

ORIGINAL RESEARCH

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SOLDIERS' EXPERIENCES OF TRAINING FOR EMERGENCY PERFORMANCE SITUATIONS

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ABSTRACT

Professions that include the risk of life-threatening emergency situations ready individuals for such extreme events through training to develop a broad range of positive psychological skills, well known in sport psychology as mental toughness. Given the relatively little attention devoted to the study of performance psychology in this area, the aim of this investigation was to provide first-person perspectives on the training of soldiers with experience in the life-threatening circumstances of hand-to-hand combat (HHC). The results of phenomenological interviews with 17 soldiers revealed four themes that characterized the participant's experience of HHC training: "warrior mindset," "confidence," "repetition," and "realistic." It was concluded the HHC training experiences of these soldiers (a) fostered mental qualities viewed as important for performance in life-threatening settings, (b) consisted of extensive practice, and (c) were aimed at replicating the physical and psychological demands of the expected combat environment. Taken together the results are consistent with sport psychology mental toughness research and provide a number of suggestions for instructors and mental skills trainers working with soldiers and other emergency situation professions.

Keywords: emergency performance; mental toughness; hand-to-hand combat; military training; phenomenology

INTRODUCTION

Many professions, such as law enforcement, firefighting, military, and aviation, must prepare individuals to deal with emergency situations that can be life-threatening, occur infrequently, and with little notice. Failure to successfully perform in these dangerous settings can lead to catastrophic results, including serious injury or death for the individual and/or others [1].

Given these contingences, many professions recognize the importance of developing psychological skills during training to contribute to successful performance in emergency settings. Professions that encounter emergency settings often include experiences during practice settings that aim not only to build psychological skills for domain-specific circumstances, but also generalize to other areas, especially novel, dangerous performance situations [2-3]. One

modality used to develop generalizable psychological skills is HHC combat training.

Defined as structured practice to develop skills for “a physical confrontation between two or more persons using empty-hand fighting or weapons that cannot fire” [4], HHC combat training develops functional skills for a close-quarters emergency encounters. Additionally, HHC training is viewed as a mechanism to develop a broad range of positive variables that include: self-confidence, emotional regulation under stress, courage, controlled aggression, and self-discipline. All such elements are designed to be generalizable to dangerous situations that by their nature cannot be anticipated or practiced in a training environment [3, 5-6]. Training environments are designed to help improve upon a broad range of physical and psychological skills that replicate, as close as possible, real-life performance demands.

A limited number of studies have examined psychological aspects in practice settings that are specific to HHC training. However, previous research has indicated that HHC training is instrumental in the development of self-efficacy, and decreased anxiety [7]. Increases in self-efficacy have also been demonstrated in military officer cadets who completed HHC training (i.e., boxing) compared to those that completed a 10-hour swimming skills course [3]. In addition, Delahaij, et al. [8], have suggested that coping self-efficacy of military officers and infantry soldiers is positively related to the use of problem-focused coping behaviors during a high-stress HHC training situation, while coping self-efficacy was negatively related to the use of emotion-focused coping behaviors. Further, HHC training performance was positively related to problem-focused coping behavior and negatively related to emotion-focused coping. Collectively, the results of these studies

suggest a link between HHC training and psychological skill development.

The concept of the practice environment as an element in developing a wide range of psychological skills is also found in sport psychology literature on *mental toughness*. A common definition of mental toughness is “having the...psychological edge that enables you to: generally, cope better than your opponents with the many demands... specifically, be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure” [9], and often requires performers to deal with unfavorable situations. In addition, research has suggested that mental toughness should be developed by gradual exposure to demanding practice situations over a period of time, challenging performers to problem solve independently in order to learn coping skills [10].

