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LETTER

Gillian Colville
C. Dalia
J. Brierley
K. Abbas
H. Morgan
L. Perkins-Porras

Burnout and traumatic stress in staff working in paediatric intensive care: associations with resilience and coping strategies

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Dear Editor,

The extent of work-related stress reported by intensive care staff has been described as being at the level of an epidemic [1] and yet little is understood about the relative impact of resilience and coping in relation to these outcomes [2].

In a survey of 120 health professionals working in a tertiary hospital paediatric intensive care unit, we investigated the prevalence of burnout and traumatic stress using an abbreviated version of the Maslach Burnout Inventory (MBI) [3] and the Trauma Screening Questionnaire [4], a brief self-report screen for post-traumatic stress disorder (PTSD) symptoms. We also examined the associations between participants' scores on these two outcome measures and (a) a measure of resilience, the Brief Resilience Scale [5] and (b) a list of coping strategies generated from an earlier internal study of job satisfaction on the unit (see Fig. 1).

The proportions of the sample scoring in the ranges deemed indicative of high risk of burnout for the three dimensions measured by the abbreviated MBI were $n = 45/120$ (48 %) for emotional exhaustion, $n = 12/120$ (10 %) for depersonalisation and $n = 55/120$ (46 %) for lack of personal accomplishment, with $n = 73$ (61 %) of the sample reporting burnout on at least one dimension. In addition 22/120 (18 %) participants reported clinically significant levels of work-related post-traumatic stress symptoms. Neither outcome measure was associated with demographic variables, whether participants were doctors or nurses, or their length of intensive care experience. Resilience scores, however, were negatively associated with both ('any burnout': OR = 0.31, CI 95 % 0.13–0.73, $p < 0.01$; 'traumatic stress': OR = 0.19, CI 95 % 0.05–0.75, $p = 0.02$).

Interestingly the strategies rated 'most helpful' by participants were *not* the ones related to better outcomes. In logistic regression models, controlling for resilience, significant additional variance in 'any burnout' was explained by three coping strategies. Staff who chose to 'keep busy' reported *higher* rates of burnout, on

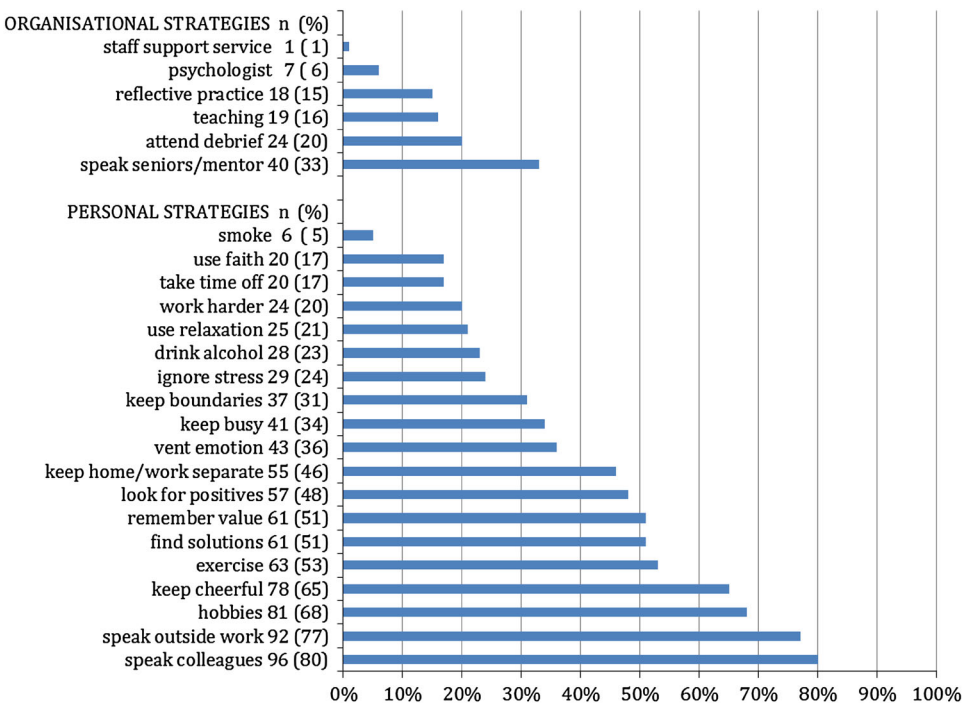

Fig. 1 Use of coping strategies for dealing with stress at work ($n = 120$)

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one or more MBI dimensions (OR = 6.08, CI 95 % 2.15–17.17, $p < 0.01$). In contrast, lower rates of 'any burnout' were found in those who tried to 'look for positives' (OR = 0.30, CI 95 % 0.12–0.76, $p = 0.01$) or used 'debriefing' to cope with work-related stress (OR = 0.27, CI 95 % 0.08–0.86, $p = 0.03$). Clinical levels of post-traumatic stress symptoms were more likely to be reported by those staff members who regularly chose to 'ignore stress' at work (OR = 3.67, CI 95 % 1.14–11.86, $p = 0.03$) and, perhaps counter-intuitively, those who used 'exercise' in response to it (OR = 8.74, CI 95 % 2.38–32.15, $p < 0.01$).

Although it is not possible to infer causality from a cross-sectional survey, it is clearly implausible that exercising in itself would increase PTSD symptoms. However, it may be that using exercise as a way to distract oneself from such symptoms may be less effective than other strategies which might involve more active emotional processing of a traumatic experience at work.

Given the high prevalence of distress found in this and other studies, it is important that future research continues to add to our understanding of how these symptoms are both maintained and kept in check, in the interests of staff wellbeing and the quality of care of our patients.

Conflicts of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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G. Colville (✉)
Paediatric Psychology Service,
St George's Hospital, Blackshaw Rd,
London SW17 0QT, UK
e-mail: gcolvill@sgul.ac.uk
Tel.: 0208 725 2214

G. Colville · C. Dalia · L. Perkins-Porras
St George's University of London, Cranmer Terrace, London SW17 0RE, UK

J. Brierley · K. Abbas · H. Morgan
Great Ormond Street Hospital for Children, Great Ormond St, London WC1 3JH, UK