

## RESEARCH ARTICLE

# The impact and experience of debriefing for clinical staff following traumatic events in clinical settings: A systematic review

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## Abstract

Health care professionals are more frequently exposed to potentially traumatic events than individuals in other professions. Repeated trauma exposure can significantly impact both physical and mental health. In clinical settings, the term “debriefing” refers to a group meeting during which clinical events and decision-making are reviewed and discussed to improve clinical practice. The present review investigated the use of debriefing for clinical staff in clinical settings following exposure to direct and vicarious trauma. We examined whether the use of posttrauma debriefing impacts symptoms of distress and explored how clinical staff experience debriefing; we also investigated the factors that influence this experience. A systematic search of five electronic databases was conducted between August 31 and September 2, 2019. Included articles ( $N = 13$ ) described the use of debriefing in clinical settings with clinical staff following a traumatic event. We assessed methodological quality and performed a narrative synthesis. Four studies found some evidence of the benefits of debriefing for reducing psychological sequelae to traumatic events. Seven studies commented on factors that clinical staff perceived to be important for the debriefing to feel helpful, including the being given the opportunity for reflection, gaining a shared experience, and having the right peer facilitator. Some evidence suggests that debriefing with staff working in clinical settings can reduce posttraumatic distress symptoms, and subjective evidence suggests that clinical staff members perceive debriefing to be useful. Due to the limited literature, no firm conclusions could be drawn, and further methodologically sound research is required.

Repeated exposure to distressing and potentially traumatic events (PTEs), or “critical incidents”, has long been known to have a significant impact on physical and mental health, including posing a vulnerability to the development of posttraumatic stress disorder (PTSD; Everly et al., 2000; Le Fevre & Kolt, 2006). In recognition of this vulnerability, researchers and clinicians have explored interventions to prevent the development of PTSD and other mental health difficulties following exposure to PTEs. One such intervention is psychological debriefing (PD).

Critical incident stress debriefing (CISD; Mitchell, 1983) was one of the earliest models of PD, described as an early intervention for emergency service personnel following trauma exposure. CISD and later models of PD (Dyregrov, 1989) were designed to reduce immediate distress following a PTE and prevent the development of consequential psychological disturbances, such as PTSD. This was achieved by encouraging emotional processing through the retelling of the PTE in rich detail while normalizing trauma responses and preparing for possible future

emotional and behavioral experiences (Bisson, 2003). Typically, CISD has been facilitated as a single-session, semistructured group meeting led by a mental health practitioner and peer-support representative. Sessions last approximately 1–3 hr and are held 24–72 hr after a PTE (Mitchell, 1983).

Despite its widespread use across a range of populations, there has been much controversy regarding the appropriate use and efficacy of PD in the prevention of PTSD and other psychological consequences after a PTE (Rose et al., 2003). Rose and Bisson (1998) conducted the first systematic review investigating the efficacy of PD as a brief early psychological intervention and concluded that no evidence was found for the effectiveness of one-off interventions in the prevention of psychological sequelae following traumatic events. Indeed, two longitudinal studies included in the review (Bisson et al., 1997; Hobbs et al., 1996), reported significantly higher rates of PTSD among participants who attended PD compared to those who received no intervention.

The authors of subsequent reviews (Rose et al., 2001, 2003) also concluded that there was no evidence of reductions in the risk of PTSD development following PD and that the use of compulsory PD following a traumatic event, which might force individuals to reexperience the event or be in a group setting in which they are uncomfortable, should stop immediately pending further research. When considering the findings regarding the potentially harmful effects of PD, researchers have suggested that engagement in PD could lead to possible retraumatization or, perhaps, pathologize normal distress responses, leading to increased worry about one's experience (Raphael & Meldrum, 1995; Rose et al., 2003). Considering the findings that PD has the potential to exacerbate distress responses and cause harm, clinical guidance released in 2005 and later updated in 2018 warned against the use of brief, single-session PD that focuses on the details of the PTE (National Institute of Clinical Excellence [NICE], 2018). Instead, acknowledging the psychological impact of trauma exposure, offering reassurance and validation of normal distress responses, and providing information on sources for practical and emotional support is recommended (NICE 2018).

