Critical Incident Stress Debriefing for Nurses in Emergency and Critical Care Departments

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Critical Incident Stress Debriefing for Nurses in Emergency and Critical Care Departments

A Paper Submitted in Partial Fulfillment of the Requirements of

NURS 5382: Capstone

In the School of Nursing

The University of Texas at Tyler

by

Rachel Davis

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Executive Summary

Frontline healthcare workers such as emergency department nurses, trauma nurses, and other nurses working within intensive care services are exposed to significant trauma on the job as they care for their critically wounded and dying patients. While trauma cannot be removed from the job descriptions of such staff members, individuals and their facilities can work together to try and ensure traumatic events do not have significant, lasting effects on the mental wellbeing of these nurses. Many coping and stress management strategies exist for nurses under duress on individual and system-wide levels, but the scope of this project is to examine one coping strategy in particular: critical incident stress debriefing (CISD). This particular method provides structure for nursing staff and their superiors to engage in workplace-appropriate communication regarding trauma and critical incidents, and whether or not such incidents are affecting the nurses’ emotional, mental, or occupational wellbeing and competency. The program participants for this benchmark project include emergency/trauma nurses (and critical care nurses, where staffed) within rural and urban facilities in Bryan and Navasota, Texas. The aim of this project is to answer the following PICOT question: In emergency and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of STS and compassion fatigue (O) after exposure to a traumatic event in the workplace (T)?

1. Project Rationale

Critical incident stress debriefing after traumatic events in the workplace has been cited as a relatively inexpensive way to decrease the impact of negative psychological consequences such as secondary traumatic stress (STS), compassion fatigue, burnout, and post-traumatic stress disorder (PTSD) on these nurses so they can continue providing high-quality care in the midst of tragedy (Healy & Tyrell, 2011; Healy & Tyrell, 2013). Additionally, CISD holds the potential to
decrease attrition in nursing staff over time (Healy & Tyrell, 2013), and should be considered by administrators looking to decrease facility and departmental costs spent on hiring and training fresh staff in the event of high turnover rates. Developing and streamlining a formal CISD program to be utilized by nursing staff and supervisors is a wise move made by shrewd administrators, as nurses who have previously engaged in debriefing enjoyed the experience and wished it was made available to them on a more regular basis (Copeland & Liska, 2016; Spencer et al., 2019). Many opportunities exist for nurses to safeguard their own emotional wellbeing, whether on the clock or off. Formal CISD is unique, however, in that it may act as a catalyst to promoting transparent, nonpunitive discussions between supervisors and their nursing staff that revolve around increasing staff safety and support, pursuing quality improvements in patient care, and acknowledging the often painful reality of providing nursing care in life-and-death circumstances.

2. Literature Review & Synthesis

A database search of NIH PubMed, Google Scholar, ResearchGate and Elsevier was conducted to retrieve literature for this project. The search was confined to articles written within the last ten years, and centered on debrief among emergency, trauma, and critical care nurses. Among the articles kept for this project are IRB-approved evidence-based projects (EBPs) implemented at specific hospitals, cross-sectional studies, descriptive surveys, and literature reviews, with evidence levels ranging from IV-VI. The search was conducted to discover the nature of critical incident debriefing among existing literature: its prevalence, consistency, frequency, cost, and perceived benefit upon implementation. A summary of findings follows.
Critical incidents are those which provoke strong emotional reactions from healthcare workers and may impede their ability to perform at their highest levels of training or cognitive function after exposure to such events (Healy & Tyrell, 2013). Patients deaths (including traumatic pediatric deaths), aggression or violence against a coworker, elder or pediatric abuse, the death of a coworker related to an injury sustained in the workplace, and learning of the physical or sexual assault of a patient have been cited across the literature as such events worthy of debrief (Healy & Tyrell, 2013; Wuthnow, Elwell, Quillen, & Ciancaglione, 2016).

Experiencing critical incidents as described above may result in sleep disturbances, intrusive flashbacks of the events, withdrawal from daily activities or responsibilities, and hypervigilance at work (Wuthnow et al., 2016). Often, unhealthy coping mechanisms such as heavy alcohol use related to emotional distress after work (Morrison & Joy, 2016), or even use of illegal drugs such as cocaine or marijuana (Duffy, Avalos, & Dowling, 2015) are utilized by emergency department nurses in the absence of healthier alternatives such as CISD. Emergency nurses are among the most likely to experience symptoms of STS and PTSD related to their work when compared to nurses within other specialties (Adriaenssens, de Gucht, & Maes, 2012). Thirty-nine percent of emergency nurses within four participating hospitals in western Scotland met full diagnostic criteria for STS (Morrison & Joy, 2016), which was cited as a precursor to the development of PTSD (Lavoie et al., 2016).

Debriefing allows care team members to reflect on their performance, mourn and honor the loss of life they may have experienced during a resuscitation attempt (Kapoor, Morgan, Siddique, & Guntupalli, 2018), and discuss potential ways to improve care for future patients. Cognitive disruption is an unfortunate reality for some emergency nurses due to the very nature of their departments’ critical incidents, and debriefing allows them a chance to ask pertinent
questions and seek clarification regarding treatment decisions that may not have surfaced in their minds until the critical incidents themselves had been resolved (Spencer, Nolan, Osborn, & Georgiou, 2019). Additionally, debriefing acts as a real-time reminder of existing psychosocial support found in peers and coworkers who understand the depth of trauma experienced during critical incidents, potentially promoting resilience among bedside nurses in emergency and critical care departments over time (Schmidt & Haglund, 2017; Anderson, Sandars, & Kinnair, 2019). The process may lead nurses to identify a work mentor who can help alleviate job-related stress (Duffy et al., 2015), and routine engagement in standardized debriefs may decrease compassion fatigue and attrition while improving psychological wellness among these nurses over time (Schmidt & Haglund, 2017; Anderson et al., 2019).

In general, debrief programs did exist, at least nominally, in a majority of the organizations represented in the articles kept for this project. However, those in charge of the programs were not always qualified or properly trained, and the debriefs themselves were being performed inconsistently (Copeland & Liska, 2016). Often they were put off in favor of seemingly more urgent concerns such as time constraints and ongoing patient care in a busy emergency or critical care department, despite staff members’ verbalizations that such debrief processes were considered beneficial (Copeland & Liska, 2016; Spencer et al., 2019). Having a designated, trained facilitator for debriefs allows for more effective reflection and better enables the development of future healthcare team processes, as changes to be made can be discussed within unit- and management-specific contexts (Anderson et al., 2019). The importance of a well-established, formal CISD program upon which staff can rely after exposure to trauma in the workplace, led by a competent, trained facilitator familiar with the psychological tolls of such incidents, should not be overlooked (Spencer et al., 2019).
3. Stakeholders

There are many stakeholders to be considered when contemplating this project. Bedside emergency, trauma, and critical care nurses, their supervisors, administrators, medical directors, and patients will be directly affected by the implementation of such a project. Even the nurses’ families may benefit due to the potential the project has to improve their loved ones’ psychological wellbeing as they work at the bedside. Although nurses were not always able to engage in the formalized debriefs from time to time due to high acuity within their department, critical, ongoing patient needs, or low staffing, they still appreciated the presence of such a program in their workplace (Copeland & Liska, 2016; Spencer et al., 2019). This is an important preference of crucial stakeholders within emergency and critical care departments that needs to be considered.

4. Planned Implementation

Education is the first step in successful implementation of such a project. Nurses employed in the emergency departments in question in Bryan, Texas and Navasota, Texas would be given introductory education regarding CIs and CISD at one of the departments’ mandatory semi-annual competency fairs held in April and October. For the registered nurses working bedside, this would entail defining CIs so the nurses can identify them in practice. They would be given handouts detailing how to recognize a CI and how to engage in team-based reflection led by a trained facilitator, including leading, open-ended questions they might ask (or be asked) regarding a case during its debrief. These handouts would also be made available in the online ED “Employee Encyclopedia” for easy access after the fairs. Additionally, nurses’ attitudes regarding CIs and CISD will be gathered during this pre-implementation phase. This is discussed in greater detail in Section 6 of this paper.
4.1 Recommended Training and Funds

House supervisors and physicians would receive the above introductory education, as well as training through the International Critical Incident Stress Foundation (ICISF) in order to facilitate the debriefs once the project is implemented. Training both house supervisors and physicians is necessary, because neither is guaranteed to be available to facilitate a debrief, depending on hospital or department needs day to day. Each site may also choose to train a substitute facilitator, such as a seasoned charge nurse, the director of the ED, or another trusted administrator. Utilizing ICISF’s online calendar and education interface, house supervisors and physicians should attempt to secure and complete their training within a six week period after the competency fair (assuming specific course availability falls within this time frame), with implementation following in an additional two weeks. This leaves a four month span before the next competency fair, during which a pilot version of the project can be implemented and evaluated.

Training funds would come from the facilities’ education budgets, and the staff would be compensated as necessary for overtime. ICISF offers a multitude of online courses, so each organization’s nurse educators and medical directors would need to decide which courses would be most appropriate for their specific patient and staff population at least one week prior to the competency fair. For example, both organizations would likely benefit from the course “Staff Support in the Healthcare Setting,” but the rural, critical access ED with a low-level trauma designation and infrequent trauma cases (Navasota, TX) might not receive the same benefits from “Ethics for Traumatologists” (International Critical Incident Stress Foundation, Inc., 2019) as would the Level-II trauma center with a generally higher acuity (Bryan, TX).
4.2 Debrief Design

The following is a suggested format for a typical debrief. Either immediately after the incident is stabilized or as time permits before the involved staff clock out that day, the house supervisor or physician on duty would gather the healthcare team in a central area to facilitate case discussion for approximately twenty minutes. Staff will utilize the forms that they, by now, should be familiar with from the provided training. Ideally, a second team would receive report of remaining patients and assume care of the department at this time. If this is not possible due to department acuity, the debrief would happen at shift change with participation considered voluntary. The facilitator might ask any number of suggested questions such as: How did you feel performing this skill? Were you comfortable using this new piece of equipment, employing this new de-escalation technique, administering this medication, or participating in this procedure? What do you believe was handled well? Where do you believe we could improve our provision of care as a team and as individuals? Do you have questions regarding anything you saw during today’s critical incident? Are you aware of counseling and mental health resources available to you in the event you need such care after today’s critical incident? Once staff has sufficiently discussed these and any organic questions that may arise, each member would be paired with a partner to foster private discussion among potentially timid individuals and to increase interdepartmental camaraderie. This phase of the debrief would last up to ten minutes, and at its conclusion, team members would resume care of their patients or go home, depending on the time of debrief. The facilitator will be responsible for time keeping and dismissal for any staff who remain in attendance after the final ten minutes. The following pages will outline a proposed timeline.
5. Timeline and Flowchart

5.1 Timeline Justification

As discussed in previous sections of this paper, the literature indicates CISD has substantial benefits. These benefits include increased job satisfaction among nurses and decreased attrition over time, with relatively low-cost implementation (Anderson, Sandars, & Kinnair, 2018; Healy & Tyrell, 2011; Copeland & Liska, 2016). Therefore CISD is expected to have a measurable and significant effect size, even in the case of what may be considered a small sample. For the sake of evaluation, the criterion for successful implementation of this project is defined as at least ten CIs with associated CISD sessions performed each time within the project period. In the event ten CIs are not experienced by staff or their associated debriefs are not performed after six months, the implementation period will be extended in hopes of achieving a more reasonable sample capable of yielding a meaningful, statistically significant effect size. The implementation phase will be capped at twelve months, regardless of the number of CIs and CISD sessions performed.

