Exploring Perspectives on Injured Trauma Survivor Peer Interventions at a Level I Trauma Center using Rapid Assessment Procedures

Allison E. Engstrom

A thesis

submitted in partial fulfillment of the

requirements for the degree of

Master of Social Work

University of Washington

2020

Reading Committee:

Megan Moore

Douglas F. Zatzick

Program Authorized to Offer Degree:

School of Social Work

University of Washington

Abstract

Exploring Perspectives on Injured Trauma Survivor Peer Interventions at a Level I Trauma Center using Rapid Assessment Procedures

Allison E. Engstrom

Chair of the Supervisory Committee:
Associate Professor Megan Moore
School of Social Work

Injured trauma survivors' perspectives on a peer-integrated intervention following traumatic injury have not been well studied. This investigation built upon and extended Rapid Assessment Procedure Informed Clinical Ethnography (RAPICE) methods to thematically code 120 traumatic injury survivors' responses to questions regarding the utility of a peer-integrated intervention. Most respondents reported perceived benefits to a peer-integrated intervention, including the hope that a peer support person could provide emotional support, medical and practical advice and medical care navigation. A smaller subgroup of respondents felt that working with a peer support person would not be helpful and could result in emotional burden. This investigation also found that using RAPICE methods to deductively develop a priori thematic domains and code responses was an efficient and successful method of capturing and categorizing qualitative interview responses.

Acknowledgements

Thank you to both Megan Moore and Doug Zatzick for their invaluable time and effort on this project. I am immensely grateful for your guidance and support in the development and completion of this thesis.

My heartfelt gratitude to the trauma survivors who shared their thoughts and a piece of their recovery story with the Trauma Survivors Outcomes and Support (TSOS) team.

TABLE OF CONTENTS

BACKGROUND

In most recent Center for Disease Control (CDC) reports, over 27 million individuals present to emergency department and trauma center settings for the treatment of traumatic injury each year; of those, 2.8 million Americans are so severely injured that they require inpatient hospitalization (2017). Injured trauma survivors often experience multiple complex medical and mental health comorbidities, including posttraumatic stress disorder (PTSD), depression and suicidal ideation (Zatzick et al., 2017). Literature review suggests that injured trauma survivors are a vulnerable population with regard to care transitions, including recurrent emergency department visits hospitalizations (Coleman et al., 2006; Gonzalez et al., 2015; Worrell et al., 2006).

Peer interventionists are becoming a mainstay of treatment delivery for multiple health conditions across diverse US healthcare systems (Fisher et al., 2015; Chapman et al., 2018; Mental Health America, 2019). In cases of people with severe mental illness, peer support has been found to be effective in engaging people into health care, reducing emergency department utilization, and reducing substance use among persons with co-occurring substance use disorders (Davidson et al., 2012). Additionally, peer support has been shown to increase participants' self-care, sense of community belonging, and satisfaction with various life domains (Mental Health America, 2019); and decrease participants' level of depression and psychosis (Davidson et al., 2012; Pfeiffer, 2011). The potential contribution of peer interventionists in the delivery of high-quality patient-centered care has been espoused across disease conditions, including diabetes and HIV/AIDS (Mental Health America, 2019; Heisler et al., 2010; Marino, Simoni, & Silverstein, 2007). Prior literature documents completed and ongoing studies of peer interventionists for the

care of multiple conditions beyond injury (Heisler et al., 2007; Heisler et al., 2010; Valenstein et al., 2016).

The concepts behind peer support interventions share many commonalities with the values and ethical principles of social work. The National Association of Social Workers (NASW) Code of Ethics (2017) set forth core values and broad ethical principles to inform social work practice. One such principle, Importance of Human Relationships, notes that social workers should understand that human relationships are an important "vehicle for change" (NASW, 2017). Peer support interventions are built on the foundational belief that people who have experienced, endured, and overcome a particular condition, set of circumstances, or set of challenges can offer support to others who may be experiencing similar challenges (Loumpa, 2012; Davidson, Chinman, Sells, & Dowe, 2006). As outlined in NASW Standards for Social Work Practice in Health Care Settings, social workers should also utilize a strengths perspective, which highlights resilience and potential for growth rather than on pathology and deficits, which exists in health care settings (2013). Peer support inherently values the "expertise through experience" and promotes autonomy and empowerment of persons giving and receiving support (Loumpa, 2012; Mead et al., 2001). As the presence of social work continues to broaden in the health care field (United States Bureau of Labor Statistics, 2018), social workers are uniquely positioned to support and advocate for peer support programs in various healthcare domains.