A number of studies interviewing elite athletes, coaches, and sport psychologists suggest the practice environment plays an important role in developing an athlete’s mental toughness [10-16]. For example, reports regarding mental toughness from eleven super-elite performers (7 athletes, 2 coaches, and 2 sport psychologists) suggest a challenging training environment is needed for athletes to master the skills for success in competition, thus resulting in a positive, engaged attitude for further training [13]. Other research suggests training sessions for building mental toughness should not only focus on technical and tactical skill development, but also include specific challenges designed to impact an athlete’s mental skill development [10, 12] and that these psychological aspects of training should occur with regularity in the practice setting [12, 14]. A selective use of training sessions, in which the level of physical and psychological challenge reflects the expected

intensity of competition, was also viewed as important for developing mental toughness [12, 15] with elite athletes from a variety of sports explaining that competition-level intensity in a practice environment allowed one to “push yourself to your limit” [16]. Elite cricketers in another study even viewed failures as important experiences in developing mental toughness [11]; while elite swim coaches further suggested practice sessions should include, situations in which an athlete is forced to confront failure in “no win” situations [12].

Additional research interviewing both athletes and coaches, illustrated the belief that a coach’s leadership is a critically important component for generating practice environments that foster mental toughness [13, 14]. In one such study, coaches described the importance of creating a mastery motivational climate that steered athletes to focus on the *process* of developing expertise, rather than the *outcome* of success in competition [12]. Coaches have also sought to create a training climate that fosters attitudes in athletes that view adversity and pain as something positive [12, 13]. Additionally, coaches sought to create a positive, yet competitive, rivalry among teammates, which was viewed as useful for developing mental toughness [13, 14]. Taken together, these results suggest the importance of the training environment and coach’s leadership in setting the conditions for an athlete to develop mental toughness.

Although unexplored to date in emergency performance settings, the aforementioned studies on mental toughness demonstrate the utility of retrospective qualitative methods to examine participants’ beliefs and attitudes. Consistent with the precedent set by sport psychology literature, other researchers recommend post-event measures to develop an understanding of

performance in emergency situations [17, 18]. One such measure for gaining a greater post-event understanding of the experiences of HHC training is existential phenomenological (EP) interviewing.

Existential phenomenology has been used with success to investigate, among others, training for professional boxers [19], imagery use in practice for collegiate gymnasts [20], training and competition in ultra-marathon running [21], and past experiences that contributed to leadership development in U.S. Army officers [22]. Utilizing participants’ descriptions of their experience of HHC, previous studies have also gained insight into stress and coping [23], as well as the psychological impact of killing [24], during emergency situations. The present study uses soldier’s descriptions of HHC, through EP interviewing, to examine experiences regarding the participant’s training prior to their HHC encounters. Existential phenomenology interviewing offers an approach that is grounded in, and emerging from, the actual lived experiences of soldiers who have fought in HHC, with potential insight into the development of psychological skills through their training. This qualitative method offers an opportunity to increase the breadth and comprehensiveness for developing psychological constructs for future investigations [25] on preparing for emergency performance settings, particularly in the context of HHC. Additionally, HHC training develops a skill set with fundamental demands that connect across a variety of professions (e.g., military, law enforcement, security), as well as those individuals seeking to develop personal self-defense capabilities to protect themselves against violence. Any insights gained in the present study may be useful in furthering the understanding of and training for direct physical confrontations in a myriad of emergency settings.

Given the limitations of previous research on the psychological skills for emergency performance, the purpose of the current study was to examine the training experiences of soldiers who had engaged in HHC during battlefield operations. It is hoped that the results will offer beneficial insights into training for this type of experience and psychological skill development as a result of such training, which can be used to inform existing training scenarios.

METHODS

Participants and Procedures

The study procedures were identical to previous articles employing this method [23-24] and consistent with the recommendations of Dale [26] and Thomas and Pollio [27] for EP interviewing. Participants included 17 soldiers with experience in HHC during military warfare operations, having completed training programs to prepare them for such events. Due to the potentially sensitive nature of the interview topic and the importance of preserving participant confidentiality, only general demographic characteristics were collected from the participants (presented in Table 1).

