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Access, Engagement, and Experiences with Critical Incident Response Resources in Athletic Training

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Abstract

Purpose: Experiencing an event that involves actual or threatened death or serious injury is a critical incident and produces serious emotional responses. Athletic trainers (ATs) experience critical incidents in their day-to-day work. The purpose of this study was to explore how ATs experience a critical incident during the course of clinical practice. **Methods:** We used one-on-one, web-based, semi-structured interviewing with a criterion sample of ATs who experienced a critical incident and used any critical incident response resources in the last year ($n=17$; age= 32 ± 8 ; years of experience= 9 ± 7 ; years in current position= 4 ± 5). We used a 3-person team with a multi-phase process to identify the emerging domains and categories. **Results:** Two emergent domains were identified from the study. External support referenced multiple personnel resources available after a critical incident occurred, specifically, trained mental health professionals, untrained personnel, and trusted colleagues/coworkers. Coping with the emotional response included debriefing, spirituality, and complementary mental health strategies. **Conclusion:** In preparation for critical incidents, emergency action planning and after-action planning for healthcare delivery and the emotional response are both essential. Many ATs do not have the formal training, but continuing education courses, community-based mental health resources, and the promotion of professional organization resources can assist ATs in critical incident management.

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ABSTRACT

Purpose: Experiencing an event that involves actual or threatened death or serious injury is a critical incident and produces serious emotional responses. Athletic trainers (ATs) experience critical incidents in their day-to-day work. The purpose of this study was to explore how ATs experience a critical incident during the course of clinical practice. **Methods:** We used one-on-one, web-based, semi-structured interviewing with a criterion sample of ATs who experienced a critical incident and used any critical incident response resources in the last year ($n=17$; age= 32 ± 8 ; years of experience= 9 ± 7 ; years in current position= 4 ± 5). We used a 3-person team with a multi-phase process to identify the emerging domains and categories. **Results:** Two emergent domains were identified from the study. External support referenced multiple personnel resources available after a critical incident occurred, specifically, trained mental health professionals, untrained personnel, and trusted colleagues/coworkers. Coping with the emotional response included debriefing, spirituality, and complementary mental health strategies. **Conclusion:** In preparation for critical incidents, emergency action planning and after-action planning for healthcare delivery and the emotional response are both essential. Many ATs do not have the formal training, but continuing education courses, community-based mental health resources, and the promotion of professional organization resources can assist ATs in critical incident management.

Keywords: debriefing, emotional response, traumatic event

INTRODUCTION

Critical Incident Stress Debriefing (CISD) was created by Jeffery Mitchell in 1974 for small groups of paramedics, firefighters, and law enforcement officers who were distressed after being exposed to a gruesome event.¹ The first article related to CISD was published in 1983 in the *Journal of Emergency Medical Services*.¹ The purpose of CISD is to mitigate the impact of a traumatic event, facilitate a normal recovery process, restore adaptive functions in psychologically healthy people and screen to identify members who could potentially benefit from additional support.¹ CISD is typically used within 24 to 72 hours after the incident occurs and debriefing takes 1 to 3 hours, depending on the number of people involved.¹ Throughout time, CISD has spread to other groups outside of emergency services such as the military, airlines, and railroads.¹ Hospitals, schools, churches, and community groups have also adopted the CISD model for staff crisis support programs.¹ By the mid-1980s, CISD was placed under critical incident stress management (CISM) as one available intervention models.^{1,2} To be most effective, CISM should occur within 12 hours and 3 months.³ CISM has continued to be used among first responder groups, after a critical incident, and can aid in helping health care providers talk through and understand their role and emotions in a critical incident.² The use of CISM in other health care professions is well documented; however, the use of CISM and CISD in the athletic training profession is still emerging.^{1,2}

Experiencing, witnessing, or being confronted with at least one event that involves actual death, threatened death, or serious injury of oneself or others is a critical incident and produces intense, serious emotional responses.^{4,5} Emergency medical technicians^{6,7}, firefighters^{8,9}, and emergency department nurses¹⁰⁻¹² have been studied relative to the debriefing experienced after the critical incident by their employer. Like other health care professionals, athletic trainers (ATs) can also experience critical incidents at work that can alter their mental status, particularly based on the outcome of the incident.^{12,13} Health care professionals can experience a wide variety of emotions after a critical incident, including but not limited to stress, depression, anger, frustration, and anxiety.¹³ In the aftermath of critical incidents, companies and employers often acknowledge loss, but still expect the affected employee resume normal work duties the following day.⁵ Due to the nature of the athletic training profession, it is likely an AT will continue to care for patients despite being involved in a critical incident. Athletic trainers should be aware of the emotions they feel after a critical incident and that they are typical. Athletic trainers should be provided with a safe space to talk about those emotions and talk through the incident if and when needed.⁵