5.2 Narrative of Proposed Events

1. Pre-implementation data is collected for future comparison to post-implementation data by project coordinator and other RN volunteers. This data will be incorporated in the final dissemination upon completion of the project.

2. The proposed CISD project takes place for four to six months to yield a statistically significant data set under the previously discussed assumptions. This is defined as at least ten CIs with associated CISD sessions led by trained facilitators each time. The program may be extended to up to twelve months if this parameter has not been met.
3. The number of CIs and associated CISD sessions is tallied by the project coordinator and associated RN volunteers.

4. Project participants are polled once more regarding their attitudes related to CISD. They are also asked for feedback related to project successes and failures. If necessary, a root cause analysis can be performed at this stage in the event the CIs happened without consistent performance of associated debriefing sessions:
   a. Why were the debriefs not performed? Are you experiencing pushback? If so, from whom? Does the project design suffer because of the fast-paced nature of the ED and need to be reconsidered? In your opinion, what resources and/or allowances need to exist for successful implementation of this program in your department?

5. Post-implementation data are compared to pre-implementation data and assessed for change using appropriate statistical testing: Chi-square for Likert-scale questions and $t$ tests for True/False questions. All data are summarized in an accessible report to be disseminated to project participants and other concerned ED staff members for review. The data to be summarized are as follows:
   a. Beliefs and attitudes of project participants before the intervention
   b. Project length (number of months)
   c. Number of CIs experienced by project participants in that length of time
   d. Number of CISD sessions experienced by project participants in that length of time
   e. Beliefs and attitudes of project participants after the intervention
6. Data Collection Methods and Evaluation

After receiving their education (but prior to project implementation), the nurses will be polled on their current beliefs and attitudes regarding several factors, including: the importance and efficacy of CISD, reservations regarding CISD implementation, and whether or not CISD affects their levels of burnout, STS, and compassion fatigue resultant from their work. Questions of this nature will be presented using standard, five-point Likert-scale ranges and “True/False” options where applicable. See Figure 2 below for several examples of these pre-intervention questions. Implementation of the proposed project will proceed for four months as previously stated, and be evaluated as the second annual competency fair approaches. Emergency nurses will be polled a second time regarding their attitudes surrounding CISD, perceptions of its benefits (or lack thereof), and how they feel the new process improved their levels of burnout,
STS, and compassion fatigue as applicable. The pre- and post-implementation attitudes will be compared using appropriate statistical testing, such as Chi-square for Likert-scale questions and t tests for True/False questions.

**Figure 2:** Example of pre Intervention questions found in ED nurses’ education materials.

1. How important do you believe critical incident stress debriefing (CISD) in the workplace to be to your overall emotional wellbeing as an employee of this facility?
   - A. Not at all important
   - B. Somewhat important
   - C. Important
   - D. Very important
   - E. Crucial

2. True/False: You find CISD helpful after experiencing traumatic workplace events.
   - A. True
   - B. False

3. True/False: You believe CISD has potential to decrease your levels of burnout and/or compassion fatigue related to traumatic workplace events.
   - A. True
   - B. False

4. How confident are you in the feasibility of a consistently performed CISD program in this department?
   - A. Not at all confident
   - B. Somewhat confident
   - C. Confident
   - D. Very confident
   - E. Convinced

5. How many debriefing sessions have you engaged in at this facility within the last calendar year, prior to this education?
   - A. 0
   - B. 1-2
   - C. 3-5
   - D. 6-9
   - E. ≥10

### 6.1 Evaluation and Dissemination

In addition to evaluation of nursing attitudes, program success will also depend on whether or not CISD was performed as instructed. The number of significant CIs during the four month period should be tallied, with documentation of associated debriefs performed to assess for project adherence and consistency. If CIs are happening but CISD sessions have been inconsistently performed at best, this may indicate a problem with project design or feasibility that necessitates review. This phase of the project would be undertaken by the facilitator, nurse educator, and any interested registered nurse volunteers. Data will be synthesized and disseminated in a readable format to be distributed at the second competency fair of the year by those individuals. If deemed beneficial, the project will be refined as necessary, continue for another six months, and be re-evaluated once more by those individuals. If ongoing benefit is
acknowledged, the project facilitator may choose to move toward election of a designated staff member to oversee the program long-term. Successful implementation of the project is evaluated as any or all of the following: decreased levels of burnout, STS, and/or compassion fatigue among emergency nurses after participation in CISD versus not debriefing at all; improved perception among emergency nurses of the efficacy of CISD in reducing workplace stress related to CIs or traumatic events (TEs); and consistent performance of CISD after each CI or TE in the workplace.

7. Cost/Benefit Discussion

Courses offered through ICISF range from $250-$390 per person, but cohort and multi-course packages are available (ICISF, 2019). As discussed previously, the primary fiscal benefit of implementing a formal, standardized CISD program within a busy emergency department or other critical care setting may be decreased staff attrition (Healy & Tyrell, 2013). Standard, 16-week orientation and preceptorship for a newly hired graduate nurse working within either of the emergency departments mentioned in this paper costs, on average, $5000 (figure is based on personal experience and unpublished interviews with facility administrators). Nurses with increased job satisfaction may be more likely to retain their positions, become more experienced and efficient, and even rise within the ranks of their facilities to advocate for quality improvement at the bedside and within administration. Staying at the bedside will give them a unique perspective of where and how they can use their expertise to solve problems, improve patient care, and positively impact working conditions for themselves and others. Pinpointing an exact number of nurses who would benefit from this project and stay onboard as faithful employees of their facilities is not feasible. Even still, as the literature suggests, nurses stand to benefit in significant personal and professional ways from CISD and the closure it can provide as
they care for high-acuity patients in stressful working conditions (Kapoor, Morgan, Siddique, & Guntupalli, 2018; Schmidt & Haglund, 2017; Anderson et al., 2019; Spencer et al., 2019). When considered holistically, the implementation of a formal, standardized CISD program is a financially responsible decision.

8. Results

Due to this project’s benchmark status, results are not actual but anticipated. The benefits of CISD seem to indicate that successful implementation of this project might result in the following:

- increased nurse resilience
- decreased attrition
- reduction in levels of compassion fatigue, burnout, and STS among a portion of the nursing staff exposed to CIs at work (Schmidt & Haglund, 2017; Anderson, Sandars, & Kinnair, 2019)
- consistent performance of CISD after CIs and TEs at work.

These will be measured from self-reported data of pre- and post-implementation surveillance and analyzed for statistical significance as previously described. Concerns about project feasibility or sustainability would almost certainly arise, and contingency plans may need to be made for nurses and other staff members who are unable to debrief due to responsibility to other high-acuity patients, department census, staffing levels, or even fatigue and disinterest at the end of a long shift when participation becomes voluntary as discussed previously. Some nurses might be indifferent to debriefing as a team alongside their supervisors, preferring informal arrangements with coworkers to decompress outside of work to the formal process described in this paper. Staff concerns should be examined to distinguish between pushback or resistance to participate
and other problems, such as emotional distress, depression, or anxiety related to professional competency. In the event genuine problems with project design are discovered after implementation, staff feedback needs to be incorporated in an attempt to improve or streamline the process to increase its chances of longevity.

**Conclusion & Recommendations**

Traumatic experiences may be considered par-for-the-course by some emergency or critical care nurses due to the nature of their work environment, but living with the consequences of exposure to critical incidents should be minimized as much as reasonably feasible. Continuing education and availability of organizational resources should be advertised to emergency/trauma and critical care nurses, in addition to the introduction of a formal CISD program within their facility. Healthy coping mechanisms should be encouraged by departmental leaders who are passionate about driving change. Such recommendations should include both personal and professional ways to cope with stress and increase resilience, in order to empower nursing staff to take ownership of their mental health. In addition, nurses should feel empowered to pursue interdepartmental accountability during times of stress without feeling rushed, guilty, or ashamed of their intrusive, traumatic thoughts. Low cost CISD facilitated by qualified professionals can and should be implemented in urban emergency/trauma departments and their associated CAHs in order to decrease compassion fatigue and STS, reduce burnout, and protect nursing staff from the debilitating effects of PTSD.
References


Appendix A: Appraisals of Literature Review

General Appraisal Overview for Adriaenssens et al.

Date: February 1, 2020

Reviewer(s) name(s): Rachel Davis


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event in the workplace (T)?

Overview/General Description of Study

- Purpose of study: The threefold aim of the study was to:
  - Examine frequency of exposure to and nature of traumatic events (TEs) in emergency nurses
  - Examine what percentage report symptoms of post-traumatic stress, anxiety and depression, somatic complaints, sleep problems and fatigue reaching a sub-clinical or clinical cut-off
Study contribution of frequency of traumatic events, coping and perceived social support to PTSD symptoms, psychological distress (anxiety and depression), somatic complaints, fatigue and sleep problems in emergency nurses.

- Study Design: IRB-approved, cross-sectional study including quantitative data collection and analysis, as well as qualitative thematic analysis.

- Research question(s) or hypotheses: Emergency nurses are confronted with work-related traumatic events and verbal and physical aggression, and repetitive exposure to such events is related to serious psychological consequences.

- Study aims: Determine frequency of exposure to TEs, coping strategies, social support, and presence/prevalence of psychological, social, and somatic complaints of Belgian emergency nurses through the use of self-administered surveys.

- Sampling Technique, Sample Size & Characteristics: Emergency nurses were selected from 15 Belgian hospitals, all in the Flanders region. Eligible population of 302 (n = 302) emergency nurses with patient contact (head nurses and nurse managers excluded) that had been working at least six months in an ED. Total of 248 completed questionnaires returned, yielding a RR of 80.5%.