In clinical settings, the practice of “debriefing” is frequently used and is popular among health care professionals, particularly those who work within acute hospital environments. In this context, the term “debrief” is used to describe an operational meeting during which clinical decisions are reviewed and learning points are identified to improve the quality of care. In addition, clinical teams are provided with an opportunity to offer personal reflections to create a shared narrative of the event they experienced. This is different from single-session PD that focuses

on the details of the PTE, as described previously. In these settings, debriefing is not used as a treatment for PTSD or a preventative intervention but rather as an early opportunity for peer support, reflection upon the sequence of events and rationale for decision-making, normalization of emotional experiences, and learning.

Reviews investigating the use of debriefing as an educational strategy among health care professionals have highlighted its benefits in improving learning and team performance (Couper et al., 2013; Tannenbaum & Cerasoli, 2013). Research regarding the efficacy of group debriefing with health care professionals and emergency service personnel has also shown it to help alleviate the effects of vicarious psychological distress (Everly & Mitchell, 1999; Mitchell & Everly, 1997). It is interesting to note that studies investigating the subjective satisfaction of debriefing and its “usefulness” have revealed largely positive feedback even when simultaneous objective measures do not reflect these outcomes (Bisson et al., 1997; Hobbs & Adshear, 1997; Small et al., 2000).

In a recent review funded by Public Health England, the authors concluded that when early posttrauma interventions are tailored to meet the needs of their recipients, such interventions are valued and perceived as both beneficial and supportive by emergency responders, with results highlighting reductions in PTSD symptom severity and stress-related absences from work (Richins et al., 2020). However, to date, little research has focused on the efficacy of debriefing following a PTE within clinical working environments (Magyar & Theophilos, 2010).

The aim of the present review was to systematically consider the research literature on the use of debriefing for clinical staff following direct and vicarious trauma in clinical settings. Specifically, we examined whether the use of debriefing following a PTE impacts symptoms of distress in clinical staff and explored how clinical staff experience debriefing, including the factors that influence this experience.

## METHOD

### Criteria for inclusion in the review

The criteria for study inclusion were: participants aged 18 years or older; participants described as clinical staff (e.g., doctors, emergency nurses, medical technicians, ambulance workers; due to the limited number of eligible studies, we included studies with samples comprising both clinical and nonclinical staff if the study methodology was deemed to be of good quality); intervention following trauma exposure; exposure that occurred in a clinical work environment (e.g. hospital wards, responding to emergency calls); intervention that was clearly defined as

involving reflection, normalization of distress responses, and provision of information and support focusing on future coping; single- or multiple-session interventions with individuals or groups; methodological quality rated as “moderate” or above (i.e., “poor” ratings were excluded to minimize the risk of bias); and English-language, full-text publications. There were no restrictions regarding study design or publication date.

## Search strategy

Electronic databases searches were conducted between August 2019 and September 2019 in CINAHL Complete (1937–2019), PsycINFO (1887–2019), EMBASE (1974–2019), MEDLINE (1946–2019), and PubMed (1996–2019). One paper included in the review was “in press” at the time of the search and was subsequently published in January 2020. The electronic search method included the following terms filtered by title or abstract: (“debrief\*” OR “psycholog\* support” OR “psycholog\* intervention\*” OR “incident\* support” OR “reflective practice”) AND (“trauma\*” OR “PTSD” OR “stressful event\*” OR “clinical event\*” OR “critical incident\*” OR “adverse incident\*” OR “adverse event”). Synonyms of “clinical staff/clinical setting” were not included in the search strategy to reduce the risk of incorrectly excluding eligible studies. In addition to electronic database searches, we inspected references within the identified studies and other relevant debriefing literature to elicit further relevant papers.

## Study examination and data extraction

The primary author screened all studies identified as being potentially eligible for inclusion in the review to ensure they fulfilled the inclusion criteria. A second independent researcher screened 10.0% of the identified studies to ensure that the eligibility criteria were met. Disagreements were discussed in relation to the inclusion criteria or through consultation with a third reviewer. The following information was extracted from each study: year of publication, study reference, country of origin, objectives, participant inclusion and exclusion criteria, participant demographic characteristics, description of the traumatic event or events, description and nature of the intervention, main findings, and author conclusions.

## Quality assessment

Methodological quality was assessed using the Quality Assessment Tool for Studies with Diverse Designs

(QATSDD; Sirriyeh et al., 2011), which was designed for reviewing studies with diverse methodologies. Per the QATSDD, quality ratings are expressed as a percentage of the total number of applicable criteria. Papers with a score of 75.0% or higher were considered to be of high quality, those with a rating of 50.1%–75.0% were considered to be of good quality, ratings of 25.0%–50.0% denoted moderate quality, and ratings below 25.0% indicated poor methodological quality. The quality assessment was conducted by two independent raters, and disagreements were resolved through discussion or via consultation with a third reviewer.