The National Athletic Trainers' Association (NATA) created a peer-to-peer support group in 2014 after a survey was sent out and showed roughly 82% of NATA members felt as if they could not deal with the psychological effects and impact of a catastrophic or critical incident.¹⁴ Because of the survey response, ATs Care was created and is currently one of the only formal peer-to-peer mental health resources offered to any AT or athletic training student. The goal of ATs Care is to have state and regional CISM teams made of ATs, both retired and actively working, available and ready to help other ATs respond to their emotions after a critical incident.¹⁴ Members of an ATs Care team are trained in an intervention model of CISM and understand an AT may have to continue caring for other teams after the incident has occurred. This peer-to-peer resource approach can help ATs involved in a critical incident seek additional resources if needed. ATs Care is available any time after a critical incident and has a hotline as well as an online contact form. The benefits of ATs Care and CISM includes its being confidential, freely available, educational, and driven through peer support.¹⁴ ATs Care uses the SAFER Model: stabilize, acknowledge the crisis, facilitate understanding, encourage effective coping, and referral to continued care.¹⁴ The SAFER Model is a model of CISM often used with individuals that experienced a critical incident or traumatic event.¹⁴

If ATs do not cope with emotions and access critical incident response resources, they may be likely to leave the profession. Types of CISM that should be available to ATs include, emotional support, CISD, individual acute crisis counseling, and follow-up procedures.^{2,11} Athletic trainers are often the go-to person for patients in their respective athletic communities, but ATs may not take the time to care for themselves after a critical incident occurs.¹⁴ The purpose of this study was to identify the accessibility of critical incident response resources for ATs and to explore how ATs experience their emotional reactions following a critical incident or traumatic event during the course of clinical practice.

MATERIALS and METHODS

Design

The consensual qualitative research (CQR) tradition,^{15,16} previously established in critical incident management research,^{5,10} was selected to explore ATs' access and engagement with critical incident response resources after being involved in a critical incident.

Participants and Setting

Institutional research board approval was obtained before data collection occurred (1569319-3). We used a criterion-sampling method to recruit ATs using an electronic demographic survey (Qualtrics, Provo, UT) including the informed consent. To participate, individuals had to have been practicing as an AT, experience a critical incident in the course of clinical practice, and used a form

of critical incident response resource following the event in the last year.

The principal investigator (KLH) conducted all interviews. Seventeen interviews were completed until data saturation, aligning with traditional CQR.^{15,16} Participants consisted of 8 (47%) female and 9 (53%) male practicing ATs (age=32 ± 8 years; years of experience=9 ± 7 years; years in current position=4 ± 5 years). Eight participants (47%) were from the secondary school setting, 5 (29%) were from the collegiate setting, and 4 (24%) were from other settings. Table 1 details the demographic data gathered from each participant.

Table 1. Participant Demographic Characteristics

Pseudonym	Age	Sex	Experience as an Athletic Trainer	Years in Current Position	Practice Setting	Practicing State
Meredith	25	Female	3 years	3 years	Secondary School	Colorado
Alex	44	Male	16 years	15 years	Secondary School	Georgia
Derek	25	Male	1 year	1 year	Secondary School	Pennsylvania
Izzie	47	Female	20 years	10 years	Secondary School	Michigan
Christina	31	Female	9 years	5 years	Secondary School	Indiana
Jackson	34	Male	10 years	5 years	College/University	Utah
Mark	38	Male	16 years	14 years	Professional Sports	Florida
Andrew	27	Male	1 year	1 year	Clinic	Massachusetts
Amelia	32	Female	10 years	4 years	Secondary School	Massachusetts
George	30	Male	7 years	1 year	Secondary School	Michigan
Lexi	28	Female	6 years	4 years	College/University	California
Owen	50	Male	25 years	21 years	Clinic	Virginia
April	25	Female	3 years	1 year	College/University	North Carolina
Addison	31	Female	1 year	1 year	Professional Sports	Utah
Preston	25	Male	1 year	1 year	College/University	Ohio
Lincoln	23	Male	1 year	1 year	Secondary School	Ohio
Callie	27	Female	4 years	2 years	College/University	North Carolina

Instrumentation

The research team (KLH, ERN, KCG, LEE) developed a semi-structured interview script to explore AT's access, engagement, and experiences with critical incident response resources following a critical incident. This script consisted of seven open-ended questions and follow-up questions were used to probe for more in-depth responses (Table 2). The interview script was reviewed by two content experts with experience providing critical incident stress management at the state and national levels of our professional organization and pilot tested.

