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# AUTOBIOGRAPHICAL ACCOUNTS OF MILITARY HAND-TO-HAND COMBAT

## ABSTRACT

The current study examines autobiographical accounts of soldiers to enhance our understanding of the demands faced, and the subsequent emotional responses experienced, during the military combat task of hand-to-hand fighting. Nine autobiographies with descriptions of military hand-to-hand fighting were sampled, and three themes were developed: unexpected shock, life-threatening fear, and burden of killing. The findings extend the current literature by illustrating the severe psychological strain soldiers face from hand-to-hand fighting situations, such as having to apply lethal actions against an opponent, and suggesting how *in situ* cognitive performance degradations can result from the encountered fear-based affective components. Based on this study, recommendations are offered to enhance representativeness in training for military hand-to-hand fighting. The autobiographical analysis in this study presents an approach for enhancing existing and future interview-based research that explores affective components of martial arts that prepare for violent conflicts.

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## KEYWORDS

Hand-to-hand combat; military; affective components; injury; killing

*Accepted for publication on 1 June 2024*



## INTRODUCTION

The use of martial arts during military ground combat remains a reality for the modern soldier with studies revealing that, for some United States (US) Army units, nearly one in five soldiers reported using hand-to-hand fighting techniques during recent major conflicts (Hoge et al., 2004; Jensen, 2014; Kim et al., 2012). Providing insights on the demands within this military context is valuable to inform training scenarios that can focus on 'mastering the key features' of such encounters (Bowman, 2014, p. 5). One key feature of military hand-to-hand fighting is the affective component that consists of the demands that generate psychological strain (Staller et al., 2017). These demands have the potential to negatively impact a soldier's performance during hand-to-hand combat. The purpose of the present study was to identify the key affective features of hand-to-hand fighting, during ground combat, so that findings might support the design of training experiences with improved representativeness.

Defined as a physical confrontation between two or more individuals using bare-hands or non-firing weapons (Cohen, 2011), hand-to-hand fighting during military ground combat is one dimension of martial arts (Wetzler, 2015). Similar to mixed martial arts (MMA) fighters in competition (e.g., Jensen et al., 2013; Vacarro et al., 2011), soldiers have described intense fearful emotions (Jensen & Wrisberg, 2014) and stressed the importance of controlling emotions for successful performance in hand-to-hand fighting (Jensen & Young, 2016). Yet, MMA competition stands apart as an *edgework* activity where participants voluntarily and deliberately seek situations with potentially life-threatening consequences to experience the 'limits of human experience' and to test 'one's ability to effectively survive the extraordinary journey up to and back from... danger' (Channon, 2020, p. 7). In contrast, soldiers viewed hand-to-hand combat as 'the least desirable means for confronting an opponent' on the battlefield (Jensen & Wrisberg, 2014, p. 415). Military encounters that included hand-to-hand fighting were considered 'inescapable' except through physical violence to stop their opponent's capacity to continue fighting (Jensen & Wrisberg, 2014, p. 415). Although hand-to-hand fighting is considered a 'last resort' option during battle, soldiers must prepare for such a possible encounter.

The cognitive-motivational-relational theory (CMRT; Lazarus, 1991, 1999) offers a conceptual structure to examine the affective features of a military hand-to-hand fighting encounter. In this model, psychological stress is a continuous interaction between an individual's perceived resources and the environmental demands, with psychological strain resulting from a belief that the demands are greater than the individual's available resources to meet those demands (Lazarus, 1999). Negative emotional reactions emerge when an individual feels threatened by a perceived mismatch between environmental demands and individual coping resources (Lazarus, 1999). CMRT has been useful for studying emotions in dynamic sporting environments (e.g., Campo et al., 2012; Uphill & Jones, 2007), including the emotions athletes experience during elite western fencing competition (Doron & Martinent, 2017, [mas.cardiffuniversitypress.org](http://mas.cardiffuniversitypress.org)

2021). In considering military ground combat, CMRT would explain how soldiers that fail to cope with the demands and emotions found in life-threatening combat can experience rapid and steep performance declines (Hancock & Krueger, 2010) and *acute stress reactions* (ASR) characterized by the temporary inability for a soldier to perform required tasks, such as speaking, moving, responding to commands, and firing weapons (Adler et al., 2020). Thus far, only a scant amount of research has examined the specific demands experienced by soldiers in hand-to-hand fighting.