## Data synthesis

A narrative synthesis was conducted following published guidance for undertaking reviews in health care (Centre for Reviews and Dissemination, 2009). Due to the heterogeneity of the studies, a meta-analysis was not possible. The study findings for each research goal were interpreted separately.

## RESULTS

Initial electronic and manual searches identified 5,624 studies. Once duplicates were removed and papers were screened for eligibility, first by title and abstract and then via full-text review, a total of 14 studies were deemed relevant for inclusion in the review. Following the quality assessment, one descriptive study that received a poor rating was removed due to its small sample size and lack of sufficient justification or description of the methodology and outcome measures. A final pool of 13 studies was deemed eligible for inclusion in the systematic review. Full details of the screening and selection process are presented in Figure 1 (Moher et al., 2009).

All included studies used single-session group interventions except one study, which used individual debriefing for “moderately severe” PTEs and individual debriefing along with group defusion for “severe” events (Macnab et al., 2004). All studies offered a form of early intervention following exposure to a PTE in a clinical setting. In eight studies, PTEs occurred in a hospital setting (Archibald & O’Curry, 2020; Blacklock, 2012; Burns & Harm, 1993; Clark et al., 2018; Ireland et al., 2008; Keene et al., 2010; Macnab et al., 2004; Spitzer & Burke, 1993), four studies described PTEs as emergencies in the community (Humphries & Carr, 2001; Jenkins, 1996; Macnab et al., 1999; Robinson & Mitchell, 1993), and one study described events within a psychiatric residential setting (Matthews, 1998). Three