Table 2. Semi-Structured Interview Script

1. Tell me about the critical incident or traumatic event you experienced during the course of your clinical practice.
a. Was this your first critical incident? If not, tell me about your previous experience(s).
2. What resources did you access to support you following the incident?
3. How did you know these resources were available to you?
a. Did you have formal education about these resources? Did you learn about these resources informally?
b. Did you have to initiate to gain access to these resources or was it activated by someone else (employer, state/regional/national organization)?
4. What, if any, barriers did you experience in accessing these resources?
5. Describe the experience in using these resources. What types of resources were available to you?
a. If not stated, did you seek out individualized interventions? How did that serve you?
b. If not stated, did you have a system of colleagues to support you? How did that serve you?
c. If not stated, did you engage in debriefing, or a structured process of reflecting on the incident with colleagues? How did that serve you?
6. Overall, how do you think these resources served you in responding to your emotions following the incident?
7. Is there anything else you think we should know about your critical incident experience and accessing resource to help you respond to your emotions?

Data Collection Procedures

Participants were recruited with the demographic survey. A random sample of ATs were selected to receive the recruitment email through the member organization (NATA). The principal investigator (KLH) contacted all potential participants to schedule individual interviews using teleconferencing software (Zoom, San Jose, California). The interviews lasted approximately 10-20 minutes each, with an average interview time of 14 minutes. At the conclusion of each interview, the transcript was de-identified. All transcripts and audio files were saved, using a pseudonym, to a secure cloud storage site.

Data Analysis and Trustworthiness

We used member-checking (within 15 days of the interview) after all transcripts were transcribed to ensure accuracy.^{16,17} This gave the participants an opportunity to verify accuracy of their responses.^{16,17} The data analysis team consisted of the primary investigator (KLH) and two other members (ERN, KCG) with experience coding using the CQR tradition. LEE, an expert qualitative researcher, served as the auditor. The 3-person data analysis team engaged in a 4-step process, first by reviewing four transcripts with an inductive approach. Each team member independently read the transcripts to develop a reflective domain list of the data.^{15,16} The team then met to compare notes and conceptualize the core ideas, creating the initial code book.^{15,16} In step 2, the data analysis team applied the initial codebook to two of the original transcripts, reviewed from step 1, and two new transcripts.^{15,16} This phase was used to ensure the codebook was reflective of the data.^{15,16} The team then met again to confirm the consensus codebook.^{15,16} In step 3, the consensus codebook was applied to the remaining transcripts, where each of the data analysis team coded four or five transcripts, independently.^{15,16} In step 4, the coded transcripts were confirmed by one other member of the data analysis team and any diverging opinions were discussed to reach consensus.^{15,16} Finally, we constructed cross-analyses of all participant interviews to ensure the accurate placement of core ideas into categories.^{15,16} Cross-analysis requires the team to collect all quotes in each category and ensure there is no outlier data and the quotes are representative of the category.^{15,16} At the conclusion of the data analysis process the interview script, consensus codebook, the cross-analyses, and coded transcripts were shared with the auditor (LEE).^{15,16} The auditor agreed with the categories, but suggested an alternative organization of the domains, which did not require any additional coding. Triangulation of the data was ensured and trustworthiness was established by the use of participant member-checking, multi-researcher triangulation, and both internal and external auditing.^{15,16}

Once the data analysis process was audited and confirmed, we determined the frequency of each category across the whole sample.^{15,16} Categories were assigned as general if identified in 16 or 17 cases, typical if identified in 8 to 15 cases, variant if identified in 4 to 7 of the cases, and rare if only identified in 3 or fewer cases.¹⁵

RESULTS

Two emergent domains were identified from the study; depicted in Figures 1 and 2. The two emergent domains included (1) external support and (2) coping with emotional response. Frequency counting was completed and is represented in Table 3.

