Abstract

Objective: Ambulance personnel provide emergency medical services to the community, often attending to highly challenging and traumatic scenes in complex and chaotic circumstances. Currently the assessment of predictors of psychological well-being remains limited. The current study investigated whether workplace belongingness was significant in predicting psychological distress as well as the presence of resilience in ambulance personnel whilst controlling for more routinely examined factors.

Method: Australian ambulance officers (N = 740) completed a survey battery including the Kessler 10 (Kessler & Mroczek, 1994), Brief Resilience Scale (Smith et al., 2008) and Psychological Sense of Organisational Membership (Cockshaw & Shochet, 2010) scale.

Results: Controlling for more commonly examined factors such as severity of trauma exposure and length of service, hierarchical multiple regression analyses demonstrated that workplace belongingness was significantly associated with reduced distress levels and enhanced resilience levels.

Conclusions: Results suggest that strategies to enhance a sense of workplace belongingness in emergency service organisations could promote the well-being of emergency workers despite routine exposure to potentially traumatic events.

Keywords: workplace belonging, trauma, resilience, well-being, emergency services

Workplace Belongingness, Distress and Resilience in Emergency Service Workers.

Emergency service workers are routinely exposed to events that have the potential to be experienced as traumatic (Regehr, Goldberg, & Hughes, 2002). As a result of the unique job demands, they are at higher risk of developing mental health problems compared to the general population (Benedek, Fullerton, & Ursano, 2007). Maintaining and promoting the psychological well-being of emergency workers is therefore vital, not only for employees but also for the broader community who rely on their services. The mental health of emergency personnel has predominantly been assessed in literature by examining negative post-trauma outcomes, particularly posttraumatic stress disorder (PTSD; Halpern, Gurevich, Schwartz, & Brazeau, 2009). Less frequently research has examined workplace predictors of well-being as well as ill-being in order to identify factors that may protect against the disruptive effects of potentially traumatic events (PTEs) and promote positive mental health outcomes such as posttraumatic growth (PTG; Shakespeare-Finch, Smith, Gow, Embelton, & Baird, 2003). This study adds unique information to existing literature by examining the impact of workplace belongingness on the well-being of emergency ambulance personnel and by operationalizing well-being as both a lack of psychological distress and the presence of resilience.

Resilience and Distress

Despite the potential for suffering from psychological distress as a result of trauma exposure, the majority of emergency service workers cope with the operational challenges in their work role, frequently demonstrating resilience (Scully, 2011). Resilience is now recognized in the literature as the most common outcome trajectory of PTEs (Bonanno, Galea, Bucciarelli, & Vlahov, 2006). Although literature indicates resilience is not equal to the absence of psychopathology, past research has typically measured resilience after trauma exposure as the absence of psychopathology (Bonanno et al., 2006). To provide a more

holistic picture of emergency service worker's mental health and to identify if factors that predict resilience are also predictive of distress, in this research the presence of resilience is measured as well as symptoms of distress.

Workplace Predictors of Well-being

The impact of PTEs on emergency service personnel well-being can be influenced by a number of operational variables. The severity of trauma experienced has been found to relate to negative mental health outcomes as has length of service as a proxy for exposure to PTEs. For example, Regehr and colleagues (2002) demonstrated that paramedics with more years of service reported experiencing significantly more distress compared to those with less years. Scully (2011) asserts that organisational factors such as Employee Assistance Programs (EAPs) including access to trained peer support officers (PSO) also influence emergency service worker well-being. However, research has not yet examined if accessing services provided or if being a trained provider of support (i. e., being a PSO), is predictive of well-being in employees. Therefore these factors will be controlled for in this study.

Workplace Belongingness

Workplace belongingness refers to the extent to which an employee perceives they are valued, respected, and accepted by others in their organisation (Cockshaw & Shochet, 2010). Research has found a strong negative association between general belongingness and symptoms of anxiety and depression in a wide range of cohorts and that workplace belongingness is distinct from general belongingness (Cockshaw, Shochet, & Obst, 2014). The benefit of a sense of workplace belongingness has recently been illustrated in a sample of fire-fighters, the results of which demonstrated that workplace belongingness acted as a protective factor against organisational stressors and the impact of such stress on psychological distress and well-being (Armstrong, Shakespeare-Finch, & Shochet, 2014).

The main purpose of this study is to assess workplace belongingness as a predictor of well-being using both measures of psychological distress and of resilience, whilst controlling for the effects of previously investigated predictors such as trauma severity and access to an EAP. Based on research in other organisational settings it is hypothesized that a sense of workplace belongingness will negatively predict psychological distress and will positively predict resilience.

Methodology

Participants

Approximately 2,500 operational Australian ambulance officers were invited to participate in the research via an email being sent to all personnel of a state-wide emergency medical response service. Of those, 740 elected to participate (30% response rate). The mean age of participants was 41.24 years (*SD* = 10.04) and length of service ranged from 6 months to 41 years (*M* = 11.72, *SD* = 9.34). The gender ratio of participants was reflective of the organisations gender demographic (66.6% male). The majority of employees were married (78.4%), with 13.2% single, 3.5% divorced, 2.7% separated and 0.4% widowed.

