staff records	Work experience: Archival data Task competence: 8-item, 5-point response scale Role conflict and ambiguity: questionnaire Interpersonal relationships: 2-item, 5-point scale Expectations: 6-item scale Job performance: 7-point scale	Pre-intervention independent relationships between job satisfaction and task competence ($\beta = 0.19$, $p < 0.05$) and job satisfaction and role ambiguity ($\beta = -0.18$, $p < 0.05$). Independent relationships between organisational commitment and role ambiguity ($\beta = -0.22$, $p < 0.01$) and organisational commitment and role conflict ($\beta = -0.19$, $p < 0.05$)	Multi-site study of 171 mental health specialists.

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Table 3.8 (continued)

Study	Primary outcome(s): instrument	Secondary outcome(s): instrument	Significant correlations/ main findings for ward-based mental health nurses	Comments
Berg and Hallberg (1999)	Occupational strain: WRSI	Sense of coherence: SOC Creativity: CCQ Nursing care satisfaction (SNCW)	WRSI and SOC (Spearman's $\rho = -0.48$, $p < 0.05$), WRSI and CCQ factors 'challenge' (-0.47 , $p < 0.05$) and 'playfulness' (-0.63 , $P < 0.01$). WRSI and SNCW factors 'atmosphere/development' (0.53 , $p < 0.05$) and 'flexibility' (0.50 , $p < 0.05$).	Sample comprised 22 inpatient nurses allocated to undergo one year of clinical supervision. Authors concluded that a strong sense of coherence was related to low work-related strain.

Note: BIBT: Barriers to Behaviour Therapy Test. BVT: Behaviour Vignettes Test. OMI: Opinions of Mental illness Test. ITQ: Incentive Therapy Questionnaire. SSQ: Modified Social Support Questionnaire. KBM-CC: Knowledge of Behavioural Methods Inventory-Continuum of care version. PUBM: Perceived Utility of Behavioural Methods. OTLQ: Orientation to Life Questionnaire. OSI: Occupational Stress indicator. MAQ: Maastricht Autonomy Questionnaire. VOS-D: Dutch Organisational Stress Questionnaire. SOC: Sense of Coherence scale. CCQ: Creative Climate Questionnaire. SNCW: Satisfaction with Nursing Care and Work Scale.

3.10.2 Results of the studies

This study reported a complex mesh of inter-variable correlations, focusing on satisfaction with a range of potential stress factors (Table 3.9). Stress factors included occupational role, organisational factors and factors related to the patient including violence and influence of relatives. The content of supervision was also correlated with the focus of staff satisfaction (Rask and Levander, 2002).

3.11 Long-stay inpatient environments

3.11.1 Scope of the included studies

Two long-stay studies considered aetiological factors, collecting data either prospectively (Corrigan *et al.*, 1994) or retrospectively (Melchior *et al.*, 1997). The samples for these studies comprised 35 mixed staff and 361 mental health nurses respectively. Both studies correlated aetiological factors against prevalence data, although the factors measured were limited to the concepts specific to the hypothesised relationships being examined by the studies' authors.

3.11.2 Results of the studies

Both studies correlated burnout with other factors (Table 3.9). The prospective study suggested a causal relationship between lack of collegial social support and depersonalisation as measured on the Maslach Burnout Inventory (Corrigan *et al.*, 1994). The cross-sectional study identified relationships between aspects of burnout and gender, age, factors intrinsic to the job (complexity and clarity), role factors, support, patient behaviours and organisational style (Melchior *et al.*, 1997).

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Table 3.9 Adult specialised ward-based settings – aetiology findings

Study	Primary outcome(s): instrument	Secondary outcome(s): instrument	Significant correlations/ main findings for ward-based mental health nurses	Comments
Forensic				
Rask and Levander (2002)	Job satisfaction: SNCW	–	7 SNCW factors identified: work role, patient's influence, relatives' influence, professional influence, information, co-operation and exposure to violence/lack of support. Highest satisfaction with co-operation, information and work role. Lowest satisfaction with relatives' influence, patient's influence and exposure to violence/lack of support. RNS more satisfied with information, professional influence and work role than LMNs. Satisfaction with co-operation correlated with multidisciplinary team co-operation (Spearman's $\rho = 0.21$, $p < 0.01$) and nurse co-operation as foci for clinical supervision. Satisfaction with information correlated with supervision focusing on nurse co-operation (0.20, $p < 0.01$), supervision focusing on feelings in relation to patients (0.20, $p < 0.01$) and nurse/patient formulation of patient problems (0.21, $p < 0.01$). Work role satisfaction correlated with supervision on feelings relating to patients (0.20, $p < 0.01$). Satisfaction with professional influence correlated with nurse formulation of patients problems (0.20, $p < 0.01$) and nurse and patient formulation of problem (0.33, $p < 0.01$). Satisfaction with relatives' influence correlated with patient, relative and nurse problem formulation (0.28, $p < 0.01$), relative problem formulation (0.23, $p < 0.01$) and patient and relative problem formulation (0.27, $p < 0.01$)	Sample comprised 242 forensic nursing staff. Authors conclude nurses' personal growth can be positively affected by clinical group supervision.

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Table 3.9 (continued)

Study	Primary outcome(s): instrument	Secondary outcome(s): instrument	Significant correlations/ main findings for ward-based mental health nurses	Comments
Long-stay				
Corrigan <i>et al.</i> (1994)	Burnout: MBI Anxiety: STAI (S)	Social support: SSQ	Collegial support and depersonalisation ($r = -0.51$ and -0.66 , $p < 0.05$, time 1 and 2 respectively). Cross-lagged correlation between time 1 and 2 suggest lack of support causes greater depersonalisation ($r = 0.52$, $p < 0.05$).	Sample comprised 35 staff working on extended care units. Authors suggest that staff who perceive their peers as disinterested are likely to adopt similar interactive styles towards their patients.
Melchoir <i>et al.</i> (1997, 1996, 1995)	Burnout: MBI	Job characteristics: Adapted JDS Leadership style: Leadership behaviour questionnaire Nursing care model: 5-point scale Patient performance: 28-item, 4-point response	At individual level, age accounted for 2% EE variance, age and gender determined 6% DEP and 4% PA. Controlling for age and gender, 16% EE variance explained by job complexity, job feedback/clarity, patient performance level and social leadership style. 12% DEP by complexity, feedback/clarity and social leadership style. 11% PA by feedback/clarity and complexity. At group level 59% EE explained by patient performance, work experience, autonomy, complexity and feedback/clarity. 21% DEP by work experience. 57% PA by work experience, feedback/clarity, patient performance and autonomy.	Sample comprised 361 nursing staff from 35 long-stay wards. Environments in which workers had good support and feedback, job clarity and autonomy, low levels of work complexity and managers with a social leadership style found to be associated with low levels of burnout.

3.12 Summary of aetiological studies of acute, general, forensic and long-stay inpatient environments

Of the 39 quantitative studies included in the review, 21 had data on aetiological factors associated with staff stress and morale. The numbers of participants in these studies ranged from 22 to 648 and included both nurses and mixed groups of staff. Most studies were of undifferentiated ward-based environments with far fewer studies in acute inpatient wards. All but one of these studies (Corrigan *et al.*, 1994) used retrospective data from cross-sectional or pre-intervention baseline surveys and correlated them with a wide variety of secondary measures. These measures were often highly selective and dependent on specific research questions and hypotheses pertinent to individual investigators' specific interests. In some cases, the measure of stress was a secondary outcome against which the investigators correlated their primary variable of interest – for example, in one series of studies the investigators were interested in 'barriers to behaviour therapy' and stress was considered to be an independent variable rather than a dependent variable (Corrigan *et al.*, 1996; Corrigan, 1994; Corrigan *et al.*, 1998; Donat, 2001). In many cases, studies are not primarily concerned with aetiology but aetiological data are collected as a by-product of the main study aim.

As a consequence, much of the correlational data that is provided cannot be interpreted in a causal manner. For example, one study determined that a 'happier outlook on life' was correlated with less stress – a relationship that could be interpreted as either a cause or a result of stress. Nonetheless a large number of factors were seen to correlate with staff stress. Burnout had the largest numbers of factors correlated with it although this was a product of this variable being measured more frequently than others in the included studies.

Variables that appeared frequently concerned aspects of the organisational environment such as workload, ward atmosphere and control of the job. Relationships to others in the workplace including social support were also frequently identified, as were aspects of the role itself such as dealing with violence, ambiguity, creativity and making treatment decisions. Coping was frequently studied but once again the direction of any relationship between stress and coping levels could not be deduced from the correlational data. The only prospective study to be conducted suggested that lack of social support led to greater levels of burnout (Corrigan *et al.*, 1994).

Therefore, because of problems with methodological quality, variety in the populations studied and the poor reporting of aetiological data on morale,

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stress and job satisfaction, it is not possible to determine which factors are most likely to increase these levels in ward-based mental health care. These limitations are particularly the case in studies pertaining to acute inpatient mental health environments.

One of the questions in the brief for this literature review was whether staff with high morale are more clinically effective. There was no evidence found relating to this issue so the report does not evaluate this factor which has been posited to be a consequence of morale levels.

3.13 Data from qualitative studies

A number of qualitative studies have been conducted to examine the aetiological factors associated with staff morale in inpatient mental health care environments. The methods used in these studies include participant observation, interviews, examination of case notes and diaries and card sort procedures. All these studies attempted to determine aetiological factors but because of the nature of the research designs did not present prevalence data with which to interpret aetiology. Data are, therefore, extremely difficult to interpret in terms of the prevalence of stress. Most studies have merely listed the factors that respondents have identified as being related to the levels of stress they experience.

Eight studies examined stress qualitatively in acute inpatient wards (Table 3.10). All used some form of interview procedure, 3 used participant observation (Handy, 1991; Handy, 1991; Hummelvoll and Severinsson, 2001, 2002), one used diaries and official records (Handy, 1991; Handy, 1991) and one used a card sort and rating scale procedure (Farrell and Dares, 1999). Major factors identified included organisational issues such as available resources, staffing levels and the nature of the ward environment; issues relating to the job itself such as dealing with violence and paperwork, relationships with peers and managers and finally conflicts between the ideals of staff and the reality of mental health care delivery. In undifferentiated ward-based settings 2 studies used interviews to collect aetiological data (Drolen and Atherton, 1993; Farley, 1994). The details of both these studies are provided in Table 3.11.

Similar aetiological factors were identified as before, with frustrations at rapid patient turnover and the increasing use of medication highlighted in one study (Farley, 1994). Once again the conflict between the ideals of staff and the reality of mental health care delivery was also a feature (Table 3.11), with staff frustrated at their high workload, bureaucracy and their inability to form long-term therapeutic relationships with patients (Drolen and Atherton, 1993; Farley, 1994).

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Table 3.10 Qualitative aetiology data for acute inpatient settings

Reference	Method	Factors / themes associated with poor morale
Wells (1995)	Soft systems	Defensive practice Lack of communication between ward manager and staff Non-involvement of staff Lack of staff recognition Lack of delegation Lack of qualified staff Poor staff development and insufficient training Over-reliance on rigid operational structures Habitual activities and mechanistic care
Handy (1991a, 1991b)	Case study – participant observation, diaries, interviews, official records	Discrepancy between ideals and practice (therapeutic care vs. control) Use of maladaptive social defence systems
Hummelvoll and Severinsson (2001a)	Participant observation, interviews	Unpredictable climate Feeling inadequate Diffuse directions in the work situation Patients' suffering and inadequate quality of care Sole responsibility for decisions Physical milieu Unsupportive leadership
Hummelvoll and Severinsson (2002)	Participant observation, interviews	Conflict between ideals and reality of nursing Dominance of medical model Demand for effectiveness
Sullivan (1993)	Semi-structured interviews	Potential or actual violence Level of predictability of violence Resources to deal with violent incidents Resources for managing suicide risk Lack of understanding and supportive management Competence, motivation and suitability of relief staff Paperwork Competing work priorities Interpersonal conflicts at work Lack of goal clarity Constant change Lack of consultation Poor information and minimal communication
Mistral <i>et al.</i> (2002)	Semi-structured interviews	Poor resources and staffing levels Patient admittance criteria Divisions between nursing and medical staff
Tyson <i>et al.</i> (2002)	Structured interviews	Nature of ward environment Client/patient mix Low staffing levels
Farrell and Dares (1999)	Card sort, rating scale, interviews	Lack of teamwork Lack of autonomy Lack of being valued by seniors Lack of professional development opportunities Different staff cliques

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Table 3.11 Qualitative aetiology data for general inpatient settings

Reference	Method	Factors/themes associated with poor morale
Drolen and Atherton (1993)	'Informal' interviews with psychiatric social workers	Hospital and worker expectations differ Frustration with bureaucracy
Farley (1994)	Semi-structured interviews with psychiatric social workers	Frustration with short-term hospital model and rapid patient turnover Lack of relationships with patients and families High workload Paperwork Bureaucracy Electronic communication devices Rapid pace of change Quality and efficacy of the treatment Increasing use of medication

Table 3.12 Qualitative aetiology data for specialised inpatient settings

Reference	Method	Factors/themes associated with poor morale
Forensic inpatient settings		
Clift (1995)	Participant observation, group interviews	Conflict between custody and therapy Feeling locked inside unit New admissions Unknown qualities of staff Staff sickness Uncertainties about continued funding of unit Security duties Fear of an extreme violent incident Being responsible for an incident Being absent from unit during an incident
MacDonald and Grogin (1991)	Interviews	Violence Job security Lack of acceptance by ward team Poor support from management Lack of therapeutic relationships Lack of patient improvement Negative patient behaviour Dealing with patient sexuality
Long-stay settings		
Donati (2000)	Direct observation	Professional impotence Skills atrophy Uncertain identity and self-esteem Stabilised 'madness' of patients
Goodwin and Gore (2000)		Identification with patient's mental disturbance Identification with patient's disability Identification with patient's chronicity

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Two studies in forensic settings used interviews (Clift, 1995; MacDonald and Grogan, 1991) with one of the studies also using participant observation methods (Clift, 1995). Aetiological factors identified here were similar to the other settings but in addition there were more concerns about the specific custodial nature of the forensic environment and worries about responding to violence and being supported by others in a violent situation (Table 3.12).

Finally, 2 studies looking at long-stay inpatient wards identified that staff identification with patients' mental health problems and staff's perception that their skills had little impact on the patient group were both factors associated with occupational stress (Donati, 2000; Goodwin and Gore, 2000). A third factor identified was a fear of skills atrophy (Donati, 2000).

3.13.1 Summary of qualitative studies

Aetiological factors suggested by qualitative studies are varied and unaccompanied by prevalence data, allowing only tentative suggestions to be made about the relationship of stress with these factors. Nonetheless, similar themes arise from these studies, namely that stress in participants is related to the way the workplace is organised and managed, the availability of social support within the workplace, the nature of the job itself and conflicts between ideals and reality in mental health care. Staff in forensic and long-stay environments are reported to have somewhat different concerns, more obviously related to the demands of these specific workplaces.

Given that the aetiology of occupational stress must be of interest to staff and organisations alike, it is disappointing that no high-quality studies are available. Future research would undoubtedly benefit from the conduct of a large, prospective cohort study, since such work may ultimately help in the identification of potentially effective intervention strategies.

Section 4 Results: Interventions (Phase B)

4.1 Intervention results

4.1.1 Literature search

From the initial search strategy, a total of 655 potentially relevant studies were identified, the true number of studies after duplicates were removed being 440. Of these, 244 were discarded because the abstract denoted that the article did not meet the inclusion criteria for population, date of study or primary outcome measure. Of the 196 studies examined in greater depth, 39 met criteria for inclusion in the review (Table 4.1).

Table 4.1 Results of the electronic literature search

Database searched	Total no. of hits (Searches A and B)	No. relevant to Search B
MEDLINE	1018	143
EMBASE	1690	97
CINAHL	522	78
PsycINFO	2458	322
Sociological Abstracts	244	15
Dissertation Abstracts	663	0
Total hits	6595	655
Relevant hits minus duplicates	–	440
No. excluded (pre-1990/non-inpatient settings/dissertations)	–	244
Total no. articles obtained	–	196
Total no. studies suitable for data extraction	–	39
Of which: adult acute inpatient settings	–	13
general adult ward-based settings	–	12
specialised adult inpatient settings	–	12
setting not specified	–	2

4.2 Scope of included studies

4.2.1 Acute adult inpatient settings

Of the 39 studies that fulfilled our inclusion criteria for this review 13 focused on interventions aimed at improving staff morale within acute adult inpatient settings, the setting most directly relevant to the focus of this review (Table 4.2). Of these 13, only 2 were of sufficiently high quality (Level 1 evidence) to be considered in detail for this review. The acute adult inpatient studies were carried out from 1990 to 2003 and included 6 UK studies, 6 US studies and one Australian study. In terms of participants 4 studies included nurses (all qualified) and 5 studies included mixed staff groups. Sample sizes ranged from 8 to 108; in 5 studies the sample size was not reported. In terms of outcomes, 5 measured job satisfaction, 5 measured burnout/stress and 4 measured sickness/turnover rates.

4.2.2 General adult inpatient settings

Twelve studies focused on general adult inpatient settings. Of these 12 only 2 were of sufficiently high quality (Level 1 evidence) to be considered in detail for this review. The general adult inpatient studies were carried out from 1991 to 1999 and included 3 UK studies, 6 US studies, 4 Australian studies and one from Sweden. In terms of participants, 3 included nurses and 5 included mixed staff groupings. Sample sizes ranged from 22 to 278; in one study the sample size was not reported. With regard to outcomes, 4 studies measured well-being, 4 job satisfaction, 5 burnout/stress and one sickness/turnover rates.

4.2.3 Specialised adult inpatient settings

Twelve studies focused on specialised inpatient settings, of these only 4 were of sufficient high quality (Level 1 evidence) to be considered in detail for this review. The specialised inpatient studies were carried out from 1990 to 2002 and included 5 UK, 3 US, 2 Swedish and one Netherlands study. With regard to participants, 4 included nurses and 7 mixed staff groupings. Sample sizes ranged from 15 to 2210 and in one study the sample size was not reported.

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Table 4.2 Included inpatient studies (n=39)

Setting	Level of evidence	Date	Country	Sample		Outcomes measured*
				Type	Size	
Acute adult inpatient	2 Level 1 (1 RCT, 1 CCT)	1990–1995	1 UK 1 USA	1 nurses 1 unit staff	72 1 – sample size unclear	2 job satisfaction 1 burnout/stress 2 sickness/turnover
	7 Level 2	1990–2003	4 UK 3 USA	3 nurses 4 staff	8–108 4 – sample size N/R	3 job satisfaction 3 burnout/stress 2 sickness/turnover
	2 Level 3	1999–2002	1 USA 1 Australia	2 Staff	20–40	2 job satisfaction 1 burnout
	2 Level 4	1990–1991	1 UK 1 USA	N/A	N/A	N/A
General adult inpatient	2 Level 1 (1 RCT, 1CBA)	1991–1999	1 UK 1 USA	1 nurses 1 unit staff	52–62	1 well-being 2 job satisfaction 1 burnout stress
	6 Level 2	1991–1999	2 UK 3 USA 1 Sweden	2 nurses 4 staff	22–278 1 – sample N/R	3 well-being 2 job satisfaction 4 burnout/stress 1 sickness/turnover
	4 Level 4	1991–1997	3 USA 1 Australia	N/A	N/A	N/A
Forensic inpatient	1 Level 1 (RCT)	2001	UK	Nurses	20	Burnout/stress
	2 Level 2	2002	UK	Staff	N/R	Job satisfaction
Psycho-geriatric inpatient	1 Level 1 (CCT)	1994	Sweden	Nurses	36	Job satisfaction Burnout/stress
	1 Level 2	1998	UK	Nurses	15	Well-being
	3 Level 3	1990–1999	2 UK 1 USA	3 staff	22–145	2 well-being 1 burnout/stress
Long-stay inpatient	2 Level 1 (1 RCT, 1 CBA)	1995–1996	Netherlands USA	1 nurses 1 unit staff	161–2210	1 well-being 1 job satisfaction 1 burnout/stress 1 sickness/turnover
	2 Level 2	1996–2001	1 USA 1 Sweden	2 staff	15 1 – N/R	1 job satisfaction 1 sickness/turnover
Not specified	2 Level 4	1994–1996	1 UK 1 Canada	N/A	N/A	N/A
Total	39					

*Some studies measure more than one outcome variable

4.3 Level 1 evidence studies

Only studies of sufficiently high quality (Level 1 evidence studies) were synthesised for this review. Results/findings arising from uncontrolled studies (Tables 4.6 and 4.7; Appendix 4, Table A4.2) should be treated with caution. To synthesise such studies would therefore prove potentially misleading. Table 4.3 presents summary data for all eight Level 1 evidence studies. More detailed tables are presented in Appendix 4, Table A4.1. Outcome data were extracted on four primary objective dimensions of morale: well-being, burnout/stress, job satisfaction and sickness/staff turnover. Data presented in the last column are a brief summary of study quality.

4.4 Scope of Level 1 studies

Of the 8 Level 1 studies, 2 pertained to acute adult inpatient settings, 2 to general adult inpatient settings, and the remaining 4 to specialised inpatient settings. Four used randomized controlled designs, 2 controlled clinical designs and 2 CBA designs. The 8 studies were conducted between 1990 and 2001 and included 3 UK, 3 US, one Swedish and one Netherlands study. With regard to participants, 2 RCTs included nurses (Carson *et al.*, 1999a; Ewers *et al.*, 2002) and 2 RCTs included all unit staff (Smoot and Gonzales, 1995; Heaney *et al.*, 1995). Of the 2 CCTs (Long *et al.*, 1990; Berg *et al.*, 1994), both included nurses. Of the 2 CBA designs, one included nurses (Melchior *et al.*, 1996) and one mixed staff grouping (Robey *et al.*, 1991). Sample sizes in the RCTs ranged from 20 to 2210. All outcomes were classified according to the four dimensions of morale (see Section 4.2 above). In the RCTs, 2 measured well-being, 2 measured job satisfaction, 2 measured stress/burnout, and one measured sickness and staff turnover rates.

4.5 Quality of Level 1 studies

In terms of quality criteria, as stipulated by EPOC (Bero *et al.*, 1998), most Level 1 studies were of low quality. Of the 4 RCTs, 2 were randomised at the level of hospital wards (clustered RCTs), and 2 randomised at the level of the individual staff member. Both clustered RCTs analysed data at the level of the individual staff member, but failed to account for potential intra-correlation and clustering of outcomes, making the results susceptible to a potential unit of analysis error. Both of the individualised RCTs had small sample sizes and no power calculations and in one of the RCTs (Ewers *et al.*, 2002), the method of randomisation was not specified. Both of the CCTs were clustered and failed to account for clustering in the

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analysis of their results, and in one (Long *et al.*, 1990) there were no comparisons for baseline differences. Both CBA studies were clustered but failed to account for potential intra-correlation and clustering of outcomes, making the results susceptible to a potential unit of analysis error. However, groups were comparable at baseline or baseline differences were accounted for in analyses in all CBA studies. In one CBA study (Melchior *et al.*, 1996) there was cross-contamination due to the nurses moving wards.

4.6 Results of Level 1 studies

Results of the studies were heterogeneous in terms of their setting and type of intervention, length of follow-up, and outcomes studied. A formal meta-analysis was not therefore justified or appropriate. Instead, a narrative review of specific strengths, limitations and results of individual studies was undertaken. Table 4.5 provides a summary of the main results for each study and Appendix 4, Table A4.1 provides full details of all results for Level 1 studies (RCTs, CCTs, CBAs, and ITS). The narrative review was organised around setting and type of intervention as described below.

4.6.1 Studies by setting and type of intervention

Studies were first stratified hierarchically according to setting; with studies conducted in the most relevant and direct setting – the acute adult inpatient setting – considered first. Next, results were considered by category of intervention. A taxonomy was applied which specified the type of intervention and the focus of the intervention (see Section 2.6.2). A three-by-three matrix was used to categorise each intervention study (Table 4.3). The numbers of studies in each cell are given.

Table 4.3 Numbers of intervention studies by type and focus

	Individual	Group	Organisation
Educational		6	
Psychological		1	
Environmental/structural			1

The majority of interventions evaluated using Level 1 evidence, are educational and target the group. However, only one of these group educational interventions pertains to acute adult inpatient settings, the primary focus of the current review. For this reason it is problematic to comment on the effectiveness of educational interventions to the setting of interest. Table 4.4 indicates the settings to which these interventions apply.

Table 4.4 Type of intervention by setting

Setting	Type of intervention
Acute adult inpatient	1 organisational structural 1 group educational
General adult inpatient	1 group educational 1 group psychological
Forensic adult inpatient	1 group educational
Psycho-geriatric adult inpatient	1 group educational
Long-stay adult inpatient	2 group educational

4.7 Scope of intervention studies

4.7.1 Educational interventions

There was only one educational intervention tested in the population of most relevance to this review, an acute adult inpatient setting: Smoot and Gonzales (1995) in an RCT conducted in the USA, evaluated an empathic skills communication course. One group educational intervention was tested in a general adult inpatient setting: in a CBA design Robey *et al.* (1991) examined the effectiveness of one-day retreats based on the principles of mission building. The remaining four educational interventions were tested in highly specialised settings and so are of limited usefulness to the present review. Ewers *et al.* (2002) examined the effect of psychosocial intervention training on a forensic mental health unit; Berg *et al.* (1994) evaluated a programme of direct clinical case supervision on a psychogeriatric ward; in long-stay settings Heaney *et al.* (1995) and Melchoir *et al.* (1996) tested the utility of a caregiver support programme and a primary care nursing model respectively.

4.7.2 Psychological interventions

There was only one group psychological intervention identified in the Level 1 evidence studies and it did not apply to an acute adult inpatient setting but to a general psychiatric ward in the UK. Carson *et al.* (1999a) evaluated the effects of a social support intervention which involved screening for psychological distress and burnout and a five-session group-based stress management programme.

4.7.3 Structural interventions

There was only one structural intervention study identified in this review but it pertained to the top priority setting – an acute adult inpatient unit. Long *et al.* (1990) investigated the effect of changing from a two-ward

system to a continuous care ward in an acute inpatient psychiatric admission ward in the UK.

4.8 Results of intervention studies

4.8.1 Acute adult inpatient settings

Two studies related to acute inpatient settings: an educational intervention (Smoot and Gonzales, 1995) and a structural intervention (Long *et al.*, 1990). Smoot and Gonzales (1995) in an RCT conducted in the USA, found that an empathic skills communication course resulted improved job satisfaction and reduced staff sickness and turnover. A net cost saving of \$62,592 p.a. was made per ward, when staff sickness and turnover were accounted for in a concurrent cost–benefit analysis. However, costs and benefits in terms of improved staff outcomes (such as burnout) were not synthesised and the cost-effectiveness in terms of health benefits cannot be commented upon. Long *et al.* (1990) evaluated an organisational change from a two-ward system (admission and discharge) to a single-ward continuous care system, using a CCT design. Their results showed that in a continuous care ward model, there were fewer logged violent incidents, the length of stay was reduced and there were fewer readmissions. A concurrent qualitative survey of the staff also showed that the intervention (change from a two-ward system to a continuous care ward) was preferred.

4.8.2 General adult inpatient settings

Two studies examined interventions in general adult inpatient settings: a group educational intervention (Robey *et al.*, 1991) and a group psychological intervention (Carson *et al.*, 1999a). Using an individualised RCT design, Carson *et al.* (1999a) found that the social support intervention produced non-significant results on all of the outcome measures. The intervention had been found to be positive in a pilot study (Ritter *et al.*, 1995) and a qualitative component of the study revealed that the limited effectiveness may have been due to poor managerial support. Many of the staff allocated to attend the social support sessions were unable to do so, because of staffing pressures and limited support in implementing the intervention at a managerial level. The participants valued the intervention but wanted more sessions. This intervention was of small sample size and it is unlikely that it had sufficient power to detect a positive effect, if there had been one present.

Robey *et al.* (1991) examined the effect of one-day retreats in the USA, designed around mission building, and found that job satisfaction scores in the intervention group were significantly greater on most subscales. The results of this study were compromised by being a CBA design that was

subject to a probable unit of analysis error, and follow-up was limited to immediately post-intervention. Evidence of a sustained benefit was not examined.

4.8.3 Specialised adult inpatient settings

The remaining 4 studies related to specialised inpatient settings. Ewers *et al.* (2002), using an individualised RCT design, examined the effect of psychosocial intervention training on burnout levels in forensic mental health nurses, as measured by the MBI. There was a significant reduction in all subscales of the MBI for the intervention group. Berg *et al.*, (1994), using a clustered CCT design, evaluated the effect of clinical supervision and individually planned nursing care on the burnout and satisfaction levels of nursing staff on a psycho-geriatric ward in Sweden. There was a significant improvement in both satisfaction and burnout levels for the intervention group during the intervention, but this advantage had disappeared at six-month follow-up. Melchoir *et al.*, in a CBA study (1996) evaluated the effectiveness of a primary care nursing model on a long-stay psychiatric ward in the Netherlands. It was found that sickness/staff turnover rates were 10 per cent lower in the intervention group (17 per cent vs. 27 per cent). Heaney *et al.* (1995) found that a caregiver support programme implemented in long-stay group homes for mental illness resulted in significant improvements in well-being levels for the intervention group as measured by the SCL. The effectiveness of this intervention seemed to follow a 'dose-response' according to the number of training sessions actually attended, with the greatest effect seen among those with the greatest compliance. Reasons for non-attendance were not explored. These positive results were, however, compromised by a probable unit of analysis error.