- Major variables studies:

  Independent variable(s): exposure to TEs in the workplace, social support, coping strategies

  Dependent (outcome) variable(s): PTSD, fatigue, psychological distress and somatic complaints, sleep problems
• Variable Analysis Used (include whether appropriate to answer research questions/hypothesis or discover themes):

Coping Inventory for Stressful Situations (CISS-21) (Endler & Parker, 1990; Schwarzer & Schwarzer, 1996; Cohan et al., 2006)

Leiden Quality of Work Questionnaire for Nurses (LQWQ-N) (Maes et al., 1999; Gelsema et al., 2005)

Impact of Event scale (IES) (Horowitz et al., 1979; Van der Ploeg et al., 2004)

Brief Symptom Inventory (BSI) (DeBeurs & Zitman, 2005)

Checklist Individual Strength (CIS-20R) (Vercoulen et al., 1999)

DSM-V questionnaire for discovering sleep problems (American Psychological Association, 2000)

Statistical methods included descriptive statistics, Pearson correlations, One Way ANOVA, and independent sample-\( t \) tests.

Measures were appropriate to discover themes.
VALIDITY

Are the results of the study valid?

- Were study/survey methods appropriate for the question? Yes No
- Was the sampling method appropriate for the question? Yes No
- Were sample size implications on study results discussed? Yes No
- Were variables studied appropriate for the question? Yes No
  - Independent variables: exposure to TEs in the workplace, social support, coping strategies
  - Dependent variables: PTSD, fatigue, psychological distress and somatic complaints, sleep problems
- Were outcomes appropriate for the question? Yes No
- Were valid and reliable instruments used to measure outcomes? Yes No
- Were chosen measures appropriate for study outcomes? Yes No
- Were outcomes clearly described? Yes No
- Did investigators and/or funding agencies declare freedom from conflict of interest? Yes No

RELIABILITY

What are the results?
• What were the main results of the study?
  
  o Was there statistical significance? Explain.

  Yes. Impact of Events Scale (IES) score positively correlated to frequency of TE exposure ($r = 0.26, p < 0.01$) and negatively correlated to supervisor social support ($r^2 = -0.19, p < 0.01$). Perceived fatigue negatively correlated with supervisor and colleagues social support ($r = -0.26, -0.17, p < 0.01$ for both). Sleep problems negatively correlated with supervisor and colleague support ($r = -0.20, -0.13, p < 0.01, p < 0.05$).

  o Was there clinical significance? Explain.

  Yes. Most emergency nurses in the sample were regularly confronted with TEs (87% reported confrontation with one or more over the last six months). Almost 25% exceeded subclinical cut-off for PTSD symptoms. Exposure to TEs is strongly related to PTSD symptoms and the other outcome variables of the study, with the exception of fatigue, which is likely secondary. These findings may lead to rising attrition, decreased job performance/satisfaction, and decreased quality of care. Screening of at-risk nurses should be considered, particularly after a major TE or cumulative exposure to TEs.

• Were safety concerns, including adverse events and risk/benefit described?  
  
  Yes  No

APPLICABILITY

Will the results help me in caring for my patients?

Are the results applicable to my patient population?  
  
  Yes  No
Will my patients’ and families’ values and beliefs be supported by the knowledge gained from this study?  

Yes  No

Reflection Prompts: Would you use the study results in your practice to make a difference in patient outcomes?

• If yes, how and why?

Yes. Raising awareness of emergency and other critical care nurses’ exposure to TEs and their potentially debilitating effects on patient care and outcomes is crucial. Development of a standardized TE or critical incident debriefing program, which can help emergency nurses cope with these events in a professionally supportive capacity, is one way to apply these findings to practice.

• If no, why not?

Additional Comments/Reflections:

Recommendations for article use within a body of evidence: I recommend this article for use within a body of evidence to help provide supportive content regarding the prevalence of psychological complaints in emergency nurses.
General Appraisal Overview for Anderson et al.

Date: February 1, 2020

Reviewer(s) name(s): Rachel Davis


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event in the workplace (T)?

Overview/General Description of Study

- Purpose of study: Understand nature and benefits of team-based reflection by healthcare professionals upon patient deaths.

- Study Design: IRB-approved, scoping literature review of previously published descriptive studies

- Research question(s) or hypotheses:

Hypothesis: Team-based reflection on a patient death by the multidisciplinary care team can lead to improved emotional wellbeing and learning for quality improvement.
Research question(s): “What is the process and benefit of team-based reflection on a patient death by healthcare professionals” (Anderson, Sandars, & Kinnair, 2019, p. 16)? Additionally, several sub-questions were included and can be found on page 16 of the article.

- Study aims: Present literature review findings with the intention of informing evidence-based recommendations for policy and practice, and to identify areas for future research.

- Sampling Technique, Sample Size & Characteristics: Electronic search of Medline, EMBASE, PsycINFO, CINAHL and Web of Science databases, limited to work published between 2006 and 2016 written in English and peer-reviewed, yielded 1450 articles. Screening and data extraction performed using RefsWorks to eventually obtain 19 keeper articles.

- Major variables studies:

  Independent variable(s): team-based reflection

  Dependent (outcome) variable(s): emotional and personal wellbeing, practitioner knowledge/improvement of practice

- Variable Analysis Used (include whether appropriate to answer research questions/hypothesis or discover themes):

  Thematic analysis

  RefsWorks software for electronic study sorting

  Measures were appropriate to discover themes.
Rapid Critical Appraisal Checklist for Anderson et al.

VALIDITY

Are the studies contained in the review randomized controlled trials? Yes No

Does the review include a detailed description of the search strategy to find all relevant studies? Yes No

Does the review describe how validity of the individual studies was assessed (e.g. methodological quality, including use of random assignment to study groups and complete follow-up of the subjects)? Yes No

Were the results consistent across studies? Yes No

Were individual patient data or aggregate data used in the analysis? Individual Aggregate

RELIABILITY

How large is the intervention or treatment effect (OR, RR, effect size, level of significance)? Not applicable.

How precise is the intervention or treatment (CI)? Unable to determine; CI of keeper studies not calculated or mentioned.

APPLICABILITY

Is my population similar to the ones included in the review? Yes No

Is it feasible to implement the findings in my practice setting? Yes No

Were all clinically important outcomes considered, including risks and benefits of the treatment/proposal/intervention? Yes No
Are there any contraindications or circumstances that would inhibit me from implementing the treatment/proposal/intervention? Yes  No

What are my subjects’ preferences and values about the intervention that is under consideration?

Structured processes for healthcare team-based reflection on a patient death facilitated by trained leaders within a supportive healthcare context should be a priority.
General Appraisal Overview for Appleton et al.

Date: February 5, 2020

Reviewer(s) name(s): Rachel Davis


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event in the workplace (T)?

Overview/General Description of Study

- **Purpose of study:** To improve critical care nurses’ external work environment in order to mitigate psychological effects these nurses experience after contending with distressing situations at work.

- **Study Design:** Three-phase, evidence-based QI pilot project consisting of a qualitative survey (Phase 1), DD training course with simulations and course evaluations administered to nursing staff (Phase 2), and implementation, data collection, and synthesis/dissemination (Phase 3)

- **Research question(s) or hypotheses:** None were stated.

- **Study aims:** Conduct an evidence-based educational pilot project to provide distress debriefings (DDs) for nurses to mitigate the effects of burnout and moral distress after experiencing critical incidents.
• Sampling Technique, Sample Size & Characteristics: Fifty-seven of 139 eligible PICU nurses completed the survey in the summer of 2016, yielding a RR of 41%. Nurses were employed at an unnamed freestanding children’s hospital.

• Major variables studied:

Independent variable(s): exposure to CIs or traumatic events, exposure to DDs after these events

Dependent (outcome) variable(s): presence of burnout, presence of moral distress

• Variable Analysis Used (include whether appropriate to answer research questions/hypothesis or discover themes):

Thematic analysis.

Measures were appropriate to discover themes.
## Rapid Critical Appraisal Checklist for Appleton et al.

Indicate the extent to which the item is met in the published report of the EBP or QI project.

### Validity of Evidence Synthesis (i.e. good methodology)

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evidence, and implications for further research, practice, or policy changes.

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**Summary Score** 75; consider evidence with caution

Recommendations with consideration of this type of level IV intervention evidence:
32-64: consider evidence with extreme caution
65-128: consider evidence with caution
129-160: consider evidence with confidence

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General Appraisal Overview for Copeland et al.

Reviewer(s) name(s): Rachel Davis

Date: February 5, 2019


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event (T)?

Overview/General Description of Study

- **Purpose of study:** The purpose of this study was to implement a formal debriefing process for trauma and code events and address the various spiritual and psychological needs of staff members within the researchers’ facility.

- **Study Design:** IRB-approved, EBP study consisting of anonymous online surveys sent in three phases: pre-implementation, mid-implementation, and post-implementation

- **Research question(s) or hypotheses:** None were stated.

- **Study aims:** Through a 1-year pilot period of post-code pauses, identify how a standardized debriefing process encourages a culture of teamwork among responders and facilitates their transition back into the workplace and civilian life after exposure to a code or other traumatic event.

- **Sampling Technique, Sample Size & Characteristics:** Thirty percent (46 out of 155 staff members) voluntarily responded to the pre-implementation survey. Nineteen percent voluntarily responded to the mid-implementation survey (37 out of 192 staff members) as
well as the post-implementation survey (33 out of 173 staff members). The staff members consisted of RNs, MDs/DOs, PAs, unit secretaries, and critical care technicians (CCTs).

- **Major variables studies:**
  
  Independent variable(s): presence of a formal debriefing process for code/trauma events
  
  Dependent variable(s): psychological and spiritual health of code/trauma responders

- **Variable Analysis Used:**
  
  Thematic analysis and percentages were used, and measures were appropriate to discover themes.

**Theory or conceptual framework:**

I believe grounded theory to be most adjacent to the qualitative nature of this study, as the researchers were seeking to understand how particular shared experiences or phenomena (in this case, codes and other traumatic events) affected their nursing staff (Polit & Beck, 2017, p. 474). This theory seeks to identify patterns of behavior which may be responsible for people’s responses to their environment. Additionally, grounded theory allows for modification as new data is collected, which is paramount to successful and well-rounded qualitative research.

**Statistics:**

**Percentages:** In order to calculate percentages, the sum of all scores/values within a sample must equal 100. The percentage represents a ratio of the value under scrutiny, divided by 100 (Polit & Beck, 2017, p. 359).

**Ethics:**

Did the article address ethical considerations?  
Yes  No  Not Applicable

Was institutional review noted?  
Yes  No  Not Applicable

Was participant privacy and confidentiality of data noted?  
Yes
Rapid Critical Appraisal Checklist for Copeland et al.

**VALIDITY**

Are the results of the study valid?

- Were study/survey methods appropriate for the question? Yes No
- Was the sampling method appropriate for the question? Yes No
- Were sample size implications on study results discussed? Yes No
- Were variables studied appropriate for the question? Yes No
  - Independent variables: presence of a formal debriefing process for code/trauma events
  - Dependent variables: psychological and spiritual health of code/trauma responders
- Were outcomes appropriate for the question? Yes No
- Were valid and reliable instruments used to measure outcomes? Yes No
- Were chosen measures appropriate for study outcomes? Yes No
- Were outcomes clearly described? Yes No
- Did investigators and/or funding agencies declare freedom from conflict of interest? Yes No

**RELIABILITY**

What are the results?