Jensen and Wrisberg (2014) found that a primary demand during hand-to-hand fighting was managing unexpected elements of an encounter (e.g., opponent attacks without warning, adjusting fighting techniques to fit unique circumstances). An emotion of surprise (e.g., 'That was really an eye-opener for me' and 'caught me off guard') was a common response to these demands. Another demand was the immediate threat to a soldier's life from the attacks of an opponent in hand-to-hand combat. The life-threatening danger, when combined with being attacked without warning, included comments of intense fear suggesting performance degradation in some study participants (e.g., 'my thoughts shut down just for a split second' and 'I was scared out of my mind'). Other demands included being separated from their fellow soldiers, putting their fellow soldiers in danger, and being captured by opposing soldiers (Jensen & Wrisberg, 2014). In a follow up study, Jensen and Simpson (2014, p. 470) found that soldiers who killed their opponent in hand-to-hand combat reported the act of taking a life was a psychological demand in and of itself with participants offering broadly negative descriptions of their *in situ* experience with terms such as 'nasty', 'ugly', 'distasteful'.

Although these findings offer insight into the affective demands of hand-to-hand fighting, some aspects of combat may be difficult for soldiers to discuss in an interview setting with potentially important information going unmentioned. For example, Purcell and colleagues (2016) found that military veterans in their focus groups described their reluctance to share their thoughts and emotions about killing with anyone, including fellow soldiers. Additionally, cultural barriers may generate additional reluctance from combat veterans talking with non-military persons about their experiences of combat, such as civilian researchers seeking information about combat events (Danish & Antonides, 2011). Given these potential limitations of previous hand-to-hand combat research, the purpose of the current study was to qualitatively examine the affective components of soldiers fighting in hand-to-hand combat. More specifically, this study aimed to explore psychological demands and subsequent emotions encountered by soldiers. It is hoped that these findings will broaden the understanding of key features within military hand-to-hand fighting and support practical implications for training improvements.

## METHOD

### *Research design, philosophical assumptions and positionality*

Considering the aim of the study to explore and inform about the experiential qualities of an individual, a qualitative approach was selected for the present study (Creswell, 2014). One approach for obtaining greater insight on the experiences of an individual is qualitative analysis of autobiographies. Autobiographies are a useful source for understanding the psychological experiences of soldiers during combat (Harari, 2007). For example, Robinson (2012) examined autobiographies from United Kingdom (UK) soldiers to better understand psychological trauma and battlefield experiences. Some argue that autobiographies are not 'true facts' but instead a story about memories of life events (Smith & Watson, 2010). Although this is an important consideration, a battlefield is an inhospitable environment that does not permit data gathering approaches such as video recording, researcher-as-observer, in-the-moment journaling by participants, or surveying soldiers during pauses in the performance setting. Instead, examining a soldier's post-event recollections (either by interview or from their writings) offers the only avenue for shedding light on the demands and emotions of combat. Allowing for the limitations of autobiographies as a data source (see Sparkes & Stewart, 2016 for a review), analysis of autobiographical sources is likely to provide information that will enhance our understanding about the affective components of hand-to-hand fighting.

Our study adopted an interpretivist lens guided by ontological relativism (i.e., social reality is humanly constructed, multiple, and subjective) and epistemological constructivism (i.e., knowledge is co-constructed by those involved in the research process). As a result, each autobiography was examined from the writer's individually constructed reality, rather than through a lens in which one objective reality exists. This also means that the research team played a role in generating knowledge through the interaction with and analysis of the data in the autobiographies (Guba & Lincoln, 2005), and how each member of the research team approached the study with their own views, knowledge, and prior experience of the demands soldiers face. The first author was a former military officer with ground combat experience and has previous experience interviewing soldiers about the demands they face during combat. The first author led the organization and analysis of the data. The second author has previous research experience of investigating stressors and analyzing data from autobiographies, and the third author has expertise in research and applied consulting work involving the use of mental skills within competitive environments. The second and third authors have no military experience.

### *Procedure and sample*

A criterion-based, purposeful sampling was used for selecting the autobiographies for this study. The initial criterion for inclusion was that the autobiography described at least one hand-to-hand fighting encounter in detail. To collect the sample, initially the

first author carried out a broad internet search for soldiers' published autobiographies to identify those that had the potential for inclusion. Key words in the search included, but were not limited to: 'hand-to-hand', 'army', 'military', 'combat', 'memoir', 'bayonet', etc. 15 autobiographies were identified in the initial search, and subsequently, six of these were not included in the study because aspects of the accounts seemed unreliably inaccurate (e.g., they referred to inaccurate information about military actions or equipment which led to us questioning the authenticity of the accounts) or the accounts lacked any meaningful descriptions of the specific cognitions and emotions of the writer. Thus, nine autobiographies of military persons were taken forward for analysis (for full details of the writers and their books see Table 1).