Unlike other areas of clinical medicine, acute post-injury interventions have yet to comprehensively integrate injured trauma survivor peer interventionists. Initial studies in the rehabilitation literature suggest that peer interventionists may aid care transitions after severe spinal cord and traumatic brain injury (Gassaway et al., 2017; Hanks et al., 2012; Jones & Gassaway, 2016). Other post-injury peer interventions have emphasized community linkage

strategies for survivors of violent physical trauma (Smith et al., 2012; Dicker, 2016; Juillard et al., 2014). Literature review, however, revealed no investigations into injured trauma survivor perspectives on a peer-integrated intervention following traumatic injury.

1.1 Research Aims

The purpose of this investigation was to better understand injured trauma survivors' perspectives on a peer-integrated intervention. The overarching goal of this investigation was to thematically code traumatic injury survivors' responses to the questions, "Do you feel it would have been helpful in addressing your post-injury concerns and recovery to have had available an injured peer interventionist to provide support," "If yes, why do you feel it would have been helpful to have an injured peer available to provide support?," and "If no, can you say more about that?" The investigation aimed to use Rapid Assessment Procedure Informed Clinical Ethnography (RAPICE) procedures, including an initial deductive data analytic approach (Graneheim, Lindgren, & Lundman, 2017), which was designed to enhance research efficiency. The investigators hypothesized that through this approach, "saturation" would be achieved and the a priori thematic domains would accurately reflect the responses received.

1.2 Protection of Human Subjects

After consultation with the University of Washington (UW) Institutional Review Board (IRB), it was determined the aims of this investigation are subsumed within the aims of prior UW IRB-approved studies (UW IRB study identifiers: 46085, STUDY00005068, & MOD00002798 of STUDY00004051).

METHODS

2.1 DESIGN OVERVIEW

This 8-month thesis project built upon and extended Rapid Assessment Procedure Informed Clinical Ethnography (RAPICE) methods in an evaluation of trauma survivors' perspectives on the utility of a peer-integrated post-injury intervention. The investigation used previously derived themes from injured trauma survivors, providers, peer interventionists, and researchers on the utility of a peer-integrated post-injury intervention. These themes were derived from research publications (Parthasarathy et al., 2013) and peer interventionist manuals (American Trauma Society, 2008). The investigation then brought those themes to bear on a RAPICE informed coding of diverse perspectives regarding the potential utility of a post-injury peer-integrated intervention.

Members of the investigative team previously completed a comparative effectiveness trial that employed a social work staffed care transition intervention to successfully reduce the percentage of any severe post-injury concerns endorsed by injured trauma survivors (Zatzick et al., 2018). This Patient Centered Outcomes Research Institute (PCORI) funded trial randomized 171 acutely injured trauma survivors meeting at least 3 of 10 predetermined risk factors with high levels of emotional distress to a care transition intervention (n=85) or nurse notification (n=86) condition. The care transition intervention components included care management that elicited and targeted improvement in injured trauma survivors' post-injury concerns, 24/7 study team cell phone accessibility, and stepped-up collaborative care. At the 6-month follow-up time point, the study team completed audio-recorded qualitative interviews to assess injured trauma survivors' perspectives on a peer-integrated intervention.

A total of 120 qualitative interviews were completed at the 6-month follow-up time point between January 2013 and March 2016 with injured trauma survivors who were recruited from a large, urban level I trauma center. The interview included questions such as “Do you feel it would have been helpful in addressing your post-injury concerns and recovery to have had available an injured peer interventionist to provide support,” “If yes, why do you feel it would have been helpful to have an injured peer available to provide support?,” and “If no, can you say more about that?” The investigation found that seventy percent of injured trauma survivors participating in the prior trial endorsed wanting peer interventionists as part of their care transition team (Zatzick et al., 2018). In this current study, injured trauma survivor perspectives were assessed through analyses of qualitative interview responses completed as part of this larger pragmatic comparative effectiveness trial at an urban level I trauma center (Zatzick et al., 2018).

2.2 RAPICE Method Overview

A key issue that arose in the planning of this investigation is how to best and most expediently understand the potential contribution of a peer-integrated multidisciplinary post-injury intervention model. Members of the investigative team have previously developed an approach to the “collection and utilization of qualitative data in pragmatic clinical trials of mental health services implementation that is informed by clinical ethnography and rapid assessment procedures” (Palinkas & Zatzick, 2019). This approach encompasses a “nimble” mixed method that allows for an expedient assessment of various perspectives on the potential utility of peer-integrated post-injury interventions.