Table 1. *Participant Demographics*

Total Participants		17
Branch of Service	U. S. Army	15
	U. S. Marine Corps	1
	Rhodesian Army	1
Rank	Commissioned Officer	1
	Non-Commissioned Officer	16
Military Occupational Specialty	Special Forces	14
	Infantry	3
Military Conflict (Location)	Operation Iraqi Freedom (Iraq)	9
	Operation Enduring Freedom (Afghanistan)	4
	Operation Restore Hope (Somalia)	1
	Vietnam War (Vietnam)	2
	Rhodesian Bush War (Zimbabwe)	1
Lethal Encounter (i.e., the participant killed their opponent)		9
Participant Wounded During Encounter		5
Combat Sport Or Martial Arts Experience		13
Military Hand-to-Hand Combat Instructor Experience		11

Although all participants were males, there were no gender restrictions during recruitment. Most participants ($n = 10$) had one experience of hand-to-hand fighting in a battlefield context, but others ($n = 6$) reported a range of between two to four hand-to-hand encounters. The remaining participant indicated he had “numerous” experiences.

Following approval by the University of Tennessee Institutional Review Board, prospective participants were identified based on information and assistance from military HHC instructors who regularly interacted with soldiers that had experienced HHC encounters. During off-duty hours, the instructors approached soldiers they knew had such experiences, and provided them with information about the study including the criteria for involvement. In phenomenological research, participants must meet two criteria: (a) experience with the phenomenon in question, and (b) the ability to describe their experience [27]. Therefore, to qualify for the present study, soldiers had to be 18 years of age or older, with experience in at least one HHC encounter, and be willing and able to provide an in-depth description of their experience.

Soldiers interested in participating in the study contacted the lead author by phone or email and were screened by the lead author for possible emotional distress using the procedures recommended by Draucker et al. [28]. Those prospective participants that appeared to be experiencing acute mental distress, undergoing mental health care treatment, or appearing at risk for a distressing emotional response during an interview were not included in the study. Of those expressing interest in participating only one was excluded due to ongoing mental health care treatment. The other participants were scheduled for an interview at a location and time of their personal convenience and

level of requested privacy (e.g., after work hours, living quarters). Participants were informed that they could end their interview at any time and for any reason, at which point their audio record and all notes would be destroyed. However, none of the participants did so.

Before conducting each interview the first author (hereafter referred to as “the interviewer”) explained again the purpose of the study, addressed any questions from the participant, obtained written informed consent from the participant, and began the interview by asking the soldier: “Please describe in as much detail as possible an incident of HHC you had with an enemy combatant during combat operations.” The purpose of the opening question was to encourage the participant to provide as much information, in an open-ended manner, as he was comfortable recalling about the experience [26-27]. The interviewer did not attempt to influence the participants’ responses at any time and only asked follow-up questions to obtain additional information or clarification about the participant’s statements [27].

The primary researcher was extensively trained and experienced in qualitative research methodology and interview techniques as delineated by Thomas and Pollio [27]. All interviews were audio-recorded and ranged in length from 17 to 73 minutes (39.76 ± 16.91 min; $Mdn = 36$ min), which is considered within the normal range for interviews of this nature [26, 29]. Soldiers were encouraged to talk freely throughout the interview, for as long as they wanted, and in as much detail as they felt comfortable [27]. Interviews were completed when the participant had nothing further to contribute as a response.

Data Analysis

The audio recording of the interview was transcribed verbatim and a copy of the transcript provided to the participant for an opportunity to verify content accuracy. The participant was invited to clarify, amplify, or revise any aspect of the transcript they wished [27]. Once verification from the participant was completed, the interviewer read the transcript several times to develop a more detailed understanding of the soldier's experience [26]. Data analysis in EP research primarily focuses on interpreting, rather than inferring, the meaning of participants' experiences [26]. Interpreting the interview involves initially attempting to identify information-rich statements that stood out as meaningful to the participant. In EP research, such information-rich statements are termed *meaning units*. Then, employing a hermeneutic process, the individual meaning units were related to the whole of the participant's experience and then used as context for interpreting and refining the meaning units [27-27].

After reviewing all of the participants' transcripts, the authors obtained the assistance of an interpretive research group to continue a more detailed data analysis. This group consisted of university faculty members and graduate students who regularly employed EP research methods and specifically functioned as a group for interpreting EP data analysis. During data analysis sessions, the group required the interviewer to account for his interpretations of the transcript text, discuss the identified meaning units, and respond to any challenges or questions regarding the interviewer's initial analysis of the transcript [27]. During this reflective and interactive process some meaning units initially identified by the interviewer were revised and in other instances meaning units identified by members of the interpretative group were added.

