



**Work related stress in forensic mental health professionals:
A systematic review**

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**Work related stress in forensic mental health professionals:
A systematic review**

Purpose

The purpose of this paper is to investigate the prevalence of stress and burnout among forensic mental health professionals (FMH).

Design/methodology/approach

A systematic review of the available literature accessed by relevant databases was conducted.

Findings

This study concluded that FMH suffer from moderate levels of both stress and burnout. There is insufficient evidence to establish that they suffer from higher levels of stress than their non-forensic colleagues. Interventions such as PSI (psychosocial intervention) training have been reported to demonstrate an improvement in staff knowledge and attitudes toward patients, whilst reducing burnout.

Practical implications

Stress in FMH is a cause of concern. Conclusions drawn are applicable only to nursing staff as other professions were not adequately represented. As most studies used the burnout scores, results were directly comparable. Further

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4 research is needed to fully evaluate stress and burnout in professionals who
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6 work within forensic mental health settings.
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9 10 11 12 13 Originality/Value

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15 High levels of stress and burnout have negative effects on an individual's ability
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17 to work and subsequently there is a financial and also moral incentive for the
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19 management of health service workforces to intervene. This study highlights
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21 that FMH, as a population, are at risk.
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24 25 26 **Keywords**

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28 Stress, burnout, forensic, mental health professionals, staff, interventions
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42 43 44 **Background**

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46 Occupational stress is defined as psychological strain due to individual and
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48 workplace stressors (Finney *et al*, 2013). Burnout is the consequence of chronic
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50 occupational stress and is described as a 'state of physical, emotional and
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52 mental exhaustion,' (Pines *et al*, 1981 and Freudenberger, 1974). It is
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54 characterised by feelings of detachment, cynicism, low self-esteem and a
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56 decreased sense of personal accomplishment (Maslach *et al*, 1996). Those
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4 working in an occupation where interpersonal relationships are crucial are prone
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6 to higher levels of burnout (Maslach *et al*, 1996). Nursing and other healthcare
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8 professions have been identified as being particularly at risk (Cacciabarne *et al.*,
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10 1986). The consequences are clear, as healthcare professionals have higher
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12 levels of physical and psychological ill health and greater sickness absence in
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14 comparison with the rest of the United Kingdom working population (Wall *et al.*,
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16 1997; Williams *et al.*, 1998). A study involving 1,800 nurses found 93% had
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18 experienced varying degrees of work related stress (Cole, 1992). It has been
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20 suggested that 25% of all nurses suffer from symptoms of burnout (Landau,
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22 1992). In addition, stress has been identified as one of the major reasons why
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24 nurses fail to achieve an optimum level of effectiveness at work (Kendrick, 2000;
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26 Joseph, 1993).
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33 In comparison to healthcare staff in other specialities, mental health
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35 professionals are at particularly high risk of developing stress and burnout; a
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37 pattern confirmed in several reviews (Edwards *et al.*, 2000; Paris & Hoge, 2010;
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39 Rossler, 2012). This may be a contributing factor to the high staff turnover rates
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41 within the mental healthcare sector (Ben-Dror, 1994). A recent literature review
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43 (Morse *et al*, 2012) highlights the significant problem that burnout poses to the
44
45 overall mental health workforce and exposes a lack of basic research in this
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47 area.
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53 Another important risk factor is the perceived or actual threat of violence (Larkin
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55 *et al.*, 1988). Forensic professionals are more likely to be subject to verbal or
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4 physical aggression therefore significantly increasing their risk of developing
5 stress and suffering burnout (Mason, 2002).
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10 Literature on stress amongst forensic professionals is sparse and there are no
11 systematic reviews of literature concerning work related stress and burnout
12 amongst multi-disciplinary professionals caring for forensic patients. A selective
13 review investigating stress among forensic mental health nurses concluded
14 there was sufficient evidence of stress among staff (Dickinson & Wright, 2008).
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16 However, the level of stress they experienced was similar but not higher than
17 that experienced by non-forensic colleagues. The findings were surprising
18 considering the intense nature of their working environment.
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30 Given the noticeable lack of literature, a systematic review of the literature on
31 prevalence of stress and burnout amongst forensic mental healthcare
32 professionals was conducted.
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41 **Method**