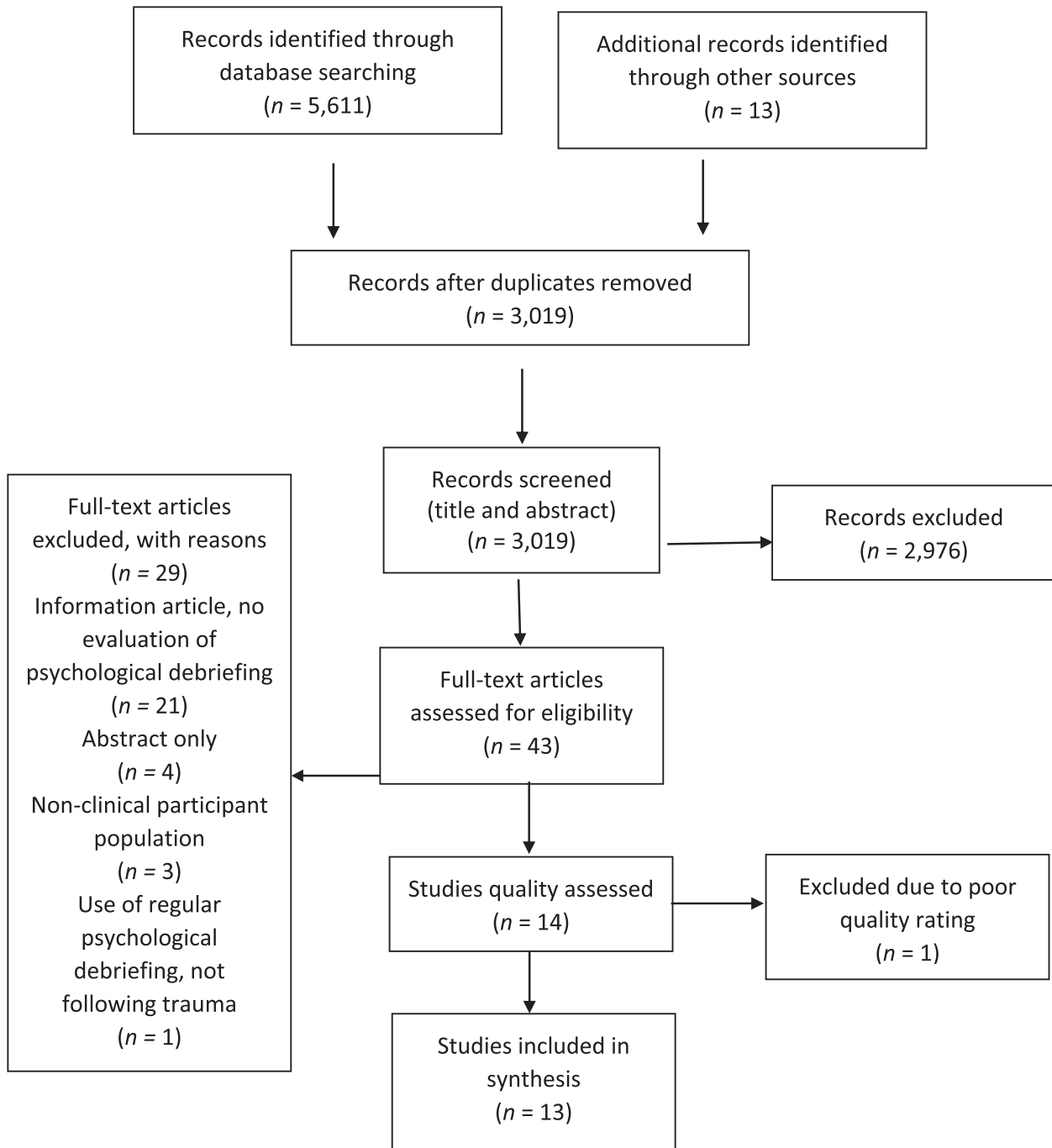


FIGURE 1 PRISMA diagram of the systematic search and selection of studies for the review

studies were conducted in the United Kingdom (Archibald & O'Curry, 2020; Humphries & Carr, 2001; Ireland et al., 2008), three in Australia (Blacklock, 2012; Matthews, 1998; Robinson & Mitchell, 1993), two in Canada (Macnab et al., 1999, 2004), and the remaining five were conducted in the United States (Burns & Harm, 1993; Clark et al., 2018; Jenkins, 1996; Keene et al., 2010; Spitzer & Burke, 1993).

## PTEs

Four studies described specific PTEs, including a public suicide (Blacklock, 2012), armed robbery or emergency medical situations (Humphries & Carr, 2001), a mass shooting (Jenkins, 1996), and an air ambulance crash (Macnab et al., 1999). The remaining nine studies described debriefing following repeated exposure to PTEs within a

clinical working environment. These events varied and included patient deaths, failed resuscitations, and exposure to personal threat (e.g., acts of violence).

## Interventions

Most included studies used group intervention protocols based on Mitchell's (1983) model of CISM (Burns & Harm, 1993; Clark et al., 2018; Humphries & Carr, 2001; Ireland et al., 2008; Jenkins, 1996; Macnab et al., 1999, 2004; Matthews, 1998; Robinson & Mitchell, 1993; Spitzer & Burke, 1993). Three studies described the use of service-specific debriefing protocols designed to meet the needs of the clinical population. Blacklock (2012) recognized the challenges of scheduling debriefing to accommodate medical teams and combined emotional defusion, to provide immediate emotional support and enable staff members to continue their shifts, with formal debriefing, which allowed staff to process the event as a team. Archibald and O'Curry (2020) used the principles of Hobfoll and colleagues (2007) to create an environment promoting a sense of safety, calm, collective efficacy, connectedness, and hope, allowing neonatal staff members to reflect on complex and potentially distressing cases. Keene and colleagues (2010) described bereavement debriefing, which focused on the emotional response to death in the wider context of the relationship between staff members, the patient, and their family; this protocol was designed to be facilitated within 1 week of the PTE, usually after the patient's funeral.

## Participants

Participants in 10 of the included studies were clinical professionals, including nurses, doctors, paramedics, and health care workers (Archibald & O'Curry, 2020; Blacklock, 2012; Burns & Harm, 1993; Clark et al., 2018; Ireland et al., 2008; Keene et al., 2010; Macnab et al., 1999, 2004; Matthews, 1998; Spitzer & Burke, 1993). The remaining three studies used mixed clinical staff and nonclinical samples, including firefighters and police officers (Jenkins, 1996; Robinson & Mitchell, 1993), and retail and financial workers (Humphries & Carr, 2001).

