

In the Cage: MMA Fighters' Experience of Competition

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Mixed Martial Arts (MMA) is a relatively new and rapidly growing sport within contemporary athletics yet, to date, it has received relatively little attention in the sport psychology literature. To shed more light on the sport, the aim of the current study was to examine the experiences of MMA fighters during sanctioned competitions. Audio-recorded phenomenological interviews were conducted with seven participants and the transcripts were qualitatively analyzed to identify emerging themes. The findings revealed that the most important aspect of fighters' experience was the chaotic nature of MMA fights, which participants characterized as "cage reality." The results also suggested that fighters' arousal regulation skills are at least as important as their technical skills for performance success. Taken together, the present findings extend previous research on MMA and suggest several implications for sport psychology consultants interested in working with fighters.

Mixed Martial Arts (MMA) is a sport involving intense combat between two opponents who use a variety of fighting techniques, including classic martial art systems, boxing, and wrestling. MMA is classified as a combat sport because competitors win a contest by subduing their opponents within an established set of regulations (Gauthier, 2009). The sport originated in 1993 when the Ultimate Fighting Championship (UFC) series was held to determine which of the possible unarmed fighting systems was superior (Walter, 2003). As the sport increased in popularity most fighters began to employ and integrate multiple fighting systems, thus producing the name MMA (Walter, 2003). MMA athletes are referred to as "fighters." During a fight competitors can engage each other like boxers or martial artists, punching and kicking, or like wrestlers grappling on the mat. A fighter can win a match in four ways: by forcing the opponent to submit ("tap out"), by rendering the opponent unconscious ("knock out"), by prompting the referee to stop the fight ("technical knockout"), or by achieving more points than the opponent based on the judges' decision (New Jersey State Athletic Control Board, 2002). The prevalence of injury during MMA competition appears consistent with the culture of injury reported in previous studies of athletes in other sports such as women's rowing, rugby, and Australian football (Grange & Kerr, 2010; Howe, 2001; Pike & Maguire, 2003). Getting hit by an opponent is a normal part of MMA competition and

injury rates are on par with those in professional boxing (Bledsoe, Hsu, Grabowski, Brill & Li, 2006). Approximately 40% of MMA matches end due to a fighter being injured (Bledsoe et al., 2006; Buse, 2005).

While relatively little research in sport psychology has examined the sport of MMA, a few studies (Downey, 2007; Harpold, 2008; Milton, 2004a; Milton, 2004b; Spencer, 2009) have provided some insights into the competitive experience of fighters. Downey's (2007) anthropological study examined the birth and evolution of fighting techniques in MMA as well as the personal significance of competition to fighters. In its most elemental form MMA competition is an opportunity for participants to test their fighting skills (Downey, 2007). However, far from being a mere brawl or primal thrashing between combatants, MMA competition is a highly technical endeavor requiring superior levels of skill and conditioning to achieve consistent success (Downey, 2007). In addition, since the sport's inception the rules have evolved, forcing competitors to continually change their tactics, experiment with various fighting techniques, and sharpen their decision-making capabilities (Downey, 2007). Therefore, sanctioned MMA competitions represent the ultimate challenge for most competitors and, for some, the apex of their MMA experience.

To examine MMA fighters' preparation for competition, Spencer (2009) conducted a participant-as-observer ethnography supplemented by semistructured qualitative interviews. His observations led Spencer (2009) to comment that, "The chaos of the fight, the sheer magnitude of the event is experientially inscribed upon the fighter and....endows the fighter with a unique experiential knowledge that only s/he can comprehend" (p. 136). Clearly, the preparation of MMA fighters appears to emphasize the importance of participation in competition as much or more than any other sport. Only after

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experiencing the crucible of competition do participants seem to identify themselves as fighters and receive the respect and recognition of other fighters (Spencer, 2009). While the findings of this anthropological study suggest the world of MMA is more complex than it might appear to the casual observer, little remains known about the realities of fighters' competitive experience.

To date, a few attempts have been made to explore in greater depth the world of the MMA fighter. In each case, qualitative interviews were conducted with MMA participants. One line of research (Milton, 2004a; Milton, 2004b) examined the experiences of five self-identified "fighters" that had responded to an advertisement on a martial arts website. The other study (Harpold, 2008) centered on the experiences of six amateur, nonelite fighters. Taken together, the findings revealed several aspects of participants' competitive lives. Not surprisingly, aggression toward the opponent was found to be a normal aspect of competition and necessary for success, which is consistent with other MMA research (Downey, 2007; Spencer, 2009) as well as recent studies with elite lacrosse players (Kerr & Males, 2011) and Australian footballers (Grange & Kerr, 2010).