RAPICE was developed as an alternative to the use of time and resource-intensive traditional qualitative approaches that can be inconsistent with the aims of efficiency and cost minimization commonly associated with increasingly common pragmatic clinical trials. RAPICE

applied in a pragmatic clinical trial is distinguished by the following: "(1) formation of a multidisciplinary research team including a member or members with clinical and/or administrative expertise and ethnographic and mixed methods training, enabling efficiency in data collection and analysis through division of labor; (2) development of materials to train team members in ethnographic methods and rapid assessment procedures that minimize the burden placed on any single study participant; (3) use of several data collection methods (e.g., participant observation, informal and semi-structured interviews, field jottings and logs, quantitative surveys) to verify information through triangulation (qualitative interview transcriptions); (4) iterative data collection and analysis in real-time to facilitate continuous adjustment of the research question and methods to answer that question; and (5) rapid completion of the mixed method component of the project, which may vary depending on project aims and mixed-method design" (Palinkas & Zatzick, 2019).

2.3 RAPICE Components

The components of RAPICE were adapted to meet the goals and aims of this investigation. A brief description of how each component of the RAPICE method was met is described below.

Formation of a Multidisciplinary Team. The thesis advisee, Allison Engstrom, is a member of the peer-integrated clinical interventionist team of the current comparative-effectiveness trial. The multidisciplinary research team includes two clinician-researchers, Douglas Zatzick, MD and Megan Moore, MSW, PhD.

Training in Coding Procedures. Two members of the research team, Douglas Zatzick, MD and Megan Moore, MSW, PhD, trained the thesis advisee in rapid coding procedures.

Use of Several Data Sources. Data sources used to derive a priori the peer related themes included publications on peer interventions (Parthasarathy et al., 2013) and American Trauma Society (ATS) training manuals (American Trauma Society, 2008).

Rapid completion of the mixed method component of the project. The investigation was completed over the course of 8 months.

This investigation utilized a RAPICE-informed deductive approach to the coding of patient perspectives on the utility of peer interventionists. This approach began with the literature review and training manual distilled themes that captured patient perspectives on the utility of peer interventionists. In this manner, the RAPICE method "frontloaded" the formation of thematic domains in an effort to enhance research efficiency (Shreyer, 2012) and were further refined through discussions with members of the investigative team and patient and peer stakeholders. Then, iterative modifications were made to the coding procedure through the inductive work with the injured trauma survivor interviews.

2.4 Interview Questions

Injured trauma survivor perspectives were assessed through analyses of qualitative interview responses completed as part of a pragmatic comparative effectiveness trial at a large, urban level I trauma center (Zatzick et al., 2018). A total of 120 previously audio-recorded qualitative interviews with injured trauma survivors were completed as part of the prior postinjury collaborative care trial. The method of assessing trauma survivors' perspectives was based on procedures previously articulated by clinical social scientists (Kleinman, Eisenberg & Good, 1978) and advocates of clinimetric approaches to outcome and quality-of-life assessments (Gill & Feinstein, 1994; Feinstein, 1987). Brief, open-ended questions were chosen to offer trauma survivors' an unconstrained opportunity to describe their perspective on the utility of a peer-

integrated intervention. The interviews included the questions, “Do you feel it would have been helpful in addressing your post-injury concerns and recovery to have had available an injured peer interventionist to provide support,” and “If yes, why do you feel it would have been helpful to have an injured peer available to provide support?,” and “If no, can you say more about that?” The recordings were transcribed verbatim by research study assistants and personal information was replaced with a participant identification number during the transcription process.

2.5 Codebook development and Thematic Domains of Injured Trauma Survivors’ Perspectives

The thesis advisee (AE) performed a preliminary review of several data sources, including prior literature on the utility of a peer-integrated intervention (Parthasarathy et al., 2013). Thematic domains of injured trauma survivors’ perspectives on a peer-integrated post-injury intervention were derived (Table 1). These thematic domains were corroborated and further refined using guides developed by members and collaborators of the American Trauma Society (ATS) Trauma Survivors Network (American Trauma Society, 2008). Last, discussions with a group of expert trauma survivor stakeholders were consulted to finalize the thematic domains. These domains were used to develop the initial codebook (Table 1).