- What were the main results of the study?
  Post-implementation, >70% of participants believed attending the post-code pauses and debriefs was at least somewhat helpful in allowing them to pay homage to
patients, return to work with a sense of focus, and improve work-related processes (Copeland & Liska, 2016, p. 60).

- Was there statistical significance? Explain.
  No inferential statistical tests were performed. Percentages indicated a large majority found attending the post-code pauses and debriefs to be beneficial to practice.

- Was there clinical significance? Explain.
  This study has clinical significance because the development of compassion fatigue and secondary traumatic stress due to repeated exposure of ED staff members to various traumatic and code events without adequate time for processing and closure is addressed well here. The development of a formal debriefing process is a direct approach on safeguarding the staff against the psychological and spiritual repercussions of such exposures.

- Were safety concerns, including adverse events and risk/benefit described? Yes No

**APPLICABILITY**

Will the results help me in caring for my patients?

- Are the results applicable to my patient population? Yes No

- Will my patients’ and families’ values and beliefs be supported by the knowledge gained from this study? Yes No

Reflection Prompts: Would you use the study results in your practice to make a difference in patient outcomes?
• If yes, how and why? Yes I would. I would attempt implementation of a post-code pause very similar to the one described in this study because I believe it is a streamlined way to formally debrief after trauma. The process would happen within the same shift that the traumatic event occurred so that my fellow staff members would be able to grieve, pay their respects, verbally process their actions, and hopefully move on with more peace and resolution than otherwise.

• If no, why not?

Additional Comments/Reflections:

Recommendations for article use within a body of evidence: Tentatively, I recommend this article for supportive use within a body of evidence. I believe this article is best suited for “addressing the issue”, providing background significance, or illustrating an effective formal debrief process model, as its result analysis is statistically weak.
General Appraisal Overview for Davidson et al.

Date: February 6, 2020

Reviewer(s) name(s): Rachel Davis


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event in the workplace (T)?

Overview/General Description of Study

- Purpose of study: “Shift the unit-based culture toward encouraging recognition of stressful workplace events and acknowledging colleagues through stressful events with intentional acts of kindness” (Davidson, Graham, Montross-Thomas, Norcross, & Zerbi, 2017, p. 182).
- Study Design: Evidence-based QI pilot project utilizing qualitative survey
- Research question(s) or hypotheses: Code Lavender will improve nurses’ job satisfaction, increase their perception of being cared for at work, and improve their ProQOL scores. Following research questions addressed:
  - Will hospital staff use the provided Code Lavender kits on the units?
  - Will staff find the kits helpful?
  - Does the use of Code Lavender improve ProQOL scores, job satisfaction, and perceptions of being cared for in the workplace?
• Study aims: Test feasibility and efficacy of Code Lavender pilot QI project on staff nurses through ProQOL scores before and after project intervention.

• Sampling Technique, Sample Size & Characteristics: Five hundred (n = 500) staff and physicians from the following four units at a university teaching hospital in San Diego, CA: 19-bed medical/neuro ICU, 26-bed telemetry unit, 36-bed ED, and 49-bed NICU

• Major variables studied:

  Independent variable(s): presence and distribution of Code Lavender kits

  Dependent (outcome) variable(s): improved job satisfaction, improved perception of being cared for, improved ProQOL scores before and after intervention

• Variable Analysis Used (include whether appropriate to answer research questions/hypothesis or discover themes):

  Professional Quality of Life Scale (ProQOL)

  Descriptive statistics

  Measures were appropriate to answer research questions and discover themes.
Rapid Critical Appraisal Checklist for Davidson et al.

Indicate the extent to which the item is met in the published report of the EBP or QI project.

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### Application of Implementation (i.e. this project is useful for my patients).

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**Summary Score**: 78; consider evidence with caution

Recommendations with consideration of this type of level IV intervention evidence:

- 32-64: consider evidence with extreme caution
- 65-128: consider evidence with caution
- 129-160: consider evidence with confidence

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General Appraisal Overview for Duffy et al.

Date: February 1, 2020

Reviewer(s) name(s): Rachel Davis


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event in the workplace (T)?

Overview/General Description of Study

- **Purpose of study:** The purpose of this study was to determine the presence and prevalence of various STS symptoms among the intrusion, avoidance, and arousal categories experienced by emergency nurses.
- **Study Design:** IRB-approved, cross-sectional descriptive study
- **Research question(s) or hypotheses:** Emergency nurses’ proximity to trauma at work on a daily basis may predispose them to symptoms of STS.
- **Study aims:** Measure emergency department nurses’ self-reported levels of STS through questionnaires.
- **Sampling Technique, Sample Size & Characteristics:** All nurses working across three Western Ireland EDs (n = 117) were encouraged to participate by completing questionnaires in February 2013. RR was 90%, as 105 surveys were returned; attrition rate of twelve. Population was 95.2% female and 4.8% male.
- **Major variables studied:**
Independent variable(s): nursing role within the EDs

Dependent (outcome) variable(s): STS symptoms

- Variable Analysis Used (include whether appropriate to answer research questions/hypothesis or discover themes):
  
  Secondary Traumatic Stress Scale (STSS) (Bride et al., 2004)
  
  Descriptive statistics
  
  Pearson’s Chi-Square
  
  ANOVA
  
  Measures were appropriate to discover themes.
Rapid Critical Appraisal Checklist for Duffy et al.

VALIDITY

Are the results of the study valid?

- Were study/survey methods appropriate for the question? Yes No
- Was the sampling method appropriate for the question? Yes No
- Were sample size implications on study results discussed? Yes No
- Were variables studied appropriate for the question? Yes No
  - Independent variables: nursing role in the ED
  - Dependent variables: STS symptoms
- Were outcomes appropriate for the question? Yes No
- Were valid and reliable instruments used to measure outcomes? Yes No
- Were chosen measures appropriate for study outcomes? Yes No
- Were outcomes clearly described? Yes No
- Did investigators and/or funding agencies declare freedom from conflict of interest? Yes No

RELIABILITY

What are the results?

- What were the main results of the study?
Was there statistical significance? Explain.

Yes. The highest proportion of STS symptoms (82%) was discovered in the staff nursing group when compared to nurse managers, advanced practice nurses, etc. ($\chi^2 = 8.23$, df = 3, $p = 0.042$). Also of statistical significance among nurses reporting STS symptoms is the variables “change of career considered” related to the symptoms ($p = 0.017$), “sought help from counselor” related to the symptoms ($p = 0.20$), and “finds alcohol helpful in alleviating work-related stress” ($p = 0.004$) when compared to nurses not reporting STS symptoms.

Was there clinical significance? Explain.

Yes. Self-care strategies (such as use of alcohol), whether healthy or not, are regarded as important by nurses in alleviating work-related stress. Nurses should be made aware of healthier, alternative coping strategies such as anticipatory guidance, supportive programs at work, lifestyle changes, counseling in order to recognize STS symptoms, and organizational debriefing with supportive leadership. A varied approach that combines personal and organizational/system-wide responsibility is wise.

- Were safety concerns, including adverse events and risk/benefit described?  
  Yes  No

**APPLICABILITY**

Will the results help me in caring for my patients?  
Yes  No

Are the results applicable to my patient population?  
Yes  No
Will my patients’ and families’ values and beliefs be supported by the knowledge gained from this study? Yes  No

Reflection Prompts: Would you use the study results in your practice to make a difference in patient outcomes?

- If yes, how and why?

Discovering effective coping strategies among mentally resilient emergency or critical care nurses would be of vast clinical significance, and certainly has the potential to make a positive impact in future patient outcomes. The idea of combining personal and organizational strategies to promote resilience and de-emphasize the development of STS and PTSD symptoms is meritorious and deserves further attention.

- If no, why not?

Additional Comments/Reflections:

Recommendations for article use within a body of evidence: I recommend this article for use within a body of evidence to address the PICOT question.
General Appraisal Overview for Healy et al.

Date: February 12, 2019
Reviewer name: Rachel Davis


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event (T)?

Overview/General Description of Study

- Purpose of study: Determine the psychological effects of working in emergency departments (EDs) and whether or not critical incident stress debriefing (CISD) is effective and available to ED staff members (Healy & Tyrell, 2013).
- Study Design: IRB-approved EBP literature review and opinion survey
- Research question(s) or hypotheses: Among ED nurses and physicians, is debriefing after critical events necessary?
- Study aims: Determine through literature review and opinion survey the current practices surrounding debriefing after critical incidents, and the opinions about the necessity of such debriefing among ED nurses and physicians.
- Sampling Technique, Sample Size & Characteristics: Questionnaires were distributed to 150 nurses and doctors working in three EDs in Ireland, and submissions were anonymous. Likert
scale, as well as free-response, questions were included. One hundred three (69%) medical professionals participated: 90 nurses and 13 physicians, with a mean years of experience of 11.4.

- Major variables studied:

  Independent variable: debriefing in EDs

  Dependent (outcome) variable(s): perceived need for debriefing

- Variable Analysis Used:

  Mann-Whitney U test

Descriptive statistics

Measures were appropriate to answer research questions and discover themes.

Theory or conceptual framework:

Mitchell’s Critical Incident Stress Debriefing tool (Mitchell, 1983)

  - Specific, small-group intervention process aimed at reducing stress and enhancing unit performance

  - Intervention most meaningful when conducted among homogenous groups (i.e. prehospital personnel vs. emergency personnel vs. inpatient personnel)

  - Traumatic events precipitate strong reactions, dysfunction among staff (Mitchell, 1983)

Statistics:

**Mann-Whitney U test**: “Nonparametric analog of an independent group’s t-test” in which ranks are assigned to the two groups of scores, summed, and compared using the $U$ statistic (Polit & Beck, 2017, p. 387).
Descriptive statistics, means: Mean is the “sum of all scores, divided by the number of scores” (Polit & Beck, 2017, p. 361). It is usually referred to as the average, and in order to calculate it, a summation and subsequent division of the variables by the number of variables is needed to perform the test.

Ethics:

Did the article address ethical considerations? Yes  No  Not Applicable

Was institutional review noted? Yes  No  Not Applicable

Was participant privacy and confidentiality of data noted? Yes
Rapid Critical Appraisal Checklist for Healy et al.

VALIDITY
Are the results of the study valid?

- Were study/survey methods appropriate for the question?  Yes  No
- Was the sampling method appropriate for the question?  Yes  No
- Were sample size implications on study results discussed?  Yes  No
- Were variables studied appropriate for the question?  Yes  No
  - Independent variables: debriefing in EDs
  - Dependent variables: development of workplace stress
- Were outcomes appropriate for the question?  Yes  No
- Were valid and reliable instruments used to measure outcomes?  Yes  No
- Were chosen measures appropriate for study outcomes?  Yes  No
- Were outcomes clearly described?  Yes  No
- Did investigators and/or funding agencies declare freedom from conflict of interest?  Yes  

RELIABILITY
What are the results?