Following group analysis of each transcript, the interviewer developed an idiographic (i.e., individual) thematic structure for each participant [26]. After the interviewer analyzed all the individual transcripts, the hermeneutic process was repeated with all the individual transcripts to create a nomothetic (i.e., group) thematic structure that contained the major components of all the interviews [26-27]. This nomothetic thematic structure consisted of both higher-order and lower-order themes, as well as their interrelationships, and served to represent the HHC experiences of the entire group of participants [26-27]. The final nomothetic structure was then shared with all the participants for verification and additional feedback regarding how well it represented their experience [27]. All of the participants that provided a response to the structure (13 of the 17 participants) indicated that the thematic structure was an accurate portrayal of their experience.

RESULTS

Analysis of the transcripts generated 183 meaning units and four themes related to training for HHC which, based on the words of several participants, were labeled warrior mindset, confidence, repetition, and realistic. Table 2 depicts these themes (along with the number of participants that mentioned each theme) and representative meaning units. In the following sections each of the themes is discussed and sample supporting quotes are provided.

Table 2. Themes and Representative Meaning Units of Participants' Experiences of Hand-to-Hand Combat Training

Theme	n	# MU ^a	%MU ^b	Representative Meaning Units (MU)
Warrior Mindset	14	39	21.3%	I had more of a warrior mentality
				Psychological edge of training
				Magnified my mental capabilities
				The mental state of fighting
				Training a step further mentally
Confidence	13	59	32.2%	Training gives you confidence
				I know I'm going to win
				An air of confidence
				I got no doubts
				I can handle the situation
Repetition	16	39	21.3%	Training was countless hours of doing
				Repetition is the key to everything
				I've been training to fight my entire life
				It was a lot of training for a long time
				I've fought since I was twelve
Realistic	16	52	28.4%	I required full kit
				Train with your kit on, it changes the game
				We worked really hard on combatives
				The more realistic, the better
				Fighting keeps you honest

Note. #MU = number of meaning units;

%MU = percent of meaning units

^a number of meaning units from participants for that theme.

^b percent of meaning units for theme relative to all meaning units.

Warrior Mindset

As soldiers in this study discussed their HHC training the most prominent topic was the relationship between training and the development of psychological aspects through HHC training. Warrior mindset emerged as soldiers described a mental readiness that they believed was necessary to perform successfully in HHC and emergency situations. One soldier stated, "the psychological piece plays a huge role in fighting and determining the outcome." Another described the warrior mindset as, "the mental state of being able to handle that

situation" with a second soldier offering, "I think that some guys are mentally more prepared...than others." The mental readiness for emergency situations was further characterized by one soldier as a "...comfort level in fighting" and another as a mental state that "...gave me the guts to do what I had to do."

HHC training, sometimes labeled by soldiers in this study as *combatives*, was viewed as a useful avenue for developing the warrior mindset. One soldier stated, "I think that combatives...builds individual warrior

spirit” and another remarked, “army combatives...I think guys who train are in a much better situation to deal with those types of things [emergency encounters].” Another explained the mental readiness necessary for emergency situations and the role of developing such readiness in a training environment. He stated, “Throughout this job, not just this job but in life, you are going to find these situations that are [expletive] extreme. So extreme that an average person will be completely overwhelmed... You are not an average person. Mentally you should be farther ahead, but if you haven’t pushed in training you are not that far ahead.”

Confidence

This theme reflected the soldiers’ beliefs in their ability to perform HHC in emergency settings. For several soldiers, confidence emerged as a strong assurance in their abilities to perform during an emergency situation. One said, “I had confidence in my own abilities and I could take care of the situation.” Another described that he was “...not worried about a HHC situation because I’m sure that I can end it if the guy doesn’t have a weapon, because of the confidence I have.” Other soldiers expressed their confidence by emphasizing their beliefs in their superior capability over an enemy they might face during an emergency situation. One soldier stated, “I’m fully capable to do what’s necessary to destroy my opponent” and another offered, “I got no doubts I could have dispatched him with my hands if I had to.”