Table 1. Definitions and Examples of A Priori Thematic Domains

Domain Definition	Examples	Derived From
Medical Advice and Care Navigation Perceived benefit of having a peer to provide or relay medical information related to the injury or recovery process and to assist with care navigation.	“I think if that there would have been someone else to tell you what is happening and what was gonna happen, would have been better. To explain things more. My doctors would come in and say, ‘oh yeah everything’s going good’ or whatever, and you can ask questions, but they wouldn’t elaborate on it.” “I would say just like, know what to expect down the road like with recovery, rehabilitation, that kind of thing.”	(American Trauma Society, 2008; Parthasarathy et al., 2013)
Practical Advice Perceived benefit of having a peer to provide practical advice not necessarily related to medical care,	“Just to be there to answer questions that like arise.” “Help with housing and stuff with the court.”	(American Trauma Society, 2008; Parthasarathy et al.,

such as housing, or to help with general problem-solving.		2013)
Emotional Support Perceived benefit of having someone to relate to, to look up to for hope and inspiration, and to spend time with or have as a companion.	"I think anytime you can share things that have happened to you and somebody has had a similar experience, it's nice to have someone that understands where you're coming from." "That would have been nice. You know somebody that's been through it - knows how you feel. How you're violated and your fears and they just relate better and you know to work to be with someone and be close with somebody that and it can get you through the day you know? And to know that there's a light at the end of the tunnel. That this isn't a forever thing. I mean yes it's forever, you'll never forget it, but you can get better."	(American Trauma Society, 2008; Parthasarathy et al., 2013)
Emotional Burden Responses in this domain include lack of interest in connecting with an unfamiliar person, self-identifying as an introvert, or experiencing remorse over a peer's situation.	"I'm just kind of an introverted person and I don't really, you know have that much interest in kind of meeting strangers that I probably don't have common interests with, except for being injured, which is not really much to talk about." "Because then I would have just felt sorry for that person."	(Parthasarathy et al., 2013)
Helpful Responses in this domain identified peer support as helpful, without further explanation.	"Yes, that would have been helpful"	Pilot coding process
Unsure Responses in this domain were unsure of whether peer support would be helpful in their recovery or how peer support might be helpful in their recovery.	"I'm not sure. I don't know." "Yeah, it may have. But I am not really sure one way or the other."	Pilot coding process
Unhelpful Responses in this domain identified peer support as either simply not helpful without further explanation, not helpful due to needs being met by other care providers or support systems, or not helpful due to the perceived lack of ability for the peer to address patient's concerns.	"No help at all." "Just, because I'm kind of stubborn and I do things on my own." "Mostly just because I was able to just figure it out with Kirsten's help and the doctors. I didn't really need anybody else I guess."	Pilot coding process
Unable to Code Responses in this domain were either very brief responses that were difficult to categorize or lengthy and complex responses with themes from multiple domains.	"It might've been more focused on my injury."	Pilot coding process
Discordant Response Responses were incongruent with the interview question, due to either the interviewer drifting from the prescribed questions or the patient's misunderstanding of the question asked.	"Because it helps me exercise my leg and strengthen it. That's, you know for the future, it's just, yes that's it." "I said that sometimes I get a lot more confused now than before."	Pilot coding process
Advocate[1] Perceived benefit of having a peer to advocate on behalf of the respondent, either in medical or legal issues.		(Parthasarathy et al., 2013)
Motivate[1] Perceived benefit of having a peer to motivate the respondent to adhere to their treatment plans or to take		(Parthasarathy et al., 2013)

necessary steps in their recovery process.

[1]No examples of this thematic domain emerged from the responses.

2.6 CODING PROCESS

Iterative modifications were made to the coding procedure through the inductive work with the injured trauma survivor interviews. After the development of the thematic domains (Table 1), Dr. Zatzick pilot coded an exploratory random sample of five responses. A number of observations were raised by this initial pilot coding. To begin, it became clear that the pragmatic approach to data collection used in the open-ended follow-up interview left many aspects of the open-ended questions elicitation to the discretion of individual research assistant interviewers. Deriving from the procedures outlined by Zatzick and colleagues (2001; 2007), the original unit of analysis proposed was the discreet response to the interviewer questions, "Do you feel it would have been helpful in addressing your post-injury concerns and recovery to have had available an injured peer interventionist to provide support," and "If yes, why do you feel it would have been helpful to have an injured peer available?," and "If no, can you say more about that?" However, through this pilot coding process, it was observed that research assistant interviewers frequently drifted from the prescribed questions and that traumatic injury survivors often gave discordant responses to questions that were either not related to the initial queries or were related to an earlier part of the dialogue. While the initial aim was to code a discreet unit of analysis (e.g., response to "why do you feel it would have been helpful to have an injured peer available?"), it became clear that the entire dialogue around the open-ended questions required coding. Therefore, the coders (Dr. Zatzick and the thesis advisee) agreed to review the entire dialogue for each case. Additionally, the domain "discordant response," was added to the codebook for cases in which the traumatic injury survivors' response were incongruent with the interview question, due to either the

interviewer drifting from the prescribed questions or the patient's misunderstanding of the question asked.