- What were the main results of the study?
  Eighty-four percent of participants rated debriefing processes after critical or stressful
events as “important” or “very important.” Thirty-seven percent of participants had taken part in debriefing sessions at some point. Nineteen percent of participants said debriefing had not occurred at their workplace, and only 1% said that it had taken place “very frequently.” When the debriefs did occur, they most commonly occurred after such events as cardiac arrests, trauma, and sudden infant deaths.

- Was there statistical significance? Explain.
  Yes. The Mann-Whitney U test produced values of $U=448$ and $p=0.021$, indicating statistical significance.

- Was there clinical significance? Explain.
  Yes. Debriefing was said by participants to provide psychological and social support to staff members, as well as boost morale, improve clinical practice, and foster team spirit.

- Were safety concerns, including adverse events and risk/benefit described?
  Yes  No

**APPLICABILITY**

Will the results help me in caring for my patients?

- Are the results applicable to my patient population?  Yes  No

- Will my patients’ and families’ values and beliefs be supported by the knowledge gained from this study?  Yes  No

- Are the result generalizable to my patient population? Why or why not?
No. Since this study was conducted outside the United States, the results are not generalizable to my patient population. Similar studies should be conducted in this country to determine whether or not the results can be duplicated among American healthcare professionals.

Reflection Prompts: Would you use the study results in your practice to make a difference in patient outcomes?

- If yes, how and why?
  Absolutely. The study results are overwhelmingly in favor of conducting CISD and formal debriefing after exposure to a traumatic patient case, and the findings indicate that such practices would empower the ED staff in profound ways. Staff members would feel more supported, have opportunities to verbally process their actions and honor the lives of their patients, and their psychological health would be well-protected so they could continue to provide quality care in the future. Healy & Tyrell say that these factors would result in less attrition over time (2013).

- If no, why not?

Additional Comments/Reflections:

Recommendations for article use within a body of evidence: I recommend this article for use within a body of evidence to help answer this PICOT question.
General Appraisal Overview for Kapoor et al.

Reviewer(s) name(s): Rachel Davis

Date: February 26, 2019


PICOT Question: In emergency/trauma and critical nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event (T)?

Overview/General Description of Study

- Purpose of study: Determine whether or not having a “Sacred Pause” (SP) debriefing session after a code or patient death in the ICU alleviates symptoms of occupational stress and burnout, and allows for adequate closure among the healthcare team.

- Study Design: IRB-approved PI consisting of qualitative online survey of 10 Likert scale questions, sent out one year after adoption of the SP ritual

- Research question(s) or hypotheses: Inability to express or resolve grief may eventually impact ICU staff both at work and in their personal lives, ultimately resulting in burnout syndrome (BOS) or compassion fatigue.
• Study aims: Determine through online survey of ICU staff the effectiveness of a SP in alleviating burnout, allowing for closure, improving professional satisfaction, and instilling a sense of team effort.

• Sampling Technique, Sample Size & Characteristics: Twelve ICU physicians and 26 nurses (total staff of 38) from the 18-bed medical ICU at Baylor St. Luke’s Medical Center in Houston, TX were invited to participate in an online, anonymous survey. Survey was completed by 12 physicians and 22 nurses. Response rate was 89%, while attrition rate was not mentioned/discussed.

• Major variables studied:

  Independent variable(s): “Sacred Pause”
  Dependent variable(s): development of occupational stress and burnout

• Variable Analysis Used:

  Percentages, due to quantitative nature of study. Measures were appropriate to discover themes.

Theory or conceptual framework:

No theory is stated within the text. However, I believe that the Lazarus and Folkman’s Theory of Stress and Coping for quantitative analysis fits in nicely, as it:

  • Aims to evaluate and understand people’s methods of coping with stressors.
  
  • States that coping strategies are deliberate and learned, and directly correlate to how well a person can manage both environmental stressors and internal demands (Polit & Beck, 2017, p. 125).
Statistics:

**Percentages:** In order to calculate percentages, the sum of all scores/values within a sample must equal 100. The percentage represents a ratio of the value under scrutiny, divided by 100 (Polit & Beck, 2017, p. 359)

Ethics:

Did the article address ethical considerations?  **Yes**  No  Not Applicable

Was institutional review noted?  **Yes**  No  Not Applicable

Was participant privacy and confidentiality of data noted?  **Yes**
## Rapid Critical Appraisal for Kapoor et al.

<table>
<thead>
<tr>
<th>Validity of Evidence Synthesis (i.e. good methodology)</th>
<th>1 (No)</th>
<th>2 (A little)</th>
<th>3 (Somewhat)</th>
<th>4 (Quite a bit)</th>
<th>5 (Very much)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The title of the publication identifies the report/project as an evidence-based practice implementation or quality improvement</td>
<td>1</td>
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<tr>
<td>The project report provides a structured summary that includes, as applicable: data to establish the existent and background of the clinical issue, inclusion and exclusion criteria and source(s) of evidence, evidence synthesis, objective(s) and setting of the EBP or QI project, project limitations, results/outcomes, recommendation and implications for policy.</td>
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<td>Report includes existing internal evidence to adequately describe the clinical issue</td>
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<td>Provides an explicit statement of the question being addressed with reference to participants or population/intervention/comparison/outcome (PICOT).</td>
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<td>Explicitly describes the search method, inclusion and exclusion criteria and rationale for search strategy limits.</td>
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<tr>
<td>Describes multiple information sources (e.g., databases, contact with study authors to identify additional studies, or any other additional search strategies) included in the search strategy, and date.</td>
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<tr>
<td>States the process for title, abstract and article screening for selecting studies.</td>
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<tr>
<td>Describes the method of data extraction (e.g., independently or process for validating data from multiple reviewers).</td>
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<tr>
<td>Includes conceptual and operational definitions for all variables for which data were abstracted (e.g., define blood pressure as systolic blood pressure, diastolic blood pressure, ambulatory blood pressure, automatic cuff blood pressure or arterial blood pressure).</td>
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<td>Describes methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study outcome level).</td>
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<td>States the principal summary measures (e.g., risk ratio, difference in means).</td>
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<tr>
<td>Describe the method of combining results of</td>
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<td>studies including quality, quantity and consistency of evidence.</td>
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<tr>
<td>Specifies assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).</td>
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<tr>
<td>Describes appraisal procedure and conflict resolution.</td>
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<tr>
<td>Provides number of studies screened, assessed for eligibility, and included in the review, with reasons for exclusion at each stage, ideally with a flow diagram.</td>
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<td>For each study, presents characteristics for which data were extracted (e.g., study size, design, method, follow-up period) and provides citations.</td>
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<tr>
<td>Presents data on risk of bias of each study and, if available, any outcome-level assessment.</td>
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<tr>
<td>For all outcomes considered (benefit or harms), include a table with summary data for each intervention group, effect estimates and confidence intervals, ideally with a forest plot.</td>
<td>3 (data not in forest plot format)</td>
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<tr>
<td>Summarizes the main findings including strength of evidence for each main outcome; considering their relevance to key groups (i.e., healthcare providers, users, and policy makers).</td>
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<td>Discusses limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias).</td>
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<tr>
<td>Provides a general interpretation of the results in the context of other evidence, and implications for further research, practice, or policy changes.</td>
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<tr>
<td>Validity of Implementation (i.e., well-done project)</td>
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<tr>
<td>Purpose of project flows from evidence synthesis</td>
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<td>Stakeholders (active and passive) are identified and communication with them is described.</td>
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<td>Implementation protocol is congruent with evidence synthesis (fidelity of the intervention).</td>
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<td>Implementation protocol is sufficiently detailed to provide for replication among project participants.</td>
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<td>Education of project participants and other stakeholders is clearly described.</td>
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<td>Outcomes are measured with measures supported in the evidence synthesis.</td>
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<tr>
<td>Reliability of Implementation Project (i.e., I can learn from or implement project results)</td>
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<tr>
<td>Question</td>
<td>Rating</td>
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<tr>
<td>Data are collected with sufficient rigor to be reliable for like groups to those participants of the project.</td>
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<tr>
<td>Results of evidence implementation are clinically meaningful (statistics are interpreted as such).</td>
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<tr>
<td>Application of Implementation (i.e., this project is useful for my patients)</td>
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<td>How feasible is the project protocol?</td>
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<tr>
<td>Have the project managers considered/included all outcomes that are important to my work?</td>
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<tr>
<td>Is implementing the project safe (i.e., low risk of harm)?</td>
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</table>

**SUMMARY SCORE**

88; consider evidence with caution

Recommendations with consideration of this type of Level IV intervention evidence:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>32-64</td>
<td>Consider evidence with extreme caution</td>
</tr>
<tr>
<td>65-128</td>
<td>Consider evidence with caution</td>
</tr>
<tr>
<td>129-160</td>
<td>Consider evidence with confidence</td>
</tr>
</tbody>
</table>
General Appraisal Overview for Kessler et al.

Date: February 5, 2020

Reviewer(s) name(s): Rachel Davis


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event in the workplace (T)?

Overview/General Description of Study

- **Purpose of study:** Review current evidence supporting post-event debriefing, discussing practical approaches to implementing debriefing programs in the emergency department.
- **Study Design:** Qualitative literature review/synthesis of evidence
- **Research question(s) or hypotheses:** Reflective debriefing after clinical events experienced by staff in the ED helps improve their future care.
- **Study aims:**
  - Conduct review of existing literature/evidence supporting team debriefing in the ED
  - Discuss practical ways to begin implementing debriefing programs
  - “…provide a practical guide for the who, what, when, where, why, and how of debriefing in the ED” (Kessler, Cheng, & Mullan, 2014, p. 690)
- **Sampling Technique, Sample Size & Characteristics:** NA
- **Major variables studied:**
Independent variable(s): clinical events experienced in ED

Dependent (outcome) variable(s): standardized debriefing process in ED

- Variable Analysis Used (include whether appropriate to answer research questions/hypothesis or discover themes):

  Thematic analysis.

  Measures were appropriate to discover themes.
Rapid Critical Appraisal Checklist for Kessler et al.

VALIDITY

Are the results of the study valid?

- Were study/survey methods appropriate for the question? Yes No
- Was the sampling method appropriate for the question? Yes Unknown
- Were sample size implications on study results discussed? Yes No
- Were variables studied appropriate for the question?
  - Independent variables: clinical events experienced in ED
  - Dependent variables: standardized debriefing process in ED
  Yes No
- Were outcomes appropriate for the question? Yes No
- Were valid and reliable instruments used to measure outcomes? Yes Unknown
- Were chosen measures appropriate for study outcomes? Yes No
- Were outcomes clearly described? Yes No
- Did investigators and/or funding agencies declare freedom from conflict of interest? Yes No

RELIABILITY

What are the results?