Soldiers not only described their confidence but believed their training in HHC was specifically responsible for developing such confidence with one saying, “I think any training in this regard [HHC] is valuable because it builds confidence” and another stating that training “...gave me the confidence to go out there, if they [the opponents] had a knife or club, I’d still feel

confident thinking at least I could contain the situation.” Several soldiers in this study also believed that their training in HHC developed confidence not only in their ability to perform effectively in a HHC emergency situation, but that their training developed a confidence that generalized beyond domain specific situations. One soldier stated, “I’m a big believer in the confidence...combatives gives you; more awareness, so you don’t have to worry about that and it’s not just in the combat situations, but in life.” Another explained that after a soldier completes HHC training, “if he never wins a tournament, wins a [sport] fight - I don’t care. Did I instill a greater confidence in him? If I did, then that training was completely worthwhile.”

Repetition

This theme dealt with soldiers’ trust in the quantity of their training. They believed that their fighting skills emerged during hand to-hand combat due in part to the large volume of training they experienced prior to participating in combat operations. For them HHC training was “something that we rehearsed over and over and over again” and another soldier explained that fighting skills, “become instinctual; it becomes drilled into you; you do it over and over and over again to where you don’t think about it, it just happens.” Another soldier remarked that a large amount of training developed, “muscle memory” and that “the more you drill something, the better you’re going to know it, the better you’re going to learn it.” One soldier’s interview comment embodied this theme when he insisted that soldiers must, “Train! Train, train, train, train, train.”

Another facet of the soldiers’ experiences of the large volume of training came from their descriptions of their overall length of training. Several soldiers indicated that they had trained in HHC for many years, with one soldier stating, “I’ve been doing

combatives for about ten years” and another remarked: “ever since my boot camp we have the [HHC training] program.” Other soldiers characterized the depth of their training experience by describing the length of time they had participated in martial arts and combat sports through their own personal interests. One soldier explained that, “for a hobby I do judo, jiu-jitsu, and boxing – and all combative sports” and another described his extensive training background stating he had participated in “years of training and teaching and competing [in] wrestling tournaments, martial arts tournaments, boxing smokers [i.e., informal competitions].”

Realistic

The final theme that emerged from these interviews depicted the intense training these soldiers described as important for success in combat situations. Some of these soldiers emphasized that the closer training resembled the demands of an actual combat event, the more valuable. Soldiers described ways their training simulated actual HHC situations, such as by wearing all of the equipment (termed by some soldiers as *kit*) they would be wearing during combat operations. One said, “training with kit on is valuable” and another noted the importance of including the weapons they might carry in combat during training by saying, “I think when it comes down to training... realistically, we got to look at how we fight, using what we’ve got, whether it comes down from the rifle, to the pistol, to the knife, to the hands.” The theme *realistic* was also characterized by some soldiers describing the importance of an active, resistant opponent for HHC training in preparing for emergency situations. As one soldier stated, “there is no substitute for fighting, but fighting” and further explained that during training, “you can shadow box...you can do forms and katas, things like that, but that really doesn’t replicate fighting. I think you got to fight.” It appeared that

HHC training, which included an active, resistant opponent, offered similar performance demands as that expected in an emergency situation and also provided a valuable level of psychological intensity. One veteran of lethal HHC in Iraq explained: “The first time you get racked by some guy’s fist, it should not be in a life and death situation. Cause you don’t know how you are going to react. It can be very overwhelming...it’s definitely an emotional event for most people when it first happens.” The focus of these soldiers to seek training that most closely replicated the demands they expected during an actual HHC encounter appeared driven by a sense that it was difficult to fully replicate combat. As one soldier cautioned, “we don’t want to cloud the difference between sport fighting and actual survival or combat fighting” because, as another soldier explained, “that is not the way combat is.” One veteran of a lethal HHC encounter described the difficulty of replicating an emergency setting during training by stating, “fighting for your life is 100% different than smashing up a bag or sparring for three or five minute rounds because the same fear factor isn’t there.”