### *Procedure and data analysis*

All autobiographies were read and re-read by the lead researcher and all text related to hand-to-hand fighting was transcribed by the lead researcher. A reflexive thematic analysis (Braun & Clarke, 2019) was conducted to identify, interpret, and describe common patterns across the descriptions of soldiers fighting in hand-to-hand combat. The reflexive thematic analysis approach was selected because it offered a flexible, yet rigorous process to identify and interpret data patterns concerning experiences related to a certain topic (Braun et al., 2016). An inductive approach was used in the data analysis that allowed the content, rather than theoretical concepts, to guide the developing analysis. The analysis was guided by the six flexible steps outlined by Braun and Clarke (2019). Initially, the first author immersed themselves in the data to become familiar with the content and context of each autobiography. This involved identifying text related to hand-to-hand combat, reading and re-reading these extracts, before generating initial codes across the data. The first author also recorded reflexive notes from questions about the data (Smith & Sparkes, 2009). For example, when a soldier described a psychological demand experienced during a battle, the researcher considered the extent to which the soldier was specifically referring to the hand-to-hand combat portion of the battle. Initial codes were examined to build connections between the psychological demands of hand-to-hand combat and their subsequent emotions (e.g., fear of injury, anger during attacks). Through this process, the first author identified underlying shared patterns and concepts within the data set, then clustered initial codes together to develop a preliminary group of themes that represented the affective components faced by soldiers when involved in hand-to-hand combat. Afterwards, connections were established between themes to merge recurring data patterns into broader organizing structures (Braun & Clarke, 2019).

Throughout the analysis the lead author met regularly with the second author who served as a *critical friend* (Smith & McGannon, 2018). The second author offered alternative interpretations of both the initial coding and thematic conceptualization. The first and second author also exchanged figures and diagrams to explore

alternative views on data interpretation and connections among the themes (Birks et al., 2008). The third author was brought in as an additional critical friend to further strengthen the thematic analysis. The third author re-examined the themes established by

the first two authors and offered potential alternatives and interpretations of the thematic structure and conceptualization from a different perspective.

Table 1: Soldier and Autobiography Details

Soldier name (coauthor)	Year published / Title	Conflict	Country / Service
Mike Calvert	1996 / <i>Fighting Mad</i>	World War II	UK / Army
Fredrick Downs	1978 / <i>The Killing Zone</i>	Vietnam War	US / Army
Stanley Whitehouse (George Bennett)	1995 / <i>Fear is the Foe</i>	World War II	UK / Army
David Bellavia (John Bruning)	2006 / <i>House to House</i>	Iraq War	US / Army
Lionel Pinn (Frank Sikora)	2007 / <i>Hear the Bugles Calling</i>	World War II, Korea	US / Army
James Gillam	2010 / <i>Life and Death in the Central Highlands</i>	Vietnam War	US / Army
Jim McEnery (Bill Sloan)	2012 / <i>Hell in the Pacific</i>	World War II	US / Marine Corps
Dakota Meyer (Bing West)	2013 / <i>Into the Fire</i>	Afghanistan War	US / Marine Corps
Marlin Groft (Larry Alexander)	2014 / <i>Bloody Ridge and Beyond</i>	World War II	US / Marine Corps

Note. Although writers from the US Marine Corps identified themselves as *marines*, for clarity and ease of read, all writers are referred to as *soldiers* in the present article.

## RESULTS

The soldiers from the present study described hand-to-hand fighting across a variety of environments and circumstances. Sometimes hand-to-hand fighting occurred simultaneously with rifle and machine gun firing during large battles as two military forces collided with each other. On other occasions, a soldier became isolated from their fellow soldiers and encountered an enemy soldier, similarly isolated, with fighting between these two individuals including hand-to-hand. Combat events occurred in jungles, desert mountains, temperate forests, buildings, and underground tunnels - both during day and night. Soldiers reported fighting techniques such as: punching, kicking, eye gouging, biting, elbow striking, strangling, and drowning an

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opponent. Non-firing weapons use included: rifle butts, bayonet-mounted rifles, knives, swords, rocks, helmets, and, in one instance, a soldier was struck with a bazooka tube. Analysis of the autobiographies generated three themes that represented the affective components, which were labeled *unexpected shock*, *life threatening fear*, and *burden of killing*.