## Study design, data collection, and use of valid measures

The study designs and methodologies varied among the included studies. The authors of five studies used mixed-method descriptive designs (Archibald & O'Curry, 2020;

Burns & Harm, 1993; Ireland et al., 2008; Keene et al., 2010; Robinson & Mitchell, 1993). Two studies were non-randomized quantitative trials (Humphries & Carr, 2001; Matthews, 1998), and one randomized control trial (RCT) was included; however, due to the limited sample size, there was insufficient power to make distinctions between the intervention and comparison groups (Macnab et al., 2004). In addition, one quantitative, longitudinal cohort study (Blacklock, 2012); two mixed-method longitudinal studies (Jenkins, 1996; Macnab et al., 1999); and two studies that used qualitative designs (Clark et al., 2018; Spitzer & Burke, 1993) were reviewed.

Five studies used standardized psychometric measures (Blacklock, 2012; Humphries & Carr, 2001; Jenkins, 1996; Macnab et al., 2004, 1999). Three studies used postintervention measures at multiple assessment points (Blacklock, 2012; Macnab et al., 2004, 1999). Humphries and Carr (2001) used pre-post intervention measures of PTSD (i.e., the Impact of Event Scale [IES]; Horowitz et al., 1979), and Jenkins (1996) asked participants to rate their current level of distress 1 month following trauma exposure relative to retrospective levels of perceived distress 1 week before trauma exposure. The remaining eight studies used proprietary questionnaires and interview schedules specifically designed by the researchers for the study (Archibald & O'Curry, 2020; Burns & Harm, 1993; Clark et al., 2018; Ireland et al., 2008; Keene et al., 2010; Matthews, 1998; Robinson & Mitchell, 1993; Spitzer & Burke, 1993).

## Methodological quality

Overall, the methodological quality of the included studies was rated as "moderate" to "good" (see Table 1). Common weaknesses across studies were a consistent absence of a priori sample size considerations and service-user involvement, minimal justification for the method of data collection and analysis, and limited critical appraisal.

## Main findings

### Impact of debriefing on posttraumatic distress symptoms

Seven studies investigated the impact of debriefing on symptoms of distress (Blacklock, 2012; Humphries & Carr, 2001; Jenkins, 1996; Macnab et al., 2004, 1999; Matthews, 1998; Robinson & Mitchell, 1993). Findings from four of these studies demonstrated some evidence of the benefits of debriefing in the reduction of psychological sequelae (Blacklock, 2012; Humphries & Carr, 2001; Jenkins, 1996;

TABLE 1 Quality assessment rating

| Study                      | % score | Rating   |
|----------------------------|---------|----------|
| Archibald & O'Curry (2020) | 35.4    | Moderate |
| Blacklock (2012)           | 47.6    | Moderate |
| Burns & Harm (1993)        | 39.6    | Moderate |
| Clark et al. (2018)        | 64.3    | Good     |
| Humphries & Carr (2001)    | 50.0    | Good     |
| Ireland et al. (2008)      | 39.5    | Moderate |
| Jenkins (1996)             | 43.8    | Moderate |
| Keene et al. (2010)        | 47.7    | Moderate |
| Macnab et al. (1999)       | 31.3    | Moderate |
| Macnab et al. (2004)       | 47.6    | Moderate |
| Matthews (1998)            | 52.4    | Good     |
| Robinson & Mitchell (1993) | 36.6    | Moderate |
| Spitzer & Burke (1993)     | 31.0    | Moderate |

Robinson & Mitchell, 1993). Of the remaining three papers, Macnab et al. (1999) reported nonsignificant correlations between debriefing attendance and the frequency or severity of IES-assessed posttraumatic distress symptoms, at 1- and 6-month follow-ups after an air ambulance crash. In the single RCT included in the review, Macnab et al. (2004) were unable to assess the effectiveness of debriefing in comparison to control groups due to the limited sample size. Finally, Matthews (1998) reported a significant (i.e.,  $p < .01$ ) reduction in stress for all comparison groups over time, with the lowest levels of IES-assessed posttraumatic distress symptoms emerging in workers who chose not to attend CISD ( $p = .030$ ).

Blacklock (2012) investigated the effectiveness of an adapted CISD protocol following a public suicide in a hospital. Due to a low response rate of completed measures, posttraumatic symptoms measured using the IES at assessment points 10 days and 6 weeks after the event could not be compared. During a 3-month follow-up call, all CISD attendees subjectively reported no symptoms of intrusive thoughts or avoidant behavior, leading the author to interpret this as some degree of effectiveness.