Table 3: Frequency of Cases per Domain and Category

Domain, Category, and Subcategory	Counts	CQR Assigned Value
Support		
Untrained Personnel	16/17	General
Trained Mental Health Professional	13/17	Typical
Personal Referral	5/17	Variant
Required Referral	4/17	Variant
Trusted Colleagues/Co-workers	16/17	General
Coping with Emotional Response		
Debriefing	17/17	General
Focus on Logistics	17/17	General
Lack of Formality	12/17	Typical
Spirituality	3/17	Rare
Complementary Mental Health Strategies	13/17	Typical

Categories were assigned as “general” if identified in 16 or 17 cases, “typical” if identified in 8 to 15 cases, “variant” if identified in 4 to 7 cases, and “rare” if only identified in 3 or fewer cases.¹⁵

Within the *external support* domain (Figure 1), participants noted multiple personnel resources available to them after an incident occurred and three categories emerged: trained mental health professional, untrained personnel, and trusted colleagues/coworkers. Every participant identified using at least one external support avenue after a critical incident. Trained mental health professionals were those identified by the participants as part of their responses who were trained in any health care

profession trained in treating or assisting with mental health concerns or CISM. Out of the 13 participants that used trained mental health professionals, a total of 5 noted a personal referral method, or going on their own, 4 noted a required referral method, or being told to go, and the other 4 participants did not discuss their referral methods. Several participants noted they had already been seeking out treatment by a trained mental health professional for other reasons, so it was easier to bring up the incident in an appointment because there was not a barrier in talking through their emotions. Several participants implied they knew of resources such as ATs Care or employee assistance programs offered through their employers but felt as if they did not need to access additional resources to cope with their emotions. The category, untrained personnel, referred to family members, coaches, or administrators as an external support system after a critical incident. Participants noted both the actual situation and the emotional response were often discussed with untrained personnel as a way of debriefing.



Figure 1. Domain 1 – External Support

Trusted colleagues/coworkers referred to the use of other ATs as a debriefing mechanism; these are often ATs that have a trusting relationship prior to an incident occurring. Participants noted the access to coworkers was easier than seeking out other external support. Participants also mentioned the comfort and trust associated with coworkers; thus they chose not to speak with others they did not have a relationship with, such as strangers or acquaintances. Supporting quotes for the *external support* domain can be found in Table 4.

Table 4. Supporting Quotes

Category	Participant	Quote
Trained Mental Health Professional	Izzie	<i>Like I said, I know we have a team in Michigan that will reach out if they're aware of a situation and ask but maybe even having those people out in the forefront.</i>
	Lexi	<i>Without the resources like ATs Care internally and just talking with people. I don't think I would have been able to go back to work and turn around and help people as soon as I did.</i>
	Alex	<i>I am a firm believer in counseling and talking to someone and talking through issues and problems. I think it is very healthy and needed and we should have more access to it as Americans, but I've used counselors and talk with counselors for years and it has helped me tremendously.</i>
Trained Mental Health Professional: Required Referral	George	<i>We brought in a trauma expert as far as dealing with mental health and trauma, respectively. So, we had a session with the hockey team, coaches, and myself that I believe really helped me get over the edge.</i>
Trained Mental Health Professional: Personal Referral	Christina	<i>And that it [ATs Care] was something that my coworker and I could use but I like I said I did not use it just because I already had my therapist or my own personal support system that I knew worked for me.</i>
Untrained Personnel	Lexi	<i>And I mean, it [talking] helps. I talked to a couple of my athletic training friends from my education. And it turns out that they had, one of them had a similar experience so talking with him helped a lot.</i>