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43 The authors conducted a systematic review of papers that measured the
44 prevalence and indicators of both stress and burnout among forensic mental
45 health professionals. The Cochrane Collaboration systematic review
46 methodology was used as outlined in the Cochrane Handbook for systematic
47 reviews of interventions (Higgins & Green, 2009).
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Search strategy

The literature search was developed via electronic databases through Health Information for London Online (library network). Databases searched included PsycINFO, Medline and Embase. On reflection CINAHL was later searched using the same strategy to identify relevant articles. For full details see Figure 1.

Study selection

The sample was limited to mental health professionals working directly with offenders or inpatients currently detained due to their risk of violent or threatening behaviour. Professionals were hospital or community based. Professionals included in the study were predominantly nursing staff, but other occupations were included such as carers, psychiatrists and occupational therapists. Studies involving prison staff, forensic scientists, mortuary workers and sexual assault nurse examiners (SANE) were excluded as their work is not based on the mental healthcare of patients.

In recent years forensic psychiatry has benefited from developments in medico-legal understanding, the evolution of legal tests to define legal insanity, change in public attitude, service delivery changes and new treatments of mental conditions, offering an alternative to custodial sentencing (Arboleda-Florez, 2006). To ensure relevance to current clinical practice only papers from the turn of the century until the search date (2000 - January, 2015) were included in this review. Only papers written in English language were included.

Assessment of bias risk

Studies were assessed for bias according to the Cochrane Handbook (Higgins & Green, 2009). Each study was examined for selective reporting and to ensure use of randomisation and blinding.

Statistical analysis

When appropriate, meta-analysis of results was considered if studies utilised the same outcome assessment tool.

[Please insert Figure 1]

Results

Seventeen studies were found and details listed in Table1.

Description of studies

Settings

Two studies were conducted in a low security forensic setting, eight in medium and three in a high secure setting. Fourteen of the seventeen studies were carried out in an inpatient setting compared to one study in an outpatient setting. The remaining two studies (Happell *et al.*, 2003a; Happell *et al.*, 2003b) examined staff from various settings. Thirteen of the studies were based in the

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4 U.K. with the remaining four from Canada, Australia and Norway. Four studies
5
6 were multi-site.
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11 Sample population

12 All studies assessed stress or burnout among forensic mental health nurses.
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14 One study (Chalder & Nolan, 2000) reported a population that included nine
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16 occupational therapists; however they were not available to follow-up and were
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18 not included in final numbers. No studies assessed stress among doctors,
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20 psychiatrists or psychologists.
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26 Sample size and response rate

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28 Most studies were small and had limited sample size. Seven studies had a
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30 sample size of less than 50 and only six of the studies had a sample size of
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32 more than 100 participants. The average sample size was 109 participants
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34 (range from 12 to 636). Response rate for nine of the studies was below 60%.
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39 Validated measures of outcome

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41 All seventeen studies used a validated outcome measure and in many, the
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43 Maslach Burnout Index (MBI) was used. The MBI is a 22-item questionnaire
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45 assessing burnout on three subscales: emotional exhaustion, depersonalization
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47 and personal accomplishment (Maslach *et al.*, 1996). High mean scores on the
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49 emotional exhaustion and depersonalisation subscales indicate high levels of
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51 burnout. Conversely a low score on the personal accomplishment subscale
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53 demonstrates a tendency to view oneself as incompetent, particularly at work,
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4 therefore indicating a high level of burnout. The scores of the subscales are not
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6 cumulative; for each subscale the respondents can be identified as suffering
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8 from low, moderate or high burnout. Thirteen of the seventeen studies were
9
10 able to provide data of MBI scores (Table 1).
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15 Several studies investigated other relevant outcomes such as job satisfaction,
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17 the effect of violence, post-traumatic stress symptoms and the positive effect of
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19 further staff training. Additional conclusions have been drawn with those results
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21 in mind despite not being the focus of the review.
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24 *(Please insert Table 1)*
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26 Assessment of bias risk 27