Of the six studies that employed group debriefing protocols based on CISD (Mitchell, 1983), three investigated the effectiveness of CISD compared to control conditions. Single-session group CISD for hospital emergency department staff and financial sector workers was reported to be more effective at reducing symptoms of posttraumatic distress, as measured using the IES, compared to no intervention ( $p < .05$ ) but not compared to a simple psychoeducation lecture about stress (Humphries & Carr, 2001). A nonrandomized trial compared three groups of community care workers: those who attended CISD following a PTE at work, those who chose not to attend

CISD, and those who did not have CISD available to them (Matthews, 1998). Across all three groups, distress levels lessened between the time of the event and 1 week later ( $p < .01$ ). Posttraumatic stress symptoms as assessed using the IES were higher in staff for whom CISD was unavailable, and the lowest distress levels were found among those who chose not to attend CISD ( $p = .030$ ; Matthews, 1998). Macnab et al. (2004) conducted an RCT comparing three levels of psychological support. Due to the limited sample size ( $N = 6$ ), there was insufficient power to make any distinctions between the different levels of intervention.

Two longitudinal studies were conducted to investigate the effectiveness of CISD following a specific emergency incident. One study examined stress reactions (Symptom Checklist-Revised [SCL-90-R], Derogatis, 1983) and recovery among emergency medical personnel following a mass shooting in a café. The author found that CISD attendance was correlated with a reduction in symptoms of depression ( $p < .001$ ) and anxiety ( $p < .05$ , Jenkins, 1996). In a sample of emergency physicians, transport paramedics, and nurses, there was no significant correlation between CISD attendance and the frequency or severity of IES posttraumatic stress symptoms at 1- and 6-month assessments conducted following an air ambulance crash; at 2-year follow-up, 16.0% of transport paramedics presented with persistent negative behavioral effects of the crash (General Health Questionnaire [GHQ], Goldberg & Hillier, 1979; Macnab et al., 1999). A final study used a survey design that included Likert-type scales to determine the impact of CISD facilitated with hospital and welfare staff as well as emergency service personnel. Participants in both groups reported significant reductions in impact score from the time of the incident to 2 weeks post-CISD ( $p < .001$ ; Robinson & Mitchell, 1993).

**TABLE 2** Factors that impact the usefulness and value of psychological debriefing

| Positive                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Negative                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Opportunities for reflection and joint understanding; what went well, learning and future improvement<sup>a,b,c,e,f</sup></li> <li>• Shared experience; “I’m not alone”<sup>a,b,e,f</sup></li> <li>• Facilitated by a trained mental health and peer representative<sup>a,c,d</sup></li> <li>• Relaxed informal, non-judgmental atmosphere<sup>d,e</sup></li> <li>• Increasing understanding of personal and colleague reactions to the event<sup>e,f</sup></li> <li>• No pressure to talk<sup>d</sup></li> <li>• Learning from others; stress management and coping<sup>b</sup></li> <li>• Everyone invited<sup>c</sup></li> </ul> | <ul style="list-style-type: none"> <li>• Inexperienced facilitators with no prior experience of clinical area<sup>b,e</sup></li> <li>• Difficulties scheduling meetings<sup>a,b</sup></li> <li>• Perceived hierarchy in the room; less contribution from junior staff<sup>a</sup></li> <li>• Taking time out of personal life<sup>b</sup></li> <li>• Too much focus on emotional response; needing to remain professional<sup>c</sup></li> </ul> |
| Contradictory views                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• Voluntary attendance<sup>b,c,d</sup> vs. mandatory attendance<sup>e</sup></li> <li>• Helpful soon after the event<sup>a,c,d</sup> vs. too soon after the event<sup>b</sup></li> <li>• Allow time for processing<sup>a</sup> vs. too long after the event<sup>b,e</sup></li> </ul>                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

Note: <sup>a</sup>Archibald & O’Curry (2020). <sup>b</sup>Burns & Harm (1993). <sup>c</sup>Clark et al. (2018). <sup>d</sup>Ireland et al. (2008). <sup>e</sup>Robinson & Mitchell (1993). <sup>f</sup>Spitzer & Burke (1993).