	Andrew	<i>We had like a small debriefing like kind of more of an administrative debriefing with my [Athletic Director] AD like I called it with my AD and assistant AD just to kind of just go over how the [emergency action plan] EAP works as far as like just step wise and everything looks good.</i>
	Addison	<i>And so, I talked a lot with my preceptor who was also involved in that sport as well. I reached out to my professors, because there were a couple days where I just could not, could not go into clinical, it was just too emotionally draining, and I spoke to my professors about that.</i>
Trusted Colleagues/Coworkers	Lincoln	<i>I worked in a high school with three athletic trainers. I think it would be a lot more difficult for an independent athletic trainer to go over incidents like this. Because I think doing it in person face to face with my colleagues at school helps a lot more than you know a weekly conference call.</i>
	Owen	<i>Oh, just tremendously knowing that our personalities match in that sort of way. And we know each other very well working between 8 and 10 years together. It just gave you a sense of calmness and have enough faith at same time help that a lot.</i>
	Amelia	<i>But I think that talking with coworkers' is very helpful because it makes you realize that we all experience those emotions and that we're all human and that it's OK to feel some level of self-doubt and anxiety during or after an incident.</i>
Debriefing- Focus on Logistics	Izzie	<i>I do specifically remember leaving the school that evening late and feeling like I had almost run a marathon. Like I was exhausted in a sense that I don't ever remember being exhausted before, both emotionally and physically</i>
	Andrew	<i>Establishing like a kind of a system of debriefing emotional debriefing when those events come up, kind of like, you know, having including the people that should be in control of that situation so myself, my [Athletic Director], the coach in question. So, she said, yeah, so she suggested to implement something like that as well.</i>
	April	<i>I don't think I would have been able to handle it as well mentally by just keeping it to myself.</i>
	Meredith	<i>Not necessarily using the resources, I suppose, but I guess time to access it. That would be the biggest thing because with our position it's not like you just have a lot of time throughout the day to just go and access it, cause our goal and our focused is the students.</i>
	Derek	<i>I was extra tired at the end of that day so I know emotionally I would claim that I'm fine. But, like physically. I was drained.</i>
Debriefing- Lack of Formality	Jackson	<i>I think just having that network setup ahead of time was phenomenal. Because again, I don't think we ever put a plan together of how to handle a sudden death like that with the team. But these resources were there, and we were able to just communicate with everybody.</i>
	Preston	<i>We're pretty busy with all the sports like any athletic trainer is so I think that was probably the hardest part just finding the time to actually be able to sit down with multiple of them and talk about it.</i>
	Andrew	<i>I think it was just knowing where to start. Just not knowing enough about the strategy of starting the conversation of sorting out emotions during a catastrophic event. Because it's easy to talk about just on a limb. But as far as like having like a structured like system. I don't really know where to start.</i>
Spirituality	Callie	<i>I'm a very spiritual person. I believe in, using religion in any aspect of athletic training. So, for me, like religion was a big based on it. So, I did a lot of praying and that moment and just calming myself down and knowing that the Lord is good.</i>
	Addison	<i>My faith is very important to me. And so, having somebody of that is a religious leader, take the time to talk with me and just let me kind of I don't know what the word is, debrief is not the word that I want, but something along those lines. That was definitely really helpful.</i>

Complementary Mental Health Strategies	Mark	<i>Well, everyone will show their emotions in a different manner and will handle stress differently and go about it differently. Some people are much more emotional. Some people will have a very delicate balance of how to handle or be very sensitive to certain situations and need more time they actually need guidance and assistance from professionals to guide them through critical situations like that. I need all that.</i>
	Christina	<i>It helped me to process, it helped me to not internalize everything because that can be, I do that, and it can be very hard on me. And it just, it helped me to recognize what these feelings were recognized what I was going through and that that was okay. And how to deal with those. But still, do what I need to do in my athletic training practice and my daily life.</i>
	George	<i>You know, because ultimately, you know we need to take care of our athletes to, you know, sometimes we as athletic trainers, forget about ourselves a lot and we always want to make sure every everybody that we care for is taken care of first before ourselves. but this incidence was something that I was able to take care of myself and the team at the same time.</i>

Coping with emotional response domain (Figure 2) referred to multiple avenues of coping and debriefing a critical incident and three categories emerged: debriefing, spirituality, and complementary mental health strategies. The debriefing category was broken down into two subcategories: lack of formality and focus on logistics. Twelve of the participants, a majority, conveyed they had no formal debriefing training from a professional education standpoint. The participants noted relief when processing the event while focusing on logistical aspects of the incident as a means of debriefing. Complementary mental health strategies included things like: journaling, breathing techniques, imagery, meditation, or rapid eye movement therapy. These were often noted by participants as learned overtime, or given to them by a mental health professional as a coping mechanism. When participants explored their emotional response to trauma, they used personalized complementary mental health strategies or spirituality as a way to address their emotions in conjunction with their external support. Supporting quotes for the *coping with emotional response* domain can be found in Table 4.