28 The quality of reporting varied. Only two of the five studies investigating the
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30 effect of interventions used randomisation for the allocation of participants to
31
32 groups (Ewers *et al.*, 2002; Redhead *et al.*, 2011). The remaining studies did not
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34 comment and therefore it is assumed that this was not carried out. None of the
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36 studies specified that blinding was used. Given that many of the studies used
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38 postal questionnaires or were conducted among small study samples it is likely
39
40 that blinding would not have been feasible.
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46 Outcome measures used to assess stress were self-reported and therefore
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48 subjective. This greatly increases the effect any bias has on the reliability of the
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50 results, but is arguably unavoidable in psychological healthcare.
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4 The studies were examined for examples of selective reporting. Two studies
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6 (Blumenthal *et al.*, 2011; Decaire *et al.*, 2006) were found to neglect reporting
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8 raw data on outcome measures, including MBI scores. This generates some
9
10 uncertainty about potential reporting bias and a lack of methodological
11
12 transparency.
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14 15 16 17 Outcome of results

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19 Overall, considering personal accomplishment, three of the studies found that
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21 forensic mental health staff had low scores in this area, indicating a high level of
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23 burnout. Eight studies demonstrated moderate burnout levels. With regards to
24
25 emotional exhaustion, seven studies indicated moderate levels and three low
26
27 levels of burnout, whilst for the subscale of depersonalisation six studies
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29 indicated moderate and five, low levels of burnout. The remaining studies did
30
31 not draw any conclusion. In instances where interventions changed outcome
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33 results, the stress / burnout measures were assessed in the control group.
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39 Effect of intervention

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41 Six of the seventeen studies investigated interventions to lower stress and
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43 burnout among staff.
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49 Two studies investigated psychosocial intervention training (PSI). PSI training is
50
51 a practical course designed to provide staff with the skills needed to reduce
52
53 distress and improve the functioning of people suffering from schizophrenia.
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55 The course encourages staff to challenge their beliefs about psychotic illness
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4 with the aim to improve their own understanding and foster empathy (Ewers,
5
6 2002).
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10 Three studies examined other psychological therapies and the remaining study
11 considered the effect of introducing single sex inpatient wards. None of the
12 studies had adequate follow-up to determine the longevity of the effects. Control
13 groups were either parallel staff samples who received 'treatment as usual,' or
14 were the same staff members at baseline.
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21 *(Please insert Table 2)*
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23 Statistical analysis

24 Due to their clinical and methodological diversity, the group of studies reporting
25 results using MBI was considered as heterogeneous; therefore meta-analysis
26 was not possible.
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37 **Discussion**

38 We investigated the prevalence of stress and burnout amongst forensic mental
39 health professionals and have reported the results of 17 studies. Overall,
40 studies reported moderate levels of stress. Some studies asked directly about
41 the participant's experience of stress whilst others drew conclusions from
42 indicators such as post-traumatic stress symptoms, job satisfaction etc. Burnout
43 was assessed through three sub-measures: emotional exhaustion,
44 depersonalisation and personal accomplishment. Sub-measure scores were
45 collated and largely signified moderate levels of burnout.
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Effect of interventions

The small number of studies which investigated the effect of various interventions demonstrated mixed, but mainly positive results. PSI training improved staff knowledge and attitudes whilst significantly reducing aspects of burnout (Ewers *et al.*, 2002; Redhead *et al.*, 2011). A recent systematic review concluded similar findings (Stewart *et al.*, 2014). Similarly, the introduction of a three month programme of multi-disciplinary therapy reduced staff burnout (Long *et al.*, 2008). Interestingly, one paper found that a change from mixed to single sex wards significantly increased levels of burnout, especially among staff working on the female inpatient ward (Nathan *et al.*, 2007). This is an interesting finding since the healthcare system in the UK has moved from mixed to single sex wards. Other interventions, such as challenging behaviour workshops and team reflective practice did not significantly reduce stress or burnout (Berry *et al.*, 2012; Blumenthal *et al.*, 2011).