### *Unexpected Shock*

Ground combat that included hand-to-hand fighting was characterized as an unusual event on the battlefield. Eight of the nine soldiers in the study described at least one unexpected demand during their hand-to-hand fighting encounter. For some soldiers, the unexpectedness came from the rapid emergence of

hand-to-hand fighting within an ongoing ground combat battle. When recalling the bayonet charge that McEnery (2012) participated in during one battle he wrote, 'I saw a lot of incredible things in my nearly two and a half years in the Pacific. But I think the action I... took part in... on Guadalcanal was the most unforgettable one of all' (p. 120). Similarly, when describing the clash between his military unit and an enemy force Calvert (1996) wrote, '[T]o my surprise, the [enemy] leapt up at us as we went at them and charged into us. Two sides charging at each other was certainly not going according to the military rule books' (p. 152). Soldiers in this study also expressed the unexpected nature of being engaged by an opposing soldier very suddenly. Downs (1978) recalled sleeping at night in a jungle patrol camp when:

Around midnight I awoke staring up at the moon...A figure was standing over me and I got the distinct impression he had just stopped. 'What time is it?' I whispered. Silence from the figure. I felt something was wrong. Suddenly, I realized the man standing above me was holding an AK-47 [rifle]. 'Goddamn! A [racial slur]!' I grabbed his foot and jerked hard. The man fell on his ass as I scrambled out of my hootch to grapple with him. (p. 127)

Unexpected demands that generated surprise could occur during an ongoing hand-to-hand combat encounter. An attempt to eye-gouge his opponent found Bellavia (2006):

Astonished to discover that the human eye is not so much a firm ball as a soft, pliable sack. I try with all my might to send my finger through. We wails like a child. It unnerves me, and I lose the stomach for this dirty trick. I withdraw my finger. (p. 264)

Chief among the unexpected demands that appeared to generate an emotion of surprise was the loss of firing capability of a soldier's weapon (e.g., rifle). This demand elicited powerful emotions of surprise. For example, Pinn (2007) was isolated from his military unit when he encountered three enemy soldiers and his weapon ran out of ammunition. He recalled:

I aimed the Thompson [submachine gun] from my hip and frantically squeezed the trigger - and nothing happened. I was out of ammo. I called out in surprise, just a shout of some kind... 'God Almighty', I said and threw the Tommy gun at them' (pp. 52-53).

Immediately following the emotion of surprise in losing use of their firing weapon, and relegated to hand-to-hand fighting techniques, soldiers felt an imminent, life-threatening danger from their opponent, who sometimes retained the firing capability of their weapon.

### *Life-Threatening Fear*

Facing an opponent(s) in ground combat with a non-firing weapon (or no weapon at all) was viewed as a severe demand and every soldier in the sample remarked about the immediate risk to their life during a hand-to-hand fighting encounter. At the outset of Whitehouse's (1995) hand-to-hand encounter, he remembered:

I heard a roar and turning quickly saw a huge [soldier] rising from the opposite ditch...I froze as he climbed out and crossed the ditch toward us, snarling and uttering horrible guttural sounds. I was convinced that this was my last moment on earth. In sheer, futile desperation I picked up the grenade and threw it at him without bothering to pull the pin; in any case, he was too close. The grenade hit his body and bounced away. (p. 98)

Gillam (2010) articulated the lethality of hand-to-hand fighting when he wrote, 'second place in this kind of fight is a body bag' (p.25). When Meyer (2013) was surprised by an enemy soldier and believed he would be tortured if captured, he resolved, 'No way. I'd die right where I was, right now' (p. 144) just as he entered hand-to-hand combat. The experience of strain from life-threatening attacks may have been exacerbated by injuries received during hand-to-hand fighting.

Five soldiers reported injuries from their opponent's hand-to-hand fighting attacks that included Calvert (1996) being 'bruised and scratched all over' (p. 93); lacerations from bayonet slashes (Pinn), head injuries (Gillam, Pinn, Whitehouse), and Bellavia (2006) who accumulated several injuries, such as a broken nose, an injured jaw, and bites to his hand and groin. At the end of his fight Bellavia recalled that 'Every part of my body aches with pain. My crotch is the worst. It is almost unbearable, and for a moment I do nothing but lie there, holding myself, shivering uncontrollably' (p. 269). Reports from soldiers with head injuries suggest a severity that impeded their immediate fighting performance. Gillam (2010) was 'stunned' (p. 129), Whitehouse (1995) described that he temporarily 'blacked out' (p. 99), and Pinn (2007) recalled:

CRACK! - something hit me right in the mouth. I saw stars and felt a sharp pain just explode through my head. I went down. Was it a shot or a rifle butt? I didn't know but I was down, and helpless. 'God, I'm getting killed', I said to myself. I tasted blood - a lot of blood - then looked up in a daze as the [soldier] stood above me, ready to finish me off. I watched paralyzed as he prepared to plunge the bayonet into my gut. (p. 81)

An additional aspect of injuries during hand-to-hand combat included soldiers providing their observations of what they believed was *their opponents'* emotional reactions to being injured by the writers. Such descriptions reinforce the strain and powerful emotions that can be present during apparently severe injuries.