## Experience of and factors related to debriefing among clinical staff

Seven of the included studies reported in detail on clinical staff members’ perceptions of debriefing (Archibald & O’Curry, 2020; Burns & Harm, 1993; Clark et al., 2018; Ireland et al., 2008; Keene et al., 2010; Robinson and Mitchell, 1993; Spitzer & Burke, 1993). Two studies investigated clinical workers’ experiences of service-specific debriefing protocols. In one study, which explored the experiences of neonatal intensive care staff, the authors found that 96.0% of participants were satisfied with the protocol and 88.0% felt able to contribute to discussions (Archibald & O’Curry, 2020). Attendees valued the shared experience and the opportunity to reflect together on what happened, what went well, and what could be improved in the future. Reported challenges to debriefing included difficulties scheduling meetings and the impact of potential hierarchical relationships among staff attendees. Keene et al. (2010) evaluated a bereavement debriefing protocol, with 98.0% of the attendees deeming the sessions to be helpful, informative, and meaningful.

All five studies that used group debriefing based on CISD (Mitchell, 1983) reported subjective benefits. Emergency nurses rated CISD as helpful in reducing critical stress symptoms (88.0%), helpful in reducing the intensity of their stress response (47.0%), and beneficial for coping in the future (82.0%; Burns & Harm, 1993). In a sample that included both emergency service personnel and welfare and hospital staff, Robinson and Mitchell (1993) found that 96.0% and 77.0%, respectively, attributed reductions in posttraumatic stress symptoms at least in part to CISD.

Six studies reported on factors that impacted the perceived usefulness of debriefing (Archibald & O’Curry, 2020; Burns & Harm, 1993; Clark et al., 2018; Ireland et al., 2008; Robinson & Mitchell, 1993; Spitzer & Burke, 1993; see Table 2). Clinical staff across studies most commonly spoke of the value of having an opportunity for reflection and gaining a shared experience with colleagues. Participants reported valuing debriefing sessions that were jointly facilitated by trained mental health professionals and peer representatives. Four studies reported on potential challenges and barriers to debriefing (Archibald & O’Curry, 2020; Burns & Harm, 1993; Clark et al., 2018; Robinson & Mitchell, 1993). The most frequently cited detrimental factor was inexperienced facilitators with a lack of knowledge about the relevant clinical working environment (Table 2). None of the reviewed studies reported evidence of any negative impacts of debriefing, including retraumatization.

## DISCUSSION

In total, we identified 13 studies that investigated the use of debriefing with clinical staff following direct or vicarious exposure to a PTE in a clinical setting. There were methodological shortcomings among the studies reviewed. Cross-sectional descriptive surveys used to capture the experience of staff who attended debriefing were commonly used for data collection. Although these methodologies are important for collating descriptive data and opinions, the subjectivity of using unvalidated measures and reliance on self-report assessments need to be considered. A lack of consistency in the measures used also impacted our ability to make comparisons between studies. Only one RCT

was identified; however, due to its limited sample size, there was insufficient power to draw conclusions (Macnab et al., 2004). Variation in psychometric measures used across studies was noted; Jenkins' (1996) study was particularly problematic due to retrospective data collection, which can lead to possible bias. One significant limitation of the present review was the limited number of studies identified. Due to this limitation, nonrandomized studies without control group comparisons were included. This impacted our ability to draw conclusions regarding the efficacy of debriefing. It is unclear whether any observed reductions in distress were due to interventions or if recovery would have naturally occurred over time. In addition, due to the limited research available, the review included studies with mixed clinical and nonclinical samples, which impacts the generalizability of the findings. Another limitation was the heterogeneity of the studies and the research questions explored. This impacted the comparability of the findings across studies and, therefore, a formal meta-analysis or assessment of publication bias was not possible.

Seven studies provided evidence in support of the first research question, namely whether the use of debriefing following a PTE impacts posttraumatic distress symptoms in clinical staff. Four out of seven studies showed some evidence of reduced symptoms of distress following debriefing. In one study, CISD was found to reduce posttraumatic stress symptoms from the time of the incident to 6 weeks later when compared with a no-treatment control condition; however, there was no evidence that CISD was any more effective than a standalone stress psychoeducation intervention (Humphries & Carr, 2001). When comparing clinical staff who had access to CISD and those who did not, Matthews (1998) reported that posttraumatic stress symptoms at 1-week posttrauma were lowest among participants for whom CISD was available but who chose not to attend (Matthews, 1998). The author suggested that knowing that support such as CISD is available, within a generally supportive working environment, might be enough to reduce distress symptoms over time regardless of whether an individual attends CISD. In another study, a service-specific debriefing protocol was also found to reduce posttraumatic symptoms over the course of 3 months (Blacklock, 2012).