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Table 4.5 Studies of interventions to improve inpatient staff morale

Author, year and design	Participants, setting and sample size	Intervention and control conditions	Main outcomes and follow-up	Main results	Comments
Acute adult inpatient settings					
Long <i>et al.</i> (1990) CCT, clustered	Nursing staff on an acute inpatient psychiatric admission ward UK N=two wards (N _i =1; N _c =1); numbers of individual staff unclear	<i>Intervention</i> Change to a continuous care ward <i>Control</i> existing model – two ward system, with admission ward and a preparation for discharge ward; transition of care through the two wards	Psychological well-being: not measured Job satisfaction: JDI Burnout/stress: NSS Sickness/staff turnover: measured Follow-up: during six-month intervention (though time point unclear)	Psychological well-being: not measured Job satisfaction: improved satisfaction, $p < 0.05$ Burnout/stress: significant pre-post difference in intervention group ($p = 0.05$), not between group difference Sickness/staff turnover: average monthly hours lost to sickness per member of staff reduced from 5.3 to 3.3 in control group	No comparisons for baseline differences Probable unit of analysis error Fewer violent incidents, length of stay reduced and fewer readmissions on intervention ward Qualitative survey of staff showed that continuous care ward was preferred
Smoot and Gonzales (1995) RCT, clustered	Unit staff (all professions) on an acute inpatient adult psychiatric ward. USA N=two wards/72 staff (N _i =35; N _c =37)	<i>Intervention</i> empathic communications skills course; 4 x one-day workshops using experiential learning methods – focus on better patient communication; facilitated by staff course graduates <i>Control</i> no course	Psychological wellbeing: not measured Job satisfaction: non-standardised measure Burnout/stress: not measured Sickness/staff turnover: measured Follow-up: six months post-intervention	Psychological wellbeing: NA Job satisfaction: positive satisfaction reported; no details given Burnout/stress: NA Sickness/staff turnover: reduced staff turnover (↓63%); reduced sick leave (↓28%)	Probable unit of analysis error Costs and benefits measured accounting for staff sickness and turnover; cost of programme \$661 per participant; reduction in staff costs of \$62,592 p.a. per ward Net cost saving

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Table 4.5 (continued)

Author, year and design	Participants, setting and sample size	Intervention and control conditions	Main outcomes and follow-up	Main results	Comments
General adult inpatient settings					
Carson <i>et al.</i> (1999a) RCT, individualised	Nurses, inpatient general psychiatric ward UK N=52 (N _i =26; N _c =26)	<i>Intervention</i> 'social support intervention'; screening for psychological distress and burnout. Group-based stress management programme (5 weekly sessions); Life events discussion and strategies to extend and utilise social support networks <i>Control</i> feedback only of questionnaire results	Psychological well-being: GHQ and Rosenberg self-esteem scale Job satisfaction: Minnesota scale and Cooper coping scale Burnout/stress: DCL scale Sickness/staff turnover: not measured Follow-up: post-intervention and 6 months	Psychological well-being: all NS Job satisfaction: all NS Burnout/stress: all NS Sickness/staff turnover: NA	Small study, no power calculation; found to be positive in pilot study Qualitative component revealed limited effectiveness may be due to poor managerial support, and difficulty taking time out; participants valued intervention, but wanted more sessions
Robey <i>et al.</i> (1991) CBA, clustered	Unit staff (all professions) on an inpatient adult psychiatric ward. USA N=two wards/62 staff (N _i =26; N _c =36)	<i>Intervention</i> one-day 'retreats' designed for training around 'mission building'; group and individual exercises to establish 'meaning' in individuals' work <i>Control</i> no retreat	Psychological well-being: not measured Job satisfaction: WES and non-standardised scale Burnout/stress: not measured Sickness/staff turnover: not measured Follow-up: pre- and immediately post-educational intervention	Psychological well-being: NA Job satisfaction: WES between group change scores significant, p <0.001; significant on most subscales Burnout/stress: NA Sickness/staff turnover: NA	Groups comparable at baseline Probable unit of analysis error

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Table 4.5 (continued)

Author, year and design	Participants, setting and sample size	Intervention and control conditions	Main outcomes and follow-up	Main results	Comments
Forensic					
Ewers <i>et al.</i> (2002) p RCT, individualised	Nurses, inpatient forensic mental health unit UK N=20 (N _i =10; N _c =10)	<i>Intervention</i> 20 days PSI training; delivered onsite; practical skills and workshops to examine attitudes and beliefs about psychotic illness <i>Control</i> no PSI training	Psychological wellbeing: not studied Job satisfaction: not studied Burnout/stress: MBI Sickness/staff turnover: not measured Follow-up: post- intervention	Psychological wellbeing: NA Job satisfaction: NA Burnout/stress: significant improvement, $p < 0.05$ in all subscales of MBI – emotional exhaustion, depersonalisation and personal achievement Sickness/staff turnover: NA	Specialist sample and small sample size. No power calculation. Method of randomisation not specified
Psychogeriatric					
Berg <i>et al.</i> (1994) CCT – clustered	Nursing staff on a psycho- geriatric ward with high proportion of patients with dementia Sweden N=36 (N _i =16; N _c =20)	<i>Intervention</i> 2-day course on clinical care, followed by promotion of innovation and creativity in nursing with individually planned nursing care and direct case supervision for each patient every fortnight over six months <i>Control</i> 2-day course on clinical care	Psychological well-being: not measured Job satisfaction: CCQ Burnout/stress: MBI Sickness/staff turnover: not measured Follow-up: during intervention and 6 months post-intervention	Psychological well-being: NA Job satisfaction: significant difference during intervention (P < 0.002); NS post- intervention Burnout/stress: significant difference during intervention ($p < 0.007$); NS post-intervention. Sickness/staff turnover: NA	Unit of analysis error All significant differences seen only during the intervention

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Table 4.5 (continued)

Author, year and design	Participants, setting and sample size	Intervention and control conditions	Main outcomes and follow-up	Main results	Comments
Long-stay					
Heaney <i>et al.</i> (1995) RCT, clustered	Direct care staff and managers	<i>Intervention</i> Caregiver support programme (CSP), 6 x 5-hour training programmes. Teaching using modelling and rehearsal to: increase social support systems; participate in problem-solving approaches and their implementation in meetings; managers involved to give organisational support <i>Control</i> Usual job	Psychological well-being: SCL-90-R	Psychological well-being: SCL significant, p = 0.04	Possible unit of analysis error.
	Large group homes for mental illness		Job satisfaction: Non standardised measure	Job satisfaction: NS	72% attended all 5 sessions.
	USA		Burnout/stress: not measured	Burnout/stress: NA	63% response rate
	N=2210 (N _i =1247; N _c =963)		Sickness/staff turnover: not measured	Sickness/staff turnover: NA	Possible dose-response effect with greatest impact in those with greatest compliance
			Follow-up: not measured		
Melchoir <i>et al.</i> (1996) CBA, clustered study	Nurses, inpatient general psychiatric ward Netherlands N=161 (N _i =101; N _c =60)	<i>Intervention</i> Change to primary care nursing model, plus support from managers. Advice on core skills and promotion of effective inter-professional communication. <i>Control</i> Usual nursing care not using a primary care model	Psychological wellbeing: not studied Job satisfaction: not studied Burnout/stress: MBI Sickness/staff turnover: turnover Follow-up: 2.5 years	Psychological wellbeing: not studied Job satisfaction: not studied Burnout/stress: NS Sickness/staff turnover: turnover: intervention vs. control 17% vs. 27%, p = 0.06	Baseline differences accounted for in analysis Possible unit of analysis error Some cross-contamination due to nurses moving wards

Note: MBI: Maslach Burnout Inventory. DCL: DeVilliers Carson Leary stress scale. GHQ: General Health Questionnaire. PSI: Psychosocial Interventions. SCL-90-R: Symptom Check List 90 Revised. CCQ: Creative Climate Questionnaire. NSS: Nurse Stress Scale. JDI: Job Description Index. WES: Work Environment Scale.

4.8.4 Summary of studies across settings

- The studies are heterogeneous in terms of setting, design, nature of intervention and population group.
- Few studies focused on acute inpatient wards.
- Overall the quality of the study designs was poor, meaning that findings should not be generalised or used definitively.
- Educational interventions – such as enhanced supervision, skills and mentoring – appear to be beneficial, although much of this evidence is from settings that may not be directly relevant to acute inpatient wards.
- Interventions designed to enhance social support networks have been shown to be positive in specialist settings, but have incompletely evaluated in adult inpatient settings. Existing trials in acute adult inpatient settings have been underpowered, or have not been adequately supported at a managerial level, such that they were incompletely implemented. More research is needed in this respect.
- Psychosocial interventions – when used in specialist settings – seem to have benefits to both staff and patient outcomes.
- There is too little evidence on psychological and structural interventions to permit assessment of efficacy

4.9 Level 2 and 3 evidence studies

The following three-by-three matrix indicates the spread of interventions evaluated at Level 2 and Level 3 evidence. Half of the interventions were structural (n=11), involving either changes to physical environments or organisational practice. Out of the 8 Level 2 and 3 studies pertaining to acute adult inpatient settings, 6 evaluated structural interventions.

Table 4.6 Level 2 and 3 interventions by type and setting

	Individual	Group	Organisation
Educational		6	
Psychological		5	
Environmental/structural			11

Tables 4.7 and 4.8 present interventions evaluated using Level 2 and 3 evidence which have not been evaluated using Level 1 evidence. The extracted data for these studies are listed in Appendix 4, Table A4.2. A brief description of the intervention, (including its classification by setting and type) and a summary of the main results are provided.

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Table 4.7 Interventions evaluated using uncontrolled pre-post designs

Author and date	Intervention	Main results
Acute adult inpatient		
Carpenter <i>et al.</i> (2000)	Structural: relocation from asylum to purpose-built community-based units	The transition had no significant effect on job satisfaction, stress, or role ambiguity scores
Dodds and Bowles (2001)	Structural: formal observations were gradually dismantled over 6 months (from November 1988) and replaced with alternative 'engagement' practices	59% reduction in staff sickness
Goodykoontz and Herrick (1990)	Educational: a four-part education programme aimed at assisting staff in managing aggressive patient behaviour	No significant difference on burnout scores; reduction in aggressive behaviour
LePage <i>et al.</i> (2003)	Structural: token economy with voluntary patient participation	Injuries causing time off work significantly decreased
Mistral <i>et al.</i> (2002)	Structural: team meetings between staff and patients, new policies, funding and staff training were implemented on the ward to improve communication, the physical environment, safety and clarity of aims and structure	Staff returned significantly higher scores on the Ward Atmosphere Scale and staff attitude measure
Rothwell <i>et al.</i> (1997)	Structural: the acute psychiatric ward was moved from the Psychiatric Hospital (PH) to a General District Hospital (GH); the PH ward was a self-contained, two-floored building with many quiet corners; the new ward in the GH had an open-plan layout similar to the hospital's general medical wards	Initial reductions in stress were not sustained
Tomasini (1992)	Psychological: staff support group meetings.	Significant improvement on two scales of the WES
General adult inpatient		
Berg and Hallberg (1999)	Educational: one year of supervised planning of individual care and fortnightly 3-hour sessions of clinical group supervision	Non-significant positive results on a range of satisfaction and stress measures
Corrigan <i>et al.</i> (1997)	Educational: 8 months of interactive staff training, an organizational development strategy that helps the rehabilitation team develop behavioural approaches to changing clients' behaviour	After the training, staff members reported significant improvement in their attitudes about behavioural interventions and increased perceptions of collegial support; direct care staff reported significantly less emotional exhaustion; interactive staff training may facilitate
Devlin (1992)	Structural: renovation (decorating and adding new furnishings and plants)	No significant improvement in staff morale

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Table 4.7 (continued)

Author and date	Intervention	Main results
Flannery <i>et al.</i> (1995)	Psychological: professional intervention	Reduction in turnover and patient assaults
	Assaulted Staff Action Program (ASAP)	
Kunkler and Whittick (1991)	Psychological: stress management groups for nurses	Scores on the GHQ-28 and Burnout Checklist decreased over course of project
Prosser <i>et al.</i> (1999)	Organisational: most of the hospital-based services (largely the day/outpatient) were relocated to the community	Scores on the MBI and GHQ-12 improved for community-based staff
Forensic		
Beck (2002)	Psychological: twice-weekly community group meetings over an 8-month trial where staff and patients were encouraged to address day-to-day interpersonal issues and to consider applying therapeutic community principles	No significant differences on staff's view of the ward
Psychogeriatric		
Shah and De (1998)	Educational: educational package to reduce aggressive behaviour among the patients and stress among the nursing staff	Intervention did not result in significant reduction in GHQ scores
Long-stay		
Barnette and Clendenen (1996)	Structural: Total Quality Management (TQM), which provides guidance for establishing infrastructure for organisational change	Reduction in annual employee turnover rates
Eklund and Hansson (2001)	Educational: new rehabilitation programme based on behavioural theory and social learning theory in accordance with the principles of psychiatric rehabilitation	Generally no significant improvements in ward atmosphere

Table 4.8 Interventions evaluated using post-test only uncontrolled designs

Acute adult inpatient		
Tyson <i>et al.</i> (2002)	Structural: the old acute and long-stay wards were replaced with new purpose-designed acute and long-stay wards	Decrease in job satisfaction and increase in burnout on new wards
Waldo and Harman (1999)	Psychological: relationship enhancement (RE) groups.	Staff gave written feedback/comments reporting improved communication with patients and staff
Psychogeriatric		
Baillon (1999)	Structural: services were relocated from a traditional psychiatric hospital to a purpose-built psycho-geriatric unit	Occupational stress scores not significantly affected
Brooker and Dinshaw (1998)	Structural: structured interviews with staff to obtain qualitative feedback	Authors comment that interviews seemed to have positive effect on morale
Lichtenberg <i>et al.</i> (1990)	Educational: Interdisciplinary Team Training in Geriatrics (ITTG)	50% ITTG participants reported that the training greatly improved their morale

4.10 Level 4 evidence studies

Eight Level 4 evidence studies are listed in Appendix 4, Table A4.4 and refer to those in which an intervention is described or proposed, but not evaluated in terms of outcomes; 5 of these studies concerned educational interventions, 2 psychological and one structural. Two studies described interventions designed for staff in acute inpatient settings: one was an educational intervention designed to help staff manage organisational change (Barkley and Bailey, 1991) and the other was a structural intervention involving the introduction of reunions of former inpatients on psychiatric units (Malone and Holden, 1990).

Section 5 Organisational literature

5.1 Review of organisational literature

The preceding reviews, Sections 3 and 4, have given a high-quality explicit and replicable summary of the epidemiological literature on stress and burnout and the clinical and cost effectiveness literature for each of the identified interventions. What this section aims to do is to:

- give an overview of observations from UK practice regarding aetiological factors of stress and burnout
- describe examples of innovative interventions and good practice.

This section is therefore intended to complement but not imitate the systematic reviews in this report. Section numbers are given in parentheses where observations/themes map onto findings from the systematic reviews, in order to link an explicit synthesis of research evidence with clinical practice.

5.2 CHI clinical governance reviews

An overview of the Commission for Health Improvement's (CHI) first 175 clinical governance reviews (mainly of acute trusts) (Commission for Health Improvement, 2002) highlighted some emerging themes which were pertinent to the present review:

- need for more creative ways of recruiting and retaining staff
- trusts poor at providing career opportunities (3.13, Table 3.4)
- many staff are working longer hours than recommended (3.12, 3.13, Tables 3.4 and 3.5)
- poor management of locum and bank agency staff (3.13, Table 3.4)
- many trusts poor at managing potential risks to patients and many staff would fear reprisals if they reported things going wrong (3.12, Tables 3.4 and 3.5)
- risks to patients made worse by staff shortages and poor attendance on mandatory training courses (3.13, Table 3.4).

5.2.1 CHI mental health clinical governance reviews

The CHI has completed 35 clinical governance reviews of mental health trusts (Commission for Health Improvement, 2004) and identified common factors among trusts that are performing well and among those that are performing poorly. Numbers in parentheses indicate where characteristics among poorly performing trusts map onto aetiological indicators in Section 3.

Table 5.1 Common characteristics of mental health trusts

Characteristics shared by trusts performing well in clinical governance reviews	Characteristics shared by trusts performing poorly in clinical governance reviews
Lower vacancy rates, particularly in psychiatry, or active attempts to resolve vacancy problems; high staff morale; good progress with <i>Improving Working Lives</i>	Serious problems with recruitment generally in psychiatry and inpatient nursing; low morale; cultural and operational divide with social care staff (3.13, Table 3.4)
Good progress with developing national service framework/NHS Plan services and the care programme approach	Limited or partial developments of new services and limited implementation of the care programme approach
Leadership cohesive, visible and well regarded by staff and partners	Staff perceive leadership as remote; weaknesses in executive or non-executive leadership (3.13, Tables 3.4 and 3.5)
Strong relationships between clinicians and managers	Lack of engagement of clinicians in management (3.13, Tables 3.4 and 3.5)
Cohesive structures between different parts of the trust	Disconnection between different parts of the trust
Strong structures to support clinical governance in directorates and sectors/localities; understanding of relationships between the board and directorates, sectors and services	Limited structures below corporate level to support implementation and performance management of clinical governance, or structures to support clinical governance components
Well-developed clinical information systems and progress with performance management	Fragmented information systems and little development in performance management (3.13, Tables 3.4 and 3.5)
Good progress on organisational and operational integration with social care	Limited progress with organisational and operational integration with social care
Effective communication systems in place	Poor communication systems (3.8.2, 3.13, Tables 3.4 and 3.5)

5.3 Examples of good practice (from individual CHI reports)

The following examples are taken from the CHI reports of 2003 and 2004 (Commission for Health Improvement, 2003, 2004).

5.3.1 Strategic capacity

- Several trusts such as Tees and North East Yorkshire NHS Trust, South West London and St George's NHS Trust, South London and Maudsley NHS Trust have developed effective performance management systems.
- Chief executive and chair of South Staffordshire Healthcare NHS Trust undertake a series of road shows open to all staff. They discuss the strategic vision for the organisation and the principles that underpin it.
- Tees and North East Yorkshire NHS Trust has developed its leadership capacity – through increased delegation of responsibility and structured leadership programmes.

5.3.2 Risk management

The CHI has found in a number of trusts an incoherent approach to prevention and management of violence and aggression. This includes the provision and monitoring of training, releasing staff for core and refresher training, availability of trained staff on shifts and the training and skills of bank and agency staff. In some areas staff accept violent behaviour as the norm, in others zero tolerance approaches are used. Other concerns include policy and practice around drug administration and lone working policies, safety of environments and staff, quality of workplace risk assessments and key clinical and safety policies being out of date and unreviewed.

- Tees and North East Yorkshire NHS Trust has developed a project *Has it changed yet?* This evaluates the outcomes from serious untoward incidents and complaints.
- South Birmingham Mental Health Trust has developed a root cause analysis of untoward incidents.
- Multidisciplinary zoning meetings held by community mental health trusts (CMHTs) in Black Country Mental Health NHS Trust function to manage risk proactively for frontline staff and individual service users.

5.3.3 Staffing and staff management

Significant staffing shortages (especially psychiatrists and inpatient nursing staff) have a major impact on clinical leadership and quality of care. Inpatient staff express concerns about staffing levels, skill mix and use of locum, bank and agency staff. Some trusts have made a strong commitment to ensuring staff safety; in other trusts staff have serious concerns about their safety.

Some trusts have not integrated different professions in teams: lack of multidisciplinary working affects organisation, learning and governance. Appraisal and clinical supervision are variable. In some trusts there is a lack of clarity about accountability and professional leadership in integrated teams.

- North Birmingham Mental Health Trust has developed an initiative to increase the number of ethnic minority nurses by offering financial assistance.
- South Birmingham Mental Health NHS Trust has redesigned the traditional roles of domestic and catering staff in clinical areas by developing a health care support role and training package.
- South Birmingham Mental Health NHS Trust seconds its locality managers two days a week to primary care trusts to improve partnership working.
- Newly qualified nurses at South Birmingham Mental Health NHS Trust have a peer support group which helps ensure that nurses adopt best practice approaches to their work.

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- The publication of its nursing strategy enabled the South London and Maudsley NHS Trust to recruit 205 nurses in a four-month period. South Birmingham Mental Health NHS Trust used a recruitment bus to reduce nursing vacancies from 12 per cent to 6 per cent.

5.3.4 Staff morale

In each of its clinical governance reviews, the CHI carried out a staff survey which enables us to benchmark staff opinion across organisations. Staff morale across trusts is variable; however, while many staff work under pressure in difficult environments, the CHI has found only a small number of trusts where morale is generally poor. The CHI has found many mental health organisations with high morale, effective communication and strong relationships between clinicians and managers.

- Community Health Sheffield NHS Trust has a workplace well-being programme which provides a range of counselling and support services for its staff.
- CHI found a very high level of staff morale throughout Tees and North East Yorkshire NHS Trust. Staff enjoy their work and feel well supported even in remote areas of the trust. The trust has successfully achieved both pledge and practice accreditation in *Improving Working Lives* standards (see below) and was also Regional Employer of the Year.

5.3.5 Education, training and continuing professional development

Trusts have showed a strong commitment to developing their staff. Attendance at training, particularly for inpatient staff, can be limited by service pressures and the need to maintain acceptable skill levels. There are issues of access to training for staff on night shifts. Monitoring of mandatory training needs to be more systematic.

- The *What Works* distance learning initiative in Avon and Wiltshire Mental Health Partnership NHS Trust gives busy nursing staff in inpatient services with different levels of experience and qualifications the opportunity to engage in learning opportunities.
- The South London and Maudsley NHS Trust has developed a consultancy service which helps teams develop their strengths.
- South Birmingham Mental Health NHS Trust has developed clear entry schemes for career progression from health care assistant to registered mental nurse including direct entry from the local community to cadet schemes. The trust has also made considerable investment in nurse training with professional development leads in each directorate and support for masters programmes linked to the trust's priorities and effectiveness programmes.

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- Community Health Sheffield NHS Trust has undertaken an analysis of the training needs of staff in areas covered by the NSF in a project funded by the Royal College of Psychiatrists and the Department of Health.
- West Kent NHS and Social Care Trust has four levels of training to ensure staff perform their role effectively: induction; learning and capacity building; work-based assessment and competence; and qualifications linked to job roles and lifelong learning. All staff groups can progress through this framework.
- In West Kent NHS and Social Care Trust the clinical practice supervision programme for nursing staff is notable for the range of choices it gives to nursing staff and for its evaluation tool, which assesses whether the supervision framework has led to service improvement.

5.4 Government initiatives

5.4.1 Improving Working Lives

Improving Working Lives (Department of Health, 2001) set out a series of performance standards for all NHS employers. The standards were designed to improve the working lives of NHS employees and were an integral part of the NHS Plan. All NHS employers were expected to achieve the *Improving Working Lives* (IWL) Standard by 2003. Additional funding was made available to support the process. The three phases of accreditation were 'pledge', 'practice' and 'practice plus' each with details of evidence requirements. The aim was to encourage employers to develop a range of policies and procedures which supported personal and professional development and enabled employees to achieve a healthy work-life balance. Of the 88 trusts, 55 were evaluated against 'practice' standard; of these 55, one significantly underachieved. The remaining 33 trusts were evaluated against the 'pledge' standard and all of these achieved.

5.4.2 Housekeeping and mental health

This initiative was concerned with enhancing the environment for patients, staff and visitors by making it reassuring, comfortable and safe. It includes the eleven service standards of maintenance of environment, cleanliness, catering, equipment, linen, control of infection, communication, health and safety, supplies, privacy and dignity and customer care. This initiative has been implemented in a number of trusts and has been well received by staff.

5.5 Examples of innovative practice and research

5.5.1 The Tidal Model

The Tidal Model was developed from the Newcastle University 5-year study of the 'need for nursing', amid concerns of the lack of a discrete theoretical formulation or model for mental health nursing care. The model asserts the importance of interpersonal relationships and incorporates a model of the process of empowerment (of the person in mental distress). The following is a summary of the core features of the model.

- It takes a person-centred approach and incorporates the assessment of people's needs across three dimensions: to be understood and validated, to be secure and to live an ordinary life.
- Emphasis is given to the person determining and, where possible, contributing to interventions that may help them. Assessments have a narrative structure and document the person's needs and problems verbatim.
- Originally developed across two pilot sites in acute admission wards in Newcastle, UK, between 1997 and 1999, the revised model was formally introduced across the whole Adult Mental Health Programme, comprising eight admissions wards and their associated community support teams, in May 2000.
- Interdisciplinary evaluation of the model in practice is being conducted using action research methodology.
- Additional pilot sites have been established in 15 countries, including Australia, Japan, Ireland and Wales, within rural, acute and medium-secure services. These pilot sites will allow a degree of cross-national and cross-cultural comparison of the model in action.
- Barker (2000) has developed a training programme for the model.

5.6 Summary of organisational literature

Reviews conducted by the CHI have been successful in identifying common factors amongst trusts that are performing well and those that are performing poorly. The main common factors among poorly performing trusts which relate to the findings in Section 3 are: problems with recruitment, qualities of staff leadership, lack of engagement from clinicians, inadequate information systems and poor communication systems. There are numerous examples of good and innovative practice in trusts throughout the UK (see Section 5.3) relating to domains of strategic capacity, risk management, staffing and staff management, staff morale and continuing professional development. Two major government initiatives which have been successful include *Improving Working Lives* and *Housekeeping and Mental Health*. The

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Tidal Model is an example of high-profile innovative practice but lacks a robust evidence base.

In summary, there needs to be more of a dialogue between research (Sections 3 and 4) and practice to enable problems in stress and burnout to be effectively targeted in inpatient settings.

Section 6 Conclusions and recommendations

The aim of this review was to examine the extent, aetiology, and consequences of poor staff morale in inpatient mental health services, and to identify the clinical and cost effectiveness of strategies to improve morale. The review has shown that the current evidence base is extremely weak in all areas – prevalence, aetiology and effectiveness. This weakness stems from severe methodological deficiencies in the available research studies and the lack of sample specificity in those studies focusing on inpatient mental health services. This section presents a discussion of the major findings and implications of this study. We consider the following areas:

- 1 methodological issues
- 2 prevalence
- 3 aetiology
- 4 interventions
- 5 practice
- 6 limitations
- 7 future research.

6.1 Methodological issues

Phase A

Through a review of the published literature evidence on the extent of burnout and poor morale among those working in inpatient mental health services, this review has demonstrated that most epidemiological data are of poor quality, from heterogeneous populations and not generalisable to specific inpatient acute mental health care environments. Only 16 out of 48 studies (33 per cent) suitable for data extraction were conducted in adult acute inpatient settings (Section 3.1.1). In terms of quality criteria most of these studies were small, of low quality and typically provide incomplete or non-standardised prevalence data (Section 3.2). Indeed, out of 13 quantitative studies pertaining directly to acute nursing environments, none was of a prospective design, only one collected data from multiple sites and only 2 included more than 100 participants. Similar methodological weaknesses were evident in the studies relating to other mental health inpatient settings. In total, out of 39 quantitative studies included in the review, only 2 provided a prospective measure of staff morale, less than one-third (n=12) were conducted across multiple sites and only 9 involved more than 100 participants (Sections 3.2 to 3.5). As a consequence, any available data can at best only be considered as suggestive prevalence estimates.

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Of particular note in this respect is that, over the last 10–15 years, the majority of epidemiological data relating to staff morale in inpatient mental health settings have arisen as a by-product of research focused on the transition from institutional to community care. Data collected during this time stemmed from the concerns of researchers and policymakers that there would be a potential increase in stress caused by the transition from institutional to community care. Inpatient staff groups have often been examined in these studies, therefore, only as baseline or comparison samples.

Furthermore, few studies either identified the characteristics of the eligible staff who did not participate or made a comparison between the demographics of the final sample and wider regional or national populations. Without such measures of external validity, it remains unclear whether the samples studied were representative of all eligible staff at any one inpatient facility or even psychiatric inpatient staff more generally. It is also highly likely that the vast majority of the studies which present data on inpatient staff do so in relation to environments which have little resemblance to those in existence today. Most of them represent environments which have changed radically since that time.

Unfortunately, and perhaps more importantly, the lack of a direct and cohesive examination of staff morale across specific inpatient mental health care settings has also led to a diversity of outcome variables being studied. This wide variation in measures has prevented us from conducting cumulative meta-analyses of the available data. Ascertaining the prevalence of any one specific indicator of staff morale or stress, or indeed commenting on the efficacy of interventions to improve staff morale, is therefore difficult to achieve.

Conclusions

- Most general inpatient epidemiological data collected during the last 15 years are from research focused on the potential stress caused by the transition from institutional to community care. In this work, the prevalence of stress among inpatient staff was usually measured only for comparative purposes.
- Therefore, although there now exist a considerable number of studies describing the prevalence of occupational stress on small staff populations (less than 100), only a small proportion of these are specifically related to the modern acute mental health inpatient environment.

Recommendations

- Further small-scale cross-sectional studies assessing rates of stress are unlikely to be informative. Rather, there is a need for well-conducted, multi-site prospective and cross-sectional studies that use validated measures to assess the prevalence of different indicators of occupational stress in specified inpatient settings.

Phase B

There were few studies (n=8) meeting criteria for Level 1 evidence (4.1.2) and of these only 2 pertained to acute adult inpatient settings. The heterogeneity of studies in terms of intervention, population group, design and outcomes measured did not permit meta-analysis. It was therefore difficult to comment on the efficacy of interventions to improve staff morale. In addition, the quality of Level 1 studies was generally poor. Interventions tended to be conducted and evaluated in situ on an ad hoc basis. Sample size was often a problem. (see 4.2.2, Table 4.3), as was the failure to analyse studies correctly, by not accounting for clustering within wards. These factors mean it is problematic to generalise any findings from this study to the population of interest.

Several studies included qualitative interviews conducted alongside evaluations in order to understand acceptability and uptake of interventions. This often gave powerful insights into the likely explanations for the negative evaluations of potentially effective interventions. Cost was rarely examined, despite the financial implications of low staff morale in terms of staff turnover and sickness. The cost-effectiveness of interventions might have been readily demonstrated, whereby costs of interventions could have been offset through savings in staff salary and recruitment. Cost-effectiveness data are crucial in the rational planning of human resources and the efficient organisation and delivery of inpatient psychiatric care.

Recommendations

- High-quality randomised controlled trials, coupled with more pragmatic evaluations of 'natural experiments' – such as ward re-organisations and policy shifts – using quasi-experimental methods, are needed as a matter of urgency. Further small-scale studies are likely to be uninformative to mental health policymaking and practice.
- Qualitative research should be conducted alongside randomised and quasi-observational research, in order to understand factors inherent in staff and organisations that influence the implementation of interventions designed to improve staff morale. Economic evaluations should also be conducted alongside evaluations of effectiveness, in order to determine cost-effectiveness.

6.2 Prevalence

The present review has provided some preliminary evidence to suggest that stress prevalence is moderate to low among inpatient staff. However, results of the studies were difficult to interpret and compare due to the variety of measurements taken and differences in the questionnaire instruments used. A comparison of burnout data

suggests that nearly one-half of acute inpatient staff may rate themselves in the top third for emotional exhaustion and depersonalisation (Section 3.2.3), with comparable levels of burnout in other general mental health inpatient environments (Section 3.3.3). However, as discussed above, the quality of the studies on which that preliminary conclusion is based is limited and 95 per cent confidence intervals for estimates of prevalence are rarely reported. Confidence in the internal validity of some of the findings is thus limited. Indeed, further analysis of the prevalence estimates for emotional exhaustion across inpatient settings shows that, once 95 per cent confidence intervals are inserted, few studies report exceptionally high levels of burnout, with most suggesting low–average levels of exhaustion. Job satisfaction also seemed to vary although most general inpatient environments reported neutral to high levels of satisfaction.

Unfortunately, due the heterogeneity of instruments used, many of the published prevalence estimates for occupational stress among inpatient mental health care staff do not have comparable estimates within the general population. A previous study of stress among all NHS staff (Borrill *et al.*, 1998) found the prevalence of poor psychological wellbeing – defined as GHQ-12 caseness – to be 26.8 per cent in 1996 and 26.6 per cent in 1998, considerably higher than that recorded among UK employees more generally. However, a paucity of data relating to this measure in the studies in our review prevents any comparison of the levels of psychological ill health reported by acute inpatient mental health care staff with these national benchmarked data.

Conclusions

- Heterogeneity within primary outcome measures, population and measurement instruments prevents an accurate analysis of occupational stress indicators with acute and general inpatient mental health care environments.
- The small amount of data that is available suggests that while levels of burnout may be moderate, job satisfaction may be high.

Recommendation

Future, large-scale studies need to follow a cohesive programme of research that focuses particularly on acute inpatient settings and utilises a common and consistent battery of validated measures – for example, Maslach Burnout Inventory, General Health Questionnaire.