Measures

The inclusion criterion required that an employee must have experienced a traumatic event, consistent with the definition provided in the Diagnostic and Statistical Manual of Mental Disorders-IV-TR criterion (American Psychiatric Association, 2000). After establishing a participant had experienced such an event they rated the severity of the event on a 5 point scale from mild = 1 to extremely severe = 5. All measures were counterbalanced.

Psychological distress was assessed using the Kessler 10 (K10; Kessler & Mroczek, 1994). The K10 is a 10-item scale that measures symptoms of depression and anxiety which are summed to provide a single metric of distress. Responses are scored from 1(not at all) to 5 (very much), with higher scores indicating greater psychological distress. The K10 has

various scoring details, so in order to compare results with the general Australian population, the present study used the same scoring as the Victorian Population Health Survey (2001): 10-19 (low distress, likely to be well), 20-24 (moderate distress, likely to have a mild disorder), 25-29 (high distress, likely to have a moderate mental disorder) and 30-50 (very high distress, likely to have a severe mental disorder). The K10 generated a Cronbach's alpha of .91 in the current study.

Resilience was measured using the Brief Resilience Scale (BRS), which assesses the ability to bounce back or recover from stress (Smith et al., 2008). This instrument uses a 6-item Likert scale (1 = strongly disagree to 5 = strongly agree) with a higher scale score indicating higher levels of resilience. The BRS has strong psychometric properties and in the current study Cronbach's alpha was .88.

Workplace belongingness was measured using the Psychological Sense of Organisational Membership scale (PSOM; Cockshaw & Shochet, 2010). This instrument has 18 items that assess feelings of being accepted, valued, and supported by an organisation and is scored from 1 = not at all true to 5 = completely true. A higher score is indicative of a greater sense of workplace belongingness. Recent longitudinal research using exploratory and confirmatory factor analysis and a cross-lagged design has provided further evidence of the validity and reliability of the POSM (Cockshaw et al., 2014). Internal consistency in the current study was strong ($\alpha = .93$).

Procedure

Ethics approval from the university Human Research Ethics Committee and the Ambulance Commissioner were obtained before conducting the study. Information telling participants about the nature of the research, what the expected benefits were and that it was anonymous and voluntary was included in an email sent to all staff by the employing state-

wide organisation. Completed surveys were returned directly to the university researchers to ensure confidentially of data and of who participated.

Results

The majority of participants indicated that the most traumatic event they had experienced had occurred at work (81.8%) and for more than half of participants this event had been perceived as either highly severe (28.4%) or extremely severe (28.1%). The results of the K10 indicated that the majority of participants were 'likely to be well' with a mean score of 18.55 (*SD* = 6.73). Nearly 64% of participants had low distress scores and were 'likely to be well', 18.9% had moderate scores, 9.4% had high scores and 7.4% had very high scores and were 'likely to have a severe mental disorder'. Levels of distress were higher in the present study's population in comparison to reported rates of distress in the general population (Victorian Health Population Survey, 2001).

Resilience scores (*M* = 3.68, *SD* = .71) were comparable to those found in the general population (Smith et al., 2008). The moderate to high mean scores and limited variability in the belongingness distribution (*M* = 3.48, *SD* = .76) indicated that the majority of employees felt a sense of belongingness within the organisation which is also comparable to previous research (Cockshaw & Shochet, 2010).

Assumptions of the data were inspected before conducting analyses and no breaches were observed. Length of service, severity of trauma, being a trained a Peer Support Officer (PSO) and accessing an employee assistance program were entered at Step 1 of both multiple regressions as previous research has suggested these factors impact on mental health (e. g., Scully, 2011). Due to the large sample size, a conservative alpha level of $p < .01$ was used to evaluate statistical significance and control for Type 1 errors.

To determine whether workplace belongingness was a significant predictor of psychological distress a 2-step hierarchical multiple regression analysis was performed.

Length of service, severity of trauma, EAP access and being a PSO were entered in Step 1 and significantly explained 5.5% of the variance, $F(4, 685) = 10.06$, $p < .001$. At this step, severity of trauma and EAP access were significant positive predictors, explaining 2% and 1% of unique variance. Being a PSO was a significant negative predictor of distress, explaining 1.1% of unique variance. Workplace belongingness was added in Step 2 and significantly explained 19.8% of additional variance, Fchange $(1, 684) = 181.35$, $p < .001$. The overall model was significant, accounting for 25.3% of variance, $F(5, 684) = 46.43$, $p < .001$. At this step, severity of trauma and EAP access remained significant predictors of distress, with increased severity of trauma associated with greater distress and EAP access. Severity of trauma and EAP access explained 1.1% and 0.8% of unique variance, suggesting that although they were significant predictors, they accounted for little variation in participant distress levels. Workplace belongingness was a significant negative predictor, explaining 19.8% of unique variance making it the strongest predictor of distress in the model.