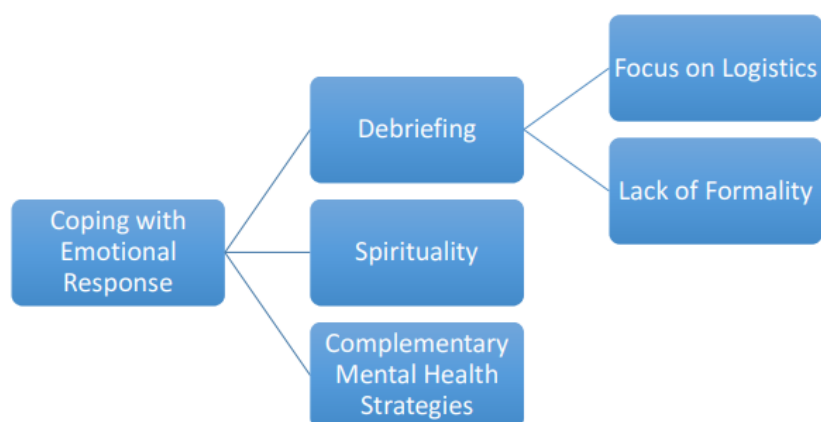


Figure 2. Domain 2 – Coping with Emotional Response

DISCUSSION

Our findings indicate ATs engage with several critical incident response resources to cope with their individual emotional responses following a critical incident. Resources for these participants were evident, but speaking to their peers, coworkers, family, or mentors were more convenient and comforting. Speaking to people outside their normal routine was uncommon and many felt hesitant to speak to people they weren't familiar with. Other mental health strategies have also been used to assist participants after an incident.

External Support

Athletic trainers may experience critical incidents during their career that cause an emotional response and hinder their ability to continue working. First responders can experience several critical incidents in a span of one shift.^{6,7} Ambulance personnel, EMTs, and firefighters all experience critical incidents, to which literature shows they may not use trained mental health personnel due to accessibility or stigma, leading to high levels of general psychopathology, post-traumatic stress symptoms, and burnout.^{7,8}

Because firefighters are frequently exposed to critical incidents, they have an increased risk for developing post-traumatic stress disorder, but only a small percent seek mental health treatment.⁸ Firefighters report accessibility of treatment and concerns about potential stigma as barriers to seeking help.⁸ Stigma, although not explicitly stated by our participants, could be a reason some participants were hesitant to talk to people outside their comfort zone. Some participants in this study noted the accessibility related to trained mental health professionals was limited based on their previous use or experiences with these resources. Accessibility to resources like emotional support, CISD, individual crisis counseling, and follow-up procedures from an employer after a critical incident can help reduce the risk of burnout in employees.^{2,11}

When using trained mental health professionals, resources should be shared openly and actively, instead of a passive approach of passing along phone numbers for resources or assistance.¹¹ Having resources available and discussed openly and more regularly in a work environment can help improve the use of resources such as employee assistance programs, ATs Care, and other trained mental health resources. Participants indicated the discussions with trained mental health professionals allowed them to return to work, manage the emotional response, and gain overall support after an incident.

The use of other individuals, such as other ATs, coaches, or administrators to help cope with the emotional response after a critical incident can be easier than scheduling an appointment with a trained mental health professional according to our participants. Each clinician grieves in their own way, some in private, while some seek support from colleagues, families, and friends.¹⁸ Athletic trainers, much like physicians and caretakers of dying patients, are at a risk for burnout or compassion fatigue if they are unable to grieve effectively.¹⁸ A majority of the participants noted using family members, friends, and other ATs as a way to manage with the emotional response after a critical incident. Although familiar individuals result in comfort, these individuals are not trained, which may result in inadequate behavioral health care.

Trust between an individual and colleagues can help start the conversation after a critical incident. When asked about debriefing or discussing the event with colleagues, it was easier for participants to access those they trusted already. The model of clinician-patient healing relationships could be generalizable to other kinds of healing relationships such as relationships with colleagues.¹⁹ Developing connections with colleagues through shared experiences can help create a healing relationship overtime.¹⁹ When talking with colleagues, they should be "comfortable" in responding to others in a heightened emotional state.²⁰ These colleagues could have been directly or indirectly involved in the incident, but it is important to remember a group of people may experience the loss or incident together, but each person grieves individually.¹⁸ The convenience of quickly accessing colleagues can allow for almost immediate debriefing and can quickly identify if an individual should seek out other forms of external support.

Coping with Emotional Response

Almost half of ambulance personnel have stated the more frequent the exposure to critical incidents the better they could cope with them, whereas, roughly 38% stated the frequency of the exposures did not affect their coping abilities.⁷ The participants within our study did not specify being involved in more than one incident helped them cope with the emotional response after another incident occurred. Athletic trainers in our study spent a majority of their time discussing and debriefing the event focused on the logistical side of the incident. This included reflection on implemented procedures that, the timeline of events, and personnel response. Implementing a debriefing protocol allows a person to review their thoughts, impressions, the facts, and their reactions related to a critical incident in a safe and confidential space.²⁰ Within athletic training, debriefing after a simulation has been researched, in professional programs.²¹ These debriefing sessions were researcher-led and focused on discussing what went well, what went poorly, and what the professional athletic training students may change for the future.²¹ Team performance, emotional responses or support, education, and improvements for future events can be more clear immediately after a real-time incident.²² Within pediatric nurses debriefing after an incident occurs shortly after and is often led by an emergency physician in an informal meeting.²²