6.3 Aetiology

Most studies providing aetiological data related to undifferentiated ward-based environments with far fewer studies in acute inpatient wards (Section 3.7). In addition, all but one of these studies (Corrigan *et al.*, 1994) used retrospective data from cross-sectional or pre-intervention

baseline surveys. In some cases, the measure of stress was a secondary outcome against which the investigators correlated their primary variable of interest. As a consequence, much of the correlational data provided in the literature cannot be interpreted in a causal manner. All quantitative aetiological studies suffered from the same methodological shortcomings as discussed previously.

This accepted, a large number of factors were seen to correlate with staff stress, with the potential influences on occupational stress in acute inpatient wards appearing similar to those found in other populations. The main candidate factors included issues relating to the way the workplace is organised and managed, the availability of social support within and outside the workplace, the nature of the job itself – such as dealing with violence – ambiguity, creativity, and conflicts between ideals and reality in mental health care.

Conclusions

- Studies included in the review suggested that the main factors likely to precipitate occupational stress in inpatient mental health care settings were related either to organizational issues (such as job characteristics and management) or psychological variables (such as adequate social support).
- Owing to problems with methodological quality, variety in the populations studied and the poor reporting of aetiological data on morale, stress and job satisfaction, it is not yet possible to determine which factors are most likely to increase these levels in ward-based mental health care. These limitations are particularly evident in studies pertaining to acute inpatient mental health environments.

Recommendation

Future research priorities must include a better identification of the key factors influencing staff morale on acute inpatient mental health units. To achieve this objective, future studies should overcome the methodological shortcomings inherent in previously published work, obtaining high levels of evidence through the completion of prospective cohort or case-control designs.

6.4 Interventions

Staff being released from work commitments so that they can receive and complete the intervention could be a critical issue (Carson *et al.*, 1999a) (4.3.3). It is therefore our recommendation that there should be management support for any proposed intervention.

The results from Level 1 evidence studies indicate that educational interventions – such as skills enhancement, mentoring and supervision – delivered in individual and group format may be beneficial. However, much of this research comes from specialist settings that may not be

directly relevant to acute adult inpatient settings. The direct extrapolation of these data should be undertaken with caution, and more research is needed in this area.

One potentially helpful strategy – a social support intervention (Carson *et al.*, 1999a) – had not been shown to be effective, in a small underpowered trial. Despite being well received, this intervention had been inadequately supported at a managerial level and incompletely implemented. There is a strong case for further research in this area. There is too little evidence on psychological and structural interventions to comment on their effectiveness.

Recommendations

- Educational interventions should be developed, researched and supported in acute adult inpatient settings.
- Psychological and structural interventions need a more robust evidence base before being implemented in practice.

6.5 Practice

Results from recent CHI reviews of mental health trusts revealed that morale in trusts is generally good. However, where morale is poor a number of common factors have been identified (Section 5.2, Table 5.1) including recruitment levels, leadership qualities, strong working relationships between clinicians and managers and effective communication and information systems. Some of these factors map onto aetiological findings identified in Section 3 of the report, which imparts added value to these observations. Another area of useful work which would be useful to address in this area is the national NHS staff surveys in mental health NHS Trusts. These surveys hold information on morale, sickness and other work and employment factors. However, this source of evidence is somewhat tangential to the scope and remit of the current review so the authors acknowledge this area as one to be followed up in future research. In addition the authors would like to acknowledge the issue of pay and morale. Although this review did not identify any organisational literature on pay as a direct determinant of morale, the interaction of market forces with the NHS pay structure clearly impacts on problems in recruitment and the consequent use of agency, bank and excessive overtime, all factors which have a deleterious affect on staff morale. The authors advise that further research efforts should focus on the identification and analysis of such research.

In practice there are currently a number of innovative interventions, most notably the Tidal Model (Barker, 2001), which have no evidential basis. This observation highlights the current gap between research and practice. It would therefore be beneficial for research to focus on providing such interventions with a more substantive evidence base. The report cited the Tidal Model as an example of an innovative

intervention, because of its prominence in the literature. However, the authors recognise that other such pioneering models exist and future efforts could focus on highlighting these.

Recommendations

- Research should be informed by observations from practice. In particular, research should focus on developing interventions to target the common factors which have been identified in trusts with poor morale levels.
- Innovative interventions identified should be subject to research and evaluation.

6.6 Limitations

This review has a number of limitations. Publication bias is often a problem in systematic reviews, particularly where controlled trials are reviewed for evidence of effective intervention strategies. However, this study involved a number of different search methods, including a review of unpublished literature and consultation with key experts in the area. It seems reasonable that unpublished studies would be most likely to be captured by these methods but given the high dependence on electronic database searching, it cannot be absolutely certain that other unpublished interventions do not exist.

The review included studies published in English after 1990 and set in inpatient settings only. It deliberately excluded those pertaining to other mental health environments such as community settings. It is acknowledged that including other studies within the review allows consideration of whether the obtained results generalise across different health care settings and populations. However, since the characteristics of other settings may differ significantly, for example in terms of caseload, working environment and severity of patient illness, it was felt that a more restricted approach was necessary in the current review, in order to minimise error in the estimated levels of occupational stress. Broadening the scope of the review beyond our specific focus on the psychiatric inpatient environment would have substantially increased the volume of literature to be reviewed. This would have been unmanageable given the time and resource restraints of the present review. We believe this represents an efficient use of our research resources.

6.7 Future research

Phase A

The most important finding for future work is that new research is required to focus on overcoming the methodological and theoretical shortcomings of previously published work. While we have found no

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studies supporting the contention that working on acute inpatient mental health wards is particularly stressful compared to other mental health environments, this absence of evidence should not be taken as proof of no true effect. The subject requires large-scale, multi-site studies to provide a high level of research evidence on the prevalence and aetiological associations of staff morale. Data should be obtained using well-known, validated measures. Although of large scale and of robust design, populations studied should be limited to staff working in modern acute inpatient facilities in order to overcome the lack of specificity in most of the published studies to date. It is likely that the type of epidemiological studies required would benefit from being adopted by the Mental Health Research Network of the National Institute for Mental Health (England) in order to give access to the size of staff populations required. Of particular value would be the testing of hypotheses about the likely aetiological characteristics peculiar to acute inpatient environments, should it be shown that staff do indeed have levels of morale different from other mental health environments. Answering such questions is likely to require extremely large numbers of study subjects. No literature was found on the question of whether staff with high morale are more clinically effective. As this was one of the questions in the original brief of the review, it is suggested that this area should be targeted for future research.

Phase B

Our broad recommendation is for a cohesive programme of research that focuses on acute inpatient settings, and uses Level 1 evidence study designs and a common battery of measures (such as MBI, GHQ). In addition, any programme of research should ensure that Level 1 designs are of high quality so that findings can be generalised with confidence.

Findings from the eight Level 1 evidence-based studies lead to a number of specific recommendations concerning which interventions should be trialled. There were two interventions relating to the population group of direct relevance to this review (Long *et al.*, 1990; Smoot and Gonzales, 1995). Smoot and Gonzales (1995) observed a net cost saving following the implementation of an empathic communication skills course. It is therefore our recommendation that this innovative educational intervention continue to be researched using high-quality research designs across acute adult inpatient settings. The other study, Long *et al.* (1990), found a reduction in the number of violent incidents on an acute inpatient ward following a change from a two-ward system to a model of continuous care. It would therefore be useful to have research focus on care models of this kind in acute inpatient settings to see if the positive effects were generalised to similar populations.

A promising psychological intervention was evaluated by Carson *et al.* (1999a) in a general adult inpatient setting. The study was

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underpowered, and hampered by poor management support. It would be advantageous for future research programmes to trial social support interventions of this kind in acute inpatient settings using adequately powered studies while ensuring a sufficient degree of management support. Of the 8 studies, 4 (Ewers *et al.*, 2002; Melchior *et al.*, 1996; Heaney *et al.*, 1995; Berg *et al.*, 1994) were conducted in specialist settings examining the effectiveness of a variety of educational interventions involving the components of skill enhancement, mentoring and supervision. Although the results cannot be conclusive due to methodological shortcomings, it would be beneficial to trial such interventions in acute inpatient settings, because there is a danger that any positive effects observed in this review are due to the specificity of the setting. Specifically we would recommend that the Psychosocial Intervention (Ewers *et al.*, 2002) (PSI) should be trialled in settings other than forensic inpatient wards, since it is currently being widely adopted in the UK NHS and current research suggests that this may have wider impact on staff job satisfaction and morale.

An important finding of this review concerns the lack of economic evaluation studies. Only 3 of the 8 studies (Long *et al.*, 1990; Smoot and Gonzales, 1995; Melchior *et al.*, 1996) included economic data as part of their evaluation. It is essential that intervention research examine cost-effectiveness alongside the clinical effectiveness. It is therefore recommended that intervention research in acute inpatient settings should include economic components.

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Appendices

Appendix 1 Search strategies

Search A: Aetiology/risk factors and epidemiological studies

The search was very focused and used the following approaches in a single strategy:

- 1 combining papers which indexers have labelled clearly as dealing with epidemiology or trends in stress/morale etc., with a wider range of terms indicating a mental health context or mental health personnel (for example, set 18 in the MEDLINE strategy)
- 2 records which have both indexing terms around stress AND indexing terms indicating statistics or questionnaires, and again are linked with a wider range of terms indicating a mental health context or mental health personnel (for example, set 21 in the MEDLINE strategy).

(1) and (2) were combined using OR and the results were limited to publications since 1980 and those in English language.

In the case of Dissertation Extracts and PsycINFO it was not possible to focus the results down using search features such as subheadings. In this case a search focusing on the main outcome issues was undertaken. The search of Dissertation Extracts and PsycINFO supplied results for both Search A and Search B below.

The number of records retrieved in each database is shown in Table A1.1.

Table A1.1 Records retrieved in each database

Database	Number of records retrieved
MEDLINE	322
EMBASE	1100
CINAHL	161
Sociological Extracts	179
Dissertation Extracts	497
PsycINFO	2458

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MEDLINE (Ovid interface, 1966 to June Week 3 2003)

- 1 stress, psychological/ep, sn, et or stress/et, ep (6307)
- 2 exp burnout, professional/ep, et (653)
- 3 exp job satisfaction/sn (9)
- 4 exp personnel turnover/sn, td (370)
- 5 morale/ (1746)
- 6 or/1-5 (8931)
- 7 exp community mental health centres/ (2084)
- 8 exp community mental health services/ (12079)
- 9 mental health services/ (12274)
- 10 hospitals, psychiatric/ (16487)
- 11 emergency services, psychiatric/ (1315)
- 12 psychiatric nursing/ (10985)
- 13 psychiatric aides/ (339)
- 14 psychiatric department, hospital/ (4665)
- 15 (psychiatric hospital\$ or mental hospital\$).ti,ab. (7008)
- 16 (psychiatric nurse\$ or psychiatric staff or psychiatric personnel or psychiatrist\$).ti,ab. (10972)
- 17 or/7-16 (63260)
- 18 6 and 17 (233)
- 19 limit 18 to (english language and yr=1980-2003) (164)
- 20 (exp stress, psychological/ or exp burnout, professional/ or exp job satisfaction/ or exp personnel turnover/ or morale/) and (exp risk factors/ or questionnaires/ or psychometrics/ or multivariate analysis/ or regression analysis/) (8499)
- 21 20 and 17 (251)
- 22 limit 21 to (english language and yr=-1980-2003) (218)
- 23 or/19,22 (322)
- 24 from 23 keep 1-322 (322)

EMBASE (Ovid interface, 1980 to 2003 Week 26)

- 1 stress/ or emotional stress/ or mental stress/
- 2 burnout/
- 3 job satisfaction/
- 4 (personnel turnover or staff retention or staff turnover).ti,ab
- 5 morale.ab,ti.

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- 6 motivation/
- 7 or/1-6
- 8 community mental health center/ or mental health center/
- 9 community mental health service\$.ti,ab.
- 10 mental health service/
- 11 mental hospital/ or psychiatric hospital\$.ti,ab
- 12 mental health care/ or psychosocial care/
- 13 psychiatric department/
- 14 psychiatrist/ or psychotherapist/
- 15 (psychiatric nurse\$ or mental health nurse\$ or psychiatric staff or psychiatric personnel or psychiatrist\$).ti,ab.
- 16 or/8-15
- 17 7 and 16
- 18 limit 17 to (english language and yr=1980-2003)

CINAHL (Ovid interface, 1982 to June Week 3 2003)

- 1 stress, psychological/ep, et, td or stress, occupational/ep, et, td or stress/et, ep
- 2 burnout, professional/ep, et, td
- 3 job satisfaction/td
- 4 personnel turnover/td
- 5 morale/td
- 6 motivation/td
- 7 or/1-6
- 8 community mental health cent\$.ti,ab.
- 9 exp community mental health services/
- 10 mental health services/ or psychiatric service/
- 11 hospitals, psychiatric/ or psychiatric units/
- 12 mental hospital\$.ti,ab
- 13 psychiatric care/
- 14 psychiatric emergencies/
- 15 exp psychiatric nursing/
- 16 exp mental health personnel/
- 17 nurse psychotherapists/
- 18 (psychiatric nurse\$ or mental health nurse\$ or psychiatric staff or psychiatric personnel or psychiatrist\$).ti,ab.
- 19 or/8-18
- 20 7 and 19

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- 21 limit 20 to (english language and yr=1980-2003)
- 22 (exp stress, psychological/ or exp stress, occupational/ or exp burnout, professional/ or exp job satisfaction/ or exp personnel turnover/ or exp morale/ or exp motivation/) and (risk factors/ or questionnaires/ or psychometrics/ or multivariate analysis/ or regression analysis.ti,ab)
- 23 22 and 19
- 24 limit 23 to (english language and yr=-1980-2003)
- 25 21 or 24

Sociological Extracts (via ARC service, searched 2 July 2003)

- 1 exact{STRESS} or exact{PSYCHOLOGICAL-STRESS} or exact{OCCUPATIONAL-STRESS} or exact{JOB-STRESS} exact{STRESS-EMPLOYEE}
- 2 exact{BURNOUT}
- 3 exact{JOB-SATISFACTION}
- 4 exact{LABOR-TURNOVER}
- 5 exact{MORALE}
- 6 exact{MOTIVATION}
- 7 #1 or #2 or #3 or #4 or #5 or #6
- 8 exact{COMMUNITY-MENTAL-HEALTH-CENTERS}
- 9 community mental health service* in ti,ab
- 10 exact{MENTAL-HEALTH-SERVICES}
- 11 psychiatric hospital* in ti,ab
- 12 exact{MENTAL-HOSPITALS}
- 13 exact{PSYCHIATRISTS}
- 14 psychiatric nurse* in ti,ab
- 15 mental health nurse* in ti,ab
- 16 psychiatric staff in ti,ab
- 17 psychiatric personnel in ti,ab
- 18 psychiatrist* in ti,ab
- 19 #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18
- 20 #7 and #19
- 21 #20 and (LA = "ENGLISH")
- 22 #21 and (PY = 1980-2003)

Dissertation Extracts Online (via Dialog, File 35, searched 2 July 2003)

s stress/ti,ab
s burnout/ti,ab
s (job(w)satisfaction)/ti,ab
s (personnel(w)turnover or labor(w)turnover or labour(w)turnover or staff(w)retention or staff(w)turnover)/ti,ab
s morale/ti,ab
s motivation/ti,ab
s s1:s6
s (mental(w)health(w)cent?)/ti,ab
s (mental(w)health(w)service? ?)/ti,ab
s (psychiatric(w)service? ?)/ti,ab
s (psychiatric(w)hospital? ? or psychiatric(w)unit? ?)/ti,ab
s (mental(w)hospital? ?)/ti,ab
s (mental(w)health(w)care or psychosocial(w)care)/ti,ab
s (mental(w)health(w)personnel)/ti,ab
s (psychiatrist? ? or psychotherapist? ?)/ti,ab
s (psychiatric(w)nurse? ?)/ti,ab
s (mental(w)health(w)nurse? ?)/ti,ab
s (psychiatric(w)staff)/ti,ab
s (psychiatric(w)personnel)/ti,ab
s s8:s19
s s7 and s20
s s21/1980:2003

PsycINFO (BIDS WebSPIRS interface, 1978-2003/06 Weeks 2-4)

#1 (STRESS) or (PSYCHOLOGICAL-STRESS) or (OCCUPATIONAL-STRESS)
or (JOB-STRESS) or (STRESS-EMPLOYEE) (68012 records)
#2 BURNOUT (3028 records)
#3 JOB-SATISFACTION (7532 records)
#4 EMPLOYEE-TURNOVER (1414 records)
#5 MORALE (1482 records)
#6 MOTIVATION (30800 records)

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#7 #1 or #2 or #3 or #4 or #5 or #6 (105268 records)
#8 COMMUNITY-MENTAL-HEALTH-CENTERS (1202 records)
#9 COMMUNITY-MENTAL-HEALTH-SERVICES (4020 records)
#10MENTAL-HEALTH-SERVICES (9747 records)
#11PSYCHIATRIC-AIDES (54 records)
#12PSYCHIATRIC-CARE (9 records)
#13PSYCHIATRIC-CLINICS (492 records)
#14PSYCHIATRIC-FACULTY (1 records)
#15PSYCHIATRIC-HOSPITAL-STAFF (603 records)
#16PSYCHIATRIC-NURSES (1021 records)
#17(PSYCHIATRIC-SECTOR) or (PSYCHIATRIC-SERVICE) or
(PSYCHIATRIC-SERVICES) (1819 records)
#18PSYCHIATRIC-UNITS (652 records)
#19PSYCHIATRIC-TEAM (1 records)
#20MENTAL-HOSPITAL or PSYCHIATRIC-HOSPITAL or PSYCHIATRIC-
HOSPITALS (2542 records)
#21PSYCHIATRISTS (17827 records)
#22MENTAL-HEALTH-PERSONNEL (4063 records)
#23psychiatric nurse* in ti,ab (721 records)
#24mental health nurse* in ti,ab (264 records)
#25psychiatric staff in ti,ab (124 records)
#26psychiatric personnel in ti,ab (35 records)
#27psychiatrist* in ti,ab (11155 records)
#28(NURSE-PSYCHOLOGIST) or (NURSE-PSYCHOLOGISTS) or (NURSE-
PSYCHOTHERAPIST) or (NURSE-PSYCHOTHERAPISTS) (4 records)
#29#8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17
or #18 or #19 or
#20or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 (41889
records)
#30#7 and #29 (2647 records)
#31#30 and Y = ENGLISH) and (PY:PY = 1980-2003) (2458 records)

Search B: Interventions

The search used the approach of focusing on the outcomes to be achieved or avoided. Searching was undertaken in two stages: a search to identify papers about interventions, and then searches using specific interventions to find more research about evaluations of interventions.

The results from the search using outcomes produced the following numbers of records.

Table A1.2 Search results using outcomes

Database	Number of records
MEDLINE	696
EMBASE	590
CINAHL	361
Sociological Extracts	184
Dissertation Extracts	*497
PsycINFO	*2458

* These are the same records as for Search A.

MEDLINE (Ovid interface, 1966 to June Week 3 2003)

- 1 (improv\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (1664)
- 2 (increas\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (4340)
- 3 (impact\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (283)
- 4 (effect\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (2885)
- 5 (enhance\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (1026)
- 6 (decreas\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (8377)
- 7 (reduc\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (13186)
- 8 (minimi\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (479)
- 9 (level\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (12683)

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- 10 (rate\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (11834)
- 11 (effect\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (25181)
- 12 (impact\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (1111)
- 13 *burnout, professional/ (2436)
- 14 *morale/ (668)
- 15 *stress, psychological/ (24345)
- 16 *stress/ (16714)
- 17 *job satisfaction/ (4234)
- 18 *personnel turnover/ (909)
- 19 or/1-18 (110715)
- 20 exp community mental health centers/ (2084)
- 21 exp community mental health services/ (12079)
- 22 mental health services/ (12274)
- 23 hospitals, psychiatric/ (16487)
- 24 emergency services,psychiatric/ (1315)
- 25 psychiatric nursing/ (10985)
- 26 psychiatric aides/ (339)
- 27 psychiatric departments, hospital/ (4665)
- 28 (psychiatric hospital\$ or psychiatric unit\$).ti,ab. (6398)
- 29 (mental hospital\$ or mental health unit\$).ti,ab. (1952)
- 30 (psychiatric nurse\$ or psychiatric staff or psychiatric personnel).ti,ab. (1340)
- 31 (psychiatrist\$ or mental health team or mental health teams or mental health professionals).ti,ab. (11129)
- 32 mental health staff.ti,ab. (86)
- 33 mental health workforce.ti,ab. (9)
- 34 mental health nurses.ti,ab. (457)
- 35 psychiatric workforce.ti,ab. (5)
- 36 or/20-35 (64591)
- 37 19 and 36 (895)
- 38 limit 37 to (english language and yr=1980-2003) (696)
- 39 from 38 keep 1-696 (696)

EMBASE (Ovid interface, 1980 to 2003 Week 26)

- 1 (improv\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (1214)
- 2 (increas\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (3714)
- 3 (impact\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (230)
- 4 (effect\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (2518)
- 5 (enhance\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (867)
- 6 (decreas\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (7090)
- 7 (reduc\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (11071)
- 8 (minimi\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (368)
- 9 (level\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (10646)
- 10 (rate\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (9591)
- 11 (effect\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (21027)
- 12 (impact\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (1033)
- 13 *burnout/ (556)
- 14 morale.ti. (111)
- 15 *stress/ or *emotional stress/ or *mental stress/ (25749)
- 16 *motivation/ (2268)
- 17 *job satisfaction/ (1300)
- 18 turnover.ti. (6835)
- 19 or/1-18 (88634)
- 20 community mental health center/ or mental health center/ (917)
- 21 community mental health service\$.ti,ab. (232)
- 22 mental health service/ (6478)
- 23 mental hospital/ or psychiatric hospital\$.ti,ab. (6704)
- 24 mental health care/ or psychosocial care/ (8307)

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- 25 psychiatric department/ (933)
- 26 psychiatrist/ or psychotherapist/ (5327)
- 27 psychiatric departments, hospital/ (0)
- 28 psychiatric unit\$.ti,ab. (928)
- 29 (mental hospital\$ or mental health unit\$).ti,ab. (961)
- 30 (psychiatric nurse\$ or psychiatric staff or psychiatric personnel).ti,ab. (346)
- 31 (psychiatrist\$ or mental health team or mental health teams or mental health professionals).ti,ab. (9516)
- 32 mental health staff.ti,ab. (76)
- 33 mental health workforce.ti,ab. (6)
- 34 mental health nurses.ti,ab. (27)
- 35 psychiatric workforce.ti,ab. (5)
- 36 or/20-35 (32522)
- 37 19 and 36 (696)
- 38 limit 37 to english language (590)
- 39 from 38 keep 1-590 (590)

CINAHL (Ovid interface, 1982 to June Week 3 2003)

- 1 (improv\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (322)
- 2 (increas\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (411)
- 3 (impact\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (101)
- 4 (effect\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (245)
- 5 (enhance\$ adj3 (morale or job satisfaction or workload or retention)).ti,ab. (97)
- 6 (decreas\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (353)
- 7 (reduc\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (1029)
- 8 (minimi\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (76)
- 9 (level\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (965)

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- 10 (rate\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (369)
- 11 (effect\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (927)
- 12 (impact\$ adj3 (burnout or turnover or absent\$ or stress or exhaustion or empowerment or absence)).ti,ab. (215)
- 13 *burnout, professional/ (879)
- 14 *morale/ (181)
- 15 *stress, psychological/ or *stress, occupational/ or *stress/ (5918)
- 16 *motivation/ (1091)
- 17 *job satisfaction/ (2058)
- 18 *personnel turnover/ (404)
- 19 or/1-18 (12592)
- 20 mental health cent\$.ti,ab. (202)
- 21 exp community mental health services/ (3054)
- 22 mental health services/ or psychiatric service/ (2867)
- 23 hospitals, psychiatric/ or psychiatric units/ (1459)
- 24 mental hospital\$.ti,ab. (106)
- 25 psychiatric care/ (1758)
- 26 psychiatric emergencies/ (253)
- 27 exp psychiatric nursing/ (7527)
- 28 psychiatric unit\$.ti,ab. or mental health personnel/ (811)
- 29 mental health unit\$.ti,ab. or nurse psychotherapists/ (124)
- 30 (psychiatric nurse\$ or psychiatric staff or psychiatric personnel).ti,ab. (1002)
- 31 (psychiatrist\$ or mental health team or mental health teams or mental health professionals).ti,ab. (989)
- 32 mental health staff.ti,ab. (44)
- 33 mental health workforce.ti,ab. (9)
- 34 mental health nurses.ti,ab. (613)
- 35 psychiatric workforce.ti,ab. (3)
- 36 or/20-35 (15072)
- 37 19 and 36 (371)
- 38 limit 37 to english language (361)
- 39 from 38 keep 1-361 (361)

Sociological Extracts (via ARCWebSPIRS service)

#36#21 and #34 and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(184 records)

#35#21 and #34(203 records)

#34(psychiatric workforce in ti,ab) or ((mental health team or mental health teams or mental health professionals or mental health staff) in ti,ab) or (mental health nurses in ti,ab) or (psychiatric personnel in ti,ab) or (mental health workforce in ti,ab) or (psychiatric staff in ti,ab) or (psychiatric nurse* in ti,ab) or (mental hospital* in ti,ab) or (psychiatric hospital* in ti,ab) or (mental health service* in ti,ab) or ((“Psychiatrists-” in DE) or (“Psychiatry-” in DE)) or ((“Community-Mental-Health-Centers” in DE) or (“Mental-Health-Services” in DE) or (“Mental-Hospitals” in DE))(4520 records)

#33psychiatric workforce in ti,ab(0 records)

#32mental health nurses in ti,ab(3 records)

#31 mental health workforce in ti,ab(3 records)

#30(mental health team or mental health teams or mental health professionals or mental health staff) in ti,ab(483 records)

#29psychiatric personnel in ti,ab(6 records)

#28psychiatric staff in ti,ab(11 records)

#27psychiatric nurse* in ti,ab(50 records)

#26mental hospital* in ti,ab(585 records)

#25psychiatric hospital* in ti,ab(645 records)

#24mental health service* in ti,ab(1156 records)

#23(“Psychiatrists-” in DE) or (“Psychiatry-” in DE)(566 records)

#22(“Community-Mental-Health-Centers” in DE) or (“Mental-Health-Services” in DE) or (“Mental-Hospitals” in DE)(2416 records)

#21((level* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab) or ((minimi* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab) or ((reduc* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab) or ((decreas* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab) or ((decreas* with (morale or job satisfaction or workload or staff retention)) in ti,ab) or ((enhance* with (morale or job satisfaction or workload or staff retention)) in ti,ab) or ((effect* with (morale or job satisfaction or workload or staff retention)) in ti,ab) or ((impact* with (morale or job satisfaction or workload or staff retention)) in ti,ab) or ((increas* with (morale or job satisfaction or workload or staff retention)) in ti,ab) or (improv* with ((morale or job satisfaction or

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- workload or staff retention) in ti,ab)) or ("Motivation-" in DE) or ("Morale-" in DE) or ("Absenteeism-" in DE) or ("Labor-Turnover" in DE) or ("Job-Satisfaction" in DE) or ("Stress-" in DE) or ("Occupational-Stress" in DE) or ("Psychological-Stress" in DE)) or ((impact* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab) or ((effect* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab) or ((rate* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab)(11513 records)
- #20 "Motivation-" in DE(1115 records)
- #19 "Morale-" in DE(151 records)
- #18 "Absenteeism-" in DE(218 records)
- #17 "Labor-Turnover" in DE(249 records)
- #16 "Job-Satisfaction" in DE(1253 records)
- #15 "Stress-" in DE(513 records)
- #14 ("Occupational-Stress" in DE) or ("Psychological-Stress" in DE)(2909 records)
- #13 (impact* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab(1408 records)
- #12 (effect* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab(3054 records)
- #11 (rate* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab(1049 records)
- #10 (level* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab(2345 records)
- #9 (minimi* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab(80 records)
- #8 (reduc* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab(1009 records)
- #7 (decreas* with (burnout or turnover or absent* or stress or exhaustion or empowerment)) in ti,ab(374 records)
- #6 (decreas* with (morale or job satisfaction or workload or staff retention)) in ti,ab(66 records)
- #5 (enhance* with (morale or job satisfaction or workload or staff retention)) in ti,ab(65 records)
- #4 (effect* with (morale or job satisfaction or workload or staff retention)) in ti,ab(640 records)
- #3 (impact* with (morale or job satisfaction or workload or staff retention)) in ti,ab(284 records)

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#2 (increas* with (morale or job satisfaction or workload or staff retention)) in ti,ab(392 records)

#1 improv* with ((morale or job satisfaction or workload or staff retention) in ti,ab)(204 records)

The second stage of searches involved searching a range of databases for examples of evaluations of named or specific interventions. The interventions were identified from scanning the studies found by the previous searches. The approach taken for MEDLINE was to search for explicit staff interventions in combination with terms that would retrieve the psychiatric hospital setting as well as psychiatric staff, in conjunction with more generic interventions (which might also be seen as a patient treatment) which had to be explicitly linked with staff terms. In databases where the searches produced fewer results, this division was collapsed and one search was carried out.

The searches were limited to English-languages- studies published since 1979. Editorials and comments were excluded where possible.

The following databases were searched:

Table A1.3 Search results based on specific interventions

Database	Database coverage (the search was restricted to publication year later than 1979)	Number of records retrieved
MEDLINE (via Ovid gateway)	1966 to September week 2 2003	4677
EMBASE (via Ovid gateway)	1980 to 2003 week 37	4046
PsycINFO (Silverplatter CD_ROM)	1978 to 2003/08	3644
CINAHL (via Ovid gateway)	1982 to September week 2 2003	3214
Sociological Extracts (Silverplatter interface via BIDS)	1963 to 2003/06	446
HMIC (Silverplatter interface via BIDS)	Issue 2003/9	475
Management and marketing Extracts (Dialog Datastar interface)	1975 to date (searched 3/10/03)	22
Management Contents (Dialog Datastar interface)	1986 to date (searched 3/10/03)	307
Inside Conferences (Dialog interface)	1993 to 2003/September W4	4

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The search strategies are presented below.