For example, Gillam (2010) recalled how his opponent's 'eyes went wide with shock and rage' (p. 226) after Gillam stabbed him with a knife. Soldiers also characterized their opponents' behaviors in a manner that reinforces the notion that intense fear can be associated with injury. Pinn (2007) remembered his opponent's 'eyes wide with just a flash of fear' (p. 53) when struck by Pinn's bayonet, and then 'a puzzled anguished look as he toppled over'. Similar distress was observed by Downs (1978) when he attacked his opponent from behind, who then was 'using both hands to reach back frantically at me' (p. 220).

The descriptions of fear from soldiers in this study suggest intense emotions could accompany the threat of an opponent. Bellavia (2006) wrote 'I am hysterical now' (p. 262) as his hand-to-hand combat opponent yelled out for his comrades to come help him. After striking his opponent several times with his submachine gun, Whitehouse (1995) described the physical manifestation of his own fear when his opponent:

[S]creamed with pain and straightened up, clutching his back... Standing upright, this Goliath of a man turned on me. He stretched out his massive arms towards me and I tried to step back. But my feet stuck in the mud, and now, bereft of all strength, I fell back with a splash into the ditch. He leaned over me as I cowered under the hedge. (p. 100)

Hand-to-hand fighting that was simultaneously mixed with dangers from ground combat, such as firing weapons, grenade, mortar, and artillery attacks, was described as 'terrifying...desperate...horrific' (Groft, 2014, p. 141), 'savagery...[a] horror' (Calvert, 1996, p. 153), and a 'nightmare' (Pinn, 2007, p. 81). When Downs' (1978) rifle malfunctioned and his opponent was still armed with a firing weapon he wrote of his fear, '[m]ere words cannot describe my will to live at that moment, my fear of dying, or my frustration... Sweat covered my body and I was gut-scared. My heart was pounding, on a rampage' (p. 219).

### *Burden of Killing*

The experience of killing their opponent, in hand-to-hand fighting, emerged as another psychological demand for soldiers. Eight soldiers described taking the life of their opponent during hand-to-hand combat encounters (Whitehouse's hand-to-hand fighting opponent was shot by one of Whitehouse's comrades). Soldiers in this study believed they had no choice but to kill their opponent because it was the only way to preserve their own life. Bellavia (2006) wrote he was 'locked in a death match' (p. 262); Pinn (2007) recalled that '[a]ll my energy and thoughts were on the fight, which was one to the finish' (p. 53); and Gillam (2010) 'knew [he] would struggle in the dark until one of us was dead' (p. 128). Calvert (1996) remembered developing a respect for his opponent's bravery during their hand-to-hand fighting encounter yet acknowledged that killing his opponent was necessary:

[He] got more vicious as he jabbed his fingers at my face in an attempt to blind me. I think it was not until then that I fully realized this would have to be a fight to the death... I pulled myself together. Brave or not, I had to kill him. Or he would kill me. (pp. 92-93)

The *in situ* experience of a soldier killing his opponent was a powerfully negative one. For example, Gillam (2010) remarked, 'I beat and strangled an enemy to death in a tunnel. After that, I thought I had seen it all, done it all, and things would get no worse for me' (p. 133). The emotions attached to the act of taking a life reinforce the intense strain and negative experience so far outlined. While pushing a knife into his opponent, Bellavia (2006) remembered yelling at his opponent to surrender:

I lunge at him, putting all my weight behind the blade. We're chin to chin now, and his sour breath is hot on my face. 'Just stop! Stop... Just stop!...' I plead. 'Please truce... Surrender!' I cry. I'm almost in tears. He gurgles a response drowned in blood. (p. 266)

The demand and emotions of taking a life emerged for Downs (1978) after he struck his opponent with a bayonet and had:

[A] moment of pity for him [but] was quickly replaced by a cold mental block. He was to be killed, period... I withdrew the blade and drove the point into his throat again... I wanted him dead but I didn't want him to suffer. (p. 220)