Some soldiers recommended including training experiences designed in a manner that soldiers would experience failure in order to approach the intensity and demands of HHC. As one veteran of lethal HHC stated, “I think sometimes guys have to fail in training,” explaining, “occasionally I would set up a ‘you’re going to lose scenario’ because I think that if you always think you are going to win that kind of gives you a false sense.” These efforts to expose soldiers to failure during HHC training were “not to make them feel bad” but were viewed as useful in exposing soldiers to the extreme physical and mental intensity of emergency situations. Some soldiers explained that such situations provided feedback for effective

learning with one stating, “if there’s not a lot of pain involved, sometimes people won’t get it, especially when you’re dealing with hand-to-hand drilling, like combatives.”

Capturing the importance of realistic training and the challenges of replicating the combat environment a veteran of lethal HHC in Iraq stated: “People like to lie to themselves and say ‘I’ll rise to the occasion.’ That’s horses**t. Physically, when it comes...to throwing down or shooting or whatever, you will not rise to the occasion. There is no such thing as rising to the occasion. You will fall to the level of your training. Make sure that level is high.”

DISCUSSION

The present study aimed to examine the training experiences of soldiers who had fought in life-threatening HHC. Perhaps the most prominent finding of the four themes that emerged from existential phenomenological interviews and qualitative data analysis was the insight into the training environment’s *motivational climate*. Defined as a practice setting’s perceived structure for reinforcing goals through a focus on explicit rewards, demands, and expectations, motivational climate is categorized as either *mastery-* or *ego-*focused [30]. An ego-focused environment encourages evaluation of success based on comparison to others, with instructors devoting greater supportive efforts on more competent athletes that can impact a team’s capability to win. A mastery-focus climate characterizes success in self-referenced goals that include persistence despite setbacks, participating with maximum effort, embracing challenging tasks, and self-referenced improvement with mistakes perceived as potentially useful sources of feedback to foster development. In this climate the role of the coach is to facilitate this focus and promote growth in all athletes. Findings from the present study suggest

participants viewed their HHC training environments as mastery-focused.

The themes of warrior mindset and confidence emphasized development in training of psychological skills intended to support success in combat situations, which is consistent with a focus on self-referenced improvement, as well as previous literature advocating similar potential for HHC training [3, 5-6]. In discussing the psychological skills developed by HHC training, soldiers in this study appeared to recognize that these skills are important for performance during high-stress, emergency situations – such as combat – which is consistent with researchers who suggest that mental skills are as valuable for performance in military settings as they are for athletes in a sport setting [31-33]. Additionally, the theme repetition that emerged from the data suggests soldiers in this study recognized the importance of large amounts of quality training for success in emergency performance settings. By doing so, this finding further supports a mastery-focus motivational climate, and is consistent with both expert performance theory for developing expertise [34] and motor behavior theory for developing automatic motor skills [18]. Highly-automatized motor skills are viewed as a mechanism for sustaining performance under stressful conditions [35] and soldiers in previous research [23] have described using highly automatic skills during HHC encounters, as a product of their training.

The theme realistic offers another aspect consistent with a mastery-focused motivational climate. These participants appeared to value challenging training tasks that demanded maximum effort as a necessary aspect to sufficiently prepare for emergency performance settings. Additionally, some participants viewed “no win” scenarios, as manufactured by instructors, to be valuable

during training. This finding is consistent with a mastery-focus on viewing setbacks as potential sources of important feedback for improvement. Recent sport psychology research suggests a mastery-focus motivational climate supports development of mental toughness in athletes [12] and findings from the present study are congruent with several aspects of mental toughness literature.

Sport psychology research suggests developing mental toughness in athletes requires challenges in the practice environment that reflect those of the expected performance environment [12, 15]. In addition, offering a setting to “push yourself to your limit” [16] and independently problem solve, despite unfavorable conditions, also facilitates the development of mental toughness [10]. These conditions to encourage the growth of mental toughness skills for these individuals were highlighted by the physically and mentally intense practice settings advocated by some participants in the present study. Additionally, the no-win practice situations recommended by some participants is consistent with elite cricket players and swim coaches for developing mental toughness in athletes [11-12].