MEDLINE

- 1 leadership/ (12423)
- 2 (leadership adj3 (training or program\$ or skills)).ti,ab. (708)
- 3 ((peer or colleague\$ or collegial or supervisor\$) adj3 support).ti,ab. (902)
- 4 (staff adj3 (consultation or consulting)).ti,ab. (192)
- 5 (staff adj3 (group or groups)).ti,ab. (1150)
- 6 (employee assistance or eap\$).ti,ab. (757)
- 7 (workplace adj3 (counselling or counselling)).ti,ab. (19)
- 8 ((team-based or team based) adj3 (education or learning)).ti,ab. (6)
- 9 (workload adj3 manag\$).ti,ab. (122)
- 10 time management/ or time management.ti,ab. (1374)
- 11 (staff adj3 (growth or development or satisfaction)).ti,ab. (1953)
- 12 staff development/ (3521)
- 13 job satisfaction/ (9477)
- 14 education, continuing/ (4910)
- 15 continuing professional development.ti,ab. (213)
- 16 mentors/ or (mentor or mentors or mentoring).ti,ab. (3178)
- 17 administrative procedure\$.ti,ab. (142)
- 18 organizational procedure\$.ti,ab. (18)
- 19 (critical incident adj3 (procedure\$ or program\$ or strategy or strategies)).ti,ab. (12)
- 20 (assault\$ adj3 (procedure\$ or program\$ or strategy or strategies)).ti,ab. (88)
- 21 (retention or retaining).ti,ab. (62744)
- 22 workload/ (5979)
- 23 (job plans or job planning or work plans or work planning or work redesign).ti,ab. (211)
- 24 (flexible hours or flexible working or flexitime).ti,ab. (71)
- 25 organizational intervention\$.ti,ab. (31)
- 26 organizational innovation\$.ti,ab. (33)
- 27 (worker adj3 empower\$).ti,ab. (18)
- 28 ((combat\$ or prevent\$ or reduc\$) adj3 burnout).mp. [mp=title, extract, cas registry/ec number word, mesh subject heading] (200)

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- 29 burnout, professional/ (3265)
- 30 targeting resource\$.ti,ab. (41)
- 31 reward/ or reward\$.ti,ab. (13153)
- 32 employee incentive plans/ (1147)
- 33 (motivation\$ adj3 intervention\$).ti,ab. (203)
- 34 motivation/ (27292)
- 35 ((ward or wards) adj3 redesign\$).mp. [mp=title, extract, cas registry/ec number word, mesh subject heading] (3)
- 36 ((environmental or workplace) adj3 improv\$).mp. [mp=title, extract, cas registry/ec number word, mesh subject heading] (764)
- 37 workplace/ (3652)
- 38 (atmosphere adj3 workplace).mp. [mp=title, extract, cas registry/ec number word, mesh subject heading] (28)
- 39 inservice training/ (10809)
- 40 Personnel Turnover/ (1827)
- 41 Employee Grievances/ (749)
- 42 occupational health services/ (7584)
- 43 interdisciplinary communication/ (1154)
- 44 work capacity evaluation/ or work schedule tolerance/ or work simplification/ (6319)
- 45 exp community mental health centers/ (2101)
- 46 exp community mental health services/ (12159)
- 47 mental health services/ (12459)
- 48 hospitals, psychiatric/ (16570)
- 49 emergency services, psychiatric/ (1325)
- 50 psychiatric nursing/ (11048)
- 51 psychiatric aides/ (340)
- 52 psychiatric departments, hospital/ (4686)
- 53 (psychiatric hospital\$ or psychiatric unit\$).ti,ab. (6466)
- 54 (mental hospital\$ or mental health unit\$).ti,ab. (1958)
- 55 (psychiatric nurse\$ or psychiatric staff or psychiatric personnel).ti,ab. (1356)
- 56 (psychiatrist\$ or mental health team or mental health teams or mental health professionals).ti,ab. (11250)
- 57 (mental health staff or mental health workforce or mental health workers or mental health nurse\$ or psychiatric workforce).ti,ab. (886)

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- 58 (mental health leaders or mental health case managers).ti,ab. (12)
- 59 (mental health adj3 clinician\$).ti,ab. (192)
- 60 (psychotherapist\$ or clinical psychologist\$).ti,ab. (1927)
- 61 (mental health adj3 doctor\$).ti,ab. (47)
- 62 (mental health adj3 assistants).ti,ab. (5)
- 63 (mental health adj3 support worker\$).ti,ab. (3)
- 64 (psychiatric adj3 doctor\$).ti,ab. (129)
- 65 (psychiatric adj3 assistant\$).ti,ab. (21)
- 66 (psychiatric adj3 support worker\$).ti,ab. (0)
- 67 or/45-66 (66906)
- 68 or/1-44 (172818)
- 69 67 and 68 (3062)
- 70 limit 69 to (english language and yr=1980-2003) (2087)
- 71 from 70 keep 1-500 (500)
- 72 from 70 keep 1-2087 (2087)
- 73 social support/ (20227)
- 74 ((social or caregiver\$) adj2 support).ti,ab. (8691)
- 75 self-help groups/ (4860)
- 76 ((self-help or self help or selfhelp or support) adj2 (group or groups)).ti,ab. (5115)
- 77 (support adj2 (program\$ or strategy or strategies)).ti,ab. (2859)
- 78 counselling/ (17544)
- 79 (communication adj3 (training or program\$ or skills)).ti,ab. (3230)
- 80 anxiety management.ti,ab. (135)
- 81 (interpersonal skills adj3 (training or program\$ or education)).ti,ab. (94)
- 82 (interactive adj3 teaching).ti,ab. (182)
- 83 (insight-oriented or insight oriented).ti,ab. (118)
- 84 ((coping or cope) adj2 (skill or skills or training or strategy or strategies)).ti,ab. (1445)
- 85 realistic self-assessment.ti,ab. (2)
- 86 narcissistic.ti,ab. (1102)
- 87 family characteristics/ (11924)
- 88 (family background or family origin).ti,ab. (832)
- 89 relationship enhancement.ti,ab. (54)

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- 90 reminiscence therap\$.ti,ab. (52)
- 91 supervision.ti,ab. (8555)
- 92 (stress adj3 (manag\$ or prevent\$ or reduc\$ or debrief\$)).ti,ab. (9659)
- 93 crisis intervention/ or (crisis intervention adj3 (program\$ or procedure\$ or strategy or strategies)).ti,ab. (3971)
- 94 (post-incident or post incident).ti,ab. (15)
- 95 stress, psychological/ (45013)
- 96 violence/ (13427)
- 97 trauma reduction.ti,ab. (30)
- 98 trauma specific.ti,ab. (72)
- 99 (psychosocial training or psychosocial intervention\$.ti,ab. (877)
- 100problem solving/ (12340)
- 101((problem or problems) adj3 solving).ti,ab. (8050)
- 102exercise techniques.ti,ab. or exercise therapy/ (12024)
- 103relaxation techniques/ (4237)
- 104relaxation.ti,ab. (44126)
- 105(milieu or therapeutic community).ti,ab. (8291)
- 106therapeutic communities.ti,ab. (172)
- 107multicomponent intervention\$.ti,ab. (61)
- 108focused intervention\$.ti,ab. (2)
- 109milieu therapy/ (834)
- 110therapeutic community/ (1783)
- 111(prevent\$ adj2 violence).ti,ab. (717)
- 112retreats.ti,ab. (118)
- 113(reflection adj2 action).ti,ab. (109)
- 114((reflection adj2 action) or balint).ti,ab. (422)
- 115reunions.ti,ab. (54)
- 116nonverbal communication/ (2127)
- 117interpersonal relations/ (29807)
- 118anxiety/pc (1543)
- 119adaptation, psychological/ (37984)
- 120environment/ (20460)
- 121psychiatric nursing/ (11048)
- 122psychiatric aides/ (340)

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123(psychiatric nurse\$ or psychiatric staff or psychiatric personnel).ti,ab.
(1356)

124(psychiatrist\$ or mental health team or mental health teams or
mental health professionals).ti,ab. (11250)

125(mental health staff or mental health workforce or mental health
workers or mental health nurse\$ or psychiatric workforce).ti,ab. (886)

126(mental health leaders or mental health case managers).ti,ab. (12)

127(mental health adj3 clinician\$).ti,ab. (192)

128(psychotherapist\$ or clinical psychologist\$).ti,ab. (1927)

129(mental health adj3 doctor\$).ti,ab. (47)

130(mental health adj3 assistants).ti,ab. (5)

131(mental health adj3 support worker\$).ti,ab. (3)

132(psychiatric adj3 doctor\$).ti,ab. (129)

133(psychiatric adj3 assistant\$).ti,ab. (21)

134(psychiatric adj3 support worker\$).ti,ab. (0)

135or/73-120 (291010)

136 or/121-134 (24850)

137135 and 136 (4443)

138limit 137 to (english language and yr=1980-2003) (3069)

139138 not 70 (2673)

140rom 139 keep 1-2673 (2673)

141comment.pt. (254289)

142editorial.pt. (156831)

143or/141-142 (370832)

14470 not 143 (2055)

145from 144 keep 1-2055 (2055)

146139 not 143 (2622)

147from 146 keep 1-2622 (2622)

Sets 72 and 147 are the result sets.

EMBASE

1 LEADERSHIP/ (3047)

2 (leadership adj3 (training or program\$ or skills)).ti,ab. (297)

3 ((peer or colleague\$ or collegial or supervisor\$) adj3 support).ti,ab.
(602)

4 (staff adj3 (consultation or consulting)).ti,ab. (133)

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- 5 (staff adj3 (group or groups)).ti,ab. (816)
- 6 (employee assistance or eap\$).ti,ab. (814)
- 7 (workplace adj3 (counselling or counselling)).ti,ab. (12)
- 8 exp Teamwork/ (3788)
- 9 ((team-based or team) adj3 (education or learning)).ti,ab. (217)
- 10 exp WORKLOAD/ (7470)
- 11 (workload adj3 manag\$).ti,ab. (86)
- 12 exp Time Management/ (386)
- 13 time management.ti,ab. (224)
- 14 (staff adj3 (growth or development or satisfaction)).ti,ab. (695)
- 15 exp Job Satisfaction/ (3182)
- 16 ((job or work) adj3 satisfaction).ti,ab. (1602)
- 17 exp Continuing Education/ (7577)
- 18 continuing professional development.ti,ab. (227)
- 19 (mentor or mentors or mentoring).ti,ab. (863)
- 20 administrative procedure\$.ti,ab. (125)
- 21 (organizational procedure\$ or organisational procedure\$).ti,ab. (15)
- 22 (critical incident\$ adj3 (procedure\$ or program\$ or strategy or strategies)).ti,ab. (14)
- 23 (assault\$ adj3 (procedure\$ or program\$ or strategy or strategies)).ti,ab. (55)
- 24 exp ASSAULT/ (1564)
- 25 (retention or retaining).ti,ab. (53771)
- 26 (job plans or job planning or work plans or work planning or work redesign).ti,ab. (85)
- 27 exp WORK/ or exp WORK SCHEDULE/ or exp WORK ENVIRONMENT/ (46100)
- 28 (flexible hours or flexible working or flexitime).ti,ab. (55)
- 29 exp Working Time/ or exp Shift Worker/ (2293)
- 30 (organisational intervention\$ or organizational intervention\$).ti,ab. (31)
- 31 (worker\$ adj3 empower\$).ti,ab. (32)
- 32 burnout/ (902)
- 33 ((combat\$ or prevent\$ or reduc\$) adj3 burnout).ti,ab. (113)
- 34 targeting resource\$.ti,ab. (37)
- 35 REWARD/ (2770)

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- 36 reward\$.ti,ab. (8209)
- 37 employee incentive plan\$.ti,ab. (1)
- 38 MOTIVATION/ (8828)
- 39 (motivation\$ adj3 intervention\$).ti,ab. (205)
- 40 workplace/ (5751)
- 41 ((ward or wards) adj3 redesign\$).ti,ab. (2)
- 42 ((environment\$ or workplace) adj3 improv\$).ti,ab. (1697)
- 43 (atmosphere adj3 workplace).ti,ab. (50)
- 44 absenteeism/ or job analysis/ or night work/ (4670)
- 45 inservice training.ti,ab. (93)
- 46 staff turnover.ti,ab. (102)
- 47 high turnover.ti,ab. (653)
- 48 Conflict/ (4162)
- 49 grievance\$.ti,ab. (96)
- 50 occupational health service\$.ti,ab. (486)
- 51 interdisciplinary communication.ti,ab. (53)
- 52 teamwork/ (3788)
- 53 Work Capacity/ (2690)
- 54 work capacity evaluation.ti,ab. (5)
- 55 Work Schedule/ (1012)
- 56 (work adj3 schedul\$).ti,ab. (495)
- 57 Task Performance/ (24694)
- 58 (simplif\$ adj3 (work or working or task or tasks)).ti,ab. (256)
- 59 exp Mental Health Care/ or exp Mental Health Center/ or exp Mental Health Service/ (19537)
- 60 exp Mental Hospital/ (5571)
- 61 PSYCHIATRIC DEPARTMENT/ (947)
- 62 (psychiatric hospital\$ or psychiatric unit\$ or psychiatric center\$ or psychiatric service\$ or psychiatric centre\$).ti,ab. (6485)
- 63 (mental hospital\$ or mental health unit\$ or mental health service\$).ti,ab. (4152)
- 64 psychiatric nurse\$.ti,ab. (279)
- 65 (psychiatric staff or psychiatric personnel or psychiatric worker\$).ti,ab. (88)
- 66 (psychiatrist\$ or mental health team or mental health teams or mental health professionals).ti,ab. (9701)

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- 67 (mental health staff or mental health workforce or mental health workers or mental health nurs\$ or psychiatric workforce).ti,ab. (309)
- 68 (psychiatric nursing or psychiatric aides or mental health leaders or mental health case managers).ti,ab. (127)
- 69 (mental health adj3 clinician\$).ti,ab. (155)
- 70 (psychotherapist\$ or clinical psychologist\$).ti,ab. (1859)
- 71 (mental health adj3 (doctor\$ or assistants or support worker\$)).ti,ab. (45)
- 72 (psychiatric adj3 (doctor\$ or assistants or support worker\$)).ti,ab. (104)
- 73 PSYCHIATRIST/ (3639)
- 74 PSYCHOLOGIST/ (1412)
- 75 or/1-58 (163051)
- 76 or/59-74 (36455)
- 77 75 and 76 (2835)
- 78 limit 77 to (english language and yr=1980-2004) (2506)
- 79 Editorial/ (157523)
- 80 78 not 79 (2408)
- 81 from 80 keep 1-2408 (2408)
- 82 Coping Behaviour/ or Social Support/ (17712)
- 83 ((social support or caregiver\$) adj2 support).ti,ab. (6206)
- 84 Self Help/ (2098)
- 85 ((selfhelp or self help or support) adj2 (group or groups)).ti,ab. (3995)
- 86 (support adj2 (program\$ or strategy or strategies)).ti,ab. (2057)
- 87 COUNSELING/ (5363)
- 88 (communication adj3 (training or program\$ or skills)).ti,ab. (2229)
- 89 Interpersonal Communication/ (12585)
- 90 ANXIETY/ (29498)
- 91 anxiety management.ti,ab. (137)
- 92 (interpersonal skills adj3 (training or program\$ or education)).ti,ab. (48)
- 93 (interactive adj3 teaching).ti,ab. (115)
- 94 (insight-oriented or insight oriented).ti,ab. (113)
- 95 ((coping or cope) adj2 (skill or skills or training or strategy or strategies)).ti,ab. (3535)

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- 96 realistic self-assessment.ti,ab. (1)
- 97 narcissistic.ti,ab. (1162)
- 98 (family adj2 characteristics).ti,ab. (907)
- 99 (family background or family origin).ti,ab. (649)
- 100NURSE PATIENT RELATIONSHIP/ (559)
- 101relationship enhancement.ti,ab. (53)
- 102reminiscence therap\$.ti,ab. (24)
- 103supervision.ti,ab. (6125)
- 104Relaxation Training/ (1793)
- 105(stress adj3 (manag\$ or prevent\$ or reduc\$ or debrief\$)).ti,ab. (7750)
- 106CRISIS INTERVENTION/ (1232)
- 107(crisis intervention adj3 (program\$ or procedure\$ or strategy or strategies)).ti,ab. (41)
- 108(post-incident or post incident).ti,ab. (15)
- 109Mental Stress/ (6804)
- 110psychological stress.ti,ab. (1663)
- 111VIOLENCE/ (8496)
- 112trauma reduction.ti,ab. (27)
- 113trauma specific.ti,ab. (70)
- 114(psychosocial training or psychosocial intervention\$).ti,ab. (822)
- 115PROBLEM SOLVING/ (4710)
- 116((problem or problems) adj3 solving).ti,ab. (5335)
- 117BREATHING EXERCISE/ or EXERCISE/ (50156)
- 118(exercise techniques or exercise therapy).ti,ab. (486)
- 119(relaxation technique\$ or relaxation therapy).ti,ab. (651)
- 120MILIEU THERAPY/ (181)
- 121Therapeutic Community/ (948)
- 122(milieu therapy or therapeutic communit\$).ti,ab. (980)
- 123multicomponent intervention\$.ti,ab. (43)
- 124focused intervention\$.ti,ab. (6)
- 125(prevent\$ adj2 violence).ti,ab. (415)
- 126retreats.ti,ab. (71)
- 127(reflection adj2 action).ti,ab. (57)
- 128BALINT GROUP/ (142)

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129balint.ti,ab. (278)
130reunions.ti,ab. (29)
131NONVERBAL COMMUNICATION/ (1201)
132INTERPERSONAL COMMUNICATION/ (12585)
133ANXIETY/ (29498)
134or/82-133 (162913)
135or/64-74 (14517)
136134 and 135 (2415)
137136 not (79 or 77) (2030)
138limit 137 to (english language and yr=1980-2004) (1638)
139from 138 keep 1-1638 (1638)
Sets 80 and 139 represent the search results.

CINAHL

1 Coping Behaviour/ or Social Support/ (9735)
2 ((social support or caregiver\$) adj2 support).ti,ab. (3544)
3 Self Help/ (0)
4 ((selfhelp or self help or support) adj2 (group or groups)).ti,ab. (1904)
5 (support adj2 (program\$ or strategy or strategies)).ti,ab. (1090)
6 COUNSELING/ (3144)
7 (communication adj3 (training or program\$ or skills)).ti,ab. (1210)
8 Interpersonal Communication/ (0)
9 ANXIETY/ (3457)
10 anxiety management.ti,ab. (40)
11 (interpersonal skills adj3 (training or program\$ or education)).ti,ab. (35)
12 (interactive adj3 teaching).ti,ab. (63)
13 (insight-oriented or insight oriented).ti,ab. (6)
14 ((coping or cope) adj2 (skill or skills or training or strategy or strategies)).ti,ab. (1869)
15 realistic self-assessment.ti,ab. (0)
16 narcissistic.ti,ab. (28)
17 (family adj2 characteristics).ti,ab. (208)
18 (family background or family origin).ti,ab. (122)

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- 19 NURSE PATIENT RELATIONSHIP/ (7453)
- 20 relationship enhancement.ti,ab. (4)
- 21 reminiscence therap\$.ti,ab. (46)
- 22 supervision.ti,ab. (2064)
- 23 Relaxation Training/ (0)
- 24 (stress adj3 (manag\$ or prevent\$ or reduc\$ or debrief\$)).ti,ab. (1878)
- 25 CRISIS INTERVENTION/ (722)
- 26 (crisis intervention adj3 (program\$ or procedure\$ or strategy or strategies)).ti,ab. (19)
- 27 (post-incident or post incident).ti,ab. (11)
- 28 Mental Stress/ (0)
- 29 psychological stress.ti,ab. (161)
- 30 VIOLENCE/ (2883)
- 31 trauma reduction.ti,ab. (2)
- 32 trauma specific.ti,ab. (11)
- 33 (psychosocial training or psychosocial intervention\$.ti,ab. (292)
- 34 PROBLEM SOLVING/ (1796)
- 35 ((problem or problems) adj3 solving).ti,ab. (1913)
- 36 BREATHING EXERCISE/ or EXERCISE/ (6324)
- 37 (exercise techniques or exercise therapy).ti,ab. (174)
- 38 (relaxation technique\$ or relaxation therapy).ti,ab. (228)
- 39 MILIEU THERAPY/ (240)
- 40 Therapeutic Community/ (240)
- 41 (milieu therapy or therapeutic communit\$.ti,ab. (93)
- 42 multicomponent intervention\$.ti,ab. (25)
- 43 focussed intervention\$.ti,ab. (0)
- 44 (prevent\$ adj2 violence).ti,ab. (363)
- 45 retreats.ti,ab. (31)
- 46 (reflection adj2 action).ti,ab. (79)
- 47 BALINT GROUP/ (0)
- 48 balint.ti,ab. (12)
- 49 reunions.ti,ab. (8)
- 50 NONVERBAL COMMUNICATION/ (430)
- 51 INTERPERSONAL COMMUNICATION/ (0)

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- 52 ANXIETY/ (3457)
- 53 (leadership adj3 (training or program\$ or skills)).ti,ab. (484)
- 54 ((peer or colleague\$ or collegial or supervisor\$) adj3 support).ti,ab. (548)
- 55 (staff adj3 (consultation or consulting)).ti,ab. (57)
- 56 (staff adj3 (group or groups)).ti,ab. (407)
- 57 (employee assistance or eap\$).ti,ab. (123)
- 58 (workplace adj3 (counselling or counselling)).ti,ab. (12)
- 59 ((team-based or team) adj3 (education or learning)).ti,ab. (159)
- 60 (workload adj3 manag\$).ti,ab. (69)
- 61 time management.ti,ab. (248)
- 62 (staff adj3 (growth or development or satisfaction)).ti,ab. (1455)
- 63 ((job or work) adj3 satisfaction).ti,ab. (1654)
- 64 continuing professional development.ti,ab. (421)
- 65 (mentor or mentors or mentoring).ti,ab. (1310)
- 66 administrative procedure\$.ti,ab. (15)
- 67 (organizational procedure\$ or organisational procedure\$).ti,ab. (4)
- 68 (critical incident\$ adj3 (procedure\$ or program\$ or strategy or strategies)).ti,ab. (11)
- 69 (assault\$ adj3 (procedure\$ or program\$ or strategy or strategies)).ti,ab. (41)
- 70 (retention or retaining).ti,ab. (3102)
- 71 (job plans or job planning or work plans or work planning or work redesign).ti,ab. (136)
- 72 (flexible hours or flexible working or flexitime).ti,ab. (61)
- 73 (organisational intervention\$ or organizational intervention\$).ti,ab. (16)
- 74 (worker\$ adj3 empower\$).ti,ab. (25)
- 75 ((combat\$ or prevent\$ or reduc\$) adj3 burnout).ti,ab. (132)
- 76 targeting resource\$.ti,ab. (17)
- 77 reward\$.ti,ab. (1679)
- 78 employee incentive plan\$.ti,ab. (0)
- 79 (motivation\$ adj3 intervention\$).ti,ab. (75)
- 80 ((ward or wards) adj3 redesign\$).ti,ab. (3)
- 81 ((environment\$ or workplace) adj3 improv\$).ti,ab. (283)
- 82 (atmosphere adj3 workplace).ti,ab. (0)

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- 83 inservice training.ti,ab. (51)
- 84 staff turnover.ti,ab. (96)
- 85 high turnover.ti,ab. (61)
- 86 grievance\$.ti,ab. (129)
- 87 occupational health service\$.ti,ab. (91)
- 88 interdisciplinary communication.ti,ab. (23)
- 89 work capacity evaluation.ti,ab. (4)
- 90 (work adj3 schedul\$.ti,ab. (142)
- 91 (simplif\$ adj3 (work or working or task or tasks)).ti,ab. (36)
- 92 leadership/ or workload/ or workload measurement/ (5934)
- 93 teamwork/ or time management/ or job satisfaction/ (6373)
- 94 education, continuing/ or professional development/ (4728)
- 95 refresher courses/ or job experience/ or job characteristics/ or work experiences/ (2969)
- 96 peer counselling/ or peer assistance programs/ or staff privileges/ (519)
- 97 staff development/ or professional-patient relations/ (11458)
- 98 employee assistance programs/ or employee discipline/ or employee grievances/ (912)
- 99 employer employee relations/ or occupational health/ or occupational health services/ (8199)
- 100employee incentive programs/ or personnel loyalty/ or employee rights/ (1350)
- 101“personnel staffing and scheduling”/ (4863)
- 102personnel turnover/ or workplace violence/ or team building/ (1891)
- 103conflict management/ or mentorship/ or critical incident stress/ or patient assault/ (3528)
- 104burnout,professional/ or reward/ or personnel retention/ (3804)
- 105occupational related injuries/ or stress, occupational/ or work environment/ (9184)
- 106workload measurement/ or work redesign/ or “quality of working life”/ (2760)
- 107flexible scheduling/ or shiftwork/ (646)
- 108“task performance and analysis”/ (942)
- 109or/53-108 (63783)
- 110exp mental health organizations/ or exp mental health care/ (40)
- 111exp hospitals, psychiatric/ (958)

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- 112psychiatric emergencies/ (258)
- 113exp psychiatric service/ or exp psychiatric units/ (609)
- 114exp mental health personnel/ (1065)
- 115exp psychiatric nursing/ (7675)
- 116(psychiatric hospital\$ or psychiatric unit\$ or psychiatric center\$ or psychiatric centre\$ or psychiatric service\$).ti,ab. (1165)
- 117(mental hospital\$ or mental health unit\$ or mental health service\$).ti,ab. (1560)
- 118psychiatric nurse\$.ti,ab. (987)
- 119(psychiatric staff or psychiatric personnel or psychiatric worker\$).ti,ab. (26)
- 120(psychiatrist\$ or mental health team\$ or mental health professional\$).ti,ab. (1070)
- 121(mental health staff or mental health workforce or mental health workers or mental health nurs\$ or psychiatric workforce).ti,ab. (1883)
- 122(psychiatric nursing or psychiatric aide\$ or mental health leaders or mental health case managers).ti,ab. (1077)
- 123(mental health adj3 clinician\$).ti,ab. (58)
- 124(psychotherapist\$ or clinical psychologist\$).ti,ab. (208)
- 125(mental health adj3 (doctor\$ or assistants or support workers)).ti,ab. (23)
- 126(psychiatric adj3 (doctor\$ or assistants or support workers)).ti,ab. (19)
- 127or/110-126 (13037)
- 128109 and 127 (1637)
- 129editorial.pt. (44507)
- 130128 not 129 (1626)
- 131limit 130 to (english and yr=1980-2003) (1603)
- 132from 131 keep 1-1603 (1603)
- 133caregiver support/ or communication skills/ or communication skills training/ (2009)
- 134((social support or caregiver\$) adj2 support).ti,ab. (3544)
- 135interpersonal relations/ (4301)
- 136((selfhelp or self help or support) adj2 (group or groups)).ti,ab. (1904)
- 137(support adj2 (program\$ or strategy or strategies)).ti,ab. (1090)
- 138COUNSELING/ (3144)

Systematic Review of Staff Morale in Inpatient Units in Mental Health Settings

- 139(communication adj3 (training or program\$ or skills)).ti,ab. (1210)
- 140interprofessional relations/ or life history review/ (3639)
- 141ANXIETY/ (3457)
- 142anxiety management.ti,ab. (40)
- 143(interpersonal skills adj3 (training or program\$ or education)).ti,ab. (35)
- 144(interactive adj3 teaching).ti,ab. (63)
- 145(insight-oriented or insight oriented).ti,ab. (6)
- 146((coping or cope) adj2 (skill or skills or training or strategy or strategies)).ti,ab. (1869)
- 147realistic self-assessment.ti,ab. (0)
- 148narcissistic.ti,ab. (28)
- 149(family adj2 characteristics).ti,ab. (208)
- 150(family background or family origin).ti,ab. (122)
- 151NURSE PATIENT RELATIONSHIP/ or clinical supervision, mental health/ (7513)
- 152relationship enhancement.ti,ab. (4)
- 153reminiscence therap\$.ti,ab. (46)
- 154supervision.ti,ab. (2064)
- 155Relaxation Techniques/ or "supervisors and supervision"/ (3400)
- 156(stress adj3 (manag\$ or prevent\$ or reduc\$ or debrief\$)).ti,ab. (1878)
- 157CRISIS INTERVENTION/ or exp organizational culture/ (3566)
- 158(crisis intervention adj3 (program\$ or procedure\$ or strategy or strategies)).ti,ab. (19)
- 159(post-incident or post incident).ti,ab. (11)
- 160stress,psychological/ or stress, occupational/ (8256)
- 161psychological stress.ti,ab. (161)
- 162VIOLENCE/ or critical incident stress/ (3106)
- 163trauma reduction.ti,ab. (2)
- 164trauma specific.ti,ab. (11)
- 165(psychosocial training or psychosocial intervention\$).ti,ab. (292)
- 166PROBLEM SOLVING/ or incident reports/ (2506)
- 167((problem or problems) adj3 solving).ti,ab. (1913)
- 168BREATHING EXERCISES/ or EXERCISE/ or relaxation techniques/ or reflection/ or reunions/ (8428)

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169(exercise techniques or exercise therapy).ti,ab. (174)
170(relaxation technique\$ or relaxation therapy).ti,ab. (228)
171SOCIOENVIRONMENTAL THERAPY/ (240)
172(milieu therapy or therapeutic communit\$).ti,ab. (93)
173multicomponent intervention\$.ti,ab. (25)
174focussed intervention\$.ti,ab. (0)
175(prevent\$ adj2 violence).ti,ab. (363)
176retreats.ti,ab. (31)
177(reflection adj2 action).ti,ab. (79)
178balint.ti,ab. (12)
179reunions.ti,ab. (8)
180NONVERBAL COMMUNICATION/ (430)
181or/133-180 (59078)
182or/114-115,118-126 (10296)
183181 and 182 (2226)
184183 not (129 or 128) (1652)
185limit 184 to (english and yr=1980-2003) (1611)
186from 185 keep 1-1611 (1611)
Sets 132 and 186 are the results sets.