Some soldiers described an intense emotion of anger accompanying their final attacks that ended their opponent's life. Gillam (2010) 'called up... instant rage' (p. 225) and Bellavia (2006) became 'a madman' remembering he 'chops down with every bit of power I have left... thundering down onto my enemy's head' (p. 265). Meyer (2013) described a similar extreme anger in the life-ending strikes on his opponent:

I lifted the rock high... smashed it down like a hammer, breaking his front teeth. He looked me in the eyes, the fight knocked out of him, his head not moving. We both knew it was over. I smashed his face again and again, driven by pure primal rage. (p. 145)

Descriptions of dissociative experiences, where soldiers in this study appeared to push away their emotions, also characterized the experience of killing. Groft (2014) explained that his 'training and a sheer will to survive kicked in' (p. 141) and his bayonet thrust into an enemy soldier happened 'instinctively'. Gillam (2010) seemed to deliberately foster anger, while he also sought to become 'cold calculated' and to 'spit his conscience on the ground' (p. 225). McEnery (2012) detailed his avoidance of an emotional connection with the experience of killing when he wrote that in hand-to-hand fighting he viewed his opponent as 'a poisonous snake that was about to bite someone' which seemed to assist him in suspending any emotions to the action of taking a life:

I didn't feel much of anything...when I drove my bayonet into the belly of a [racial slur]... I felt detached, like I was watching someone else doing it. At that moment, killing a man with a bayonet was just another hard, dirty job to me. I could've been digging another foxhole for all the emotion I felt. (p. 292)

The coping mechanisms described to avoid emotional responses may indicate some aspect of killing was a psychological strain on the soldiers that they wanted to avoid.

## DISCUSSION

The present study aimed to identify the demands that soldiers reported during hand-to-hand fighting and their subsequent emotional responses resulting from these demands. The themes that were constructed through the analysis aligned very closely with findings from previous research examining the soldiers' experiences of hand-to-hand fighting (Jensen & Simpson, 2014; Jensen & Wrisberg, 2014). Consistent with previous research (Jensen & Wrisberg, 2014), the findings from the present study suggest hand-to-hand fighting can be an extremely stressful experience. The most important finding from the results of the present study was identifying the emotions of fear described by soldiers who believed their lives were imminently in danger during hand-to-hand fighting. Psychological stress literature (Lazarus & Folkman, 1984) considers life-threatening circumstances the most straining demand for an individual which is supported by findings in the present study.

Most soldiers reported their fearful emotions with terms suggesting an extreme level of psychological strain (e.g., terrifying, horror), which was also found in some comments from previous interview-based literature (Jensen & Wrisberg, 2014). Extending previous interview research, the strain and emotions came from not only the hand-to-hand attacks from an opponent, but when such fighting simultaneously included other ground combat dangers such as rifle and machine gun fire, grenade attacks, mortar/rocket fire, etc. The emotions associated with these life-threatening attacks, while a soldier only had hand-to-hand fighting techniques at their disposal, suggest soldiers appraised a large gap between the demands of the environment (i.e., firing and non-firing attacks from an opponent) and the soldiers' perceived resources to cope with those demands. Soldiers included behavioral terms in expressing their fear such as, 'helpless', 'frantically', 'hysterical', 'froze', and 'cowered', that suggest performance debilitation was occurring as some coping mechanisms potentially failed the soldier.

The physical injuries, with accompanying emotions and distress reported in the present study, extend the previous hand-to-hand combat literature (Jensen & Wrisberg, 2014). The fear of being wounded is a predominant emotion of ground combat (Helmus & Glenn, 2005) that stems from ground combat being the most casualty-producing form of modern warfare (Scales, 2016). The strain and negative emotions associated with hand-to-hand

fighting may have been further exacerbated if soldiers believed that continuing to fight their opponent, despite their injuries, was the only option to preserve their life. A perceived lack of control during a stressful task generates greater anxiety than in participants with a sense of control over their environment (Endler et al., 2000). Experiencing injuries resulting in performance debilitation, may impact a soldier's sense of control over their situation in hand-to-hand fighting and may have contributed to the sense of threat, distress, and subsequent fear.

The theme *unexpected shock* was consistent with the unusual and sudden aspects of hand-to-hand fighting that soldiers from previous interview literature described (Jensen & Wrisberg, 2014). Some soldiers in the present study were attacked without warning, resulting in hand-to-hand fighting, which was a demand also described by soldiers in previous literature (Jensen & Wrisberg, 2014), and is a common threat for soldiers in ground combat (Helmus & Glenn, 2005). Adding to the existing research on unexpected demands during hand-to-hand combat, soldiers in the present study described the specific event of a sudden loss of the firing capability in their weapon (e.g., rifle). Unable to fire their weapon during ground combat was disturbing and accompanied by emotions of surprise.