The theme confidence, which soldiers viewed as a valuable outcome of HHC training, is an attribute of mental toughness [9] and consistent with previous literature that demonstrated the impact of HHC training on soldier's domain specific self-efficacy [3, 7-8]. Additionally, some soldiers in the present study viewed HHC training useful for developing a globalized self-efficacy that extended beyond the specific domain of HHC performance. This view is consistent with Bandura's [36] concept of *transformational experiences*, where self-efficacy developed from success in a highly challenging event (e.g., summiting a difficult mountain)

transfers to a globalized sense of self-efficacy applicable to a wide-range of challenges and settings. The highly demanding physical and psychological aspects characterized by the theme realistic may have contributed to creating the challenging conditions for transformational experiences through HHC training. Offering some contrast, the no-win situations recommended by some participants appears in conflict with self-efficacy theory that emphasizes past experiences as the most prominent influence in fostering a person's self-efficacy [36]. Perhaps the perspective regarding no-win training scenarios advocated by these participants continued to support a mastery-focus motivational climate by embracing setbacks as an important opportunity for feedback and recognizing that the manner in which a person interprets past performance, rather than simply the performance outcome, is critical for developing self-efficacy [37].

Military instructors play an obvious role in setting the conditions for the training environment's motivational climate, but given the combat sport nature (i.e., two opponents physically contesting against each other for a dominant position) of HHC training, each soldier becomes important in contributing to the practice setting motivational climate and conditions for developing mental toughness. For example, a soldier's training partner is instrumental in providing “realistic” conditions during a practice setting. Without a training partner practicing with sufficient effort and recognizing their role in creating the physical and mentally challenging conditions to a training setting, another soldier may not experience a level of adversity that fosters development of the psychological skills discussed by participants in this study and past literature [6].

The present findings suggest some possible opportunities for augmenting HHC and self-defense training protocols. First,

instructors should foster a motivational climate that encourages students to focus on process rather than outcome goals. Competitive activities (e.g., tournaments) should not be discouraged, but instructors should view all such activities as opportunities to foster an environment where students value: maximum effort, appropriate attitude, and constructive reflection after losses to an opponent or a struggling performance. Any application of HHC as a platform for developing mental toughness would likely be well served by structured approaches such as Stress Exposure Training [38], which gradually introduces mentally challenging and stressful settings with an opportunity for individuals to gradually develop appropriate coping skills [10]. Additionally, incorporating the high volume of HHC training, as well as the physical and mental intensity, suggested by the themes repetition and realistic, into efforts to develop soldier's mental toughness should be approached with caution given the endemic nature of muscular skeletal injuries from military training in general [39]. A holistic training approach that incorporates well-established, evidence-based protocols for both mental toughness development and physical injury mitigation are recommended to maximize soldier's readiness and safety.

Recommendations for Future Research

It should be noted that the present study was limited in at least three ways. First, the results that emerged from the interviews represent the experiences of only 17 soldiers and the degree these findings extend to other military persons is unknown. Second, the study's focus on HHC training limits generalizability to other forms of military or self-defense training (e.g. marksmanship training). Finally, another research team's interpretation of the data may yield different interpretations. To obtain a larger sample of what soldiers think about the mental

toughness development, future researchers might use survey methods to explore HHC training or other areas of military training based on the current findings. Further examination of the military HHC training environment may provide additional insights into the mental toughness of soldiers and development of such psychological aspects. Specifically, examining the views and role of HHC instructors on developing mental toughness, which is mentioned in sport psychology research, but was not mentioned by participants in the current study.

CONCLUSIONS

Soldiers who fought in HHC during a potentially life-threatening emergency suggest their training experiences played a role in building a psychological readiness and mental resilience akin to the notion of mental toughness found in sport. Participants in this study also described large amounts of training in a practice setting approaching the physical and mental intensity expected in emergency situations was favored. Given that the expected performance environment may have aspects that are irreproducible in a training setting, the importance of developing psychological skills becomes paramount for the success and safety of individuals in dangerous professions.

ACKNOWLEDGEMENTS

The authors are deeply grateful to the soldiers who participated in this study.

This paper is based on data from a doctoral dissertation submitted by the first author as a U.S. Army Advanced Civil Schooling student. Jensen PR is now at the Preservation of the Force and Family – Human Performance Program, U.S. Special Operations Command, Tampa, FL. The authors have no financial or other personal

interest in the research findings. The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or representing the views of the U.S. Special Operations Command, Department of the Army, or the Department of Defense.

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