PsycINFO

1 explode "Leadership"
2 "Employee-Absenteeism" in DE
3 "Employee-Assistance-Programs" in DE
4 "Employee-Attitudes" in DE
5 "Employee-Benefits" in DE
6 "Employee-Efficiency" in DE
7 "Employee-Health-Insurance" in DE
8 "Employee-Interaction" in DE
9 "Employee-Leave-Benefits" in DE
10 "Employee-Motivation" in DE
11 "Employee-Pension-Plans" in DE
12 "Employee-Productivity" in DE
13 "Employee-Skills" in DE
14 "Employee-Turnover" in DE

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- 15 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14
- 16 "Supervisor-Employee-Interaction" in DE
- 17 "Employer-Attitudes" in DE
- 18 "Empowerment-" in DE
- 19 "Noise-Levels-Work-Areas" in DE
- 20 "Job-Analysis" in DE
- 21 "Job-Characteristics" in DE
- 22 "Job-Enrichment" in DE
- 23 "Family-Work-Relationship" in DE
- 24 "Job-Involvement" in DE
- 25 "Job-Knowledge" in DE
- 26 "Job-Performance" in DE
- 27 "Job-Satisfaction" in DE
- 28 "Job-Security" in DE
- 29 "On-the-Job-Training" in DE
- 30 #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29
- 31 "Occupational-Stress" in DE
- 32 "Organizational-Behaviour" in DE
- 33 "Organizational-Change" in DE
- 34 "Organizational-Characteristics" in DE
- 35 "Organizational-Climate" in DE
- 36 "Organizational-Commitment" in DE
- 37 "Organizational-Crises" in DE
- 38 "Organizational-Development" in DE
- 39 "Organizational-Effectiveness" in DE
- 40 "Organizational-Merger" in DE
- 41 "Organizational-Objectives" in DE
- 42 "Organizational-Structure" in DE
- 43 #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40 or #41 or #42
- 44 "Working-Conditions" in DE
- 45 "Working-Space" in DE
- 46 "Quality-of-Work-Life" in DE

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- 47 "Work-Scheduling" in DE
- 48 "Self-Managing-Work-Teams" in DE
- 49 "Work-Attitudes-Toward" in DE
- 50 "Work-Load" in DE
- 51 "Work-Related-Illnesses" in DE
- 52 "Work-Rest-Cycles" in DE
- 53 "Work-Teams" in DE
- 54 "Work-Week-Length" in DE
- 55 #44 or #45 or #46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54
- 56 "Workday-Shifts" in DE
- 57 "Time-Management" in DE
- 58 "Time-On-Task" in DE
- 59 explode "Continuing-Education"
- 60 "Professional-Development" in DE
- 61 "Professional-Supervision" in DE
- 62 "Mentor-" in DE
- 63 "Organizational-Behaviour" in DE
- 64 "Organizational-Change" in DE
- 65 #56 or #57 or #58 or #59 or #60 or #61 or #62 or #63 or #64
- 66 "Patient-Violence" in DE
- 67 "Personnel-Promotion" in DE
- 68 "Occupational-Status" in DE
- 69 explode "Rewards"
- 70 explode "Incentives"
- 71 "Employee-Motivation" in DE
- 72 "Hospital-Environment" in DE
- 73 "Environmental-Planning" in DE
- 74 "Environmental-Stress" in DE
- 75 "Occupational-Safety" in DE
- 76 #66 or #67 or #68 or #69 or #70 or #71 or #72 or #73 or #74 or #75
- 77 "Inservice-Training" in DE
- 78 "Occupational-Attitudes" in DE
- 79 "Occupational-Neurosis" in DE

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- 80 "Occupational-Success" in DE
- 81 "Occupational-Status" in DE
- 82 "Task-Complexity" in DE
- 83 "Task-Analysis" in DE
- 84 #77 or #78 or #79 or #80 or #81 or #82 or #83
- 85 "Social-Support-Networks" in DE
- 86 "Self-Help-Techniques" in DE
- 87 explode "Counselling"
- 88 "Communication-Skills" in DE
- 89 "Communication-Skills-Training" in DE
- 90 "Anxiety-Management" in DE
- 91 "Social-Skills-Training" in DE
- 92 "Insight-Therapy" in DE
- 93 #85 or #86 or #87 or #88 or #89 or #90 or #91 or #92
- 94 "Coping-Behaviour" in DE
- 95 "Family-Background" in DE
- 96 "Relationship-Satisfaction" in DE
- 97 "Relationship-Therapy" in DE
- 98 "Reminiscence-" in DE
- 99 explode "Stress-Management"
- 100 #94 or #95 or #96 or #97 or #98 or #99
- 101 "Crisis-Intervention" in DE
- 102 "Crisis-Intervention-Services" in DE
- 103 "Emotional-Trauma" in DE
- 104 "Psychosocial-Readjustment" in DE
- 105 explode "Problem-Solving"
- 106 explode "Relaxation-Therapy"
- 107 explode "Milieu-Therapy"
- 108 explode "Therapeutic-Community"
- 109 "Nonverbal-Communication" in DE
- 110 explode "Interpersonal-Communication"
- 111 #101 or #102 or #103 or #104 or #105 or #106 or #107 or #108 or #109 or #110
- 112 #15 or #30 or #43 or #55 or #65 or #76 or #84 or #93 or #100 or #111

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113explode "Mental-Health-Personnel"
114explode "Psychiatric-Hospital-Staff"
115explode "Psychologists"
116#113 or #114 or #115
117explode "Paramedical-Personnel"
118"Psychiatric-Clinics" in DE
119"Psychiatric-Hospitals" in DE
120"Psychiatric-Units" in DE
121"Community-Mental-Health-Centers" in DE
122explode "Community-Mental-Health-Services"
123explode "Mental-Health-Services"
124#118 or #119 or #120 or #121 or #122 or #123
125#117 and #124
126#116 or #125
127#112 and #126
128#127 and (PY = 1980-2004)
129#128 and (LA = "ENGLISH")
130AUTOBIOGRAPHY-BIOGRAPHY in PT
131AUTOBIOGRAPHY-PERSONAL-ACCOUNT in PT
132BIOGRAPHY in PT
133CLASSROOM-MATERIAL in PT
134COMMENT in PT
135DICTIONARY-GLOSSARY in PT
136DIRECTORY in PT
137EDITORIAL in PT
138FICTION-CREATIVE-WORK in PT
139JOURNAL-COLUMN-OPINION in PT
140JOURNAL-EDITORIAL in PT
141OBITUARY in PT
142REFERENCE-MATERIAL in PT
143STUDY-CURRICULUM-RESOURCE-GUIDE in PT
144WORKBOOK in PT
145#130 or #131 or #132 or #133 or #134 or #135 or #136 or #137 or
#138 or #139 or #140 or #141 or #142 or #143 or #144
146#129 not #145

Systematic Review of Staff Morale in Inpatient Units in Mental Health Settings

Set 146 is the search result.

Sociological Extracts

- #1 "Mental-Hospitals" in DE(502 records)
- #2 "Nurses-" in DE(826 records)
- #3 #1 and #2(16 records)
- #4 ("Psychiatrists-" in DE) or ("Psychiatry-" in DE)(566 records)
- #5 explode "Psychologists-" in DE(230 records)
- #6 "Physicians-" in DE(1616 records)
- #7 ("Mental-Health" in DE) or ("Mental-Health-Services" in DE)(4282 records)
- #8 #2 or #6(2340 records)
- #9 #8 and (#7 or #1)(50 records)
- #10 #4 or #5 or #9(806 records)
- #11(#4 or #5 or #9) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(711 records)
- #12((mental health staff or mental health workforce or mental health workers or mental health nurs* or psychiatric workforce) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(117 records)
- #13((psychiatric near2 (nurs* or staff or personnel or worker* or aide* or doctor* or assistant*)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(105 records)
- #14((psychiatrist* or psychotherapist* or psychologist*) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(1804 records)
- #15((mental health near2 (team* or professional* or staff or workforce or workers or nurs* or leaders or managers or clinicians)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(582 records)
- #16((mental health near2 (doctor* or assistants)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(1 records)
- #17((((mental health near2 (doctor* or assistants)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or (((mental health near2 (team* or professional* or staff or workforce or workers or nurs* or leaders or managers or clinicians)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or (((psychiatrist* or psychotherapist* or psychologist*) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or (((psychiatric near2 (nurs* or staff or personnel or worker* or aide* or doctor* or assistant*)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or (((mental health staff or mental health workforce or mental health workers or mental health nurs* or

Systematic Review of Staff Morale in Inpatient Units in Mental Health Settings

- psychiatric workforce) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003))) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(2401 records)
- #18(((((((mental health near2 (doctor* or assistants)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or (((mental health near2 (team* or professional* or staff or workforce or workers or nurs* or leaders or managers or clinicians)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or (((psychiatrist* or psychotherapist* or psychologist*) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or (((psychiatric near2 (nurs* or staff or personnel or worker* or aide* or doctor* or assistant*)) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or (((mental health staff or mental health workforce or mental health workers or mental health nurs* or psychiatric workforce) in ti,ab) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003))) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)) or ((#4 or #5 or #9) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003))) and (LA:SO = ENGLISH) and (PY:SO = 1980-2003)(2774 records)
- #19("Communication-" in DE) or ("Interpersonal-Communication" in DE) or ("Nonverbal-Communication" in DE) or ("Organizational-Communication" in DE) or ("Verbal-Communication" in DE)(4196 records)
- #20"Teamwork-" in DE(364 records)
- #21"Peer-Influence" in DE(709 records)
- #22("Conflict-" in DE) or ("Conflict-Resolution" in DE) or ("Intergroup-Relations" in DE) or ("Interpersonal-Conflict" in DE) or ("Role-Conflict" in DE)(4736 records)
- #23"Shift-Work" in DE(39 records)
- #24"Anxiety-" in DE(655 records)
- #25"Coping-" in DE(2263 records)
- #26"Narcissism-" in DE(84 records)
- #27"Social-Background" in DE(1270 records)
- #28"Home-Environment" in DE(632 records)
- #29"Practitioner-Patient-Relationship" in DE(1660 records)
- #30"Family-Work-Relationship" in DE(2370 records)
- #31 "Supervision-" in DE(338 records)
- #32("Management-Styles" in DE) or ("Time-Utilization" in DE)(1753 records)
- #33"Crisis-Intervention" in DE(177 records)

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- #34 ("Group-Decision-Making" in DE) or ("Group-Dynamics" in DE)(1409 records)
- #35 "Problem-Solving" in DE(406 records)
- #36 "Leadership-" in DE(1588 records)
- #37 ("Absenteeism-" in DE) or ("Benefits-" in DE) or ("Employee-Assistance-Programs" in DE) or ("Empowerment-" in DE) or ("Job-Satisfaction" in DE) or ("Job-Training" in DE) or ("Labor-Turnover" in DE) or ("Worker-Ownership" in DE)(4739 records)
- #38 ("Work-Environment" in DE) or ("Working-Hours" in DE) or ("Workplaces-" in DE)(2848 records)
- #39 ("Quality-of-Working-Life" in DE) or ("Worker-Participation" in DE)(956 records)
- #40 "Part-Time-Employment" in DE(340 records)
- #41 ("Occupational-Status" in DE) or ("Professional-Socialization" in DE) or ("Professional-Training" in DE)(2520 records)
- #42 "Mentoring-" in DE(126 records)
- #43 ("Organizational-Behaviour" in DE) or ("Organizational-Change" in DE) or ("Organizational-Commitment" in DE) or ("Organizational-Culture" in DE) or ("Organizational-Development" in DE) or ("Organizational-Effectiveness" in DE) or ("Organizational-Socialization" in DE) or ("Organizational-Structure" in DE)(7893 records)
- #44 ("Work-Attitudes" in DE) or ("Work-Experience" in DE) or ("Work-Organization" in DE)(2517 records)
- #45 "Social-Support" in DE(3314 records)
- #46 "Support-Networks" in DE(534 records)
- #47 "Self-Help-Groups" in DE(799 records)
- #48 "Assault-" in DE(162 records)
- #49 "Violence-" in DE(3384 records)
- #50 "Retention-" in DE(16 records)
- #51 ("Job-Change" in DE) or ("Job-Characteristics" in DE) or ("Job-Performance" in DE) or ("Job-Requirements" in DE)(1254 records)
- #52 "Promotion-Occupational" in DE(271 records)
- #53 "Occupational-Stress" in DE(1157 records)
- #54 ("Incentives-" in DE) or ("Motivation-" in DE) or ("Recognition-Achievement" in DE) or ("Rewards-" in DE)(1478 records)
- #55 "Grievances-" in DE(109 records)
- #56 "Occupational-Safety-and-Health" in DE(800 records)

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- #57("Occupational-Safety-and-Health" in DE) or ("Grievances-" in DE) or ("Incentives-" in DE) or ("Motivation-" in DE) or ("Recognition-Achievement" in DE) or ("Rewards-" in DE)) or ("Occupational-Stress" in DE) or ("Promotion-Occupational" in DE) or ("Violence-" in DE) or ("Job-Change" in DE) or ("Job-Characteristics" in DE) or ("Job-Performance" in DE) or ("Job-Requirements" in DE)) or ("Assault-" in DE) or ("Retention-" in DE) or ("Self-Help-Groups" in DE) or ("Support-Networks" in DE) or ("Social-Support" in DE) or ("Work-Attitudes" in DE) or ("Work-Experience" in DE) or ("Work-Organization" in DE))(14739 records)
- #58("Mentoring-" in DE) or ("Quality-of-Working-Life" in DE) or ("Worker-Participation" in DE)) or ("Occupational-Status" in DE) or ("Professional-Socialization" in DE) or ("Professional-Training" in DE)) or ("Work-Environment" in DE) or ("Working-Hours" in DE) or ("Workplaces-" in DE)) or ("Part-Time-Employment" in DE) or ("Absenteeism-" in DE) or ("Benefits-" in DE) or ("Employee-Assistance-Programs" in DE) or ("Empowerment-" in DE) or ("Job-Satisfaction" in DE) or ("Job-Training" in DE) or ("Labor-Turnover" in DE) or ("Worker-Ownership" in DE)) or ("Leadership-" in DE) or ("Problem-Solving" in DE) or ("Group-Decision-Making" in DE) or ("Group-Dynamics" in DE)) or ("Crisis-Intervention" in DE) or ("Management-Styles" in DE) or ("Time-Utilization" in DE)) or ("Supervision-" in DE) or ("Family-Work-Relationship" in DE) or ("Organizational-Behaviour" in DE) or ("Organizational-Change" in DE) or ("Organizational-Commitment" in DE) or ("Organizational-Culture" in DE) or ("Organizational-Development" in DE) or ("Organizational-Effectiveness" in DE) or ("Organizational-Socialization" in DE) or ("Organizational-Structure" in DE))(23917 records)
- #59("Practitioner-Patient-Relationship" in DE) or ("Home-Environment" in DE) or ("Family-Work-Relationship" in DE) or ("Social-Background" in DE) or ("Narcissism-" in DE) or ("Coping-" in DE) or ("Anxiety-" in DE) or ("Shift-Work" in DE) or ("Conflict-" in DE) or ("Conflict-Resolution" in DE) or ("Intergroup-Relations" in DE) or ("Interpersonal-Conflict" in DE) or ("Role-Conflict" in DE)) or ("Communication-" in DE) or ("Interpersonal-Communication" in DE) or ("Nonverbal-Communication" in DE) or ("Organizational-Communication" in DE) or ("Verbal-Communication" in DE)) or ("Peer-Influence" in DE) or ("Teamwork-" in DE))(17962 records)
- #60#18 and #59(212 records)
- #61#18 and #58(161 records)
- #62#18 and #57(147 records)
- #63(#18 and #57) or (#18 and #58) or (#18 and #59)(446 records)

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HMIC

- #1 psychiatric nurses(966 records)
- #2 Community-psychiatric-nurses in DE(299 records)
- #3 (PSYCHIATRIC-NURSES in DE) or (PSYCHIATRIC-NURSING in DE) or (PSYCHIATRISTS in DE) or (PSYCHIATRISTS- in DE) or (PSYCHIATRY in DE) or (PSYCHIATRY- in DE)(1836 records)
- #4 (COMMUNITY-MENTAL-HEALTH-TEAM in DE) or (COMMUNITY-MENTAL-HEALTH-TEAMS in DE) or (COMMUNITY-PSYCHIATRIC-NURSES in DE) or (COMMUNITY-PSYCHIATRIC-NURSING in DE) or (COMMUNITY-PSYCHIATRY in DE)(716 records)
- #5 MENTAL-HEALTH-WORKERS in DE(3 records)
- #6 (MENTAL-HEALTH-WORKERS in DE) or ((COMMUNITY-MENTAL-HEALTH-TEAM in DE) or (COMMUNITY-MENTAL-HEALTH-TEAMS in DE) or (COMMUNITY-PSYCHIATRIC-NURSES in DE) or (COMMUNITY-PSYCHIATRIC-NURSING in DE) or (COMMUNITY-PSYCHIATRY in DE)) or ((PSYCHIATRIC-NURSES in DE) or (PSYCHIATRIC-NURSING in DE) or (PSYCHIATRISTS in DE) or (PSYCHIATRISTS- in DE) or (PSYCHIATRY in DE) or (PSYCHIATRY- in DE)) or (Community-psychiatric-nurses in DE) or (psychiatric nurses)(2639 records)
- #7 psychiatric near2 ((nurs* or staff or personnel or worker* or aide* or doctor* or assistant*) in ti,ab)(1024 records)
- #8 (psychiatrist* or psychotherapist* or psychologist*) in ti,ab(1277 records)
- #9 mental health near2 ((team* or professional* or staff or workforce or workers or nurs* or leaders or managers or clinicians) in ti,ab)(1244 records)
- #10mental health near2 ((doctor* or assistant*) in ti,ab)(4 records)
- #11(mental health near2 ((doctor* or assistant*) in ti,ab)) or (mental health near2 ((team* or professional* or staff or workforce or workers or nurs* or leaders or managers or clinicians) in ti,ab)) or ((psychiatrist* or psychotherapist* or psychologist*) in ti,ab) or (psychiatric near2 ((nurs* or staff or personnel or worker* or aide* or doctor* or assistant*) in ti,ab)) or ((MENTAL-HEALTH-WORKERS in DE) or ((COMMUNITY-MENTAL-HEALTH-TEAM in DE) or (COMMUNITY-MENTAL-HEALTH-TEAMS in DE) or (COMMUNITY-PSYCHIATRIC-NURSES in DE) or (COMMUNITY-PSYCHIATRIC-NURSING in DE) or (COMMUNITY-PSYCHIATRY in DE)) or ((PSYCHIATRIC-NURSES in DE) or (PSYCHIATRIC-NURSING in DE) or (PSYCHIATRISTS in DE) or (PSYCHIATRISTS- in DE) or (PSYCHIATRY in DE) or (PSYCHIATRY- in DE)) or (Community-psychiatric-nurses in DE) or (psychiatric nurses))(4350 records)

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- #12((mental health near2 ((doctor* or assistant*) in ti,ab)) or (mental health near2 ((team* or professional* or staff or workforce or workers or nurs* or leaders or managers or clinicians) in ti,ab)) or ((psychiatrist* or psychotherapist* or psychologist*) in ti,ab) or (psychiatric near2 ((nurs* or staff or personnel or worker* or aide* or doctor* or assistant*) in ti,ab)) or ((MENTAL-HEALTH-WORKERS in DE) or ((COMMUNITY-MENTAL-HEALTH-TEAM in DE) or (COMMUNITY-MENTAL-HEALTH-TEAMS in DE) or (COMMUNITY-PSYCHIATRIC-NURSES in DE) or (COMMUNITY-PSYCHIATRIC-NURSING in DE) or (COMMUNITY-PSYCHIATRY in DE)) or ((PSYCHIATRIC-NURSES in DE) or (PSYCHIATRIC-NURSING in DE) or (PSYCHIATRISTS in DE) or (PSYCHIATRISTS- in DE) or (PSYCHIATRY in DE) or (PSYCHIATRY- in DE)) or (Community-psychiatric-nurses in DE) or (psychiatric nurses))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(4259 records)
- #13((LEADERSHIP in DE) or (LEADERSHIP- in DE) or (LEADERSHIP-QUALITIES in DE) or (LEADERSHIP-SKILLS in DE) or (LEADERSHIP-STYLE in DE) or (LEADERSHIP-STYLES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(1325 records)
- #14((PEER-GROUP-RELATIONS in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(39 records)
- #15((SUPERVISORS in DE) or (SUPERVISORS- in DE) or (SUPERVISORY-MANAGEMENT in DE) or (SUPERVISORY-SKILLS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(81 records)
- #16 ((STAFF-CONSULTATION in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(42 records)
- #17((EMPLOYEE-ASSISTANCE-PROGRAMMES in DE) or (EMPLOYEE-BENEFITS in DE) or (EMPLOYEE-MOTIVATION in DE) or (EMPLOYEE-PARTICIPATION in DE) or (EMPLOYEE-RELATIONS in DE) or (EMPLOYEE-RIGHTS in DE) or (EMPLOYEE-STRESS in DE) or (EMPLOYER-CONDUCT in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(110 records)
- #18((WORKPLACE-BEHAVIOUR in DE) or (WORKPLACE-HARASSMENT in DE) or (WORKPLACE-NURSERIES in DE) or (WORKPLACE-STANDARDS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(53 records)
- #19((TEAM-BUILDING in DE) or (TEAM-BUILDING-TEAMS in DE) or (TEAM-DEVELOPMENT in DE) or (TEAM-LEADERS in DE) or (TEAM-MANAGEMENT in DE) or (TEAM-MEMBERS in DE) or (TEAM-NURSING in DE) or (TEAM-ROLES in DE) or (TEAM-SKILLS in DE) or (TEAM-TEACHING in DE) or (TEAM-WORK in DE) or (TEAM-WORKING in DE) or (TEAMBUILDING in DE) or (TEAMBUILDING- in DE) or (TEAMWORK in

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- DE) or (TEAMWORK- in DE) or (TEAMWORK-SKILLS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(936 records)
- #20((WORKLOAD in DE) or (WORKLOAD- in DE) or (WORKLOAD-ANALYSIS in DE) or (WORKLOAD-MANAGEMENT in DE) or (WORKLOAD-MEASUREMENT in DE) or (WORKLOADS in DE) or (WORKLOADS- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(951 records)
- #21((TIME-MANAGEMENT in DE) or (TIME-OFF in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(131 records)
- #22((STAFF-ACCOMMODATION in DE) or (STAFF-ALLOCATION in DE) or (STAFF-APPEALS-PROCEDURES in DE) or (STAFF-APPRAISAL in DE) or (STAFF-ASSESSMENT in DE) or (STAFF-ATTENDANCE in DE) or (STAFF-ATTITUDES in DE) or (STAFF-CATERING in DE) or (STAFF-CHANGING-ROOMS in DE) or (STAFF-CLOAKROOMS in DE) or (STAFF-COMPLAINTS in DE) or (STAFF-COMPLAINTS-PROCEDURES in DE) or (STAFF-COUNSELLING in DE) or (STAFF-COUNSELLING-SERVICES in DE) or (STAFF-DEVELOPMENT in DE) or (STAFF-DEVELOPMENT-FUNCTION in DE) or (STAFF-DEVELOPMENT-PROGRAMMES in DE) or (STAFF-DINING-FACILITIES in DE) or (STAFF-DINING-ROOMS in DE) or (STAFF-DISCIPLINE in DE) or (STAFF-DISTRIBUTION in DE) or (STAFF-EDUCATION in DE) or (STAFF-EXCHANGES in DE) or (STAFF-EXPECTATIONS in DE) or (STAFF-HEALTH-AND-SAFETY in DE) or (STAFF-INCENTIVES in DE) or (STAFF-INDUCTION in DE) or (STAFF-INVOLVEMENT in DE) or (STAFF-LOCATION-AND-CALL-SYSTEMS in DE) or (STAFF-MEETINGS in DE) or (STAFF-MORALE in DE) or (STAFF-ORIENTATION in DE) or (STAFF-PERSONAL-LIFE in DE) or (STAFF-PROCEDURE-MANUALS in DE) or (STAFF-PROTECTION in DE) or (STAFF-RATIOS in DE) or (STAFF-RECREATIONAL-FACILITIES in DE) or (STAFF-RELATIONS in DE) or (STAFF-RELOCATION in DE) or (STAFF-REORGANISATION in DE) or (STAFF-REPORTING in DE) or (STAFF-REPRESENTATIVES in DE) or (STAFF-RESIDENTIAL-ACCOMMODATION in DE) or (STAFF-RESIGNATION in DE) or (STAFF-RETAINERS in DE) or (STAFF-RETENTION in DE) or (STAFF-RIGHTS in DE) or (STAFF-ROOMS in DE) or (STAFF-ROTAS in DE) or (STAFF-RULES in DE) or (STAFF-SUGGESTION-SCHEMES in DE) or (STAFF-SUPERVISION in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(2289 records)
- #23((STAFF-SUPPORT in DE) or (STAFF-SUPPORT-GROUPS in DE) or (STAFF-SUPPORT-SYSTEMS in DE) or (STAFF-TRAINING in DE) or (STAFF-TRANSFER in DE) or (STAFF-TRANSFERS in DE) or (STAFF-TRANSPORT-SERVICES in DE) or (STAFF-TRAVEL-PAYMENTS in DE) or (STAFF-TURNOVER in DE) or (STAFF-VIEWS in DE) or (STAFF-WASHROOMS in DE) or (STAFF-WELFARE in DE) or (STAFF-WORKING-LIFE in DE) or (STAFFING-LEVELS in DE) or (STAFFING-MIX in DE) or

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- (STAFFING-MODELS in DE) or (STAFFING-POLICIES in DE) or (STAFFING-STRUCTURE in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(1151 records)
- #24((JOB-SATISFACTION in DE) or (JOB-SHARING in DE) or (JOB-SHARING-SCHEMES in DE) or (JOB-SPECIFICATION in DE) or (JOB-TENURE in DE) or (JOB-TRANSFER in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(896 records)
- #25((MENTORS in DE) or (MENTORS- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(12 records)
- #26((ADMINISTRATIVE-PROBLEMS in DE) or (ADMINISTRATIVE-STRUCTURE in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(40 records)
- #27((ORGANISATION-CHANGE in DE) or (ORGANISATION-CULTURE in DE) or (ORGANISATION-DEVELOPMENT in DE) or (ORGANISATION-STRUCTURE in DE) or (ORGANISATIONAL-ANALYSIS in DE) or (ORGANISATIONAL-AUDIT in DE) or (ORGANISATIONAL-BEHAVIOUR in DE) or (ORGANISATIONAL-CHANGE in DE) or (ORGANISATIONAL-CULTURE in DE) or (ORGANISATIONAL-DESIGN in DE) or (ORGANISATIONAL-DEVELOPMENT in DE) or (ORGANISATIONAL-EFFECTIVENESS in DE) or (ORGANISATIONAL-INFRASTRUCTURE in DE) or (ORGANISATIONAL-MANAGEMENT in DE) or (ORGANISATIONAL-PRACTICE in DE) or (ORGANISATIONAL-STANDARDS in DE) or (ORGANISATIONAL-STRATEGIES in DE) or (ORGANISATIONAL-STRATEGY in DE) or (ORGANISATIONAL-STRUCTURE in DE) or (ORGANISATIONAL-STRUCTURES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(2566 records)
- #28((ASSAULT in DE) or (ASSAULT- in DE) or (ASSAULTS in DE) or (ASSAULTS- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(60 records)
- #29((FLEXIBLE-PLANNING in DE) or (FLEXIBLE-RESOURCE-MANAGEMENT in DE) or (FLEXIBLE-ROSTERING in DE) or (FLEXIBLE-WORKING in DE) or (FLEXIBLE-WORKING-AGREEMENTS in DE) or (FLEXIBLE-WORKING-ARRANGEMENTS in DE) or (FLEXIBLE-WORKING-HOURS in DE) or (FLEXITIME in DE) or (FLEXITIME- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(196 records)
- #30((EMPOWERMENT in DE) or (EMPOWERMENT- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(731 records)
- #31((BURNOUT in DE) or (BURNOUT- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(7 records)
- #32((INCENTIVES in DE) or (INCENTIVES- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(241 records)

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- #33((MOTIVATION in DE) or (MOTIVATION- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(425 records)
- #34(WARD-DESIGN in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(12 records)
- #35((ENVIRONMENTAL-DESIGN in DE) or (ENVIRONMENTAL-FACTORS in DE) or (ENVIRONMENTAL-HEALTH in DE) or (ENVIRONMENTAL-HYGIENE in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(1268 records)
- #36((GRIEVANCE in DE) or (GRIEVANCE-INTERVIEWS in DE) or (GRIEVANCE-PROCEDURES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(8 records)
- #37((OCCUPATION-HEALTH in DE) or (OCCUPATIONAL-FACTORS in DE) or (OCCUPATIONAL-HAZARDS in DE) or (OCCUPATIONAL-HEALTH-AND- SAFETY in DE) or (OCCUPATIONAL-HEALTH in DE) or (OCCUPATIONAL-HEALTH-AND- SAFETY in DE) or (OCCUPATIONAL-HEALTH-PROGRAMMES in DE) or (OCCUPATIONAL-HEALTH-SERVICES in DE) or (OCCUPATIONAL-HYGIENE-SERVICES in DE) or (OCCUPATIONAL-PENSION-SCHEMES in DE) or (OCCUPATIONAL-PENSIONERS in DE) or (OCCUPATIONAL-PENSIONS in DE) or (OCCUPATIONAL-PENSIONS-ADVISORY-SERVICE in DE) or (OCCUPATIONAL-SAFETY in DE) or (OCCUPATIONAL-VALUES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(6606 records)
- #38((COMMUNICATION-BREAKDOWN in DE) or (COMMUNICATION-SKILLS in DE) or (COMMUNICATION-SKILLS-NURSES in DE) or (COMMUNICATION-STRATEGIES in DE) or (COMMUNICATION-STRATEGY in DE) or (COMMUNICATION-TECHNIQUES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(729 records)
- #39((SCHEDULE in DE) or (SCHEDULES in DE) or (SCHEDULING in DE) or (SCHEDULING- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(34 records)
- #40((INTERPERSONAL-COMMUNICATION in DE) or (INTERPERSONAL-COMMUNICATIONS in DE) or (INTERPERSONAL-INTERACTION in DE) or (INTERPERSONAL-RELATIONS in DE) or (INTERPERSONAL-RELATIONSHIPS in DE) or (INTERPERSONAL-SKILLS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(559 records)
- #41((SELF-HELP-GROUP in DE) or (SELF-HELP-GROUPS in DE) or (SELF-HELP-ORGANISATIONS in DE) or (SELF-HELP-SERVICES in DE) or (SELF-HELP-TEAMS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(292 records)
- #42((ANXIETY in DE) or (ANXIETY- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(245 records)

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- #43((REMINISCENCE in DE) or (REMINISCENCE-THERAPY in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(46 records)
- #44((RELAXATION in DE) or (RELAXATION- in DE) or (RELAXATION-THERAPY in DE) or (RELAXATION-TRAINING in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(25 records)
- #45((STRESS in DE) or (STRESS- in DE) or (STRESS-ANALYSIS in DE) or (STRESS-CLINICS in DE) or (STRESS-FACTORS in DE) or (STRESS-MANAGEMENT in DE) or (STRESS-REDUCTION in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(1794 records)
- #46((CRISIS-INTERVENTION in DE) or (CRISIS-INTERVENTION-COUNSELLING in DE) or (CRISIS-INTERVENTION-SERVICES in DE) or (CRISIS-MANAGEMENT in DE) or (CRISIS-PREVENTION in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(161 records)
- #47((INCIDENT in DE) or (INCIDENT-REPORTS in DE) or (INCIDENTS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(129 records)
- #48((VIOLENCE in DE) or (VIOLENCE-TO-STAFF in DE) or (VIOLENCE-VICTIMS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(938 records)
- #49((PROBLEM-SOLVING in DE) or (PROBLEM-SOLVING-EXERCISES in DE) or (PROBLEM-SOLVING-MODELS in DE) or (PROBLEM-SOLVING-THERAPY in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(243 records)
- #50(REFLECTIVE-PRACTICE in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(65 records)
- #51(THERAPEUTIC-COMMUNITIES in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(70 records)
- #52((((REMINISCENCE in DE) or (REMINISCENCE-THERAPY in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((ANXIETY in DE) or (ANXIETY- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or ((REFLECTIVE-PRACTICE in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((PROBLEM-SOLVING in DE) or (PROBLEM-SOLVING-EXERCISES in DE) or (PROBLEM-SOLVING-MODELS in DE) or (PROBLEM-SOLVING-THERAPY in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or ((THERAPEUTIC-COMMUNITIES in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((VIOLENCE in DE) or (VIOLENCE-TO-STAFF in DE) or (VIOLENCE-VICTIMS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((INCIDENT in DE) or (INCIDENT-REPORTS in DE) or (INCIDENTS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((CRISIS-INTERVENTION in DE) or (CRISIS-INTERVENTION-COUNSELLING in DE) or (CRISIS-