- What were the main results of the study?
  - Was there statistical significance? Explain.
    No. No statistics exist within this review.
  - Was there clinical significance? Explain.
    Yes. The benefits to ED staff members, their provision of care, and other eventual clinical implications for beginning and adhering to a standardized
debriefing procedure in an ED were discussed at length in this review.

Practical ways to debrief at the individual, team, process, and system levels are all addressed, allowing for potential quality improvement on an impressive scale.

- Were safety concerns, including adverse events and risk/benefit described?  

**APPLICABILITY**

Will the results help me in caring for my patients?  

**Yes**  **No**  

Are the results applicable to my patient population?  

**Yes**  **No**  

Will my patients’ and families’ values and beliefs be supported by the knowledge gained from this study?  

**Yes**  **No**  

Reflection Prompts: Would you use the study results in your practice to make a difference in patient outcomes?

- If yes, how and why?

Because this literature review provides ample wisdom in how, when, and why to implement a standardized debriefing program, the future care provided by ED staff members involved in these debriefs can result in better patient outcomes. At both individual and team levels, group reflection benefits knowledge, attitude, skills, and teamwork behaviors.

- If no, why not?

Additional Comments/Reflections:

Recommendations for article use within a body of evidence: As this is a generalized literature review only, I recommend with caution the use of this article within a larger body of evidence to justify the research in question.
General Appraisal Overview for Lavoie et al.

Reviewer(s) name(s): Rachel Davis

Date: February 15, 2019


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event (T)?

Overview/General Description of Study

- **Purpose of study:** Describe factors associated with PTSD symptoms among ER nurses after exposure to traumatic events (TEs).
- **Study Design:** IRB-approved, EBP cross-sectional descriptive correlational study utilizing a number of qualitative tools and questionnaires (see below)
- **Research question(s) or hypotheses:** TEs experienced by ER nurses can precipitate symptoms of PTSD (Lavoie et al., 2016).
- **Study aims:** Discover, through cross-sectional descriptive study, various factors associated with pre-traumatic, peri-traumatic and post-traumatic factors among ER nurses, and describe implementation of a supportive intervention which can address these factors.
- **Sampling Technique, Sample Size & Characteristics:** A convenience non-probability sample of 35 nurses from one of two ERs in a university medical center in Quebec, Canada, which was dedicated to pediatrics, trauma, and cardiology, was chosen. Inclusion criterion: the nurse
worked in the ER. Exclusion criterion: the nurse had taken sick leave, or had a diagnosis at any
time of PTSD.

- Major variables studied:
  Independent variable(s): TEs at work experienced by ER nurses
  Dependent variable(s): development of PTSD symptoms in ER nurses

- Variable Analysis and Instruments Used:
  Big Five Inventory Personality Test (John & Srivastava, 1999)
  Clinical Events Questionnaire (O’Connor & Jeavons, 2003)
  Ways of Coping Questionnaire (Folkman & Lazarus, 1988)
  *Inventaire de Detresse Peritraumatique* (Jehel et al., 2005)
  Impact of Event Scale (Brunet et al., 2003)
  *Questionnaire sur les comportements de soutien social en situation d’anxiete* (St-Jean-Trudel et al., 2005)

  All above instruments demonstrated acceptable internal validity with Cronbach’s alpha values
  ranging from 0.76-0.93.

  Associations between study variables were measured using Spearman’s correlational
  coefficients.

  Measures were appropriate to confirm hypotheses and discover themes.

  Theory or conceptual framework:
  Traumatic Stress-Coping Model (Joseph et al., 1997)

- PTSD symptoms manifested by a person exposed to a TE are conditioned by that person’s
  interpretation of the event

- Specific symptoms will also be influenced by person’s immediate reaction to the TE
• Demographics, presence (or lack thereof) of social support structures, and coping strategies influence development of PTSD symptoms after TE exposure

Statistics:

**Spearman’s correlational coefficient:** Correlation index for ordinal-level or nonparametric data used to indicate magnitude between variables (Polit & Beck, 2017, pp. 393, 745).

Ethics:

Did the article address ethical considerations?  Yes  No  Not Applicable

Was institutional review noted?  Yes  No  Not Applicable

Was participant privacy and confidentiality of data noted?  Yes
Rapid Critical Appraisal Checklist for Lavoie et al.

VALIDITY

Are the results of the study valid?

- Were study/survey methods appropriate for the question? Yes No
- Was the sampling method appropriate for the question? Yes No
- Were sample size implications on study results discussed? Yes No
- Were variables studied appropriate for the question? Yes No
  - Independent variables: traumatic events (TEs) at work experienced by ER nurses
  - Dependent variables: development of PTSD in ER nurses
- Were outcomes appropriate for the question? Yes No
- Were valid and reliable instruments used to measure outcomes? Yes No
- Were chosen measures appropriate for study outcomes? Yes No
- Were outcomes clearly described? Yes No
- Did investigators and/or funding agencies declare freedom from conflict of interest? Yes No

RELIABILITY

What are the results?

- What were the main results of the study? The response rate was 35%, and participation was voluntary. Exposure to grief-type TEs at work (such as death of a child, suicide, serious injury to a first responder or coworker) during the previous year and having an introverted personality type (neuroticism) were positively associated with peritraumatic distress syndrome (PD), an important factor in the development of PTSD.
Was there statistical significance? Explain.

Yes. Spearman’s correlation coefficient indicated a positive correlation between grief-type TEAs and development of PTSD ($P \leq 0.05$). There was no association between coping strategies, social support, or pretraumatic factors such as age or gender.

Was there clinical significance? Explain.

Yes. This study indicates that personality factors, which are relatively static, are a huge factor in the development of PTSD after exposure to TEAs. ER nurses with the personality traits discussed above who might be prone to the development of PTSD should be encouraged by management to pursue counseling and healthy coping habits in order to remain at the bedside.

- Were safety concerns, including adverse events and risk/benefits described? Yes No

APPLICABILITY

Will the results help me in caring for my patients?

- Are the results applicable to my patient population? Yes No
- Will my patients’ and families’ values and beliefs be supported by the knowledge gained from this study? Yes No

Reflection Prompts: Would you use the study results in your practice to make a difference in patient outcomes?

- If yes, how and why? Yes. Regarding my PICOT question, I am curious whether or not a formal debrief process after TEAs would improve the quality of these nurses’ lives. The literature seems to indicate that such an occupational support structure, as well as the
introduction of occupational therapy and counseling, would be helpful to nurses with certain personality traits, thus enabling this population of nurses to continue providing high-quality care to the “sickest of the sick.”

- If no, why not?

Additional Comments/Reflections:

Recommendations for article use within a body of evidence: I recommend this article for use within a body of evidence to help answer this PICOT question.
General Appraisal Overview for Morrison et al.

Reviewer(s) name(s): Rachel Davis

Date: March 5, 2019


PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event (T)?

Overview/General Description of Study

- **Purpose of study:** Investigate the prevalence of and experiences related to secondary traumatic stress (STS) among ER nurses, and determine whether or not any beneficial tools exist to manage these symptoms.
- **Study Design:** IRB-approved, biphasic study including quantitative data collection and analysis, as well as qualitative thematic analysis
- **Research question(s) or hypotheses:** Secondary traumatic stress is a potential consequence of repeated exposure to traumatic events such as those experienced by ER nurses (Morrison & Joy, 2016).
- **Study aims:** Through the use of anonymous questionnaires distributed at work (Phase 1) accompanied by subsequent focus groups (Phase 2), determine the prevalence of STS among ER nurses in West of Scotland.
Sampling Technique, Sample Size & Characteristics: A convenience sample of ER nurses >18 years of age with >12 months’ work experience practicing in West of Scotland, across four different emergency departments, was invited to participate (Phase 1, n = 150). Questionnaire packets were distributed to eligible nurses by each of the departments’ Lead Nurses. Eighty questionnaire packets were completed and returned, yielding a response rate of 53.3% (Phase 1). Across Phase 2, a stratified sample of ten responsive nurses were selected at random (n = 10).

Major variables studied:

Independent variable(s): repeated exposure to trauma, occupational stressors in ED

Dependent variable(s): development of STS

Variable Analysis and Instruments Used:

Secondary Traumatic Stress Scale (STSS) (Bride et al., 2004)

Descriptive statistics (Phase 1)

Thematic analysis (Phase 2) using Burnard’s 14 Stage Analysis Model (Burnard, 1991)

Measures were appropriate to discover themes.

Theory:

Grounded theory

Empirical data sheds light on how individuals experience/interact with/cope with shared life events.

Seeks to identify shared experiences or coping phenomena

Focus is on symbolic meaning conveyed by people’s actions in certain circumstances (EBP, 2015, p. 144)

I believe this was accomplished using:

Burnard’s 14 Stage Analysis Model (Burnard, 1991)
• Approach based on harmonizing transcribed interview data with empirical or demographic data of a population

• When performed correctly, categorization of data from unstructured or informal interviews can yield clarity to mixed-methods data collection

• Relevant information synthesized into “meaning units” so that transcribed interviews can be pared down into readable, meaningful pieces of data

Statistics:

**Descriptive statistics (SDs and mean):** Mean is “the sum of all scores, divided by the number of scores” (Polit & Beck, 2017, p. 361). Usually referred to as the average, and in order to calculate it, a summation and subsequent division of all variables by the number of variables is needed to perform the test. Standard deviation is an average deviation from the mean, and is calculated for all values (Polit & Beck, 2017, p. 362).

**Thematic analysis:** Systematic description of variables relying on both similarity and contrast between those variables, in order to identify patterns and uncover significance. In order to perform thematic analysis, a working knowledge (or even an identified definition) of themes present within participants’ data and the descriptive statistics associated with such themes is necessary (P&B, 2017, p. 534).

Ethics:

Did the article address ethical considerations?  **Yes**  No  Not Applicable

Was institutional review noted?  **Yes**  No  Not Applicable

Was participant privacy and confidentiality of data noted?  **Yes**
Rapid Critical Appraisal Checklist for Morrison et al.

VALIDITY

Are the results of the study valid?

- Were study/survey methods appropriate for the question? Yes No
- Was the sampling method appropriate for the question? Yes No
- Were sample size implications on study results discussed? Yes No
- Were variables studied appropriate for the question? Yes No
  - Independent variables: repeated exposure to trauma, occupational stressors in ED
  - Dependent variables: development of STS
- Were outcomes appropriate for the question? Yes No
- Were valid and reliable instruments used to measure outcomes? Yes No
- Were chosen measures appropriate for study outcomes? Yes No
- Were outcomes clearly described? Yes No
- Did investigators and/or funding agencies declare freedom from conflict of interest? Yes No

RELIABILITY

What are the results?

- What were the main results of the study?