Of the two studies that reported no evidence that CISD attendance reduced PTSD symptoms over time, one study had insufficient power to draw any conclusions (Macnab et al., 2004) and the other revealed that 2 years after an air ambulance crash, transport paramedics who attended CISD continued to experience objectively measured negative behavioral effects despite self-report ratings of being "back to normal" after 6 months (Macnab et al., 1999). These discrepancies between objective and subjective measures of distress are consistent with findings from other

studies that have investigated the impact of debriefing (Bisson et al., 1997; Hobbs & Adshhead, 1997; Small et al., 2000). One explanation is that objective measures are more suited to detecting distress symptoms that are subjectively unnoticeable or, perhaps, that within clinical staff populations, stress symptoms are accepted as part of day-to-day working life and, therefore, subjectively perceived as "normal." Everly (1988) proposed that individuals who work in environments that involve frequent exposure to traumatic events might process these experiences differently from those who do not work in such environments, due to the expectation of trauma exposure as part of their role as well as their specialist training. In addition, some researchers have hypothesized that these kinds of jobs attract emotionally hardy individuals (Everly, 1988).

Within this review, there is some evidence that debriefing in the form of providing clinical teams space for reflection and processing can reduce distress symptoms in clinical staff populations following traumatic events. However, an absence of controlled, longer-term follow-up measures among the studies reviewed means that no conclusions can be drawn regarding the possible harmful effects of debriefing, as highlighted in previous reviews (Rose & Bisson, 1998; Rose et al., 2001, 2003).

Seven studies provided evidence for the second research question: How do clinical staff experience debriefing, and what factors influence this? Four of the included studies drew overall conclusions that participants were subjectively satisfied with their experience of debriefing and found it helpful in reducing stress symptoms. Gaining a shared understanding of PTEs and peer support were cited as being of particular value. These findings reflect those reported in previous studies regarding the benefits of peer support during the processing of PTEs (Harvey, 1992) and the importance of promoting a safe environment within which to do this (Hobfoll et al., 2007). Debriefing that was facilitated by a trained peer representative with prior experience of the relevant clinical working environment was highlighted as important. Moreover, participants noted the importance of voluntary attendance, recognizing that group interventions do not suit everyone, and some individuals may not require debriefing, choosing instead to seek support through alternative avenues, such as support networks outside work (Jenkins, 1996).

Of the studies that reported on the potential challenges and barriers to debriefing, the pragmatic complexity of scheduling meetings was a recurrent theme. Finding suitable times when all staff involved in the incident are able to attend without taking time away from one's personal life while ensuring that staff rosters are covered is problematic. This also impacts the amount of time between when the PTE occurs and when the debriefing can be scheduled. Timing and other practicalities should be flexible



and considered within the context of the relevant clinical working environment. Interestingly, despite these reported challenges, none of the reviewed studies provided evidence of retraumatization, a criticism and concern of debriefing previously highlighted within the literature (Rose et al., 2001, 2003). However, it is important to note that none of the studies in this review employed controlled, longer-term, longitudinal designs and, therefore, no conclusions about possible harmful effects can be determined.

In conclusion, the present findings suggest some tentative evidence that clinical staff populations subjectively perceive debriefing to be helpful and supportive following exposure to a PTE at work and that debriefing attendance can reduce symptoms of posttraumatic stress. However, due to the limited number of published studies with robust evidence, no firm conclusions can be drawn. It is important to note that within clinical contexts, the term “debriefing” is commonly used to describe a space for reflection, learning, and psychosocial support among teams. It is not the case that CISD is being facilitated as a treatment for PTSD due to recommendations against its use (NICE, 2018). Reviews of service-specific debriefing protocols suggest that debriefing frameworks tailored to the specific needs of the setting and recipients might be most beneficial. This review also highlights the current gap in the literature regarding the use of debriefing specifically with clinical staff. However, several studies discussing the proposed implementation of new debriefing protocols within clinical environments were identified during the literature search; once evaluations of the results of these protocols are published, a repeat review would be recommended.

## OPEN PRACTICES STATEMENT

The preregistration for this study was completed on PROSPERO (ID: CRD42019139139) and can be accessed at [www.crd.york.ac.uk/prospERO/display\\_record.php?RecordID=139139](http://www.crd.york.ac.uk/prospERO/display_record.php?RecordID=139139). We reviewed data that was collected by third-party authors, and, therefore, the data are not under our direct control; requests to access the data should be directed to the relevant authors of individual papers.

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