After the initial analysis, both Dr. Zatzick and the thesis advisee coded a random sample of 25 injured trauma survivor interviews ($\kappa = 0.56$). During the review of these data, it was determined that further modifications to the codebook, including the addition of the domain, "helpful," would strengthen the coding procedure by reducing the number of "uncodable" responses. Responses in the "helpful" domain identified peer support as simply helpful, without further explanation or not otherwise specified. A third random sample of 20 injured trauma survivor interviews were coded by both Dr. Zatzick and the thesis advisee (AE) ($\kappa = 0.94$). Given this high rater reliability, the remaining 70 interviews were then coded solely by the thesis advisee.

Throughout the coding process, no new thematic domains emerged that were not already captured during the RAPICE-informed deductive "frontload" process to the identification of thematic domains. However, this process aims to leave space to discover other unexpected perspectives of patients. If during the coding process it had become apparent that a new theme was emerging from the interview responses, those responses would have been noted and later discussed between members of the investigative team. Those emerging themes would have been added to the codebook and a note regarding the method of discovery would have been made.

RESULTS

A total of 120 responses from trauma survivors were coded. Trauma survivors were from diverse ethnocultural identities and age groups (Table 2). At the time of injury, the average age for all trauma survivor respondents was 41.9 years old. Fifty-seven percent of the respondents identified

themselves as female. The average amount of years of education for all trauma survivors was 13.1. Twenty-five percent of trauma survivors reported being married or living with a partner. Forty-eight percent of respondents were employed at the time of injury.

Table 2. Injured Trauma Survivor Characteristics

Variable	Total (*N* = 120)	Intervention (*n* = 65)	Usual Care (*n* = 55)	χ^2 or Fisher's Exact Test	*p*
Age, *M* (*SD*)	41.9 (15.6)	39.1 (14.4)	45.3 (16.3)	*F* (1, 118) = 2.21	0.03
Female, *n* (%)	69 (57.5)	37 (56.9)	32 (58.2)	$\chi^2(1) = 0.02$	0.89
Race/ethnicity, *n* (%)					0.04
White	69 (57.5)	34 (52.3)	35 (63.6)		
Black	17 (14.2)	9 (13.8)	8 (14.5)		
Native American	17 (14.2)	8 (12.3)	9 (16.4)		
Asian/Pacific Islander	9 (7.5)	9 (13.9)	0 (0.0)		
Hispanic/Latino	8 (6.7)	5 (7.7)	3 (5.4)		
Education, years, *M* (*SD*)	13.1 (2.6)	13.3 (2.5)	12.9 (2.8)	*F* (1, 117) = 0.9	0.37
Married/living with partner, *n* (%)	31 (25.8)	17 (26.2)	14 (25.5)	$\chi^2(1) = 0.01$	0.93
Employed, *n* (%)	55 (48.7)	34 (57.6)	21 (38.9)	$\chi^2(1) = 3.96$	0.05
Insurance, *n* (%)					1.00
Private	4 (3.3)	2 (3.1)	2 (3.6)		
Public	116 (96.7)	63 (96.9)	53 (96.4)		

Of the 120 responses, 64 (53.30%) were categorized into a domain in which a peer support person would be seen as helpful or beneficial to the recovery process in some way. Forty percent (n = 48) of respondents felt that a peer support person would be helpful by providing emotional support. One such respondent reported that a peer support may be helpful to them "because they understand the pain, they understand, they kind of live in the same world that you do." Nine percent (n = 11) of respondents felt that a peer support person could be helpful by providing medical advice or by assisting with medical care navigation. For example, one respondent noted "I had the flesh eating bacteria, my kidney shut down because of that you know. You know, knowing, you know, how it could have, how it could have affect my other organs, my kidneys my liver you know, if I would've been told that you know that would've

made a big difference. Information is a good thing to have, knowledge of the things that's going on with your body, you know?" Three percent (n = 4) of respondents felt that a peer support person might be helpful in providing practical advice, such as helping a respondent "know what to expect down the road like with, with court and recovery, rehabilitation, that kind of thing." One person (0.83%) felt that a peer support person could be helpful, but did not specify how.