Comparison to other groups

Howard (2009) found that staff working in a forensic unit had slightly higher levels of emotional exhaustion than those who worked in the community. Despite this they appeared to have greater levels of personal achievement and had a significantly lower fear of violence. Chalder and Nolan (2002) found there was no difference in the levels of stress experienced by acute general and forensic mental health nurses. Surprisingly, the study by Happell (2003a) found

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4 that forensic staff had significantly less burnout and had greater job satisfaction
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6 than non-forensic staff.
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11 On balance the three studies do not support the theory that forensic staff suffer
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13 from higher levels of stress than non-forensic staff, surprising given the
14
15 increased threat of violence. Chalder *et al* (2000), suggests that there is a
16
17 degree of self-selection in forensic mental healthcare, in that it tends to attract
18
19 strong, assertive personalities that are less prone to stress. They also propose
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21 that forensic units recognise the risk of violence and so provide adequate
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23 support.
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26 27 28 *Study Population* 29

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31 The aim of this study was to investigate levels of work related stress in a
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33 selection of professionals within the forensic mental health multidisciplinary
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35 team. The limited variety of professions included in this review clearly highlights
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37 the lack of research in this area.
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42 The conclusions drawn from this review are only relevant to a nursing
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44 population as other professions were not well represented in this selection of
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46 studies. One exception was the inclusion of occupational therapists (OT) in the
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48 study by Oddie and Ousley (2007). Unfortunately none of the nine OT's invited
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50 to participate did so and hence the profession did not contribute to the results of
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52 the study.
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Comparison to other literature

Edwards and Burnard (2003) investigated stress among community general mental health nursing. They found various factors that were associated with higher levels of stress, including higher workload, time management issues and dealing with potentially violent or suicidal patients. In particular the association between stress and violence risk supports the hypothesis of this study.

Studies directly investigating forensic mental healthcare have found that staff do suffer from stress. However, studies that compare forensic and general staff have found that there is no obvious difference. This finding is in keeping with the conclusions drawn from this review. Dickinson and Wright (2008) speculated that the stress-inducing effect of the forensic setting is limited by positive factors such as clinical supervision, professional development and supportive management.

Strengths

All studies included used a validated tool to measure stress or burnout, in most cases the MBI. As thirteen of the seventeen studies used the MBI score, results were directly comparable.

Limitations

The main limitation is that many of the studies published were of poor eminence. Nine of the studies had response rates below 60%. This factor along with limited sample sizes reduces the reliability of the results. It can be argued that

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4 those who perceive more stress are more likely to be respondents, therefore
5 positively skewing the results. Factors outside work such as domestic
6 experiences and relational problems can affect perceived occupational stress
7 and are confounding variables. None of the studies measured these variables
8 and this may have again positively skewed the results.
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17 There is the potential that relevant literature may have been missed as our
18 search strategy had a high dependence on electronic databases. However
19 given our relatively recent search dates, the chances of this are small. Another
20 limiting factor is that only studies published in English were included due to
21 difficulties in access to translation services.
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30 It became apparent that CINAHL (search database for nursing staff and allied
31 health professionals) was not included in the original search for literature. This
32 was identified as a significant limitation given that all of the included papers
33 concerned the welfare of nursing staff and a CINAHL review was duly done
34 (strategy as documented in Figure 1). Two papers (Reid, 2014; Curtis & Day,
35 2013) were identified as being relevant but were excluded following examination
36 of the inclusion criteria. Reid (2014) had a study sample of nurses who worked
37 in a variety of settings, both forensic and non-forensic. No conclusions or raw
38 data pertaining to forensic nurses alone was available and on that basis it was
39 excluded. Curtis and Day (2013) had a small study sample of psychologists who
40 had worked in prisons. The study did not clarify but it was evident from sample
41 data that not all volunteers were currently employed in forensic positions. As our
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4 study looks at stress and burnout in relation to current employment it too, was
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6 excluded. Retrospective inclusion of either of these papers would not have
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8 affected the conclusions reached by this review. Neither of these studies used
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10 MBI to measure burnout.
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12 13 14 15 *Further Research*

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17 Future research should include large multi-site studies using well-validated
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19 outcome measures. These should include adequate follow-up if assessing the
20
21 effect of interventions. They should also endeavour to control for factors outside
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23 work that may contribute to work-related stress. Replication of studies as well
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25 as expansion to include forensic mental health professionals other than nursing
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27 staff is required.
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35 **Conclusions**