Surprise, as an emotion, manifests when a demand fails to match with an established and coherent representation of the performance setting, driving an urgent process to update such representations (Maguire et al., 2011). The surprise expressed by soldiers in the present study may suggest that firing a weapon is a distinct 'representation' compared to that of hand-to-hand fighting in the ground combat performance setting. Updating representations requires an individual to evaluate the surprising event through conscious, top-down driven cognitive efforts aimed to understand the cause of the mismatch in representations (Diarra et al., 2023). A soldier committing time and attentional resources towards understanding the mismatch in representations may interrupt the application of appropriate hand-to-hand fighting skills toward the performance setting that calls for such skills. Hand-to-hand fighting skills operate most effectively when performance setting stimuli match and trigger well-learned, highly automated motor skill programs that function with minimal conscious processing (Kibele, 2006). The surprise expressed by soldiers in the present study may have impacted their hand-to-hand fighting performance as attentional focus was not committed externally toward an opponent and the stimuli needed to activate automatic hand-to-hand fighting motor programs, but instead was drawn internally to manage (a) shifting representations, and (b) attempting to make sense of the mismatch between representations. The appraisal of surprising demands can further contribute to the psychological strain and emotional responses of a soldier.

Military performance research posits that in ground combat scenarios, with a 'sudden extreme demand for immediate action' from the rapid onset of demands in life-threatening settings, can

overwhelm a soldier's coping strategies and lead to performance decrements (Hancock & Krueger, 2010, p. 5). When a soldier's coping strategies are overwhelmed, they can experience a sudden 'falling over the edge' of regulatory capacity followed by a steep and rapid performance decline (Hancock & Krueger, 2010, p. 5). Motor behavior research demonstrates that hand-to-hand combat attacks can occur with a speed that overwhelms a person's reaction time (Kantor et al., 2022). The descriptions of fear and surprise from the present study suggest soldiers' coping skills may have started to fail and a steep drop in performance was potentially imminent or in progress for soldiers in this study (e.g., Whitehouse 'cowering' and Bellavia 'hysterical'). The danger of a continued decline in performance capability, due to ineffective emotional regulation, is that a soldier experiences an ASR, losing all ability to cope with the demands of their environment and placing the soldier in peril to themselves and increased risk to their fellow soldiers (Adler et al., 2020).

Soldiers in previous research described the experience of killing in hand-to-hand combat with broadly negative terms (Jensen & Simpson, 2014), and findings from the present study extend our understanding by highlighting specific negative emotions that might accompany the act of taking a life. An *in situ* psychological strain was evident in the pleading, anger, and pity described by some soldiers in performing the actions that resulted in an opponent's death. Qualitative research examining the psychological experience of killing in military combat has only examined soldiers' experiences in the aftermath of killing another person in combat (Purcell et al., 2016). Extending this research on the psychology of killing in military combat, the present findings suggest that some soldiers may experience a range of distressing emotions in the actions that result in an opponent's death. A soldier experiencing such negative emotions may shift their attention away from their opponent, with the external stimuli needed to activate fighting motor programs, and direct inward to apply coping mechanisms aimed to manage their negative emotions. This external to internal shift in attention as noted when encountering emotions of surprise, may have potential to disrupt automated fighting skills (Wulf, 2013). Such demands and emotions might impact soldiers' immediate hand-to-hand fighting performance, suggesting further research in this area is warranted.

Further extending previous research, soldiers in the present study also recalled, while delivering a lethal attack to their opponent, shock, fear, and anger in their opponents' reactions. Observing an opponent's emotional response may have contributed to the soldier's own distress of taking a life. Proximity to the sight or feel of physical damage inflicted on another person can foster vicariously aroused distress (Bandura, 1999). Potentially amplifying the stress of harming or killing another person in hand-to-hand fighting is that an individual cannot leverage group diffusion of responsibility for inhumane actions and instead must solely shoulder the burden of harm done to another (Bandura, 1999). Soldiers may believe that they have a moral license from their society to perform violently during war (Walzer, 1977), or

see the violence of a hand-to-hand combat encounter as a justifiable self-defense response (Lazarus, 1999). Yet these cognitive defense mechanisms, while enabling physical acts of harm on another, may not shield an individual from the emotional distress of harming another at very close distance.