  Seventy-five percent of sampled nurses reported at least one STS symptom in the previous week, and various occupational stressors such as death, trauma, and resuscitation were cited as influencing factors. Formal debriefing and a healthy nursing culture (use of humor, a lack of antagonism or mistrust among fellow nurses)
were cited as beneficial for management of STS symptoms. Thirty-nine percent of participating nurses in Phase 1 data collection met full diagnostic criteria for STS.

- Was there statistical significance? Explain.

Yes. The Secondary Traumatic Stress Scale utilized in this study is referred to as previously validated. Alarmingly, nearly 40% of participants met full diagnostic criteria for STS.

- Was there clinical significance? Explain.

Yes. The literature consistently suggests that STS symptoms can be detrimental to patient outcomes, employee attrition, compassion and job satisfaction, and a multitude of other factors affecting nurses working in the ED and other critical care settings. The results of this study seem to be congruent in this regard, indicating clinical significance.

- Were safety concerns, including adverse events and risk/benefit described? Yes No

APPLICABILITY

Will the results help me in caring for my patients?

Are the results applicable to my patient population? Yes No

Will my patients’ and families’ values and beliefs be supported by the knowledge gained from this study? Yes No

Reflection Prompts: Would you use the study results in your practice to make a difference in patient outcomes?

- If yes, how and why?

Yes. I believe that dissemination and application of this data, though limited in its scope and generalizability, is beneficial to my coworkers and other ER nurses. The results of the quantitative phase of the study were alarming to me, but I trust that they are accurate. By
formalizing debriefs among this population of nurses, managers and other policy makers can improve employee satisfaction and attrition, patient outcomes, and hospital performance.

- If no, why not?

Additional Comments/Reflections:

Recommendations for article use within a body of evidence: I recommend this article for use within a body of evidence to help answer this PICOT question.
General Appraisal Overview for Spencer et al.

Date: February 6, 2020

Reviewer(s) name(s): Rachel Davis


doi: 10.1016/j.resuscitation.2019.06.280

PICOT Question: In emergency/trauma and critical care nurses (P), how does debriefing (I) compared to not debriefing (C) affect the development of secondary traumatic stress (STS) and compassion fatigue (O) after exposure to a traumatic event in the workplace (T)?

Overview/General Description of Study

- **Purpose of study:** To examine cardiac arrest debriefing practices and the burden of tending to in-hospital cardiac arrests (IHCAs) on nursing and medical staff.
- **Study Design:** IRB-approved cross-sectional descriptive, qualitative study
- **Research question(s) or hypotheses:** One potential cause of burnout and poor psychological wellbeing may be exposure to stressful experiences, including witnessing or tending to an IHCA.
- **Study aims:** Examine through qualitative survey the psychological burden of attending IHCAs on nursing and medical staff in acute areas of a hospital; examine current cardiac arrest debriefing practices.
- **Sampling Technique, Sample Size & Characteristics:** 517 staff from 732-bed general hospital in UK in 2018; 358 doctors, 159 other staff members made up of nurses, assistants, and registrars; 414 staff members responded, yielding a RR of 80.1%
• Major variables studied:

Independent variable(s): debriefing practices after IHCAs

Dependent (outcome) variable(s): presence of psychological trauma symptoms in resuscitation providers

• Variable Analysis Used (include whether appropriate to answer research questions/hypothesis or discover themes):

  Fisher’s test

  $\chi^2$

  Mann-Whitney U test

  Spearman’s correlational coefficient

 Measures were appropriate to discover themes.
Rapid Critical Appraisal Checklist for Spencer at al.

VALIDITY

Are the results of the study valid?

- Were study/survey methods appropriate for the question? Yes No
- Was the sampling method appropriate for the question? Yes No
- Were sample size implications on study results discussed? Yes No
- Were variables studied appropriate for the question? Yes No
  - Independent variables: debriefing practices after IHCAs
  - Dependent variables: presence of psychological trauma symptoms in resuscitation providers
- Were outcomes appropriate for the question? Yes No
- Were valid and reliable instruments used to measure outcomes? Yes No
- Were chosen measures appropriate for study outcomes? Yes No
- Were outcomes clearly described? Yes No
- Did investigators and/or funding agencies declare freedom from conflict of interest? Yes No

RELIABILITY

What are the results?

- What were the main results of the study?
  - Was there statistical significance? Explain.
    Yes. The younger the provider (FY1 doctors versus those with more experience), the higher the trauma score \((p = 0.02)\). Healthcare assistants had higher trauma scores that nurses \((p = 0.02)\). There was no association between
PTSD risk and debriefing \( (p = 0.98) \), and patient outcome following the arrest (fatal vs. non-fatal IHCA) was not associated with trauma score \( (p = 0.92, \) Spearman’s rho = -0.01).

- Was there clinical significance? Explain.
  Yes. Many survey participants resented having to return to work immediately following an IHCA without debriefing, had considered leaving work altogether because of the traumatic event, and experienced significant loss in their confidence in their professional abilities after an IHCA. A voluntary response rate of 80% seems to indicate that staff felt these clinical issues were relevant enough to participate in such a study and were professionally invested in its findings.

- Were safety concerns, including adverse events and risk/benefit described? Yes  No

**APPLICABILITY**

Will the results help me in caring for my patients? Yes  No

Are the results applicable to my patient population? Yes  No

Will my patients’ and families’ values and beliefs be supported by the knowledge gained from this study? Yes  No

Reflection Prompts: Would you use the study results in your practice to make a difference in patient outcomes?

- If yes, how and why?
  Yes. The findings from this article indicate significant trauma symptoms exist in the minds of resuscitation providers, including emergency/trauma and critical care nurses.
Such symptoms can affect their ability to provide high-quality care for the duration of their shifts following IHCAs and other CIs, and debriefing was cited by these providers as helpful, positive experiences (Spencer at al., 2019). Improving the providers’ professional and emotional wellbeing will trickle down to improve patient outcomes.

- If no, why not?

Additional Comments/Reflections:

Recommendations for article use within a body of evidence: I recommend this article for use within a body of evidence to address the relevant PICOT question.
<table>
<thead>
<tr>
<th>Author, Year, Title</th>
<th>Conceptual Framework</th>
<th>Design/Method</th>
<th>Sample/Setting</th>
<th>Major Variables Studied and Their Definitions</th>
<th>Measurement of Major Variables</th>
<th>Data Analysis</th>
<th>Study Findings</th>
<th>Strength of the Evidence (i.e., level of evidence + quality [study strengths and weaknesses])</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adriaenssens, J., de Gucht, V., &amp; Maes, S. (2012). The impact of traumatic events on emergency room nurses: Findings from a questionnaire survey</td>
<td>Qualitative study using grounded theory</td>
<td>IRB-approved cross-sectional descriptive study</td>
<td>Fifteen EDs in Belgium from 2007-2008 Eligible population (n = 302): nurses with pt contact and had worked at least 6 mos in ED 248 completed questionnaires returned (RR = 80.5%)</td>
<td>IV: coping and social support DV: development of PTSD</td>
<td>Coping Inventory for Stressful Situations (CISS-21) by Endler &amp; Parker, 1990 Leiden Quality of Work Questionnaire for Nurses (LQWQ-N) by Maes et al., 1999 Impact of Events scale (IES) by Horowitz et al., 1979 with “Intrusion” and “Avoidance” subscales</td>
<td>Descriptive statistics ANOVA with Independent Sample-t tests (Bonferroni) Pearson correlation coefficient IES total score positively correlated to frequency of exposure (r = 0.26, p &lt; 0.01) and negatively correlated to supervisor social support (r² = -0.19, p &lt; 0.01). Perceived fatigue negatively correlated</td>
<td>Female: 55.6%. Mean age respondents: 37.76, 74% cohabiting, 42% no resident children, mean job experience in ER 11.21 yrs, 84% members of in-hospital resuscitation team Higher IES score (p = 0.02) and CIS score (p &lt; 0.001) for ER nurses compared to normative sample Strengths: correlation analysis of different variables, high response rate, large sample of ER nurses, use of previously validated statistical tools of analysis Limitations: convenience sampling, self-constructed sleep problem scale based on DSM-IV criteria Risk/harm if implemented: none Highly feasible for use in practice LoE: VI USPSTF grade: A USPSTF LoC: high d/t well-designed and well-conducted nature of study</td>
<td></td>
</tr>
</tbody>
</table>
DV 1: emotional and personal wellbeing  
DV 2: practitioner knowledge/implementation of practice | RefsWorks software for electronic study sorting | Thematic analysis | Major themes: Relevant team members (health, clergy, social care) involved  
No studies identified in which families involved  
Team meetings: 1) provide emotional support of individuals and team, 2) quality improvement  
Majority led by designated leader  
Emotional support → high satisfaction | Strengths: literature review conducted; first of its kind in this topic of interest  
Limitations: search limited to articles written within last ten years  
Risk/harm if findings implemented: none  
Highly feasible for use in practice  
LoE: V  
USPSTF grade: B  
USPSTF LoC: low d/t limited number of studies similar to this one; potentially not generalizable |
| Appleton, K. P., Nelson, S., & Wedlund, S. (2018). Distress debriefings after critical | Qualitative, descriptive study utilizing the CF of Corley’s proposed theory of | Three-phase, evidence-based QI pilot project | Phase 1: 57/139 eligible PICU nurses in unnamed freestanding children’s hospital completed survey in 2016 (41% RR) | IV 1: exposure to Cis or traumatic events  
IV 2: exposure to DDs after these events | REDCap Survey platform  
Moral Distress Survey (Cavaliere et al., 2010) | Thematic analysis | Phase 1: 100% (n = 57) nurses surveyed experiencing burnout signs  
86% (n = 49) willing to participate in burnout and moral distress training | Strengths: evidence-based goals were defined and met  
Limitations: pilot project, small sample size, results not necessarily reproducible, RR < 50%  
Risk/harm if implemented: none |
### CISD FOR ER AND CC NURSES