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37 This review demonstrates that mental health staff working in a forensic setting
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39 experience moderate levels of both stress and burnout. There is not enough
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41 evidence to suggest that burnout is any higher than that described by staff
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43 working in other areas of mental healthcare. Interventions, in particular PSI
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45 training, display small but positive effects in reducing both stress and burnout.
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47 The lack of follow-up makes it difficult to ascertain the longevity of these positive
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49 effects. Conclusions drawn are applicable only to nursing staff as other
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51 professions were not adequately represented among the study sample. Future
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4 research involving larger, multi-disciplinary samples is needed to accurately
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6 assess stress and burnout in forensic mental healthcare professionals.
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11 *Practical implications*

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13 • Staff working with forensic mental health patients are at risk of
14 developing stress while at work.
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17 • High levels of stress and burnout have negative effects on an individual's
18 ability to work and subsequently there is a financial and also moral
19 incentive for the management of health service workforces to intervene.
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22 • Interventions, in particular PSI-training appear to demonstrate small but
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24 positive effects in reducing stress and burnout.
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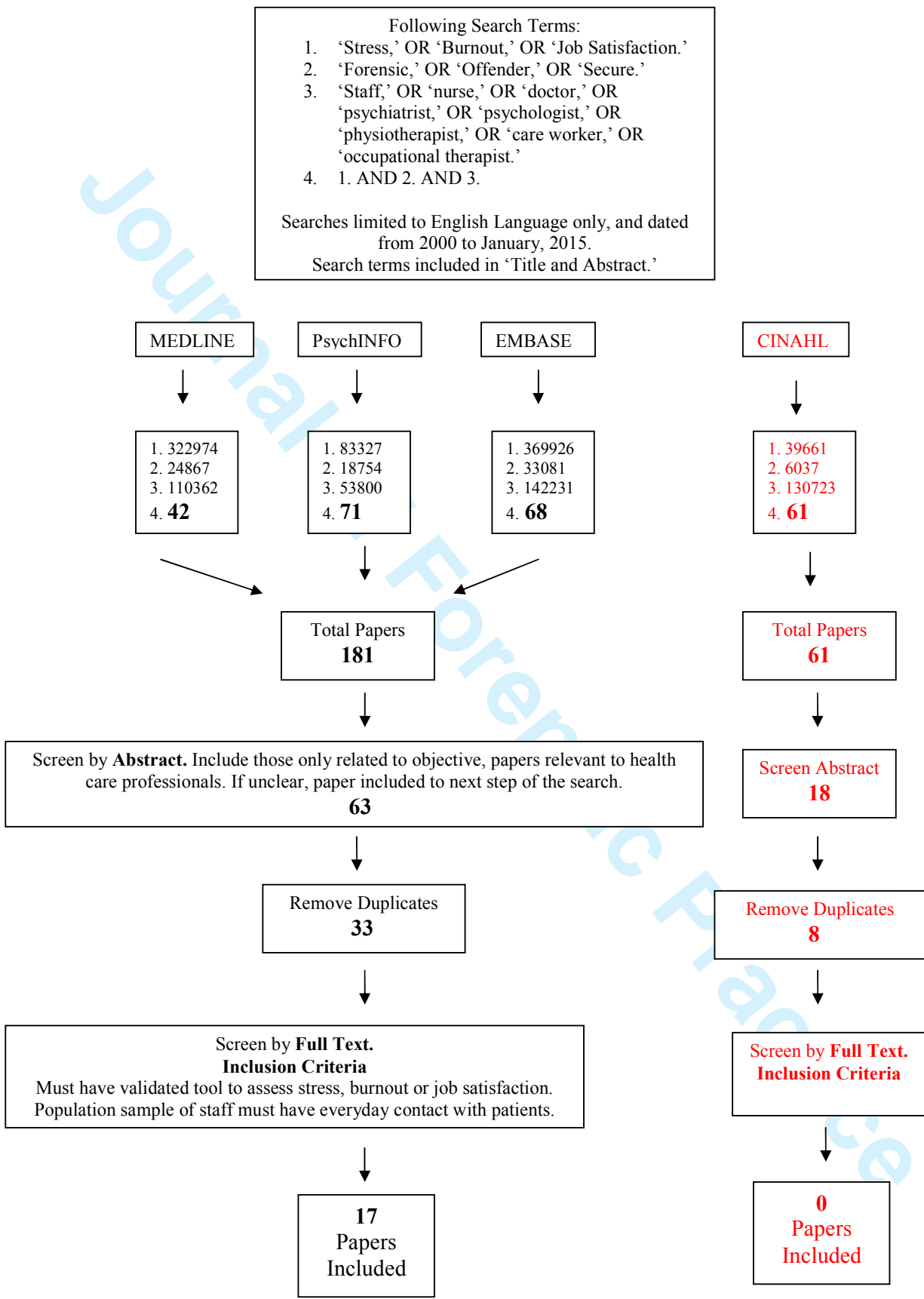