According to the participants' recollection of their debriefing, they reflected on their focus on the logistics rather than the emotions associated with being involved with a critical incident. We postulate this could be due to the absence of a debriefing or post critical incident protocol or the lack of knowledge on the importance of emotional debriefing as well as logistical debriefing. The number of critical incidents a health care professional has been a part of can directly affect the way the person internalizes and copes with the event and the emotions they may experience.⁷ Medical students identified the use of multiple coping mechanisms outside of the hospital due to the lack of formality and support from their supervising fellows or attending physicians.¹⁸ Health care professionals and their supervisors should be aware of the possible affects a single or multiple critical incidents can cause on their functional well-being.²⁰ A screening of health care professionals can help identify those with pre-existing needs or experiences that may put them at an elevated need for treatment and can aid in mental health support after an incident.¹¹ Screening should include, but is not limited to psychiatric family history, previous trauma, social support, and any additional life stresses.¹²

Cultural and religious beliefs have an impact on coping.¹⁸ A few participants turned to spirituality as a way to better help them cope with the emotional response they were experiencing after a critical incident. However, those who did use spirituality noted an overall sense of comfort and support after using those resources. Some people used religious specific resources as a way to cope with life difficulties.²³ Emotional-focused coping works to reduce the emotional affects after a stressful event.²⁴ Religion can aid one in returning to a stable emotional state, and could look different from person to person.²⁴ Along with cultural and religious beliefs, complementary mental health strategies can be used as a way to cope.

Athletic trainers, like those in this study, can use complementary mental health strategies as a way to cope with the emotional response after a critical incident. Employers have provided peer-support groups, mentorship, tranquility rooms, massage chairs, or aromatherapy, which are effective at helping post-traumatic stress from a critical incident.¹¹ Aromatherapy has been effective in reducing workplace-related stress symptoms in nurses.²⁵ Complementary mental health coping strategies can help with both acute and chronic exposure to critical incidents while on the job thus decreasing the chances of burnout.¹⁸ Burnout refers to, a maladaptive response to persistent workplace or occupational related stress.¹⁸ This could arise from high demands of the job or a lack of resources, thus leading to exhaustion and health care workers considering a reduction of work hours or a change in job.¹⁸ There is an established need for more staff welfare after a critical incident.⁷ Personal coping mechanisms like humor, exercise, adequate sleep, faith, relaxation techniques, and self-reflection,¹⁸ can improve welfare. Journaling can also help one self-reflect and use metacognition to help them cope with the situation. Journaling can help an individual identify what went well and what did not and add in making appropriate modifications for the future.²⁶

Limitations and Future Research

Research bias is assumed in qualitative research, but the multi-analyst triangulation and development of a consensus codebook within CQR work to mitigate researcher bias. Revisiting a critical incident can bring up emotions that could potentially limit the participant's ability to discuss the event fully or could disincite participation. Moreover, the recollection of self-efficacy or the perceived efficacy of those employers and communities supporting these athletic trainers after a critical incident could be unreliable. Given the qualitative approach and that recruitment occurred during the COVID-19 pandemic, research that aims to generalize these findings is needed. Future research is needed to address the way critical incidents affect the mental health of ATs, immediately following and over time.

CONCLUSION

Our findings indicate ATs engage with several critical incident response resources to cope with emotional responses following a critical incident. ATs have a responsibility to prepare for critical incidents through education and planning. Athletic trainers should educate themselves on debriefing as well as mental health resources. Moreover, the practice of emergency action plans with coaches and administrators are critical to improving the patient outcomes for a critical incident. These plans should also involve the creation of a debriefing protocol to be used after an incident occurs, including identifying a trained facilitator, a timeline for when debriefing should occur, and resources if providers wish to seek out additional debriefing and support.