A total of 24 (20.00%) responses were coded into a domain in which a peer support person would be seen as unhelpful or not beneficial to the recovery process in some way such as emotional burden (n = 11, 9.16%). One such respondent felt "I would get depressed like seriously, I'd be like 'we don't deserve this,' you know. That's the type of person I am. I'm like, I have a heart, emotionally, like 'Oh my gosh. You don't deserve this and I don't deserve this and look what happened.'" Nearly eleven percent of respondents felt that a peer support person would be unhelpful, not otherwise specified (n = 13). A total of 13 responses (10.83%) were coded as "unsure." A total of 9 of the 120 responses were "discordant" (7.50%) and 10 of the responses (8.33%) were unable to be coded due to brevity or complexity.

Two themes that emerged from the deductive "frontload" process but were not evident in the interview responses were "advocate" and "motivate." No new thematic domains emerged during the coding process. The study found that saturation was achieved through the frontload process; while some refinements to the coding process occurred, the themes identified in the literature and treatment manual review did not change substantially. The a priori thematic domains were successful in capturing and categorizing qualitative interview responses and the study team expects the same or very similar themes would have arisen through a more extensive qualitative coding approach.

DISCUSSION

To the study team's knowledge, this is the first investigation to assess injured trauma survivor perspectives on a peer-integrated intervention following traumatic injury. Investigations documenting the effects of peer support interventions for medical conditions exist. Previous investigations have found peer support to be effective in engaging people into health care, reducing ED utilization, and reducing substance use among persons with co-occurring substance use disorders. Peer support has been shown to increase participants' self-care, sense of community belonging, and satisfaction with various life domains (Davidson et al., 2012). The findings of this investigation add the perspectives of distressed injured trauma survivors, a particularly vulnerable population, regarding a post-injury peer support intervention.

Injured trauma survivors in this study reported a number of perceived benefits to working with a peer support person post-injury. Most participants expected the peer support person to be helpful in providing emotional support, either by way of serving as someone to relate to, to look up to for hope and inspiration, or to spend time with and have as a companion. Prior investigations have revealed that the psychological impact of trauma and recovery is of great concern to injured trauma survivors (Zatzick et al., 2001; Zatzick et al., 2018). In the case of implementing peer-supported post-injury interventions, providing training to peer support persons in methods of providing emotional support to newly injured trauma survivors may be helpful in tandem with lived experience.

Results from this investigation also suggest that some injured trauma survivors believe that peer support persons may be helpful in providing or relaying medical advice or information from medical care teams or assisting with care navigation (e.g., scheduling follow-up appointments or assisting with communication with medical care team). While peers may be

well-equipped to navigate these systems having had experience navigating them previously, the typical scope of work of peer support persons may inhibit them from meeting such expectations of some newly injured trauma survivors. Setting expectations and boundaries with regards to the roles and limitations of peer support persons beforehand may be important in avoiding confusion within post-injury care teams.

For injured trauma survivors who did not expect a peer support person to be of direct benefit to them post-injury, many believe the experience might result in emotional burden. According to the responses, this may be in part due to personal preferences (e.g., self-identifying as an introvert or a lack of interest in connecting with an unfamiliar person) or due to experiencing psychological distress (e.g., re-experiencing trauma triggered through conversation). It may be that training peer support persons in topics such as trauma response and boundary setting could reduce these unintended consequences.

Beyond specific findings related to peer support themes, the investigation built upon and extended previously articulated RAPICE methods. The investigation reviewed the extant literature and treatment manuals related to peer support in order to frontload thematic domains and introduce efficiencies into the coding process. This 8-month long investigation is one of the first to adopt RAPICE methods to assess and analyze qualitative data as part of a larger pragmatic trial. The study found that saturation was achieved through the frontload process; while some refinements to the coding process occurred, the themes identified in the literature and treatment manual review did not change substantially. The a priori thematic domains were successful in capturing and categorizing qualitative interview responses and the study team expects the same or very similar themes would have arisen through a more extensive qualitative coding approach. Due to the time constraints of the thesis, a comparative coding process using

more commonly used qualitative coding procedures was unable to be completed. However, future studies could utilize and compare coding frameworks to assess effectiveness and efficiency.

LIMITATIONS

Data for the present study were collected at one hospital. This study focused on injured trauma survivors who met at least three of ten predetermined risk factors and were screened for emotional distress; therefore, these survivor perspectives may not be shared by the average trauma survivor (Zatzick et al., 2001; Zatzick et al., 2018). Thirty percent of the 171 total enrolled trauma survivors from the parent project did not participate in this qualitative interview. This may be in part due to difficulty in reaching or engaging the participant. Therefore, the perspectives of such participants were not included and may differ from those who were more engaged in this study. Future studies similar to this investigation could include more diverse patients, including those who do not speak English. Last, while the investigation postulates that the frontloading procedure more quickly arrived at thematic saturation, no formal comparative coding procedure was tested (Palinkas & Zatzick, 2019). Future investigations could formally test comparative coding procedures.