Figure 1: Search Strategy

Study	Results	Mean MBI Scores (In control group if a comparison trial)		
		Emotional Exhaustion (EE)	Depersonalization (Dp)	Personal Accomplishment (PA)
Berry et al., (2012)	Significant increase in EE following intervention.	24.54‡	7.54‡	36.38‡
Blumenthal et al., (2011)	Both groups showed similar improvement. No evidence to support the intervention.	-	7.1‡	-
Chalder et al., (2000)	No significant difference in stress between groups.	-	-	-
Coffey and Coleman., (2001)	A number of nurses reported burnout. Significant association between caseload and stress reported.	20.74 M‡ 17.76 F‡	6.52 M‡ 4.65 F†	32.45 M‡ 33.62 F‡
Decaire et al., (2006)	A small percentage of patients caused the majority of incidents. Lower frequency of incidents associated with staff experience and 'clarity' in work environment. Higher frequencies associated with staff age, staff 'openness,' and staff who felt they had a greater sense of 'autonomy' in their work environment. No correlation between staff burnout and patient incidents. No conclusions drawn with regard to stress level in staff.	n/a	n/a	n/a
Dennis and Leach., (2007)	Almost a third of responses showed evidence of expressed emotion. No member staff fulfilled criteria for burnout. Suggested link between expressed emotion and Dp.	13.6†	11.1‡	33.3‡
Ewers et al., (2002)	After intervention, staff showed significant improvement in knowledge and attitudes. Significantly less evidence of burnout. Control group did not show any significant changes from baseline.	18.82‡	5.74†	33.81‡
Happell et al., (2003a)	Significantly greater EE in mental health nurses compared to forensic mental health nurses. Significantly greater job satisfaction among forensic mental health nurses.	12.9 FMHN† 17.4 MHN‡	4.7 FMHN† 4.5 MHN†	34.5 FMHN‡ 35.5 MHN‡
Happell et al., (2003b)	'Low' level of burnout, specifically moderate levels of EE and low levels of Dp and reduced PA.	12.5†	4.5†	34.5‡
Howard et al.,	Staff working in medium secure unit had a significantly lower fear of violence despite the fact they were at increased risk. Positive correlation between	21.77 MSU‡	5.66 MSU†	28.16 MSU#

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(2009).	physical violence and burnout.	19.97 CMH‡	5.87 CMH†	26.33 CMH#
Langdon et al., (2007)	67% interviews demonstrated evidence of high expressed emotion. Overall 'low' levels of burnout; specifically moderate to low levels of EE, low levels of Dp and high levels of PA. Similar use of coping skills and job satisfaction scores to that, have been reported for general nurses.	16.63‡	5.37†	11.52#
Lauvrud et al., (2009)	95.7% met exposure criteria for PTSD, but PTSD symptom prevalence was low and no-one met the full PTSD criteria. Low job satisfaction scores but conversely also low burnout scores.	-	-	-
Long et al., (2006)	After intervention there was significantly improved 'involvement' 'clarity,' and 'co-worker cohesion.' Significant decrease in EE, Dp and increase in PA. Significantly increased job satisfaction. Significantly reduced patient levels of disturbed behaviour.	3.25*†	9.3‡	31#
Nathan et al., (2007)	After intervention, significantly increased levels of EE among staff on female inpatient ward. Smaller increase in burnout among staff on male inpatient ward.	n/a	n/a	n/a
Oddie and Ousley., (2007).	54% of staff reported high levels of EE. Study indicated stress and burnout were mainly due to organizational factors- not due to patient factors.	23‡	7‡	35‡
Redhead et al (2011)	After intervention, Qualified and Unqualified staff showed significant improvement in knowledge and attitudes. Significant decrease in Dp for qualified staff. More PSI was used in patient care plans.	19.44 Q ‡ 15.73 U†	5.22 Q† 7.09 U‡	32.44 Q‡ 35.55 U‡
Reninghaus et al., (2007)	Social and managerial support shown to be protective factors. Physical assault significantly associated with psychological distress. Staff demonstrated high levels of self esteem and low levels of stress.	-	-	-