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INTERVENTION-SERVICES in DE) or (CRISIS-MANAGEMENT in DE) or (CRISIS-PREVENTION in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((STRESS in DE) or (STRESS- in DE) or (STRESS-ANALYSIS in DE) or (STRESS-CLINICS in DE) or (STRESS-FACTORS in DE) or (STRESS-MANAGEMENT in DE) or (STRESS-REDUCTION in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((RELAXATION in DE) or (RELAXATION- in DE) or (RELAXATION-THERAPY in DE) or (RELAXATION-TRAINING in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(3631 records)

#53((((REMINISCENCE in DE) or (REMINISCENCE-THERAPY in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((INTERPERSONAL-COMMUNICATION in DE) or (INTERPERSONAL-COMMUNICATIONS in DE) or (INTERPERSONAL-INTERACTION in DE) or (INTERPERSONAL-RELATIONS in DE) or (INTERPERSONAL-RELATIONSHIPS in DE) or (INTERPERSONAL-SKILLS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((ANXIETY in DE) or (ANXIETY- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((SCHEDULE in DE) or (SCHEDULES in DE) or (SCHEDULING in DE) or (SCHEDULING- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((SELF-HELP-GROUP in DE) or (SELF-HELP-GROUPS in DE) or (SELF-HELP-ORGANISATIONS in DE) or (SELF-HELP-SERVICES in DE) or (SELF-HELP-TEAMS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(1172 records)

#54((((INTERPERSONAL-COMMUNICATION in DE) or (INTERPERSONAL-COMMUNICATIONS in DE) or (INTERPERSONAL-INTERACTION in DE) or (INTERPERSONAL-RELATIONS in DE) or (INTERPERSONAL-RELATIONSHIPS in DE) or (INTERPERSONAL-SKILLS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((SCHEDULE in DE) or (SCHEDULES in DE) or (SCHEDULING in DE) or (SCHEDULING- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((COMMUNICATION-BREAKDOWN in DE) or (COMMUNICATION-SKILLS in DE) or (COMMUNICATION-SKILLS-NURSES in DE) or (COMMUNICATION-STRATEGIES in DE) or (COMMUNICATION-STRATEGY in DE) or (COMMUNICATION-TECHNIQUES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((OCCUPATION-HEALTH in DE) or (OCCUPATIONAL-FACTORS in DE) or (OCCUPATIONAL-HAZARDS in DE) or (OCCUPATIONAL-HEALTH-AND-HEALTH in DE) or (OCCUPATIONAL-HEALTH-AND-HEALTH in DE) or (OCCUPATIONAL-HEALTH-AND-HEALTH in DE) or (OCCUPATIONAL-HEALTH-PROGRAMMES in DE) or (OCCUPATIONAL-HEALTH-SERVICES in DE) or (OCCUPATIONAL-HYGIENE-SERVICES in DE) or (OCCUPATIONAL-PENSION-SCHEMES in DE) or

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(OCCUPATIONAL-PENSIONERS in DE) or (OCCUPATIONAL-PENSIONS in DE) or (OCCUPATIONAL-PENSIONS-ADVISORY-SERVICE in DE) or (OCCUPATIONAL-SAFETY in DE) or (OCCUPATIONAL-VALUES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((GRIEVANCE in DE) or (GRIEVANCE-INTERVIEWS in DE) or (GRIEVANCE-PROCEDURES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010)))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(7860 records)

#55((((ENVIRONMENTAL-DESIGN in DE) or (ENVIRONMENTAL-FACTORS in DE) or (ENVIRONMENTAL-HEALTH in DE) or (ENVIRONMENTAL-HYGIENE in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or ((WARD-DESIGN in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((MOTIVATION in DE) or (MOTIVATION- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((EMPOWERMENT in DE) or (EMPOWERMENT- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((INCENTIVES in DE) or (INCENTIVES- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((BURNOUT in DE) or (BURNOUT- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010)))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(2661 records)

#56((((FLEXIBLE-PLANNING in DE) or (FLEXIBLE-RESOURCE-MANAGEMENT in DE) or (FLEXIBLE-ROSTERING in DE) or (FLEXIBLE-WORKING in DE) or (FLEXIBLE-WORKING-AGREEMENTS in DE) or (FLEXIBLE-WORKING-ARRANGEMENTS in DE) or (FLEXIBLE-WORKING-HOURS in DE) or (FLEXITIME in DE) or (FLEXITIME- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((ASSAULT in DE) or (ASSAULT- in DE) or (ASSAULTS in DE) or (ASSAULTS- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((ORGANISATION-CHANGE in DE) or (ORGANISATION-CULTURE in DE) or (ORGANISATION-DEVELOPMENT in DE) or (ORGANISATION-STRUCTURE in DE) or (ORGANISATIONAL-ANALYSIS in DE) or (ORGANISATIONAL-AUDIT in DE) or (ORGANISATIONAL-BEHAVIOUR in DE) or (ORGANISATIONAL-CHANGE in DE) or (ORGANISATIONAL-CULTURE in DE) or (ORGANISATIONAL-DESIGN in DE) or (ORGANISATIONAL-DEVELOPMENT in DE) or (ORGANISATIONAL-EFFECTIVENESS in DE) or (ORGANISATIONAL-INFRASTRUCTURE in DE) or (ORGANISATIONAL-MANAGEMENT in DE) or (ORGANISATIONAL-PRACTICE in DE) or (ORGANISATIONAL-STANDARDS in DE) or (ORGANISATIONAL-STRATEGIES in DE) or (ORGANISATIONAL-STRATEGY in DE) or (ORGANISATIONAL-STRUCTURE in DE) or (ORGANISATIONAL-STRUCTURES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((ADMINISTRATIVE-PROBLEMS in DE) or (ADMINISTRATIVE-STRUCTURE in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((MENTORS in DE) or (MENTORS- in

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- DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010)))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(2870 records)
- #57((((MENTORS in DE) or (MENTORS- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((JOB-SATISFACTION in DE) or (JOB-SHARING in DE) or (JOB-SHARING-SCHEMES in DE) or (JOB-SPECIFICATION in DE) or (JOB-TENURE in DE) or (JOB-TRANSFER in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((STAFF-SUPPORT in DE) or (STAFF-SUPPORT-GROUPS in DE) or (STAFF-SUPPORT-SYSTEMS in DE) or (STAFF-TRAINING in DE) or (STAFF-TRANSFER in DE) or (STAFF-TRANSFERS in DE) or (STAFF-TRANSPORT-SERVICES in DE) or (STAFF-TRAVEL-PAYMENTS in DE) or (STAFF-TURNOVER in DE) or (STAFF-VIEWS in DE) or (STAFF-WASHROOMS in DE) or (STAFF-WELFARE in DE) or (STAFF-WORKING-LIFE in DE) or (STAFFING-LEVELS in DE) or (STAFFING-MIX in DE) or (STAFFING-MODELS in DE) or (STAFFING-POLICIES in DE) or (STAFFING-STRUCTURE in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010)))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(2028 records)
- #58((((WORKLOAD in DE) or (WORKLOAD- in DE) or (WORKLOAD-ANALYSIS in DE) or (WORKLOAD-MANAGEMENT in DE) or (WORKLOAD-MEASUREMENT in DE) or (WORKLOADS in DE) or (WORKLOADS- in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((TIME-MANAGEMENT in DE) or (TIME-OFF in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((TEAM-BUILDING in DE) or (TEAM-BUILDING-TEAMS in DE) or (TEAM-DEVELOPMENT in DE) or (TEAM-LEADERS in DE) or (TEAM-MANAGEMENT in DE) or (TEAM-MEMBERS in DE) or (TEAM-NURSING in DE) or (TEAM-ROLES in DE) or (TEAM-SKILLS in DE) or (TEAM-TEACHING in DE) or (TEAM-WORK in DE) or (TEAM-WORKING in DE) or (TEAMBUILDING in DE) or (TEAMBUILDING- in DE) or (TEAMWORK in DE) or (TEAMWORK- in DE) or (TEAMWORK-SKILLS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((WORKPLACE-BEHAVIOUR in DE) or (WORKPLACE-HARASSMENT in DE) or (WORKPLACE-NURSERIES in DE) or (WORKPLACE-STANDARDS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010)))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(2049 records)
- #59((((EMPLOYEE-ASSISTANCE-PROGRAMMES in DE) or (EMPLOYEE-BENEFITS in DE) or (EMPLOYEE-MOTIVATION in DE) or (EMPLOYEE-PARTICIPATION in DE) or (EMPLOYEE-RELATIONS in DE) or (EMPLOYEE-RIGHTS in DE) or (EMPLOYEE-STRESS in DE) or (EMPLOYER-CONDUCT in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or ((STAFF-CONSULTATION in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((SUPERVISORS in DE) or (SUPERVISORS- in DE) or (SUPERVISORY-

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MANAGEMENT in DE) or (SUPERVISORY-SKILLS in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or ((PEER-GROUP-RELATIONS in DE) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (((LEADERSHIP in DE) or (LEADERSHIP- in DE) or (LEADERSHIP-QUALITIES in DE) or (LEADERSHIP-SKILLS in DE) or (LEADERSHIP-STYLE in DE) or (LEADERSHIP-STYLES in DE)) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010)))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(1588 records)

#60#12 and #22 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(60 records)

#61#12 and #52 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(217 records)

#62#12 and #53 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(45 records)

#63#12 and #54 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(54 records)

#64#12 and #55 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(22 records)

#65#12 and #56 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(27 records)

#66#12 and #57 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(89 records)

#67#12 and #58 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(63 records)

#68#12 and #59 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(22 records)

#69((#12 and #59 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (#12 and #58 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (#12 and #57 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (#12 and #56 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (#12 and #55 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (#12 and #54 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (#12 and #22 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (#12 and #53 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))) or (#12 and #52 and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010)))) and ((PY:HMIC = 1980-2099) or (PY:HQ = 1980-2010))(475 records)

Inside Conferences

- S1 156 (COPING())BEHAVIOR OR SOCIAL()SUPPORT OR CAREGIVER?()SUPPORT)
- S2 223 (SELF()HELP OR SELFHELP OR SUPPORT()GROUP?)
- S3 366 (SUPPORT(W3)(PROGRAM? OR STRATEGY OR STRATEGIES))
- S4 732 (COUNSELING OR COUNSELLING)
- S5 304 (COMMUNICATION(W3)(TRAINING OR PROGRAM? OR SKILLS))
- S6 31 INTERPERSONAL()COMMUNICATION
- S7 9 ANXIETY(W3)MANAG?
- S8 169 (INTERPERSONAL()SKILLS OR INTERACTIVE(W3)TEACHING)
- S9 0 INSIGHT()ORIENTED
- S10 106 (COPING OR COPE)(W3)(SKILL OR SKILLS OR TRAINING OR STRATEGY OR STRATEGIES)
- S11 19 REALISTIC()SELF()ASSESSMENT OR NARCISSISTIC
- S12 12 FAMILY(W3)CHARACTERISTICS
- S13 9 FAMILY()BACKGROUND OR FAMILY()ORIGIN
- S14 2 NURSE()PATIENT()RELATION?
- S15 0 RELATIONSHIP()ENHANCEMENT
- S16 8066REMINISCENCE()THERAP? OR SUPERVISION OR RELAXATION
- S17 359 STRESS(W3)(MANAG? OR PREVENT? OR REDUC? OR DEBRIEF?)
- S18 0 (CRISIS()INTERVENTION(W3)(PROGRAM? OR PROCEDURE? OR STRATEGY OR STRATEGIES))
- S19 126 POST()INCIDENT OR MENTAL()STRESS OR PSYCHOLOGICAL()STRESS
- S20 49 VIOLENCE(3W)PREVENT? OR TRAUMA()REDUCTION
- S21 23 PSYCHOSOCIAL()TRAINING OR PSYCHOSOCIAL()INTERVENTION?
- S22 3037PROBLEM?(3W)SOLVING
- S23 26 BREATHING()EXERCISE? OR EXERCISE()TECHNIQUES OR EXERCISE()THERAPY
- S24 53 RELAXATION()TECHNIQUE? OR RELAXATION()THERAP?
- S25 0 MILIEU()THERAP?
- S26 46 THERAPEUTIC()COMMUNIT?
- S27 0 MULTICOMPONENT()INTERVENTION?
- S28 23 FOCUSSED()INTERVENTION? OR RETREATS OR REFLECTION(3W)ACTION

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S29 55 BALINT OR REUNIONS OR NONVERBAL()COMMUNICATION
 S30 60 (LEADERSHIP(W3)(TRAINING OR PROGRAM? OR SKILLS))
 S31 53 ((PEER OR COLLEAGUE? OR COLLEGIAL OR
 SUPERVISOR?)(W3)SUPPORT)
 S32 0 (STAFF(W3)(CONSULTATION OR CONSULTING))
 S33 4 (STAFF(W3)(GROUP OR GROUPS))
 S34 3600(EMPLOYEE()ASSISTANCE OR EAP? ?)
 S35 4 (WORKPLACE(W3)(COUNSELING OR COUNSELLING))
 S36 70 ((TEAM()BASED OR TEAM)(W3)(EDUCATION OR LEARNING))
 S37 83 WORKLOAD(W3)(MANAG? OR ASSESS? OR MEASURE? OR
 ALLOC?)
 S38 104 TIME()MANAGEMENT
 S39 314 (STAFF(W3)(GROWTH OR DEVELOPMENT OR SATISFACTION))
 S40 181 ((JOB OR WORK)(W3)SATISFACTION)
 S41 464 CONTINUING()PROFESSIONAL()DEVELOPMENT OR MENTOR OR
 MENTORS OR MENTORING
 S42 34 ADMINISTRATIVE()PROCEDURE? ?
 S43 1 ORGANIZATIONAL()PROCEDURE? ? OR
 ORGANISATIONAL()PROCEDURE??
 S44 24 INCIDENT? ?(W3)(PROCEDURE? ? OR PROGRAM? OR STRATEGY
 OR STRATEGIES)
 S45 3 ASSAULT?(W3)(PROCEDURE? ? OR PROGRAM? OR STRATEGY
 OR STRATEGIES)
 S46 3633RETENTION OR RETAINING OR JOB()PLANS OR JOB()PLANNING
 OR WORK()PLANS OR WORK()PLANNING OR WORK()REDESIGN?
 S47 29 FLEXIBLE()HOURS OR FLEXIBLE()WORKING OR FLEXTIME
 S48 12 ORGANISATIONAL()INTERVENTION? ? OR
 ORGANIZATIONAL()INTERVENTION? ? OR WORKER?(W3)EMPOWER?
 S49 3 (COMBAT? OR PREVENT? OR REDUC?)(W3)BURNOUT
 S50 1 TARGETING()RESOURCE? ?
 S51 604 REWARD? OR EMPLOYEE()INCENTIVE()PLAN?
 S52 5 MOTIVATION?(W3)INTERVENTION?
 S53 0 (WARD OR WARDS)(W3)REDESIGN?
 S54 313 (ENVIRONMENT? OR WORKPLACE OR
 WORK()PLACE)(W3)IMPROV?
 S55 0 ATMOSPHERE(W3)WORKPLACE

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S56 33 INSERVICE()TRAINING OR STAFF()TURNOVER OR
HIGH()TURNOVER

S57 165 GRIEVANCE? ? OR OCCUPATIONAL()HEALTH()SERVICE? ?

S58 9 INTERDISCIPLINARY()COMMUNICATION OR
WORK()CAPACITY()EVALUATION

S59 62 WORK(W3)SCHEDUL?

S60 12 SIMPLIF?(W3)(WORK OR WORKING OR TASK OR TASKS)

S61 1342REFRESHER()COURSE? ? OR JOB()CHARACTERISTICS OR
PEER()COUNSELLING OR PEER()ASSISTANCE

S62 11491 STAFF()DEVELOPMENT OR INCENTIVE? ? OR LOYALTY OR
SCHEDULING

S63 112 WORKPLACE(3W)VIOLENCE OR TEAM()BUILDING

S64 1976CONFLICT(3W)MANAG? OR BURNOUT OR REWARD? ? OR
OCCUPATIONAL(3W)INJUR? OR WORK?(3W)ENVIRONMENT

S65 25659 SHIFTWORK OR SHIFTS OR STRATEGIES

S66 15 MENTAL()HEALTH()PERSONNEL OR PSYCHIATRIC()NURSING

S67 47 PSYCHIATRIC(3W) (TEAM? ? OR PROFESSIONAL? ? OR STAFF
OR WORKFORCE OR WORKERS OR NURSE? ? OR NURSING OR AIDE?
? OR LEADER? ? OR MANAGER? ? OR CLINICIAN? OR DOCTOR? ? OR
ASSISTANT? ?)

S68 424 PSYCHIATRIST? ?

S69 65 MENTAL()HEALTH(3W)(TEAM? ? OR PROFESSIONAL? ? OR STAFF
OR WORKFORCE OR WORKERS OR NURSE? ? OR NURSING OR AIDE?
? OR LEADER? ? OR MANAGER? ? OR CLINICIAN? OR DOCTOR? ? OR
ASSISTANT??)

S70 62 PSYCHOTHERAPIST? ? OR CLINICAL()PSYCHOLOGIST? ?

S71 22483 S1:S50

S72 40965 S51:S65

S73 62705 S71:S72

S74 578 S66:S70

S75 13 S73 AND S74

Management and marketing extracts

- 1 MMKA 31 (COPING ADJ BEHAVIOR OR SOCIAL ADJ SUPPORT OR
CAREGIVER\$ ADJ SUPPORT)
- 2 MMKA 79(SELF ADJ HELP OR SELFHELP OR SUPPORT ADJ GROUP OR
SUPPORT ADJ GROUPS)

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- 3 MMKA 572 (SUPPORT WITH (PROGRAM\$ OR STRATEGY OR STRATEGIES))
- 4 MMKA 527 (COUNSELING OR COUNSELLING)
- 5 MMKA 591 (COMMUNICATION WITH (TRAINING OR PROGRAM\$ OR SKILLS))
- 6 MMKA 38INTERPERSONAL ADJ COMMUNICATION
- 7 MMKA 9 ANXIETY WITH (MANAGING OR MANAGEMENT)
- 8 MMKA 283 (INTERPERSONAL ADJ SKILLS OR INTERACTIVE WITH TEACHING)
- 9 MMKA 0 INSIGHT ADJ ORIENTED
- 10 MMKA 153 (COPING OR COPE) WITH (SKILL OR SKILLS OR TRAINING OR STRATEGY OR STRATEGIES)
- 11 MMKA 7 REALISTIC ADJ SELF ADJ ASSESSMENT OR NARCISSISTIC
- 12 MMKA 15FAMILY WITH CHARACTERISTICS
- 13 MMKA 10FAMILY ADJ BACKGROUND OR FAMILY ADJ ORIGIN
- 14 MMKA 0 NURSE ADJ PATIENT ADJ RELATION\$
- 15 MMKA 2 RELATIONSHIP ADJ ENHANCEMENT
- 16 MMKA 575 REMINISCENCE ADJ THERAP\$ OR SUPERVISION OR RELAXATION
- 17 MMKA 583 STRESS WITH (MANAGEMENT OR MANAGING OR PREVENT\$ OR REDUC\$ OR DEBRIEF\$)
- 18 MMKA 0 (CRISIS ADJ INTERVENTION WITH (PROGRAM\$ OR PROCEDURE\$ OR STRATEGY OR STRATEGIES))
- 19 MMKA 14 POST ADJ INCIDENT OR MENTAL ADJ STRESS OR PSYCHOLOGICAL ADJ STRESS
- 20 MMKA 22 VIOLENCE WITH PREVENT\$ OR TRAUMA ADJ REDUCTION
- 21 MMKA 0 PSYCHOSOCIAL ADJ TRAINING OR PSYCHOSOCIAL ADJ INTERVENTION\$
- 22 MMKA 1010 PROBLEM\$ WITH SOLVING
- 23 MMKA 1 BREATHING ADJ EXERCISE\$ OR EXERCISE ADJ TECHNIQUES OR EXERCISE ADJ THERAPY
- 24 MMKA 6 RELAXATION ADJ TECHNIQUE\$ OR RELAXATION ADJ THERAP\$
- 25 MMKA 0 MILIEU ADJ THERAP\$
- 26 MMKA 1 THERAPEUTIC ADJ COMMUNIT\$
- 27 MMKA 0 MULTICOMPONENT ADJ INTERVENTION\$
- 28 MMKA 27FOCUSED ADJ INTERVENTION\$ OR RETREATS OR REFLECTION WITH ACTION

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- 29 MMKA 8 BALINT OR REUNIONS OR NONVERBAL ADJ COMMUNICATION
- 30 MMKA 461 (LEADERSHIP WITH (TRAINING OR PROGRAM\$ OR SKILLS))
- 31 MMKA 70((PEER OR COLLEAGUE\$ OR COLLEGIAL OR SUPERVISOR\$) WITH SUPPORT)
- 32 MMKA 49(STAFF WITH (CONSULTATION OR CONSULTING))
- 33 MMKA 210 (STAFF WITH (GROUP OR GROUPS))
- 34 MMKA 212 (EMPLOYEE ADJ ASSISTANCE OR EAP\$)
- 35 MMKA 10(WORKPLACE WITH (COUNSELING OR COUNSELLING))
- 36 MMKA 143 ((TEAM ADJ BASED OR TEAM) WITH (EDUCATION OR LEARNING))
- 37 MMKA 27WORKLOAD WITH (MANAGEMENT OR MANAGING OR ASSESS\$ OR MEASURE\$ OR ALLOC\$)
- 38 MMKA 265 TIME ADJ MANAGEMENT
- 39 MMKA 613 (STAFF WITH (GROWTH OR DEVELOPMENT OR SATISFACTION))
- 40 MMKA 746 ((JOB OR WORK) WITH SATISFACTION)
- 41 MMKA 463 CONTINUING ADJ PROFESSIONAL ADJ DEVELOPMENT OR MENTOR OR MENTORS OR MENTORING
- 42 MMKA 14ADMINISTRATIVE ADJ PROCEDURE\$
- 43 MMKA 11ORGANIZATIONAL ADJ PROCEDURE\$ OR ORGANISATIONAL ADJ PROCEDURE\$
- 44 MMKA 40INCIDENT\$ WITH (PROCEDURE\$ OR PROGRAM\$ OR STRATEGY OR STRATEGIES)
- 45 MMKA 2 ASSAULT\$ WITH (PROCEDURE\$ OR PROGRAM\$ OR STRATEGY OR STRATEGIES)
- 46 MMKA 1751RETENTION OR RETAINING OR JOB ADJ PLANS OR JOB ADJ PLANNING OR WORK ADJ PLANS OR WORK ADJ PLANNING OR WORK ADJ REDESIGN\$
- 47 MMKA 645 FLEXIBLE ADJ HOURS OR FLEXIBLE ADJ WORKING OR FLEXITIME
- 48 MMKA 40ORGANISATIONAL ADJ INTERVENTION\$ OR ORGANIZATIONAL ADJ INTERVENTION\$ OR WORKER\$ WITH EMPOWER\$
- 49 MMKA 12(COMBAT\$ OR PREVENT\$ OR REDUC\$) WITH BURNOUT
- 50 MMKA 5 TARGETING ADJ RESOURCE\$
- 51 MMKA 2439REWARD\$ OR EMPLOYEE ADJ INCENTIVE ADJ PLAN\$
- 52 MMKA 1 MOTIVATION\$ WITH INTERVENTION\$
- 53 MMKA 0 (WARD OR WARDS) WITH REDESIGN\$

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- 54 MMKA 520 (ENVIRONMENT\$ OR WORKPLACE OR WORK ADJ PLACE)
WITH IMPROV\$
- 55 MMKA 6 ATMOSPHERE WITH WORKPLACE
- 56 MMKA 383 INSERVICE ADJ TRAINING OR STAFF ADJ TURNOVER OR
HIGH ADJ TURNOVER
- 57 MMKA 275 GRIEVANCE\$ OR OCCUPATIONAL ADJ HEALTH ADJ
SERVICE OR OCCUPATIONAL ADJ HEALTH ADJ SERVICES OR
INTERDISCIPLINARY ADJ COMMUNICATION OR WORK ADJ CAPACITY
ADJ EVALUATION
- 58 MMKA 142 WORK WITH SCHEDUL\$
- 59 MMKA 47SIMPLIF\$ WITH (WORK OR WORKING OR TASK OR TASKS)
- 60 MMKA 50REFRESHER ADJ COURSE\$ OR JOB ADJ CHARACTERISTICS
OR PEER ADJ COUNSELLING OR PEER ADJ ASSISTANCE
- 61 MMKA 4279 STAFF ADJ DEVELOPMENT OR INCENTIVE\$ OR LOYALTY
OR SCHEDULING
- 62 MMKA 233 WORKPLACE WITH VIOLENCE OR TEAM ADJ BUILDING
- 63 MMKA 3476(CONFLICT WITH (MANAGEMENT OR MANAGING)) OR
BURNOUT OR REWARD\$ OR OCCUPATIONAL WITH INJUR\$ OR WORK
WITH ENVIRONMENT
- 64 MMKA 6467SHIFTWORK OR SHIFTS OR STRATEGIES
- 65 MMKA 0 MENTAL ADJ HEALTH ADJ PERSONNEL OR PSYCHIATRIC ADJ
NURSING
- 66 MMKA 5 PSYCHIATRIC WITH (TEAM\$ OR PROFESSIONAL\$ OR STAFF
OR WORKFORCE OR WORKERS OR NURSE\$ OR NURSING OR AIDE\$
OR LEADER\$ OR MANAGER\$ OR CLINICIAN\$ OR DOCTOR\$ OR
ASSISTANT\$)
- 67 MMKA 10PSYCHIATRIST\$
- 68 MMKA 19MENTAL ADJ HEALTH WITH (TEAM\$ OR PROFESSIONAL\$ OR
STAFF OR WORKFORCE OR WORKERS OR NURSE\$ OR NURSING OR
AIDE\$ OR LEADER\$ OR MANAGER\$ OR CLINICIAN\$ OR DOCTOR\$ OR
ASSISTANT\$)
- 69 MMKA 10PSYCHOTHERAPIST\$ OR CLINICAL ADJ PSYCHOLOGIST\$
- 70 MMKA 32511 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
- 71 MMKA 298221 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
39
- 72 MMKA 623140 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55
- 73 MMKA 14050 56 57 58 59 60 61 62 63 64 65
- 74 MMKA 327766 67 68 69 70
- 75 MMKA 4166 67 68 69

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76 MMKA 21096 70 71 72 73

77 MMKA 2275 AND 76

Management Contents

QN DATABASE DOCS SEARCH TERMS

- 1 MGMT326 (COPING ADJ BEHAVIOR OR SOCIAL ADJ SUPPORT OR CAREGIVER\$ ADJ SUPPORT)
- 2 MGMT728 (SELF ADJ HELP OR SELFHELP OR SUPPORT ADJ GROUP OR SUPPORT ADJ GROUPS)
- 3 MGMT4369(SUPPORT WITH (PROGRAM\$ OR STRATEGY OR STRATEGIES))
- 4 MGMT2085(COUNSELING OR COUNSELLING)
- 5 MGMT3301(COMMUNICATION WITH (TRAINING OR PROGRAM\$ OR SKILLS))
- 6 MGMT384 INTERPERSONAL ADJ COMMUNICATION
- 7 MGMT82ANXIETY WITH (MANAGING OR MANAGEMENT)
- 8 MGMT767 (INTERPERSONAL ADJ SKILLS OR INTERACTIVE WITH TEACHING)
- 9 MGMT0 INSIGHT ADJ ORIENTED
- 10 MGMT606 (COPING OR COPE) WITH (SKILL OR SKILLS OR TRAINING OR STRATEGY OR STRATEGIES)
- 11 MGMT97REALISTIC ADJ SELF ADJ ASSESSMENT OR NARCISSISTIC
- 12 MGMT289 FAMILY WITH CHARACTERISTICS
- 13 MGMT127 FAMILY ADJ BACKGROUND OR FAMILY ADJ ORIGIN
- 14 MGMT2 NURSE ADJ PATIENT ADJ RELATION\$
- 15 MGMT6 RELATIONSHIP ADJ ENHANCEMENT
- 16 MGMT3745REMINISCENCE ADJ THERAP\$ OR SUPERVISION OR RELAXATION
- 17 MGMT1358STRESS WITH (MANAGEMENT OR MANAGING OR PREVENT\$ OR REDUC\$ OR DEBRIEF\$)
- 18 MGMT5 (CRISIS ADJ INTERVENTION WITH (PROGRAM\$ OR PROCEDURE\$ OR STRATEGY OR STRATEGIES))
- 19 MGMT73POST ADJ INCIDENT OR MENTAL ADJ STRESS OR PSYCHOLOGICAL ADJ STRESS
- 20 MGMT100 VIOLENCE WITH PREVENT\$ OR TRAUMA ADJ REDUCTION
- 21 MGMT2 PSYCHOSOCIAL ADJ TRAINING OR PSYCHOSOCIAL ADJ INTERVENTION\$

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- 22 MGMT4955 PROBLEM\$ WITH SOLVING
- 23 MGMT18 BREATHING ADJ EXERCISE\$ OR EXERCISE ADJ TECHNIQUES
OR EXERCISE ADJ THERAPY
- 24 MGMT37 RELAXATION ADJ TECHNIQUE\$ OR RELAXATION ADJ
THERAP\$
- 25 MGMT0 MILIEU ADJ THERAP\$
- 26 MGMT16 THERAPEUTIC ADJ COMMUNIT\$
- 27 MGMT0 MULTICOMPONENT ADJ INTERVENTION\$
- 28 MGMT270 FOCUSSED ADJ INTERVENTION\$ OR RETREATS OR
REFLECTION WITH ACTION
- 29 MGMT186 BALINT OR REUNIONS OR NONVERBAL ADJ
COMMUNICATION
- 30 MGMT2430 (LEADERSHIP WITH (TRAINING OR PROGRAM\$ OR
SKILLS))
- 31 MGMT751 ((PEER OR COLLEAGUE\$ OR COLLEGIAL OR SUPERVISOR\$)
WITH SUPPORT)
- 32 MGMT312 (STAFF WITH (CONSULTATION OR CONSULTING))
- 33 MGMT1099 (STAFF WITH (GROUP OR GROUPS))
- 34 MGMT613 (EMPLOYEE ADJ ASSISTANCE OR EAP\$)
- 35 MGMT32 (WORKPLACE WITH (COUNSELING OR COUNSELLING))
- 36 MGMT774 ((TEAM ADJ BASED OR TEAM) WITH (EDUCATION OR
LEARNING))
- 37 MGMT125 WORKLOAD WITH (MANAGEMENT OR MANAGING OR
ASSESS\$ OR MEASURE\$ OR ALLOC\$)
- 38 MGMT1056 TIME ADJ MANAGEMENT
- 39 MGMT1510 (STAFF WITH (GROWTH OR DEVELOPMENT OR
SATISFACTION))
- 40 MGMT2549 ((JOB OR WORK) WITH SATISFACTION)
- 41 MGMT2149 CONTINUING ADJ PROFESSIONAL ADJ DEVELOPMENT OR
MENTOR OR MENTORS OR MENTORING
- 42 MGMT178 ADMINISTRATIVE ADJ PROCEDURE\$
- 43 MGMT75 ORGANIZATIONAL ADJ PROCEDURE\$ OR ORGANISATIONAL
ADJ PROCEDURE\$
- 44 MGMT231 INCIDENT\$ WITH (PROCEDURE\$ OR PROGRAM\$ OR
STRATEGY OR STRATEGIES)
- 45 MGMT23 ASSAULT\$ WITH (PROCEDURE\$ OR PROGRAM\$ OR
STRATEGY OR STRATEGIES)

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- 46 MGMT6280 RETENTION OR RETAINING OR JOB ADJ PLANS OR JOB DJ PLANNING OR WORK ADJ PLANS OR WORK ADJ PLANNING OR WORK ADJ REDESIGN\$
- 47 MGMT344 FLEXIBLE ADJ HOURS OR FLEXIBLE ADJ WORKING OR FLEXITIME
- 48 MGMT443 ORGANISATIONAL ADJ INTERVENTION\$ OR ORGANIZATIONAL ADJ INTERVENTION\$ OR WORKER\$ WITH EMPOWER\$
- 49 MGMT70 (COMBAT\$ OR PREVENT\$ OR REDUC\$) WITH BURNOUT
- 50 MGMT4 TARGETING ADJ RESOURCE\$
- 51 MGMT10838 REWARD\$ OR EMPLOYEE ADJ INCENTIVE ADJ PLAN\$
- 52 MGMT32 MOTIVATION\$ WITH INTERVENTION\$
- 53 MGMT0 (WARD OR WARDS) WITH REDESIGN\$
- 54 MGMT2188 (ENVIRONMENT\$ OR WORKPLACE OR WORK ADJ PLACE) WITH IMPROV\$
- 55 MGMT38 ATMOSPHERE WITH WORKPLACE
- 56 MGMT690 INSERVICE ADJ TRAINING OR STAFF ADJ TURNOVER OR HIGH ADJ TURNOVER
- 57 MGMT891 GRIEVANCE\$ OR OCCUPATIONAL ADJ HEALTH ADJ SERVICE OR OCCUPATIONAL ADJ HEALTH ADJ SERVICES OR INTERDISCIPLINARY ADJ COMMUNICATION OR WORK ADJ CAPACITY ADJ EVALUATION
- 58 MGMT1757 WORK WITH SCHEDUL\$
- 59 MGMT464 SIMPLIF\$ WITH (WORK OR WORKING OR TASK OR TASKS)
- 60 MGMT446 REFRESHER ADJ COURSE\$ OR JOB ADJ CHARACTERISTICS OR PEER ADJ COUNSELLING OR PEER ADJ ASSISTANCE
- 61 MGMT17359 STAFF ADJ DEVELOPMENT OR INCENTIVE\$ OR LOYALTY OR SCHEDULING
- 62 MGMT1164 WORKPLACE WITH VIOLENCE OR TEAM ADJ BUILDING
- 63 MGMT14693 (CONFLICT WITH (MANAGEMENT OR MANAGING)) OR BURNOUT OR REWARD\$ OR OCCUPATIONAL WITH INJUR\$ OR WORK WITH ENVIRONMENT
- 64 MGMT20836 SHIFTWORK OR SHIFTS OR STRATEGIES
- 65 MGMT10 MENTAL ADJ HEALTH ADJ PERSONNEL OR PSYCHIATRIC ADJ NURSING
- 66 MGMT81 PSYCHIATRIC WITH (TEAM\$ OR PROFESSIONAL\$ OR STAFF OR WORKFORCE OR WORKERS OR NURSE\$ OR NURSING OR AIDE\$ OR LEADER\$ OR MANAGER\$ OR CLINICIAN\$ OR DOCTOR\$ OR ASSISTANT\$)

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67 MGMT172 PSYCHIATRIST\$
68 MGMT174 MENTAL ADJ HEALTH WITH (TEAM\$ OR PROFESSIONAL\$ OR
STAFF OR WORKFORCE OR WORKERS OR NURSE\$ OR NURSING OR
AIDE\$ OR LEADER\$ OR MANAGER\$ OR CLINICIAN\$ OR DOCTOR\$ OR
ASSISTANT\$)
69 MGMT123 PSYCHOTHERAPIST\$ OR CLINICAL ADJ PSYCHOLOGIST\$
70 MGMT14412 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
71 MGMT11310 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
38 39
72 MGMT19965 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55
73 MGMT40184 56 57 58 59 60 61 62 63 64 65
74 MGMT14657 66 67 68 69 70
75 MGMT478 66 67 68 69
76 MGMT307 73 AND 75
77 MGMT307 ..LIMIT 76 YEAR GT 1979

Commission for Health Improvement (web site searched 6 October 2003)

Reports and reviews produced by the CHI were identified by searching the CHI website. All CHI reports address staffing. Some of the CHI reports have a section specifically on the 'morale' of staff.