| Incidents: A pilot project. | Nurses’ moral distress (2002) | Phase 2: 25 PICU nurse participants; trained in groups of 8 at a time; nurse leaders/charge nurses educated in facilitating DDs | DV 1: presence of burnout | DV 2: presence of moral distress | Burnout Self-Test (MindTools, 2018) | Phase 3: DDs perceived by facilitators to be helpful (25%) to very helpful (75%) | Highly feasible for use in practice |
|--------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------|---------------------------------|--------------------------------------------------------------------------------|---------------------------------
| Copeland, D., & Liska, H. (2016). Implementation of a post-code pause: Extending post-event debriefing to include silence | Qualitative study using grounded theory, with qualitative thematic analysis of open-ended survey responses | IRB-approved, EBP QI project consisting of anonymous online survey | 32-bed Level 1 shock trauma center (location not mentioned); initiated by UBC | Pre-implementation: 30% RR (46/155 staff members) | Mid-implementation: 19% RR (37/192 staff member) | Post-implementation: 19% RR (33/173 staff members) | IV: presence of formal debriefing process for code/trauma events | DV: psychological and spiritual health of code/trauma responders | Online survey; no info provided on scale | Percentages and thematic analysis | Quantitative post-implementation findings: 79% respondents felt attending the PCPs was valued in the ED ≥50% of the time | Strengths: developed by UBC members of same hospital |
| | | | Attrition not discussed; RNs, MDs/DOs, PAs, unit secretaries, CTCs surveyed | Attributes: tasks to be completed, sadness for patient or family members, sense of responsibility, anger/frustration, and fortune | | | | | | | | Limitations: statistically insignificant d/t lack of valid analysis; poor voluntary RR |
| | | | | | | | | | | | | Risk/harm if implemented: in cases of insufficient staffing, potential delay in subsequent patient care during PCP/debrief attendance by relevant staff members |
| | | | | | | | | | | | | Highly feasible for use in practice |
| | | | | | | | | | | | | LoE: Level VI |
| | | | | | | | | | | | | USPSTF grade: C |
| | | | | | | | | | | | | USPSTF LoC: low d/t limited size of study and flaws in statistical inference |

| Davidson, J. E., Graham, P., Montross-Thomas, L., Norcross, W., & Zerbi, G. (2017). | Thematic analysis of qualitative survey, with no theory stated | Evidence-based QI pilot project utilizing qualitative survey | Five hundred (n = 500) staff and physicians from the following four units at a university teaching hospital in San Diego, CA: 19-bed medical/neuro ICU | IV: presence & distribution of Code Lavender kits | ProQOL survey (Stamm, 2010) | Descriptive statistics | Symptomatic stressful event at baseline (48%, n = 164) & post-intervention (51%, n = 83) Improvement in feeling cared for (mean 5.96 → mean 6.93), but statistically insignificant (p = 0.95, 95% CI: -0.63-0.59) | Strengths: delivered by UBC members of hospital in question |
| | | | | | | | | | | | | Limitations: pilot project, results of intervention statistically insignificant |
| Duffy, E., Avalos, G., & Dowling, M. (2015). Secondary traumatic stress among emergency nurses: A cross-sectional study | No theory stated | IRB- approved cross-sectional descriptive study | 117 RNs working in 3 Western Irish EDs invited → 105 surveys returned; attrition rate of 12% RR = 90% 95.2% female, 4.8% male | IV: nursing role w/ ED (staff nurse, CNM, advanced practice nurse, etc.) DV: STS Secondary Traumatic Stress Scale (STSS) (Bride et al., 2004) STSS survey responses analyzed by IBM Statistics 20 Descriptive statistics Marital status (63.8% married, 28.6% single, 3.8% cohabiting, 3.8% separated/divorced) Highest education level (55.2% postgrad diploma, 20% diploma, 9.5% Bachelor’s, 15.2% Master’s) presence of STS among nursing groups: $\chi^2 = 8.32$, df = 3, $p = 0.042$ Various intrusion ($p = 0.868$), avoidance ($p = 0.855$), or arousal ($p = 0.443$) criteria | Feasibility of use in practice: moderate Risk/harm if implemented: mild, as some nurses were given Code Lavender kits sarcastically, negating intent of the intervention LoE: VI USPSTF grade: C USPSTF LoC: low d/t limited number or size of studies, important flaws in study design, and findings potentially not being generalizable |
| Healy, S., & Tyrell, M. (2013). Importance of debriefing following critical incidents. | No theory stated | IRB- approved EBP literature review and anonymous online survey | Questionnaires distributed to 150 ED doctors and RNs practicing in 3 Ireland EDs 103 total participants: 91% female, 8% male IV: debriefing in EDs DV: perceived need for debriefing Anonymous online survey with Likert scale questions Mann-Whitney U test Thematic analysis $U=448, p=0.021$ → null hypothesis tested, and primary purpose of debriefing (provide support vs promote team spirit) depends on age and experience of staff Themes: 84%: debriefing “important” or “very important”; | Strengths: anonymity retained, STSS is a validated tool, high internal validity of instruments used in statistical analysis Limitations: sample pertains only to a specific region of Ireland; high levels of STS may be rt chronic overcrowding of Irish EDs Risk/harm if implemented: none Highly feasible for use in practice LoE: VI USPSTF grade: A USPSTF LoC: high d/t widespread use and reliability of STSS tool |
| Kapoor, S., Morgan, C.K., Siddique, M.A., & Guntupalli, K.K. (2018). | None stated in text; Lazarus & Folkman’s Theory of Stress and Coping (1984) fits well | IRB-approved quantitative, anonymous online survey, sent out one year after adoption of SP ritual | 12 ICU physicians, 22 ICU nurses from Baylor St. Luke’s Medical ICU in Houston, TX (n = 34); voluntary participation; total participants invited = 38; RR = 89%, as 4 nurses did not participate; attrition rate not discussed | IV: “Sacred Pause” | Online survey; info on scale not provided | Thematic analysis | Strongly agree/agree survey responses: SP should be a universal practice in all ICUs: 85% SP makes your efforts feel appreciated: 82% SP brought closure, helped overcome feelings of grief, disappointment, distress and failure: 79% SP improves professional satisfaction: 73% SP instills and encourages sense of team effort: 73% SP helps handle stressful situations in ICU better: 70% SP helps in overall improvement as ICU physician/nurse: 58% SP has potential to improve ICU burnout: 55% | Strengths: first study endeavoring to understand impact of SP ritual. Limitations: single-center study performed in medical ICU only; no information provided on scales, therefore no ability to determine internal validity; neither years of experience, nor professional experience (physicians vs nurses) segregated. Risk/harm if implemented: none. Feasibility of use in practice: high; potentially beneficial outcomes for staff AEB thematic analysis. LoE: Level IV. USPSTF grade: B. USPSTF LoC: Low, d/t need for more studies and generalizability. |
### Debriefing conceptualizes ways to improve performance. Helps individuals and groups recognize errors. Content of debriefs: clinical management, teamwork, behavioral issues. All team members involved in clinical event should be involved. Lack of trained facilitator second most common barrier to debriefs taking place; facilitator more familiar with clinical medicine preferred. Follow a structured format; three phases in general: description, analysis, application to future events.

| Lavoie et al. (2016). An exploration of factors associated with post-traumatic stress in ER nurses. | Traumatic Stress-Coping Model (Joseph et al., 1997) | IRB-approved, EBP cross-sectional descriptive correlational study | Convenience nonprobability sample of 35 nurses working in ER in Quebec medical center were chosen out of 100; RR = 35%; participation voluntary; attrition not discussed | IV: TEs at work experienced by ER nurses DV: development of PTSD symptoms in ER nurses | Big Five Inventory Personality Test (John & Srivastava, 1999) 
\(a = 0.73-0.86\) Clinical Event Questionnaire (O'Connor & Jeavons, 2003) 
\(a = 0.71-0.94\) Ways of Coping Questionnaire (Folkman & Lazarus, 1988) 
\(a = 0.76-0.85\) **Peritraumatic distress syndromes: \(P \leq 0.011** Social support: \(P > 0.05\) | Grief-type TEs: \(P \leq 0.05\) Coping strategies: \(P > 0.05\) Personality traits: \(P \leq 0.05\) (extraversion, agreeableness, conscientiousness negatively correlated; neuroticism and openness positively correlated) **Peritraumatic distress syndromes: \(P \leq 0.011** Social support: \(P > 0.05\) | Strengths: high internal validity of all instruments used in study design Limitations: possible recall bias in data collection strategy; small sample size; cross-sectional design impairs determination of relationship b/w variables Risk/harm if implemented: none, and none discussed Feasibility of use in practice: dissemination might be useful, but positive correlations not associated w/ factors w/o our control AEB Spearman’s coefficients | LoE: V USPSTF grade: B USPSTF LoC: low d/t important flaws in design and gaps in chain of evidence |
### CISD FOR ER AND CC NURSES

#### Study Overview

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Methodology</th>
<th>Participants</th>
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<th>Results</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Feasibility</th>
<th>LoE</th>
<th>USPSTF Grade</th>
<th>USPSTF LoC</th>
<th>Risk/harm if implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morrison, L. E., &amp; Joy, J. P. (2016)</td>
<td>Secondary traumatic stress in the emergency department</td>
<td>Overall sample 150 ER nurses across 4 EDs in West Scotland (80 questionnaires filled out in Phase 1 (RR 53.3%, AR 46.7%) vs 20 focus group invitations filled out in Phase 2 (overall RR = 13.3%))</td>
<td>IV: repeated exposure to trauma and occupational stressors in ED</td>
<td>25% participants failed to meet diagnostic criteria for STS</td>
<td>39% participants met full diagnostic criteria for STS</td>
<td>Most common arousal symptom: feeling easily annoyed (52.6%)</td>
<td>Most common avoidance symptom: discouragement about the future (51.3%)</td>
<td>Most common intrusion symptom: disturbing dreams about work with patients (22.6%)</td>
<td>Phase 2: themes of acute stressors and nursing culture cited as 2 most contributory factors in development of STS</td>
<td>Strengths: high inference quality, mixed methods study design, rigor enhanced by STSS tool</td>
<td>Limitations: small sample/low RR, low generalizability/transferability, self-reporting nature may limit reliability, internal validity of instruments used not confirmed for this study</td>
</tr>
</tbody>
</table>

#### Measures

- Impact of Event Scale (Brunet et al., 2003) ($\alpha = 0.81-0.93$)
- Questionnaire sur les comportements de soutien social en situation d’anxiété (St-Jeal-Trudel et al., 2005) ($\alpha = 0.73-0.86$)
- Secondary traumatic stress in the emergency department (Burnard’s 14 Stage Analysis Model, Burnard, 1991)

<table>
<thead>
<tr>
<th>None stated</th>
<th>IRB-approved cross-sectional descriptive questionnaire</th>
<th>Acute 732-bed general hospital in UK</th>
<th>IV: debriefing practices after in-hospital cardiac arrest (IHCA)</th>
<th>TSQ sensitivity and specificity of 0.85 and 0.89 respectively</th>
</tr>
</thead>
</table>

Survey sent to 517 staff: 358 doctors, 159 other staff members made up of nurses, assistants, registrars
RR = 80.1%

DV: presence of psychological trauma symptoms in resuscitation providers

Association between debriefing and screening positively for PTSD ($p > 0.05$)

Effects of provider role, department, and post-IHCA rest on screening positively for PTSD (Health care assistants: $p = 0.01$, Foundation year 1 doctors: $p = 0.01$, No post-IHCA rest: $p = 0.04$)

Correlation between debriefing and TSQ score (IHCA: $p = 0.92$, fatal IHCA: $p = 0.34$, non-fatal IHCA: $p = 0.02$)

Legend:

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