CONCLUSION

Injured trauma survivors in this study reported a number of perceived benefits to working with a peer support person post-injury. Most participants expected the peer support person to be helpful in providing emotional support, either by way of serving as someone to relate to, to look up to for hope and inspiration, or to spend time with or have as a companion. Some injured trauma

survivors also believed that peer support persons may be helpful in providing or relaying medical advice or information from medical care teams or assisting with care navigation. For injured trauma survivors who did not expect a peer support person to be of direct benefit to them post-injury, many believe the experience might result in emotional burden, either due to a lack of interest in connecting with an unfamiliar person, self-identifying as an introvert, or experiencing remorse over a peer's circumstances.

The study also found that saturation was achieved through the thematic domain frontload process; while some refinements during the coding process occurred, the themes identified through the review of prior literature and peer support manuals did not change substantially. The a priori thematic domains were successful in capturing and categorizing qualitative interview responses and the study team expects the same or very similar themes would have arisen through a more extensive grounded theory coding approach. Future investigations could include a comparative coding process to assess the effectiveness and efficiency of this RAPICE informed coding framework.

REFERENCES

American Trauma Society. (2008). The Trauma Survivors Network Implementation Guide Book.

Centers for Disease Control and Prevention. (2017). *Web-based Injury Statistics Query and Reporting System (WISQARS) Nonfatal Injury Data*. Retrieved from https://www.cdc.gov/injury/wisqars/facts.html

Chapman, S.A., Blash, L. K., Mayer, K.M., & Spetz, J. (2018). Emerging roles for peer providers in mental health and substance use disorders. *American Journal of Preventative Medicine, 54*(6S3), S267-S274.

Coleman, E. A., Parry, C., Chalmers, S., & Min, S. J. (2006). The care transitions intervention: results of a randomized controlled trial. *Arch Intern Med, 166*(17), 1822-1828. doi:10.1001/archinte.166.17.1822

Davidson, L., Bellamy, C., Guy, K., & Miller, R. (2012). Peer support among persons with severe mental illnesses: a review of evidence and experience. *World Psychiatry, 11*(2), 123-128.

Fisher, E. B., Ayala, G. X., Ibarra, L., Cherrington, A. L., Elder, J. P., Tang, T. S., … Peers for Progress Investigator Group (2015). Contributions of Peer Support to Health, Health Care, and Prevention: Papers from Peers for Progress. *Annals of family medicine, 13* Suppl 1(Suppl 1), S2–S8. doi:10.1370/afm.1852

Gassaway, J., Jones, M. L., Sweatman, W. M., Hong, M., Anziano, P., & DeVault, K. (2017). Effects of Peer Mentoring on Self-Efficacy and Hospital Readmission After Inpatient Rehabilitation of Individuals With Spinal Cord Injury: A Randomized Controlled Trial. *Arch Phys Med Rehabil, 98*(8), 1526-1534.e1522. doi:10.1016/j.apmr.2017.02.018

Gonzalez, A. A., Abdelsattar, Z. M., Dimick, J. B., Dev, S., Birkmeyer, J. D., & Ghaferi, A. A. (2015). Time-to-readmission and Mortality After High-risk Surgery. *Ann Surg, 262*(1), 53-59. doi:10.1097/sla.0000000000000912

Graneheim, U.H., Lindgren, B.M. & Lundman, B. (2017). Methodological challenges in qualitative content analysis: A discussion paper. *Nurse Education Today, 56,* 29-34. https://doi.org/10.1016/j.nedt.2017.06.002

Hanks, R. A., Rapport, L. J., Wertheimer, J., & Koviak, C. (2012). Randomized controlled trial of peer mentoring for individuals with traumatic brain injury and their significant others. *Arch Phys Med Rehabil, 93*(8), 1297-1304. doi:10.1016/j.apmr.2012.04.027

Heisler, M., Halasyamani, L., Resnicow, K., Neaton, M., Shanahan, J., Brown, S., & Piette, J. D. (2007). "I am not alone": the feasibility and acceptability of interactive voice response-facilitated telephone peer support among older adults with heart failure. *Congest Heart Fail, 13*(3), 149-157.