Appendix 2 Endnote system

Managing Endnote libraries

This document aims to provide guidance on to how to create and manage the Endnote library (ENL) for the SDO inpatient review. All relevant stages of the review process from creating the initial library and ordering inter-library loans (ILL) to preparing the final ENL for incorporation into the review are described.

The roles of the review team members for Searches A and B and their responsibility for maintaining the ENL are also discussed.

Step 1: Literature searching

Information Officer (IO) in York responsible for searches.

Information officer:

- carries out search
- keeps results on own computer
- tells reviewers that this is available and the number of records contained in the library. E-mails copy (in text and in separate Endnote files) to Information Officer responsible for Master ENL maintenance (Clare Doherty) and Searches A and B dispatched to respective reviewers.

Step 2: Checking titles and extracts for Search A

Reviewer responsible for ENL.

Reviewer in Manchester:

- receives a copy of each search in both text and Endnote files
- sifts records
- annotates each ENL record (using pre-agreed format, for example ORDER, OBTAINED, BACKGROUND in Custom 3 field as in Appendix 1)
- checks to see if an electronic version is available if so this will be OBTAINED in Custom 3.
- sends ENL back to Clare.

Step 3: Checking titles and extracts for Search B

Reviewer responsible for ENL.

Reviewer:

- receives a copy of each search in both text and Endnote files
- sifts records
- annotates each ENL record (using pre-agreed format, for example ORDER, BACKGROUND in Custom 2 field as in Appendix 1)
- gives ENL back to Clare.

Step 4: Construction and maintenance of MASTER ENL by IO (Clare)

For each ENL sent back from Leeds and Manchester, Clare will:

- delete all records with REJECT in field 2 or 3 which will leave records with ORDER or OBTAINED
- add the date and source of the reference in field 4 (for example, MEDLINE, EMBASE or hand search)
- either place an order for an ILL (see Step 5) or obtain an electronic copy of the reference
- add the ORDERED and date ordered in field 1 or insert OBTAINED in fields 2 and/or 3
- import the processed ENL into the MASTER ENL.

Step 5: Inter-library loans

IO in Leeds responsible for ILLs.

Clare will:

- order all ILLs and will track their status
- check the orders to ensure full details are available and correct
- split the requests into two parts – journal orders and other orders
- identify the ILLs to be ordered by searching for 'order' in the Custom 2 and 3 field AND journal article; and 'order' in the Custom 2 and 3 field AND NOT journal article
- annotate Custom field 1 with 'ordered' and date of order

All ILLS will pass through the Leeds office and their status tracked (see Step 9).

Step 6: Hand-searched references

Clare is responsible for MASTER ENL.

Many references will come not from the electronic searches, but from hand searching, scanning references, reading around the subject. We need a method of tracking these references and making sure that they are placed in the MASTER ENL.

Clare:

- receives paper copies of references (for example, front page of a paper or photocopy of the reference list from which it was drawn) retrieved by hand searching from the reviewer
- checks to see whether already on ENL
- checks reference and gets full details and extract if possible; this may involve searching several databases
- annotates (using pre-agreed format in Custom 4 field, such as hand search and details of source of reference)
- loads the enriched reference onto ENL
- informs the reviewers that this has been done, giving record numbers and returns paper copies to reviewers.

Step 7: Sifting hand-searched references

Searches A and B reviewers.

(This stage only necessary if the IO has managed to find an extract providing additional details about the reference. Otherwise the reference should be ordered by Clare without further consultation with the reviewers.)

Reviewer:

- independently examines the extract
- makes decisions
- annotates each record (using pre-agreed format, such as order, background in Custom 2/3 field)
- sends ENL to Clare.

Step 8: Inter-library loan queries

IO responsible for ENL.

Clare:

- investigates; where the problem involves the expense of an additional search (for example, a worldwide search) Clare will consult with reviewer on the importance of the request.

Step 9: Inter-library loan receipts

IO responsible for ILLs.

Clare:

- records the receipt of ILLs. for example 'received' in Custom 1 field for both Leeds and Manchester
- passes paper to the Leeds and Manchester reviewer, to save confusion and the paper getting lost.

Step 10: Assessing papers

Reviewers (Searches A and B) responsible for ENL.

Reviewer:

- reads papers and independently makes decision as to whether to include or exclude
- sends an e-mail to Clare, informing her of the outcome; Clare then annotates Custom field 2/3 of MASTER ENL, for example include, exclude, background.

Step 11: Updating and backing up the MASTER ENL

Clare responsible for Master ENL.

Clare will at the end of each working day:

- back up the MASTER ENL on CD
- e-mail a zipped copy to key reviewers.

Step 12: Dealing with duplicates

Clare responsible for Master ENL.

Clare should:

- regularly review duplicates:
- enter show duplicates

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- review duplicates and if the duplicate is from a different review team, insert the information from field 2/3 and 5/6 into the original Endnote entry (this will ensure that all relevant information from both review teams is included in one Endnote entry)
- put a note into Custom field 1 to indicate that an extra copy needs to be ordered
- if the duplicate is from the same review team (this is bound to happen), review entry and if redundant delete
- in cases where there are duplicates in the same review team and the reviewers reach different decisions regarding order vs. reject, alert the reviewers who will resolve the discrepancy by discussion.

Table A2.1 Suggested allocation of the ENL custom fields

Field no.	Contents	Responsibility for changes
1	Used by Clare to show status of ILLs	Clare only
2	Used by Search B review team to show final decisions with regard to order/reject; include/exclude; background/study	Search B reviewer only
3	Used by Search A review team to show final decisions with regard to order/reject, include/exclude and background/study	Search A reviewer only
4	Used by Clare to identify the initial source of the reference (e.g. MEDLINE, EMBASE, hand search etc.)	Clare only
5	Used by Search B reviewer for own notes and to indicate personal decisions on order/reject, include/exclude and background/study	Search B reviewer only
6	Used by Search A reviewer for own notes and to indicate personal decisions on order/reject, include/exclude and background/study	Search A reviewer only

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Table A2.2 Suggested list of keywords for annotating custom fields

Keyword	Definition
Order	Used in the first round of title and extract screening to identify all references (whether background, possible trials or others) which need to be ordered by IO
Reject	Used in the first round of title and extract screening to identify all other references, which are <i>not</i> to be ordered and which have been rejected
Ordered [date]	Used by IO to indicate when the ILL loan was ordered, e.g. Ordered [22-01-01]
Received	Used by IO to indicate that the ILL or other request has been received
Include	Used to identify references (background, reports of trials and others) which are to be included in the final review
Exclude	Used to identify references where the full paper copy has been ordered but will not be subsequently used in the final review
Background	Used to identify that the reference is a background or other (e.g. methodological or systematic review) paper
Study	Used to indicate that the reference is a report of a study
Timed out	Used by IO to indicate that the request did not arrive after requested by e-mail
E-mail	Used by IO to indicate an e-mail request to author
Unobtainable	Used by IO to indicate a worldwide search reject or decision not to obtain

NB Keywords should be entered *exactly* as above including capitalisation. Additional terms to be added on agreement of team.

Appendix 3 Discussion guides

Table A3.1 Adult acute inpatient settings: scoping table

Study	Country	Sample (n) / Comparison (n)	Design	Primary Outcome(s)
Callaghan (1991)	UK	<i>Sample:</i> Mental health nurses from 4 acute wards of a large teaching hospital (n=39) <i>Comparison:</i> None	Cross-sectional survey	Occupational stress Job satisfaction
Chalder and Nolan (2000)	UK	<i>Sample:</i> All first-level, registered mental health nurses working in a 3-ward acute unit (n=15) <i>Comparison:</i> All first-level, registered mental health nurses working in a 2-ward forensic unit (n=23)	Cross-sectional survey	Occupational stress
Corrigan et al. (1996)	USA	<i>Sample:</i> Day-shift workers of 5 acute care units of a state hospital (n=49) <i>Comparison:</i> None	Cross-sectional survey	Burnout
Farrell and Dares (1999)	Australia	<i>Sample:</i> All nursing staff of an acute inpatient hospital psychiatric unit (n=22) <i>Comparison:</i> None	Cross-sectional survey	Job satisfaction
Muscroft and Hicks (1998)	UK	<i>Sample:</i> Stratified random sample of nurses working in an acute psychiatric unit (n=26) <i>Comparison:</i> Stratified random sample of nurses working in a similarly located general hospital (n=26)	Cross-sectional survey	Occupational stress
Severinsson and Hummelvoll (2001)	Norway	<i>Sample:</i> Staff from one acute ward of a county psychiatric hospital (n=23) <i>Comparison:</i> None	Cross-sectional survey	Job satisfaction

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Table A3.1 (continued)

Study	Country	Sample (n) / Comparison (n)	Design	Primary Outcome(s)
Sullivan (1993)	UK	Sample Comparison:	All trained psychiatric nurses working in 8 acute inpatient wards of 2 health authorities (n=78) None	Cross-sectional survey Burnout Occupational stress
Long, et al. (1990)	UK	Sample: Comparison:	Nurses from an acute inpatient unit following a traditional 2-ward system of care (admissions and pre-discharge). Sample size not reported. None	Pre-intervention measure as part of a quasi-experimental design Occupational stress Job satisfaction Staff sickness
Mistral, et al. (2002)	UK	Sample: Comparison:	Staff from one high-care psychiatric ward at a 3-ward inpatient unit (n=22) None	Pre-intervention measure as part of a quasi-experimental design Staff attitude Staff sickness
Smoot and Gonzales (1995)	USA	Sample: Comparison:	Staff from one acute inpatient unit attending an empathy-based training programme (n=31) Staff from a matched acute unit not attending training (n=34)	Pre-intervention measure as part of a quasi-experimental design Burnout Staff sickness Turnover
Tyson et al. (2002)	Australia	Sample Comparison:	Staff from an 'old design' acute ward of a rural psychiatric hospital (n=21) Staff from an 'old design' long stay ward of a rural psychiatric hospital (n=16)	Pre-intervention measure as part of a quasi-experimental design Burnout Job Satisfaction
Goodykoontz and Herrick (1990)	USA	Sample: Comparison:	Nursing staff working on a psychiatric unit serving acutely psychotic schizophrenics (n=27) None	Pre-intervention measure as part of a quasi-experimental design Burnout
Rothwell et al. (1997)	UK	Sample: Comparison:	Nursing staff employed on an acute ward of a psychiatric hospital (sample size not stated) None	Pre-intervention measure as part of a quasi-experimental design Occupational stress

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Table A3.2 Adult general inpatient settings: scoping table

Study	Country	Sample (n) / Comparison (n)		Design	Primary Outcome(s)
Prosser <i>et al.</i> (1996, 1999)	UK	<i>Sample:</i>	All clinical inpatient mental health staff in 3 adult mental health sectors (n=50, 35 and 35 at times 1,2 and 3 respectively)	Prospective, repeated measures	Psychological health
		<i>Comparison:</i>	All clinical community mental health staff in 3 adult mental health sectors (n=71, 65 and 59 at times 1, 2 and 3 respectively)		Burnout Job satisfaction Turnover
Corrigan (1994)	USA	<i>Sample:</i>	Inpatient staff at a state psychiatric hospital. (n=290)	Cross-sectional survey	Occupational stress
		<i>Comparison:</i>	None		
Corrigan <i>et al.</i> (1998)	USA	<i>Sample:</i>	Nursing and clinical staff from 5 inpatient programmes at a city hospital (n=90)	Cross-sectional survey	Burnout
		<i>Comparison:</i>	None		
Donat (2001)	USA	<i>Sample:</i>	Psychiatric aides providing inpatient direct care services at a public psychiatric facility (n=21)	Cross-sectional survey	Occupational stress
		<i>Comparison:</i>	None		
Donat <i>et al.</i> (1991)	USA	<i>Sample:</i>	Direct care staff at a public residential psychiatric facility (n=100)	Cross-sectional survey	Occupational stress
		<i>Comparison:</i>	None		
Fagin <i>et al.</i> (1995, 1996) Carson <i>et al.</i> (1995, 1996a, 1996b, 1997, 1999) Brown <i>et al.</i> (1994)	UK	<i>Sample:</i>	Ward-based mental health nurses from 2 district psychiatric hospitals and 5 mental hospitals (n=323), 2 large asylums (n=144) and 2 mental hospitals (n=181)	Cross-sectional survey	Psychological health
		<i>Comparison:</i>	Community mental health nurses from 15 out of 16 regional health districts (n=250)		Burnout Job satisfaction Occupational stress Staff sickness
Humpel and Caputi (2001)	Australia	<i>Sample:</i>	Mental health nurses in 3 regional hospital inpatient units (n=43)	Cross-sectional survey	Occupational stress
		<i>Comparison:</i>	None		

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Table A3.2 (continued)

Study	Country	Sample (n) / Comparison (n)		Design	Primary Outcome(s)
Ito <i>et al.</i> (2001)	Japan	<i>Sample:</i>	All licensed nurses in 27 out of 108 psychiatric hospitals (n=1494)	Cross-sectional survey	Job satisfaction
		<i>Comparison:</i>	None		
Levert <i>et al.</i> (2000)	S. Africa	<i>Sample:</i>	Qualified nurses from a medium-term, voluntary psychiatric hospital, a medium- and long-term involuntary hospital and the acute assessment and referral units of 2 general hospitals (n=94)	Cross-sectional survey	Burnout
		<i>Comparison:</i>	None		
McElfatrick <i>et al.</i> (2000)	UK	<i>Sample:</i>	Qualified ward-based mental health nurses (n=98)	Cross-sectional survey	Burnout Psychological health
		<i>Comparison:</i>	Qualified community mental health nurses (n=70)		
Munro <i>et al.</i> (1998)	Australia	<i>Sample:</i>	Nursing staff from 5 units of a private inpatient psychiatric facility (n=60)	Cross-sectional survey	Psychological health Job satisfaction
		<i>Comparison:</i>	None		
Stuart <i>et al.</i> (2000)	USA	<i>Sample:</i>	All inpatient nurses employed by one state department for mental health (n=222)	Cross-sectional survey	Job satisfaction Organisational commitment Staff absences Turnover intent
		<i>Comparison:</i>	All community nurses employed by the same state department for mental health (n=108)		
Tummers <i>et al.</i> (2001)	Netherlands	<i>Sample:</i>	Mental health nurses on 5 different wards (n=178)	Cross-sectional survey	Burnout
		<i>Comparison:</i>	General nurses on 5 different wards (n=196)		
Adkins (1995)	USA	<i>Sample:</i>	Mental health specialists of 7 inpatient facilities allocated to undergo staff training (n=171)	Pre-intervention measure as part of a quasi-experimental design	Job satisfaction Organisational commitment Turnover
		<i>Comparison:</i>	None		

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Table A3.2 (continued)

Study	Country	Sample (n) / Comparison (n)		Design	Primary Outcome(s)
Berg and Hallberg (1999)	Sweden	<i>Sample:</i>	All nurses on an inpatient ward undergoing one year of clinical supervision (n=22)	Pre-intervention measure as part of a quasi-experimental design	Occupational strain
		<i>Comparison:</i>	None		
Carson <i>et al.</i> (1999)	UK	<i>Sample:</i>	Ward-based nurses allocated to receive a social support intervention (n=27)	Pre-intervention measures as part of a RCT	Occupational stress Psychological health Burnout Job satisfaction Staff sickness
		<i>Comparison:</i>	Ward-based nurses allocated to receive a feedback-only intervention (n=26)		
Corrigan <i>et al.</i> (1997)	USA	<i>Sample:</i>	All direct care and clinical staff from 3 residential programmes for severe mental illness, who were allocated to participate in interactive staff training (n=35)	Pre-intervention measure as part of a quasi-experimental design	Burnout
		<i>Comparison:</i>	None		
Devlin (1992)	USA	<i>Sample:</i>	Staff on 4 wards of a state psychiatric hospital (n=37)	Pre-intervention measure as part of a quasi-experimental design	Staff morale
		<i>Comparison:</i>	None		
Kunkler and Whittick (1991)	UK	<i>Sample:</i>	Nursing staff working in inpatient psychiatric hospital villas who were allocated to attend stress management workshops, sample size not stated	Pre-intervention measures as part of a quasi-experimental design	Psychological health Burnout
		<i>Comparison:</i>	None		
Robey <i>et al.</i> (1991)	USA	<i>Sample:</i>	Staff from the same residential agency not allocated to attend retreats (n=36)	Pre-intervention measures as part of a quasi-experimental design	Job satisfaction
		<i>Comparison:</i>	Staff from a large multi-site residential agency allocated to attend one day retreats (n=26)		

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Table A3.3 Adult specialised inpatient settings: scoping table

Study	Country	Sample (n) / Comparison (n)		Design	Primary Outcome(s)
Forensic					
Kirby and Pollock (1995)	UK	Sample:	Acute and long-stay nursing staff of a regional secure unit (n=38)	Cross-sectional survey	Occupational stress
		Comparison:	None		
Ewers <i>et al.</i> (2002)	UK	Sample:	Qualified forensic MH nurses allocated to receive PSI training (n=10)	Pre-intervention measure as part of a quasi-experimental study	Burnout
		Comparison:	Qualified forensic MH nurses not allocated to received PSI training (n=10)		
Long-stay					
Corrigan <i>et al.</i> (1994)	USA	Sample:	Staff working day and evening shifts on extended-care units at a state psychiatric hospital (n=35)	Prospective, repeated measures	Burnout Anxiety
		Comparison:	None		
Melchior <i>et al.</i> (1997, 1996, 1995)	Netherlands	Sample:	Nursing staff from 35 long-stay wards of 5 psychiatric hospitals working in direct patient care (n=361)	Cross-sectional survey	Burnout
		Comparison:	None		
Shepherd <i>et al.</i> (1996)	UK	Sample:	Staff from 5 randomly selected rehabilitation wards in long-stay mental hospitals, sample size not stated	Cross-sectional survey	Job satisfaction Psychological health
		Comparison:	Staff from 20 randomly selected community residential homes provided by a range of private, independent non-profit and statutory community agencies, Sample size not stated		

Appendix 4 Phase B data extraction tables: interventions

Table A4.1 Evaluated interventions: Level 1 evidence

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
Acute inpatient						
Long <i>et al.</i> (1990)	CCT, clustered Data collection contemporaneous No comparisons for baseline differences	Nurses working in an acute inpatient care unit in an English general hospital, sample size not reported	<i>Organisational intervention</i> The intervention and control conditions respectively were: <i>Intervention</i> One ward converted into a continuous-care system, where patients remained on the same ward from admission through to discharge <i>Control</i> The rest of the unit which continued the existing two-ward system of care, where acutely ill patients and those preparing for discharge were cared for on separate wards (admissions and pre-discharge).	<i>Primary</i> Stress Staff absenteeism/sickness rates <i>Secondary</i> Work satisfaction Staff perceived merits and disadvantages of the two systems	Nursing Stress Scale (Grey-Toft and Anderson, 1981). The NSS comprises 7 subscales and was completed before and after the study. Average number of hours lost per month per whole time equivalent qualified staff, measured throughout the baseline and experimental periods. Work subscale of the Job Description Index (JDI; Smith <i>et al.</i>, 1969), completed before and after the study. Purpose made 28 item questionnaire completed by experimental group before and after experimental period	<i>Borderline positive NSS</i> Mean scores are not reported. There were no significant differences between the two groups in either before or after scores on 6 of the 7 subscales. Before the intervention, the experimental group expressed significantly (5%) more uncertainty about treatment. At post-intervention the experimental group's scores were significantly (5%) reduced but were not significantly different to the control group. <i>Staff absenteeism/sickness rates</i> The results are presented with the control group split into the admissions and pre-discharge wards.

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
					Baseline and experimental periods 3 and 6 months respectively	The experimental group had lower baseline rates than either the admissions or pre-discharge wards (5.3, 7.0 and 7.4 respectively). During the experimental period, the average number of hours lost decreased by 2.0 on the experimental ward, rose by 2.0 on the admissions ward, and decreased by 2.2 on the pre-admission ward. <i>JDI</i> Mean scores, both before and after, are not reported. It is only reported that the only change between before and after scores was with the experimental group, with greater satisfaction indicated ($p < 0.05$). Staff perceived merits and disadvantages of the two systems. Staff felt that the ward was closer to the ideal after the conversion to continuous care.

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
						The perceived benefits to staff were: Work being more rewarding due to being able to 'finish the job'; more variety in work; and being able to develop better relationships with patients. Staff disagreed with the idea that the continuous care ward would be more stressful and lead to less job satisfaction.

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
Smoot and Gonzales (1995)	RCT, clustered, intervention group chosen by a coin flip	Staff working on two acute inpatient psychiatric units which specialised in caring for people with a primary mental illness who had returned to the hospital after one month of a previous discharge Intervention unit n=35 Control unit n=37	<i>Intervention</i> A 32-hour staff communications training programme designed to improve patient management skills and relieve staff stress. The training program focused on developing accurate empathy by teaching staff members to use appropriate cognitive and emotional components of interpersonal communication. 19/35 staff members completed the staff training. <i>Control</i> The control group received the intervention six months after the experimental group had received the intervention.	<i>Primary</i> Staff resignations and transfers Sick leave (total hours) Annual leave (total hours) <i>Secondary</i> Patients' rights complaints Incidents of restraint and seclusion Assaults on staff		<i>Study is positive.</i> The results of this study support the efficacy of training staff in specific interpersonal communication skills for demonstrating accurate empathy. Staff turnover (resignations and transfers) dropped from 11 to 4 in the intervention group but increased from 8 to 9 in the control group (RR = 0.46, 95% CI = 0.28 to 0.65). Use of annual leave hours dropped to 27% of the previous level for the intervention group but rose by 8% in the control group. Economic costs: expenditures in the intervention unit were reduced by approximately \$65,592 and expenditures in the control unit rose by \$22, 248. The total cost for training staff in the intervention unit was \$13,145.

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
General adult inpatient						
Carson <i>et al.</i> (1999a)	RCT, individualized. Method of allocation was by using sealed envelopes with random permuted blocks.	53 Qualified Mental Health Nurses from Bethlem Royal and Maudsley Hospitals. Intervention group n=27 Control group n=26. Age (years): Intervention 31.54 (SD = 7.23) Control 31.77 (SD = 7.23) Months in job: Intervention 18.3 Control 26.3	<i>Intervention</i> Received professional intervention – Social Support Group (SSG). 5 weekly sessions, included listing occupational stressors, graph of personal life satisfaction, role-mapping exercise, drawing up a 'personal support network map' and considering how participants were going to move forward in terms of developing their own personal social support. <i>Control</i> Feedback-only. Given structured written feedback on the scores on the study questionnaires; given a 7-page booklet entitled 'Stress Management: Some Useful Tips', developed by two of the authors (Cavagin and West)	<i>Primary</i> Occupational stressors that confront mental health nurses as measured by the DeVilliers Carson Leary Stress Scale (DCL scale) Levels of stress as measured by the General Health Questionnaire (GHQ-28 (Goldberg and Williams, 1988)) and the Maslach Burnout Inventory (Maslach and Jackson, 1986) Levels of job satisfaction: Minnesota Job Satisfaction scale (Weiss <i>et al.</i> , 1967) and level of coping skills: Cooper Coping Skills scale (Cooper <i>et al.</i> , 1988)	DeVilliers Carson Leary Stress Scale (DCL scale) General Health Questionnaire (GHQ-28 (Goldberg and Williams, 1988)) Maslach Burnout Inventory (Maslach and Jackson, 1986) Minnesota Job Satisfaction scale (Weiss <i>et al.</i> , 1967) Cooper Coping Skills scale (Cooper <i>et al.</i> , 1988)	<i>This study is borderline negative.</i> The only significant difference between the two groups was observed on the DCL scale at 6-month follow-up, with the feedback only group reporting decreased stress. (p <0.05; ES = 1.29) The feedback-only group had a significant improvement in their MBI Personal Accomplishment scores at post-intervention (p <0.05; ES = 0.35) and improved significantly on the GHQ total score at post-intervention (p <0.05; ES = 0.32)

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
Robey et al. (1991)	CBA, clustered Contemporaneous data collection: not clear Study and control sites comparable at baseline	62 staff (all professions) working in a large multisite residential mental health agency. Intervention group n=26 Control group n=36	<i>Intervention</i> The retreats consisted of a series of group and individual exercises that were intended to help staff identify sources of personal meaning in their work: first by examining the values and goals they bring to their work, then by identifying activities in which these values are enacted, and finally by envisioning the mission of the agency and considering ways in which the personal and professional missions are in alignment. <i>Control</i> This group did not attend the retreat.	Primary Perceptions of the work environment as measured by the Work Environment Scale Form-R (WES) (Insel and Moos, 1974) Job satisfaction as measured by an in-house scale comprising 20 item Work values as measured by a 62-item work values measure adapted from that originally used by Kansas et al. (1974) in their research on work values	Work Environment Scale (WES) Job Satisfaction Scale 62-item work values measure	<i>This study is positive/borderline positive but probable unit of analysis error.</i> As suggested by pre/post-change scores of the intervention and control groups, retreats promoted more favourable perceptions of the work environment: differences between change scores for the two groups were statistically significant ($p < 0.001$) for the involvement, autonomy, clarity, innovation, and physical comfort dimensions. For the peer cohesions, supervisor support, task orientation and control dimensions scores were more favourable for the intervention groups but the differences were non-significant. A significant between groups difference was found for job satisfaction change scores but a pre-test measurement effect caused an elevated decrease in job satisfaction for the control group.

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
Forensic adult inpatient						
Ewers <i>et al.</i> (2002)	RCT, individualized. Method of randomisation not specified. The sample was stratified by ward, sex and day/night duty.	Forensic mental health nurses working in a regional secure unit. Level of training ranged from grade D to grade G. Intervention group n=10 Control group n=10 Age (years): Intervention 43.40 (SD = 5.74) Control 41.70 (SD = 7.70) Time at clinic (years): Intervention 10.90 (6.66) Control 12.80 (6.00)	<i>Intervention</i> Professional intervention: 20 days of Psychosocial Intervention Training (PSI) Taught by first author and facilitated by subject specialists from local academic institutions and services Includes practical and theoretical components Skills to reduce distress and improve functioning for people with schizophrenia Aims to encourage staff to examine their existing attitudes and beliefs about psychotic illness Encourages flexible and creative way of seeing patients' problems <i>Control</i> Waiting list	<i>Primary</i> Stress as measured by the Maslach Burnout Inventory (Maslach <i>et al.</i> , 1996) <i>Secondary</i> Knowledge concerning schizophrenia and psychological approaches (Lancashire <i>et al.</i> , 1997) Scale to identify whether subjects had realistic and positive attitudes towards their patients' care, which would lead to appropriate responses to the difficulties that result from the illness (Ewers <i>et al.</i> , 2002)	Maslach Burnout Inventory (Maslach <i>et al.</i> , 1996)	<i>This study is positive.</i> There were statistically significant differences between intervention and control groups on all three scales of the MBI as follows: Emotional exhaustion, $p = 0.04$; Depersonalization, $p = 0.01$; Personal achievement, $p = 0.01$.