Table 1. Study results reporting on MBI subscale scores and classified as high, moderate and low according to MBI Scoring Key (Maslach et al., 1996).

For the EE subscale (score 0-54): Low= 0-16, Moderate= 17-26 and High= ≥27

For the Dp subscale (score 0-30): Low= 0-6, Moderate= 7-12 and High= ≥13

For the PA subscale (score 0-48): Low= ≥39, Moderate= 32-38 and High= 0-31

†Low, ‡ Moderate, # High

Study	Sample (N)	Study Sites (Number, Location, Nature)	Response Rate/ Participation (%)	Intervention description and Number (N)	Control description and Number (N)	Primary Outcome	Validated Measures used
Berry et al., (2012)	38 Forensic Mental Health Nurses	Single; Manchester, U.K., Low Secure Unit.	66% 34% at follow up.	N=25 Before intervention ('Challenging Behaviour' workshop).	N=13 After intervention ('Challenging Behaviour,' workshop).	Occupational stress, Burnout, Ward atmosphere, Staff-patient relationships	WAI, MBI, WAS
Blumenthal et al., (2011)	70 Forensic Mental Health Nurses	Single; Liverpool, U.K.; High Secure Unit	51.4%	N=18 Weekly multi-disciplinary reflective practice.	N=18 Parallel Staff Sample	Occupational stress, Burnout, Ward atmosphere, Staff-patient interaction	MBI, WAS
Chalder et al., (2000)	60 Forensic and Acute Mental Health Nurses	Multiple; West Midlands, U.K.; Forensic and an Acute Mental Health Unit.	63%	N=23 Forensic Mental Health nurses	N=15 Acute Mental Health Nurses	Occupational stress	MHPSS
Coffey and Coleman, (2001)	104 Forensic Community Mental Health Nurses.	Multiple; England & Wales, U.K.; Out-patient.	77%	-	-	Occupational stress, Burnout	MBI, GHQ, CPNSQ
Decaire et al., (2006)	25 Forensic Mental Health Nurses	Single; Canada; Minimum Security Unit	52%	-	-	Occupational stress, Burnout, Staff personality traits in relation to violent incidents.	NEO-FFI, WES, MBI
Dennis and Leach, (2007)	30 Staff: Health Care Workers and Registered Nurses	Single; England, U.K.; Medium Secure Learning Disabilities Unit	33%	-	-	Occupational stress, Burnout, Expressed Emotion	FMSS, MBI
Ewers et al., (2002)	33 Forensic Mental Health Nurses	Single; Merseyside, England, U.K.; Medium Secure Unit	60.6%	N= 10 Psychosocial Intervention Training (PSI)	N=10 Placed on waiting list for intervention.	Occupational stress, Burnout, Knowledge and attitudes toward patients.	MBI
Happell et al., (2003a)	191 Forensic and General Mental Health Nurses	Single area; Melbourne, Australia; Various	67.5%	N=51 Forensic Mental Health Nurses	N=78 General Mental Health Nurses	Occupational Stress, Burnout, Job satisfaction	MBI, MJSS, SNCW
Happell et al., (2003b)	95 Forensic Mental Health Nurses	Single area; Melbourne, Australia; Various	54%	-	-	Occupational stress, Burnout	MBI, NSS