Heisler, M., Vijan, S., Makki, F., & Piette, J. D. (2010). Diabetes control with reciprocal peer support versus nurse care management: a randomized trial. *Ann Intern Med, 153*(8), 507-515. doi:10.7326/0003-4819-153-8-201010190-00007

Jones, M., & Gassaway, J. (2016). Peer-supported self-management to facilitate community re-entry after discharge from spinal cord injury rehabilitation: Engaging peers as change agents and research partners. *Annals of Physical and Rehabilitation Medicine, 59*, e128-e129. doi:https://doi.org/10.1016/j.rehab.2016.07.289

Loumpa, V. (2012). Promoting Recovery Through Peer Support: Possibilities for Social Work Practice, *Social Work in Health Care, 51*(1), 53-65, DOI: 10.1080/00981389.2011.622667

Marino, P., Simoni, J.M., & Silverstein, L.B. (2007) Peer Support to Promote Medication Adherence Among People Living with HIV/AIDS, *Social Work in Health Care*, 45:1, 67-80, DOI: 10.1300/J010v45n01_05

National Association of Social Workers (NASW). (2017). Code of Ethics. Retrieved from: https://www.socialworkers.org/About/Ethics/Code-of-Ethics

National Association of Social Workers (NASW). (2016). Standards for Social Work Practice in Health Care Settings. Retrieved from: https://www.socialworkers.org/LinkClick.aspx?fileticket=fFnsRHX-4HE%3D&portalid=0

Palinkas, L. A., & Zatzick, D. (2019). Rapid Assessment Procedure Informed Clinical Ethnography (RAPICE) in Pragmatic Clinical Trials of Mental Health Services Implementation: Methods and Applied Case Study. *Administration and Policy in Mental Health and Mental Health Services Research*, *46*(2), 255-270. doi:10.1007/s10488-018-0909-3

Parthasarathy, S., Wendel, C., Haynes, P. L., Atwood, C., & Kuna, S. (2013). A pilot study of CPAP adherence promotion by peer buddies with sleep apnea. *J Clin Sleep Med*, *9*(6), 543-550. doi:10.5664/jcsm.2744

Pfeiffer, P. N., Heisler, M., Piette, J. D., Rogers, M. A., & Valenstein, M. (2011). Efficacy of peer support interventions for depression: a meta-analysis. *General hospital psychiatry*, *33*(1), 29–36. doi:10.1016/j.genhosppsych.2010.10.002\

United States Bureau of Labor Statistics. (2018). Occupational Employment Statistics: Healthcare Social Workers. Retreived from: https://www.bls.gov/oes/2018/may/oes211022.htm

Valenstein, M., Pfeiffer, P. N., Brandfon, S., Walters, H., Ganoczy, D., Kim, H. M., . . . Heisler, M. (2016). Augmenting Ongoing Depression Care With a Mutual Peer Support Intervention Versus Self-Help Materials Alone: A Randomized Trial. *Psychiatr Serv, 67*(2), 236-239. doi:10.1176/appi.ps.201400454

Worrell, S. S., Koepsell, T. D., Sabath, D. R., Gentilello, L. M., Mock, C. N., & Nathens, A. B. (2006). The risk of reinjury in relation to time since first injury: a retrospective population-based study. *J Trauma, 60*(2), 379-384. doi:10.1097/01.ta.0000203549.15373.7b

Zatzick, D., Russo, J., Thomas, P., Darnell, D., Teter, H., Ingraham, L., . . . Jurkovich, G. (2018). Patient-Centered Care Transitions After Injury Hospitalization: A Comparative Effectiveness Trial. *Psychiatry, 81*(2), 141-157. doi:10.1080/00332747.2017.1354621

Zatzick, D., & Thomas, P. (2018). Comparing Two Ways to Coordinate Care for Patients after Trauma. Retrieved from https://www.pcori.org/research-results/2017/comparing-two-ways-coordinate-care-patients-after-trauma

Zatzick, D. F., Kang, S. M., Hinton, W. L., Kelly, R. H., Hilty, D. M., Franz, C. E., . . . Kravitz, R. L. (2001). Posttraumatic concerns: a patient-centered approach to outcome assessment after traumatic physical injury. *Medical Care, 39*(4), 327-339.

Zatzick, D. F., Rowhani-Rahbar, A., Wang, J., Russo, J., Darnell, D., Ingraham, L., . . . Rivara, F. P. (2017). The Cumulative Burden of Mental, Substance Use, and General Medical Disorders and Rehospitalization and Mortality After an Injury. *Psychiatr Serv, 68*(6), 596-602. doi:10.1176/appi.ps.201600311