A 2-step hierarchical multiple regression analysis predicting resilience was also run to test whether a sense of workplace belongingness was predictive of resilience levels. Again, length of service, severity of trauma, EAP access and being a PSO were entered in Step 1. This step significantly explained 5.4% of variance, $F(4, 685) = 9.84$, $p < .001$. At this step length of service and EAP access were both significant negative predictors, explaining 1% and 2.4% of unique variance. Workplace belongingness was added in Step 2 and significantly explained an additional 9.8% of variance, F change $(1, 684) = 79.44$, $p < .001$. The overall model was significant, accounting for 15.3of variance, $F(5, 684) = 24.66$, $p < .001$. Workplace belongingness was the most important predictor in the model, significantly explaining 10% of unique variance. The unstandardised coefficients, confidence intervals, beta weights and significance values are included in Table 1.

Please place Table 1 here

Discussion

The results supported the hypotheses that workplace belongingness would be a negative predictor of distress and a positive predictor of resilience. The finding is consistent with previous literature, which indicates that belongingness acts as an interpersonal buffer between organisational stressors and well-being and is associated with decreased depressive symptoms and increased well-being (Armstrong et al., 2014; Cockshaw et al., 2013).

Workplace belongingness was the strongest predictor of psychological distress and resilience when controlling for a number of work context factors and was also a stronger predictor of distress than resilience. Findings indicate that efforts aimed at increasing a sense of workplace belongingness will likely facilitate the psychological well-being of emergency service personnel routinely exposed to PTEs. Therefore emergency service organisations need to promote workplace practices that foster a sense of belongingness. For example, rather than only providing negative feedback when an employee has performed insufficiently, it is suggested that management take care to also acknowledge and positively reinforce the good work of employees. Such a positive approach to reinforcement is likely to promote a sense of value, support and belongingness among personnel in the workplace. Training and education that focuses on the benefits of workplace belongingness and on how to promote a sense of belongingness, is also suggested, especially for those in supervision and management roles.

The present study is limited by its cross-sectional design and reliance on self-reports, which may have reduced the generalisabiltiy of the findings or elicited social desirability bias. A culture of denial and stigma attached to negative mental health outcomes is still present in emergency services and may have resulted in employees who were experiencing mental health problems being less likely to participate in the current study (Alexander & Klein, 2001). Indeed there was a 30% response rate which is a good response to an anonymous survey but it does limit generalisability. However, validated and reliable

instruments were used and counterbalanced in the survey to enhance the rigor of the findings and the use of anonymity in the survey is likely to have promoted honest and candid responses.

The variables examined in this study explained twenty-five percent of variance in psychological distress and nearly sixteen percent of resilience variance demonstrating that additional factors are associated with the distress and resilience constructs. It was also observed that belongingness explained more variance in psychological distress than it did in resilience, indicating that there are more unexplained constructs influencing the presence of resilience. Knowledge of variables that account for additional variance in resilience and distress could provide pathways for organisations to use so that increased efforts aimed at protecting against the detrimental impact of workplace stressors and PTEs are made.

The present study has contributed to a gap in the current literature by assessing a workplace predictor of psychological well-being that has not previously been examined in a population of trauma exposed emergency service workers. Furthermore, the research measured the presence of psychological distress as well as the presence of resilience rather than inferring resilience by the absence of psychopathology. Results illustrated that a sense of workplace belongingness is likely to enhance the psychological well-being of ambulance personnel exposed to traumatic events. This finding highlights the benefits of encouraging a sense of belongingness within the workplace, especially in organisations where personnel are exposed to potentially traumatic events in their work role. As ambulance personnel provide a critical service that is heavily relied upon by the general community, the promotion of their psychological well-being should be prioritized.

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Table 1

Hierarchical Multiple Regression Analysis Predicting Psychological Distress and Resilience

Variable	Step 1					Step 2				
	B	CI	β	sig	sr^2	B	CI	β	sig	sr^2
Predicting Distress										
Length of service	.06	[.00, .11]	.08	.041	.01	.03	[-.02, .08]	.04	.237	.00
Severity of trauma	.79	[.38, 1.20]	.14	.000	.02	.58	[.22, .95]	.11	.002	.01
EAP Access	1.43	[.38, 2.48]	.10	.008	.01	1.29	[.36, 2.23]	.09	.007	.01
PSO	-2.73	[-4.65, -.81]	-.11	.005	.01	-2.19	[-3.91, -.49]	-.08	.012	.01
Belongingness						-3.99	[-4.57, -3.41]	-.45	.000	.20
Predicting Resilience										
Length of service	-.01	[-.01, -.00]	-.10	.007	.01	-.01	[-.01, -.00]	-.08	.037	.01
Severity of trauma	-.04	[-.09, .00]	-.08	.049	.01	-.03	[-.07, .01]	-.05	.179	.00
EAP Access	-.24	[-.35, -.13]	-.16	.000	.02	-.23	[-.33, -.12]	-.15	.000	.02
PSO	.16	[-.04, .36]	.06	.122	.00	.12	[-.07, .31]	.04	.220	.00
Belongingness						.30	[.23, .36]	.32	.000	.10

Note. sr^2 = semi-partial correlation