Howard et al., (2009)	190 Forensic Mental Health Staff	Multiple; Birmingham, U.K.; Community and Medium Secure Inpatient settings.	43.2%	N=44 Staff in a medium secure unit (High risk of violence).	N=38 Staff working in the community (Low risk of violence).	Occupational stress, Burnout, Support, Violent Incidents	MBI, SSSQ(2), Difficult Behaviour Self-efficacy Scale.
Langdon et al., (2007)	Total Sample Number Not Available. 27 Mental Health Nurses Participated	Single; Norwich, U.K.; Medium Secure Unit for patients with intellectual disabilities.	N/A	-	-	Occupational stress, Burnout, Expressed Emotion, Coping Skills, Job satisfaction	FMSS, MBI, Cooper Coping Skills, GHQ- 28, MJSS
Lauvrud et al., (2009).	100 Forensic Mental Health Nurses	Single; Norway; High Secure Unit	70%	-	-	PTSD symptoms, Occupational stress, Burnout, Job satisfaction	PCL-C, Pro-QOL
Long et al., (2006)	Total Sample Number Not Available. 12 Mental Health Staff Participated	Single; Northampton, England, U.K.; Medium Secure Female Developmental Disabilities Unit.	N/A	Sample prior to intervention (12 week MDT individual and group therapies).	Sample six months after intervention.	Occupational stress, Burnout, Work Environment, Job satisfaction.	WES, JDI, MBI, DBL
Nathan et al., (2007)	47 Forensic Mental Health Nurses. (28 at Follow-up)	Single; England, U.K.; Medium Secure Unit	100% 59.6% at follow-up	Staff on new female inpatient ward (baseline and 18 month follow up).	Staff on established male inpatient ward (baseline and 18 month follow up).	Occupational stress, Burnout	MBI
Oddie and Ousley (2007)	115 Forensic Mental Health Nurses 9 Occupational Therapists	Single; England, U.K.; Medium secure Unit	57%	-	-	Occupational stress, Burnout	MBI, PNOSS
Redhead et al., (2011)	79 Forensic Mental Health Nurses: Qualified (Q) and Unqualified (U).	Single; Northwest England, U.K.; Low security unit	58%	N=22 (12Q 10U) Psychosocial Intervention Training (PSI)	N=20 (9Q 11U) Placed on waiting list for intervention.	Occupational stress, Burnout, Knowledge and attitudes toward patients.	MBI, Attitude toward PSI scale.
Reninghaus et al., (2007)	Sample Not Available. 636 Forensic Mental Health Nurses Responded	Multiple; UK; High Secure Units	22-28%	-	-	Occupational stress, Burnout, Self esteem, Coping Mechanisms	GHQ-12, Rosenberg self esteem scale, PSS, PNMCQ

Table 2. Description of studies measuring stress and burnout among forensic psychiatry mental health professionals.

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7 WES: Work environment scale; MBI: Maslach Burnout Inventory; JDI: Job Description Index; DBL: Disturbed Behaviour List; PSS: Perceived stress scale; PNMCQ: PsychNurse Methods of Coping Questionnaire;
8 Rosenberg Self-Esteem Scale (modified version); GHQ: General Health Questionnaire (GHQ-12, GHQ-28 versions); Attitude to PSI scale; PCL-C: PTSD Checklist, civilian version; ProQOL: Professional Quality of
9 Life Scale; JSS: Job Satisfaction Scale; SNCW: Satisfaction with Nursing Care and Work; NSS: The Nursing Stress Scale; WAS: Ward Atmosphere Scale; FMSS: Five Minute Speech; NEO-FFI: Neuroticism
10 Extroversion Openness to Experience Five-Factor Inventory; WAI: Working Alliance Inventory; CPNSQr: Community Psychiatric Nurse Stress Questionnaire – revised; SSSQ version2: The Staff Support and
11 Satisfaction Questionnaire - Version 2; Difficult Behaviour Self-efficacy Scale; CCSQ= The Cooper Coping Skills Questionnaire; MJSS= The Minnesota Job Satisfaction Scale; PNOSS= Psychiatric Nurse
12 Occupational Stress; MHPSS= Mental Health Professional Stress Scale.
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