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
Psychogeriatric adult inpatient						
Berg <i>et al.</i> (1994)	CCT, clustered Data collection contemporaneous and wards regarded by the nursing administrator as similar with regard to staffing, patients and nursing methods	Psychogeriatric nurses working in two wards at a psychogeriatric clinic in southern Sweden Intervention ward n=19 Control ward n=20 Level of training: Intervention 4 registered, 13 licensed, 1 aide, 1 with no vocational training Control 4 registered, 12 licensed, 1 aide, 3 no vocational training Age (years): Intervention 32.9 (SD 11.0) Control 36.4 (SD 11.3) Years in nursing: Intervention 10.7 (SD 9.4) Control 11.2 (SD 8.5)	<i>Intervention</i> Professional intervention: individually planned and documented nursing care (IVC) combined with regular systematic clinical supervision. The supervision occurred every third week during the first 6 months, and every fortnight during the following 6 months (30 hours). Each session lasted for 2 hours. <i>Control</i> All nurses on both wards initially participated in a 2-day course on dementia diseases and dementia care, one ward at a time, followed by another 2 days during the year of the study. The control ward received no other intervention.	<i>Primary</i> The climate of creativity and innovation, tedium and burnout was measured by the Creative Climate Questionnaire (CCQ) (Ekvall <i>et al.</i> , 1983), the Burnout Measure (BM) (Pines and Aronson, 1988), and the Maslach Burnout Inventory (MBI) (Maslach and Jackson, 1981). Data were collected at baseline and 6 months and 12 months after the start of the intervention.	Maslach Burnout Inventory (1981) Creative Climate Questionnaire (1983) The Burnout Measure	<i>Study is positive/borderline positive.</i> CCQ Between-group differences at 12-month follow-up indicated that on the CCQ, idea support ($p < 0.004$, ES = 0.96), trust ($p < 0.02$, ES = 0.78) and risk taking ($p < 0.03$, ES = 0.63) were significantly higher on the intervention ward, while conflicts were significantly lower ($p < 0.006$, ES = 0.85). <i>BM</i> There were no significant differences between the two groups at 12-month follow-up. Within the intervention group, the mean Burnout score decreased significantly from baseline to 12-month follow-up ($p < 0.004$, ES = 0.72). The control group did not show any significant changes over time. <i>MBI</i> There were no significant differences between the two groups at 12-month follow-up. Within the intervention group the overall frequency and intensity of burnout decreased significantly ($p < 0.007$, ES = 0.35 and $p < 0.01$, ES = 0.45)

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
Long-stay adult inpatient						
Heaney <i>et al.</i> (1995)	Randomised controlled trial, clustered The care home, not the individual, is the unit of randomisation. Method of randomisation not reported	Direct-care staff and home managers working in group homes that provide residential care for adults with developmental disabilities or mental illness in 11 counties in Michigan Age (years) 31.5 (SD = 10.1) Average tenure in the job: 1 year 4 months.	<i>Intervention</i> Professional intervention: Caregiver Support Program (CSP) 6 training sessions (4–5 hours each), first three weekly, last three fortnightly Aimed to teach employees about the helping potential of support systems and to build skills in mobilising available support from others at work Also aimed to teach employees about participatory problem-solving approaches and to build skills in implementing such approaches in work team meetings Learning processes structured according to the principles of social learning theory (Bandura, 1977) and Janice's (1983) work on effective short-term counselling techniques	<i>Primary</i> Mental health was measured with a multidimensional index of symptoms that included 24 items from the SCL-90-R subscales (Derogatis <i>et al.</i> , 1976) from anxiety, depression, somatisation, and anger. The mental health measure was coded so that higher scores indicated fewer symptoms. The job satisfaction measure used nine items to tap employees' feelings about various aspects of the job such as task variety, skill utilisation, opportunities for promotion, and job content (Andrews and Withey, 1976).	24 items from SCL-90 (Derogatis <i>et al.</i> , 1976) Job Satisfaction Measure Interpersonal skills related outcomes Group Problem Solving Outcomes	<i>This study is broadly positive</i> The intervention group experienced significantly greater improvements in mental health ($p < 0.05$), supportive feedback ($p < 0.05$), Self appraisal of coping ($p < 0.001$), group problem solving ($p < 0.05$), and work team climate ($p < 0.05$). There were no significant differences between the two groups on job satisfaction, supervisor support and handling disagreements.

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Table A4.1 (continued)

Author and Year	Design	Population, setting and sample size	Intervention and control conditions	Outcomes studied	Outcome measure used	Results
			Control Did not receive CSP training	<i>Secondary</i> Interpersonal skill-related outcomes Group problem-solving outcomes Report (at 5 weeks post-training) of the amount of discussion covered in the CSP that had taken place in the past 2 months in their group homes.		
Melchior <i>et al.</i> (1996)	CBA, clustered Data collection contemporaneous Baseline differences accounted for in analysis	Five psychiatric hospitals in the Netherlands participated in this study. 35 of these wards were long-stay and 492 staff were randomly sampled to complete questionnaires. Intervention ward n=22 Control ward n= 21 Nursing students and temporary employees excluded Based on pre-test data 72% of respondents were women. Age (years) 34.8 (SD = 8.2)	<i>Intervention</i> n=60. Intervention involved the introduction of an innovation in nursing care delivery with a special focus on primary nursing. Intervention was based on the general principles of primary nursing. Both psychiatric and practical nurses were assigned to patients as primary nurses based on the complexity of care needed. <i>Control</i> n=101. This group did not receive the intervention.	<i>Primary</i> Burnout was measured by the Maslach Burnout Inventory (Maslach <i>et al.</i>, 1996) including the three scales of emotional exhaustion, depersonalization and personal accomplishment. Job Turnover over the study period was measured.	Translated version (Schaufeli, 1990) of the Maslach Burnout Inventory (Maslach and Jackson, 1981)	<i>This study is mixed effect.</i> The results did not indicate that the introduction of primary nursing led to the decrease of burnout among psychiatric nurses. Using pre-test 2 as a covariate, it was shown that the intervention group increased their depersonalization score at post-test significantly more than the control group ($F = -2.17, p \leq 0.05$) A comparison of change scores (post/pre-test 2) between the intervention and control scores indicated a slight trend for the control group to do better. The control group had 9.6% more turnover than the intervention group. This difference was marginally significant ($p = 0.06$, $RR = 0.63$, 95% CI 0.03 to 0.99)

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Table A4.2 Evaluated interventions: Level 2 evidence

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Acute adult inpatient						
Carpenter <i>et al.</i> (2000)	Natural experiment with repeated measures design: pre-, 4-month and 12-month follow-up	Nurses, managers and occupational therapists at a UK psychiatric hospital with long-stay and secure wards n=102, 108 and 91	<i>Structural intervention</i> Relocation from asylum to purpose-built community-based units	<i>Primary</i> Job satisfaction Stress <i>Secondary</i> Role ambiguity/clarity	Scale by Dyer and Hoffenberg (1975) General Health Questionnaire (GHQ-28; Goldberg and Hillier, 1979) Measure by Rizzo <i>et al.</i> (1970)	<i>No effect</i> Response rates: Time 1 = 71%; Time 2 = 74%; Time 3 = 62% The transition had no significant effect on job satisfaction, stress, or role ambiguity scores Note: Stress levels for this sample were lower than for the general population as reported by Cox <i>et al.</i> (1987) and for psychiatric nurses at Clayburn Hospital, as reported by Brown and Leary (1995)
Dodds and Bowles (2001)	Case study	Staff on Oakburn Ward, a 21-bed acute (male) inpatient ward in Bradford, UK	<i>Organisational intervention</i> 'Refocusing', whereby formal observations were gradually dismantled over 6 months (from November 1988) and replaced with alternative 'engagement' practices.	<i>Primary</i> Staff sickness rates <i>Secondary</i> Patient violence and aggression Staffing costs	The amount of staff hours lost through sickness, as a percentage of the full complement of hours Number of incidents of patient violence and aggression Comparisons made of costs before and after the changes	<i>Positive results</i> <i>Staff sickness</i> There was a reduction from 10.8% to 4.4%, which is 59%. This was from the year ending 31 March 1988 (19–7 months before implementation) to the year ending 31 March 2000 (5–17 months after implementation)

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
			Nurses reviewed observation needs hourly; they stopped using observation as an indicator of clinical need and spent more one-to-one time with patients developing collaborative, therapeutic relationships and interventions. The professional culture was also promoted, with all staff completing professional development plans.			<i>Patient violence and aggression</i> There was a reduction of 33.4% (273 vs. 182 incidents), from the 12 months prior, to the 12 months following implementation. <i>Staffing costs</i> Staffing costs reduced dramatically. For years ending 31st March: 1998 £15,748 overspent 1999 £2421 underspent 2000 £27,400 underspent
Goody-koontz and Herrick, (1990)	One group pre-/post-design	Staff of an acute psychiatric unit with highly psychotic clients, country not specified n=27 (of an initial 33) Registered Nurses, Licensed Practice Nurses and aides	<i>Professional intervention</i> A four-part education programme aimed at assisting staff in managing aggressive patient behaviour; the programme was taught one part per month over three months and covered communication skills, non-violent crisis intervention and participants' feelings about the course and of being assaulted.	<i>Primary</i> Burnout <i>Secondary</i> Reported incidents of patient aggressive behaviour	Burnout Scale (Pines and Aronson, 1980) The study arbitrarily created four categories of severity. Monthly quality assurance reports provided a record of reported incidents of patient aggressive behaviour.	<i>Borderline positive results</i> <i>Burnout scale</i> There was no significant difference between pre- and post-intervention total scores (means not reported). There was a shift toward less severe burnout (cut-off points not reported). <i>Reported patient aggressive behaviour</i> The number of reported incidents fell from a pre-intervention rate of at least 6 per month, to a total of 6 in the 4 months following the programme.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
LePage et al. (2003)	One group pre-/post-design	Mental health care staff in a US acute psychiatric inpatient unit for young adults (aged 18–20 years) Sample size not reported	<i>Organisational intervention</i> Token economy with voluntary patient participation	<i>Primary</i> Staff absenteeism due to patient inflicted injury <i>Secondary</i> Incidents of patient-inflicted injury – on staff, self, and other patients	All the data were taken from databases on the unit, from 12 months prior to, to the first 24 months of the token economy.	<i>Positive results</i> <i>Staff absenteeism due to patient-inflicted injury</i> The proportion of injuries that resulted in time off work was significantly reduced (by 80%, $p < 0.01$). Actual work time lost through injury decreased by 93% ($p < 0.01$). <i>Incidents of patient inflicted injury</i> There were significant decreases in the total number of injuries (of 33%, $p < 0.05$) and patient-to-patient injuries (of 48% $p < 0.01$). There were non-significant reductions in patient-inflicted injury to self and on staff.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Mistral <i>et al.</i> (2002)	One group pre-/post design	Staff on a UK high-care psychiatric ward (n=22) including trained and untrained nurses, medical practitioners and ward managers	<i>Professional intervention</i> Team meetings between staff and patients, new policies, funding and staff training were implemented on the ward to improve communication, the physical environment, safety and clarity of aims and structure	<i>Primary</i> Job satisfaction Stress Staff illness	Adaptation of the AAPPQ (Cartwright, 1980) Ward Atmosphere Scale (WAS; Moos 1989) Interviews analysed with Grounded Theory (Glaser and Strauss, 1967)	<i>Borderline positive results</i> <i>Job satisfaction</i> AAPAQ: 2 of the 7 scales (Skill and knowledge adequacy and Self-esteem in work) had significantly improved scores at post-test. The remaining 5 were non-significantly improved. Job satisfaction WAS: 2 of the 10 subscales (Involvement and Practical orientation) showed significantly improved scores from pre- to post-test. The remaining 8 were non-significantly improved. Qualitative data (n=36) <i>Stress</i> Similar levels were reported at pre- and post-test (16 and 15 members of staff respectively reporting extreme or high levels). Further areas of concern were safety, divisions between nursing and medical staff and staffing levels.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
						Five areas of positive change also emerged: communication, cohesiveness, relations with management, clarity of structure and quality of patient care. <i>Staff illness</i> There was a decrease in work days lost. From the 6 months prior to, to the 6 months following the interventions, the number of days lost fell from 210 to 79 (62% reduction). <i>Costs</i> £70,000 was made available for renovations.
Rothwell <i>et al.</i> (1997)	One group repeated measures design: at 3 months pre-, 1 month post-, and 10-month follow-up	Nurses working on a 24-bed acute adult psychiatric ward	<i>Organisational intervention</i> The ward was relocated from a psychiatric hospital (PH) to a general district hospital (GH). The PH ward was a self-contained, two-floored building with many quiet corners. The new ward in the GH had an open plan layout similar to the hospital's general medical wards.	<i>Primary</i> Stress	A self-rated 10-point scale, where a higher score indicates greater stress. The scale was completed at the end of a shift.	<i>Mixed effect</i> Initial reductions in stress were not sustained. Mean scores pre-, post- and follow-up were 4.9, 2.8 and 4.2 respectively. Pre- to post-test scores were significantly improved, but post-follow-up scores were significantly worse ($p < 0.05$, Scheffe post hoc test)

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Tomasini (1992)	Single group pre-/post- design	Registered nurses on a speciality unit of a large US university teaching hospital (n=8, all female)	<i>Professional intervention</i> Staff support group meetings were scheduled every week for 1 hour over a period of 12 weeks	<i>Primary</i> Job satisfaction	Work Environment Scale (WES; Moos, 1981, 1986) WES forms R and I tap perceived real and ideal work environments respectively, across 10 dimensions Clinical observations made by a psychiatric liaison nurse post-intervention	<i>Borderline positive results</i> <i>WES</i> Standardised 'real' score changes pre- v post-test: 4 dimensions had non-significantly worse scores; the remaining 6 dimensions were improved, 2 significantly (Clarity, $p \leq 0.01$ and Control, $p \leq 0.05$). Real-ideal discrepancies pre- v post-test: discrepancies were reduced at post-test on 6 dimensions, 1 significantly (Clarity, $p \leq 0.01$). <i>Clinical observations</i> Improved communication between nurses in the meetings was observed. Specifically, they balanced the expression of concerns with positive feedback, were less critical, and clarified others' comments rather than making assumptions. There was a positive response to the meetings, but nurses felt that there was work to be done on extending the improvements into the workplace.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
General adult inpatient						
Berg and Hallberg (1999)	One repeated-measures design: pre-, 6 months and 12 months	Psychiatric nurses on a general psychiatric ward in Sweden (n=22, 10 registered nurses, 10 licensed mental practical nurses, 1 licensed practical nurse and 1 nurse's aide) Mean age = 39.7 years (SD 7.1) Mean years in nursing = 13.5 (SD 8.3)	Professional intervention One year of supervised planning of individual care and fortnightly 3-hour sessions of clinical group supervision	<i>Primary</i> Job satisfaction through: Satisfaction with Nursing Care and Work; work-related strain; sense of coherence; climate of creativity and innovation <i>Secondary</i> Nurses' views of the effects of clinical supervision on e.g. professional performance and development and team functioning	Satisfaction with Nursing Care and Work Questionnaire (SNCW; Hallberg <i>et al.</i>, 1994), low scores indicate greater satisfaction Work-Related Strain Inventory (WRSI; Revicki <i>et al.</i>, 1991), high scores indicate greater strain Sense of Coherence Scale (SOC; Antonovsky, 1987), high scores indicate greater sense of coherence Creative Climate Questionnaire (CCQ; Ekvall <i>et al.</i>, 1983). High scores indicate creative climate, except for conflicts where the reverse applies A 14-item questionnaire developed for this study	<i>Borderline positive results</i> SNCW Mean scores were non-significantly improved over the 12 months. WRSI There was a non-significant decrease in scores from pre- to 12 months post-intervention. SOC Mean scores were non-significantly improved. CCQ 3 dimensions of the CCQ had significantly improved scores (Trust, Conflicts and Idea-time, ps <0.05). The remaining 7 results were not significant, but 6 were improved. <i>Nurses' views of the effects of supervision</i> Nurses' views were positive after 6 months, and more so at 12 months.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Corrigan <i>et al.</i> (1997)	One group pre-/post- design	Rehabilitation teams working with people with severe mental illness in US residential programmes (n=35) Direct care staff = 13 (37%) Clinical staff = 22 (63%) Mean age = 45.9 years (SD 8.4) Sample was 56% of staff and representative in terms of gender, ethnicity, age and tenure.	Professional intervention 8 months of interactive staff training to facilitate the adoption of behavioural approaches to rehabilitation work; training included monthly 90-minute meeting in which staff identified programme needs, behavioural strategies to meet those needs and how to implement the strategies.	<i>Primary</i> Stress Job satisfaction through collegial support	Maslach Burnout Inventory (MBI; Maslach and Jackson 1986). The MBI has 3 sub-measures and a low score indicates low burnout. Social Support Questionnaire (SSQ; Sarason <i>et al.</i>, 1983), which was modified to be specific to the workplace	<i>Mixed effect</i> <i>MBI</i> Personal Accomplishment scores improved but not significantly. Depersonalisation change scores were also not significant (worse for clinical staff, better for direct care staff). Emotional exhaustion scores were significantly improved for direct care staff following training, while clinical staff scores were non-significantly worse. <i>SSQ</i> The results indicate a non-significant reduction in the size of collegial support for both staff groups, but a significant increase in satisfaction with support, again for both groups.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Devlin (1992)	One group pre-/post- design (2 months pre- and 1 month post-)	Staff of a state psychiatric hospital with geriatric and special services wards (n= 75)	<i>Structural intervention</i> Renovation (decorating and adding new furnishings and plants)	<i>Primary</i> Staff morale <i>Secondary</i> Environmental design	Environmental Design Survey, with an additional morale question	<i>Borderline negative results</i> <i>Staff morale</i> There was no significant improvement from pre- to post-test. <i>Environmental design</i> Analysis of variance showed a significant pre-/post- main effect for furnishings (in the day hall) and for plants ($p < 0.01$). For the remaining items, either the ward, rather than pre- or post-test, was the main effect, or there were no significant differences.
Flannery et al. (1995)	One group pre-/post- design	A US state 400-bed hospital employing over 415 nursing staff 278 assaulted staff received support from the Assaulted Staff Action Program (ASAP)	<i>Professional intervention</i> The ASAP is a voluntary peer-help crisis intervention to help staff who have been assaulted by patients to deal with the psychological consequences. The programme lasted for 2 years.	<i>Primary</i> Staff turnover as a result of patient assault <i>Secondary</i> Number of reported patient assaults on staff		<i>Positive results</i> <i>Staff turnover</i> The average turnover preceding the ASAP was 15 members of staff per year. During the 2 years of the ASAP only 1 staff member left as a result of patient assault.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
						<i>Reported patient assaults</i> There was a significant reduction from a base rate of 30 to a base rate of 11 at the end of the ASAP ($t(8) = 16.46$, $p < 0.005$) <i>Costs</i> The cost in 1990–91 was \$40,000 in salaries for 15 ASAP members, servicing over 415 nursing staff.
Kunkler and Whittick (1991)	Single-group pre-/post- design with follow-up	Nursing staff (n=360.5) working in a psychiatric hospital in Scotland	<i>Psychological Intervention</i> Stress management training sessions	<i>Primary</i> Well-being Burnout	GHQ – 28 (Goldberg, 1978) Burnout-Checklist (Bailey, 1985)	<i>Positive results</i> The recruitment of staff proved so difficult for the first set of workshops that different methods of organising the sessions were employed. In the second set of workshops mean scores on outcome measures decreased during course of project but burnout scores decreased most over the period of the intervention.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Prosser et al. (1999)	Natural experiment with repeated-measures design: twice during and once post-intervention, with 12 months between measures	Multidisciplinary team staff of 3 London adult mental health sectors (n=160, 166, 152) Base of work for respondents: Time 1 Inpatient 41%; community or day/outpatient 59% Time 2 Inpatient 35%; community 65% Time 3 Inpatient 37%; community 63%	<i>Structural intervention</i> Hospital-based day and outpatient services relocated to the community	<i>Primary</i> Staff turnover Burnout General health Job satisfaction	Maslach Burnout Inventory (MBI, Maslach and Jackson, 1986); MBI has 3 sub-measures, low score indicates low burnout 12-item General Health Questionnaire (GHQ-12; Goldberg and Williams 1988); higher scores indicate poorer health The general job satisfaction item from the Job Diagnostic Survey (Hackman and Oldham, 1975); higher scores indicate greater job satisfaction	<i>Borderline positive results</i> Response rates, % (n) Time 1 = 76% (121) Time 2 = 60% (100) Time 3 = 62% (94) 25 staff assessed over all 3 points <i>Staff turnover</i> Time 1 = 35%; Time 2 = 34%; Time 3 = 30% Neither MBI, GHQ-12 nor job satisfaction scores for the samples as a whole were significantly changed over the three time points. <i>MBI</i> For community staff, Emotional exhaustion mean scores improved (from 27.4 to 21.2) over the study period, as did Depersonalisation mean scores (from 8.8 to 6.7). When time was not a variable, Emotional exhaustion scores were significantly lower in the sector longest in the community (p = 0.03, STATA multiple regression).

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
						<i>GHQ-12</i> Community staff mean scores decreased over the 3 time points (from 14.4, to 13.9, to 11.8). When time was not a variable, GHQ-12 scores were significantly higher for community-based staff ($p = 0.02$, STATA multiple regression). <i>Job satisfaction</i> Scores significantly increased over time for community staff.
Forensic inpatient						
Beck (2002)	One group pre-/post- design	17-bed secure hospital ward No details on staff population	<i>Organisational intervention</i> Twice-weekly community group meetings over an 8-month trial where staff and patients were encouraged to address day-to-day interpersonal issues and to consider applying therapeutic community principles on the ward	<i>Primary</i> Job satisfaction through staff constructs of the ward <i>Secondary</i> Staff's views on the project	Repertory grid technique (Kelly, 1955, 1991) Oral feedback	<i>Negative results</i> <i>Job satisfaction</i> The community group meetings had little impact on staff's constructions of the ward, the constructions being that it was akin to a hostel, had low levels of staff cohesion, and that patients were socially isolated, apathetic and viewed their key workers as dispassionate and ill informed about their concerns.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
						Staff's views of an ideal ward did change from being most like a specialist behavioural model, to more like a therapeutic community. <i>Staff views</i> Staff reported a feeling of chaos around the project, noting lack of staffing and training resources as contributors. Staff and patients felt confused and disempowered.
<i>Psychogeriatric inpatient</i>						
Shah and De (1998)	One group repeated-measures design: weeks 1, 7, 13 and 19 (the last week of the study)	Nurses in a 24-bed psychogeriatric continuing care ward at a London district general hospital All agency and 1 long-term sick staff excluded (n=15) Median age = 44 years (range 26–59) Median years in nursing = 10 (range 2.5–32) Median years in psychiatric nursing = 7.25 (range 2.5–25)	<i>Professional intervention</i> An educational package to reduce patient aggression and nurses' stress The package was implemented during weeks 7 to 12 of the 19-week study period Note: At week 13 nurses were informed of plans to close the ward and move services to the private sector.	<i>Primary</i> Stress	30-item General Health Questionnaire (GHQ-30; Goldberg, 1978), higher scores indicate poorer health	<i>Negative results</i> Week 19 scores were significantly higher than weeks 1 (p < 0.05) and 7 (p < 0.01) and non-significantly higher than at week 13 (p = 0.07). It is considered most likely that the increase in GHQ-30 scores is a result of the news of the forthcoming ward closure (at week 13), rather than the educational package (at weeks 7–12).

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Long-stay inpatient						
Barnette and Clendenen (1996)	One group pre-/post- design	Shawnee Hills Inc. A mental health care organisation with over 65 facilities for people with developmental and learning disabilities, addictions and mental health problems	Organisational intervention Total Quality Management (TQM), which provides guidance for establishing infrastructure for organisational change	Primary Rates of staff turnover Rates of staff sick leave	Records of annual employee turnover rates Records of the proportion of staff who used 3 or fewer sick days per year	<i>Borderline positive results</i> Rates fell by 50% but if the figures are correct, they fell even more before the intervention. <i>Rates of staff turnover</i> Annual employee turnover rates ranged from 18% to 24% before TQM implementation. From the year before implementation (1991) to the year following implementation (1993), rates fell significantly from 3.2% to 1.6% <i>Rates of staff sick leave</i> Sick leave decreased significantly. After the intervention 17% of staff used 3 or fewer sick days, compared to 31% before the intervention. <i>Economic data</i> A reported upturn in revenue from \$17.9 million in 1993 (the year following implementation) to \$50 million at the end of 1995 is attributed to TQM.

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Table A4.2 (continued)

Author and year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Eklund and Hansson (2001)	One group pre-/post- design (Note: There had been a minor staff turnover during the interval between the two time-points.)	Trainees and staff members in a psychiatric work rehabilitation unit in Sweden (n=15) Pre-: Age = 44 years (SD = 10) Post-: Age = 45 years (SD = 11)	<i>Organisational intervention</i> New rehabilitation programme based on behavioural theory and social learning theory in accordance with the principles of psychiatric rehabilitation developed at the Centre for Psychiatric Rehabilitation in Boston	<i>Primary</i> Job satisfaction through ward atmosphere	Community Oriented Programs Environment Scale (COPES (Moos, 1997))	<i>Mixed effect</i> The only significant change was with Autonomy, which improved ($p = 0.02$). Of the remaining 9 scales, 1 demonstrated no change, 3 had worse and 5 had improved post-test scores.

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Table A4.3 Evaluated interventions: Level 3 evidence

Author and Year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Acute adult inpatient						
Tyson <i>et al.</i> (2002)	Pre-/post- design Note: Pre- and post- samples are independent groups	Large rural psychiatric hospital in Australia with a large catchment area serving a population of 300,000 and comprising acute and long-stay wards 40 nurses (old acute and long stay wards); 40 nurses (purpose-designed acute and long-stay wards)	<i>Structural intervention</i> The old wards were replaced with new purpose-designed ones	<i>Primary</i> Burnout Job satisfaction	Maslach Burnout Inventory (MBI, Maslach and Jackson, 1986) The MBI has 3 sub-measures, low score indicates low burnout Job satisfaction scale (Warr <i>et al.</i> , 1979)	<i>Broadly negative results</i> Response rates were 37/40 and 34/40 <i>MBI</i> Emotional exhaustion and Personal accomplishment scores were significantly higher (worse) on the new wards ($F = 9.57$, $p < 0.01$; $F = 6.57$, $p < 0.05$ respectively). Depersonalisation scores did not differ significantly between the old and new wards. <i>Job satisfaction</i> There was a non-significant trend toward decreased satisfaction on the new wards.
Waldo and Harman (1999)	Single-group post-test design	22 staff working in an acute inpatient setting of a state hospital in the USA	<i>Psychological Intervention</i> Relationship enhancement (RE) therapy offered in a series of three 2-hour group meetings	<i>Secondary</i> Improvement of communication with patients	No outcome measure: staff gave written feedback about the RE groups	Nearly all of the participants had to leave the RE meetings at least once because of unanticipated work-related responsibilities. Staff indicated that the RE groups helped them improve communication with both patients and staff.

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Table A4.3 (continued)

Author and Year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
<i>Psychogeriatric inpatient</i>						
Baillon (1999)	Natural experiment with pre-/post- design Note: Pre- and post- samples are independent groups	Staff working in UK traditional hospital setting in elderly psychiatry (n=66 (pre-relocation) and n=79(post-relocation) The samples comprised medical, nursing, administrative and domestic occupations.	<i>Structural intervention</i> Services were relocated from a traditional psychiatric hospital to a purpose-built psychogeriatric unit	<i>Primary</i> Occupational stress	Occupational Stress Inventory (OSI; Cooper <i>et al.</i> , 1988). Completed 2–4 months prior to, and 6 months following relocation	<i>Negative results</i> The relocation did not significantly affect OSI scores, either when all occupational groups were assessed together, or when qualified nurses only in each sample were compared
Brooker and Dinshaw (1998)	Single-group post-test only design	85 staff (all staff including night staff and members of the interdisciplinary team) working on a psychogeriatric assessment ward	Structured interviews with staff to obtain qualitative feedback. The interviews were based on questionnaires originally devised by Raphael and Mandeville in the King's Fund survey into the lives of elderly people in hospital. Staff were asked to comment on what they thought was good about delivery of care and what they thought could be done to make things better	Primary Staff morale	No outcome measure used	No data. Authors comment that the interviews "seemed" to have had a positive effect on morale.

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Table A4.3 (continued)

Author and Year	Design	Population, setting and sample size	Intervention	Outcomes studied	Outcome measure used	Results
Lichtenberg <i>et al.</i> (1990)	Controlled post-test at 1-month follow-up	Psychiatric aides at a US 130-bed intermediate geriatric care facility within a psychiatric hospital (n=22)	<i>Professional intervention</i> Interdisciplinary Team Training in Geriatrics (ITTG); 12 learning objectives taught over 12 two-hour sessions Ten participants who did not receive ITTG training comprised the control group.	<i>Primary</i> Morale <i>Secondary</i> Knowledge of: Alzheimer's disease and other dementias, including ethics of treatment and research; interdisciplinary team functioning	Standardised interview Purpose-made multiple-choice exam	<i>Positive results</i> Morale: of 12 ITTG participants only 25% reported no affect of the training on morale, 25% and 50% reported slight and great improvement respectively. Knowledge: the training group scored significantly higher than controls in the exam ($t = 4.23$, $df = 29$; $p < 0.0005$).

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Table A4.4 Level 4 evidence studies

Author and year	Intervention	Description
Acute adult inpatient		
Barkley and Bailey (1991)	Transitional programme	Programme designed to help staff manage organizational change when a large psychiatric hospital closes down and staff and patients are moved into community based services
Malone and Holden (1990)	Reunions of former inpatients on a psychiatric unit	Formal reunion held annually so that former patients could return to the psychiatric inpatient unit
General inpatient settings		
Clinton <i>et al.</i> (1997)	Accelerated Professional Development	Programme developed at the Centre for Mental Health Nursing Research at Queensland University of Technology; process that draws on the principles of action learning, reflective practice and peer consultation
Pratt and Gill (1992)	Interagency In-Service Training	Programme directors from psychosocial facilities pool their resources to create a psychosocial programme that responds to the common training needs of individual programmes
Storch (1991)	In-hospital Support Group for employee victims of violence	The support group set up for nursing staff although all personnel were encouraged to participate; two leaders, one psychiatrist and one nurse; meetings held once a week; the group aimed to be emotionally supportive, educational and task oriented
Welzant <i>et al.</i> (1995)	Critical Incident Stress Debriefing Team	CISD team uses a variety of interventions to assist staff through various critical incidents (e.g. individual defusings, referrals for additional counselling, formal debriefings, follow-up visits)
Setting not specified		
Collins (1994)	Prevention and Management of Aggressive Behaviour Programme (PMAB)	Programmes designed to train professionals in techniques to prevent and manage aggression and violence; programmes can be adapted to any setting where services are provided to the public
Harrison and Creed (1996)	A course for recently appointed psychiatrists	Aims of the course to identify common problems and stresses faced by newly appointed psychiatrists and to share and develop ways of coping with such pressures

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