### *Applications*

The findings from the present study offer information that may enhance hand-to-hand combat training for soldiers. First, surprising elements that appear in the criterion environment can be represented to varying degrees in a training and testing setting. For example, soldiers can have their training ammunition modified to include instances where their weapons suddenly and unexpectedly do not function, while opposing training forces offer constraints that drive solutions toward hand-to-hand fighting. Other unexpected elements can be introduced with the objective to foster problem solving during hand-to-hand fighting (Körner & Staller, 2017). One caution is that such top-down driven cognitive processes risk 'paralysis by analysis' during the rapid occurring demands of hand-to-hand fighting (Beilock et al., 2002). Given the wide variability of demands that are possible in the criterion environment, training and testing for military hand-to-hand fighting may best be served with a balanced and integrated curriculum of: 1) building highly automatic fighting techniques, and 2) incrementally introducing a variety of demands that necessitate rapid, adaptable problem solving for tactical success.

The demand of life-threatening attacks with an affective component of extreme fear may be difficult to represent in a training or testing environment with a fidelity that fosters viable training. Future research might interview veterans of life-threatening hand-to-hand fighting to inquire how best to build fidelity in training that prepares soldiers for life-threatening fear. The range of emotions that a soldier might experience when taking the life of another person may also be difficult to represent in a training and testing environment. Again, further research is needed in this area to better inform soldiers and instructors on this potential aspect of a hand-to-hand fighting encounter. Both life-threatening fear and the psychological experience of killing are affective components that may be ethically impermissible to simulate with a fidelity that prepares soldiers for the criterion environment.

*Information provision* is the didactic education of individuals on the expected demands, likely stressors involved, and impact on performance from emotions and physiological reactions that might occur in a criterion performance environment (Driskell et al., 2008). This training approach may help prepare soldiers for those aspects of hand-to-hand fighting that are difficult, impossible, or ethically impermissible to represent in training. Another approach to integrate affective demands into training is through performance imagery (Blank et al., 2014). Using the findings from this study, imagery scripts could be developed that



include the possible demands and emotions of hand-to-hand fighting so that by systematically and deliberately imaging these aspects of hand-to-hand fighting, a soldier might build familiarity and minimize the appraised threat of these demands when faced in a criterion environment.

### *Limitations*

The use of autobiographical data includes several limitations in the current study. Writing autobiographies by relying on recorded memories, which in some cases took place decades after a hand-to-hand fighting event occurred, means the written accounts can be influenced by the reconstructive nature of memory that is subject to confabulation (Johnson et al., 1993). In addition, the writer might report events in a way that portrays an identity in which the manner they want to be seen aligns less with their past-self and more with their present-self (Offer et al. 2000). A further potential limitation is that autobiography authors may have felt some influence to describe events in a manner that made the autobiographies more commercially marketable, thereby not presenting a completely accurate reflection of their experience (Smith & Watson, 2010). Future research might analyze non-commercial data sources (e.g., interviews, diaries, etc.) to confirm, refute, or expand on the findings in the present study.

Additionally, only English language autobiographies were used as data, which may have limited the findings as there may be autobiographies in other languages that contain descriptions of hand-to-hand combat experiences that could have further extended our findings. Another limitation of the present study is that data about the experiences of hand-to-hand combat are only offered by soldiers who survived such an encounter. Due to the lethal nature of such events, a comparison of soldiers with different success rates in hand-to-hand combat, such as comparing Olympic medalist wrestlers with non-medalists (Gould et al., 1993), is unavailable as those soldiers who did not perform well, likely did not survive their encounter.

## CONCLUSION

The present findings reinforce previous research indicating the extreme stress possible in hand-to-hand fighting encounters that is intensified by the unexpected and life-threatening demands of the criterion environment, as well as the act itself of taking the life of another soldier. Findings from the present study open a possible area for future research by examining the extent to which the reported fear during hand-to-hand fighting in military conflicts is similar to or different from the fear described by competitive athletes, such as MMA fighters (e.g., Jensen & Wrisberg, 2013; Vaccaro et al., 2011). Researchers might interview soldiers with experience in both MMA competition and hand-to-hand fighting to shed light on this phenomenon, examining fear across both voluntary and involuntary contexts of this form of combat. Perhaps the issue to most highlight is that the affective components of a military hand-to-hand fighting situation may be difficult or ethically impermissible to fully represent in a training or testing setting, and as such the comparisons with combat sports may reveal important potentials for informing soldiers' training through the medium of such proxies. Finally, the current study demonstrates the potential use of autobiographies as a data source for researchers seeking to gain increased understanding of the affective components of individuals exposed to real life problems from violent and life-threatening martial art settings.

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