REFERENCES

1. Mitchell JT, Everly GS. Critical incident stress debriefing (CISD). An Operations Manual for the Prevention of Traumatic Stress Among Emergency Service and Disaster Workers. Second Edition, Revised. Ellicott City: Chevron Publishing Corporation. 1997.
2. Everly GS, Flannery RB, Eyer VA. Critical incident stress management (CISM): A statistical review of the literature. *Human Sciences Press: Psychiatr. Q.* 2002; 73(3):171-182.
3. Priebe R, Thomas-Olson LL. An exploration and analysis on the timeliness of critical incident stress management interventions in healthcare. *Int J Emerg Ment Health.* 2013;15(1): 39-49.
4. Berger W, Coutinho ESF, Figueira I, et al. Rescuers at risk: A systematic review and meta-regression analysis of the worldwide current prevalence and correlates of PTSD in rescue workers. *Soc Psychiatry Psychiatr Epidemiol.* 2012; 47(6): 1001-1011.
5. Lim JJ, Childs J, Gonsalves KB. Critical incident stress management. *Workplace Health Saf.* 2000; 48(10): 487
6. Moya PN, Carrasco MG, Hoz EV. Psychosocial risk and protective factors for the health and well-being of professionals working in emergency and non-emergency medical transport services, identified via questionnaires. *Scand. j. trauma resusc.* 2017; 25(1): 88.
7. Alexander DA, Klein S. Ambulance personnel and critical incidents: Impact of accident and emergency work on mental health and emotional well-being. *Br J Psych.* 2001; 178(1): 76-81.

8. Kim JE, Dager SR, Jeong HS, et al. Firefighters, posttraumatic stress disorder, and barriers to treatment: Results from a nationwide total population survey. *PLoS one*. 2018; 13(1): e0190630.
9. Boffa JW, Stanley IH, Smith LJ, et al. Posttraumatic stress disorder symptoms and suicide risk in male firefighters: The mediating role of anxiety sensitivity. *J. Nerv. Ment. Dis.* 2018; 206(3): 179-186.
10. Halpern J, Gurevich M, Schwartz B, et al. Interventions for critical incident stress in emergency medical services: A qualitative study. *Stress Health*. 2009; 25(2): 139-149.
11. Maloney C. Critical incident stress debriefing and pediatric nurses: An approach to support the work environment and mitigate negative consequences. *Pediatric Nursin*. 2012; 38(2).
12. De Boer JC, Lok A, van't Verlaat E, et al. Work-related critical incidents in hospital-based health care providers and the risk of post-traumatic stress symptoms, anxiety, and depression: A meta-analysis. *Soc. Sci. Med.* 2011; 73(2): 316-326.
13. Scott SD, Hirschinger LE, Cox KR, et al. (2009). The natural history of recovery for the healthcare provider "second victim" after adverse patient events. *BMJ Qual. Saf.* 2009; 18(5): 325-330.
14. ATs Care. NATA. <https://www.nata.org/membership/about-membership/member-resources/ats-care>. Published December 8, 2020. Accessed December 15, 2020.
15. Hill CE, Knox S, Thompson BJ, et al. Consensual qualitative research: An update. *J Couns Psychol*. 2005;52(2):196.
16. Hill CE, Thompson BJ, Williams EN. A guide to conducting consensual qualitative research. *J Couns Psychol*. 1997; 25(4): 517-572.
17. Hill CE. Consensual Qualitative Research: A Practical Resource for Investigating Social Science Phenomena. Washington, DC: American Psychological Association; 2012.
18. Durall A. Care of the caretaker: Managing the grief process of health care professionals. *Pediatric Annals*. 2011; 40(5): 266-273.
19. Scott JG, Cohen D, DiCicco-Bloom B, et al. Understanding healing relationships in primary care. *Ann Fam Med*. 2008; 6(4): 315-322.
20. Burns B. Caring for colleagues through debriefing. *Nurs N Z*. 2016; 22(8): 12-4.
21. Paloncy KA. Post debriefing supervised practice improves clinical performance during simulation-based cardiopulmonary resuscitation encounter. *Athl Train Educ J*. 2020; 15(2): 85-92.
22. Nocera M, Merritt C. Pediatric critical event debriefing in emergency medicine training: an opportunity for educational improvement. *Acad Emerg Med*. 2017; 1: 208-214.
23. Pargament KI, Raiya HA. A decade of research on the psychology of religion and coping: Things we assumed and lessons we learned. *Psyke & logos*. 2007; 28(2): 742-766.
24. Vishkin A, Tamir M. Fear not: Religion and emotion regulation in coping with existential concerns. *The Science of Religion, Spirituality, and Existentialism*. 2020: 325-338.
25. Chen MC, Fang SH, Fang L. The effects of aromatherapy in relieving symptoms related to job stress among nurses. *Int. J. Nurs. Pract.* 2015; 21(1): 87-93.
26. Epp S. The value of reflective journaling in undergraduate nursing education: A literature review. *Int. J. Nurs. Stud.* 2008; 45(9): 1379-88.