The results of studies by Milton (2004a) and Harpold (2008) appear to be consistent with a number of themes addressed in the literature in sport psychology (Landers & Arent, 2010; Orlick, 2008; Ravizza, 2010; Vealey & Greenleaf, 2010). For example, fighters in Milton's study emphasized the importance of focus and composure for performance success as well as the need to remain mentally relaxed to respond quickly to the various contingencies that might occur at any moment in a match. Participants also believed that accumulated experience in MMA helped inoculate them to the stress of fights and manage their competitive arousal more effectively. Fighters in Harpold's (2008) study said they used precompetition mental techniques, particularly imagery, to rehearse the tactics of the opponent as well as the fighter's own rapid response to each move. During the fight some mentioned using breathing techniques to regulate arousal, particularly when transitioning from the upright fighting position to fighting on the ground (Harpold, 2008). Similar to the results of recent qualitative research with athletes from a variety of sports (Neil, Hanton, Mellalieu & Fletcher, 2011), several fighters in Harpold's (2008) study also acknowledged that high levels of arousal could sometimes be beneficial. For example, when receiving a blow from an opponent, the resulting increase in arousal could actually heighten a fighter's intensity, which in some cases could turn the tide of the fight leading to victory.

Another important theme emerging from previous MMA research is confidence (Harpold, 2008; Milton, 2004a). Most participants viewed themselves as tough competitors and believed they had what it took to compete and win matches (Milton, 2004a). However, consistent with the notion that past experience is a key component of self-confidence (Vealey, Hayashi, Garner-Holman & Giacobbi, 1998), experienced fighters seemed to be more "quietly confident" in their abilities than did novices

(Harpold, 2008). Similar to the findings of one study with World Cup female soccer players (Holt & Hogg, 2002), some fighters said they used mental techniques such as self-talk to bolster their confidence, particularly during challenging matches or defining moments of a competition (Harpold, 2008). Still other participants admitted they occasionally doubted their abilities, especially after losing a competition (Milton, 2004a).

While the previously discussed research offers some general insights into the experiences of MMA competitors, it is unclear whether the participants in one of the studies (Milton, 2004a; Milton, 2004b) was strictly MMA fighters or competitors from another combat sport. In the other study (Harpold, 2008) all participants appeared to be MMA fighters, however little information was provided regarding their respective levels of competitive experience. In addition, the use of semistructured interview questions in some of this research (Milton, 2004a; Milton, 2004b; Spencer, 2009) may have limited participants' accounts of their experiences. In the only study using a phenomenological interview approach fighters were instructed to discuss their use of mental skills in their sport (Harpold, 2008). Thus, they may have neglected mentioning other dimensions of the fighting experience.

Given these limitations and the current dearth of information on MMA competition in the sport psychology literature, the aim of the current study was to examine the fighting experiences of seasoned participants in greater detail. To accomplish this purpose the method of existential phenomenological interviewing (Dale, 1996; Thomas & Pollio, 2002) was employed, which permitted fighters to provide their own first-person descriptions of the lived experience of MMA competition. A similar approach was recently employed in a study examining professional British boxers' experience of training for a fight (Simpson, 2009).

Method

As a qualitative research method, existential phenomenology begins with open-ended interviews designed to obtain the participant's experience of a specific phenomenon (Thomas & Pollio, 2002). Participants are considered the experts regarding the phenomenon in question and their interaction with the researcher represents an opportunity to unveil a rich and nuanced view of a particular lived experience (Dale, 1996). Transcripts of the interviews are then meticulously read, reread, and analyzed for themes using a team of researchers experienced in qualitative research. The themes are then woven into a thematic structure, which along with the author's narrative description constitutes the meaning participants attach to their behavior and interactions with the world around them (Thomas & Pollio, 2002).

Participants

Seven currently competitive male MMA fighters, ranging in age from 24 to 36 years, participated in the study.

All participants had at least 3 years of training in MMA with the average length of training being 6.7 years. They had competed in an average of 10.7 amateur level MMA events and, for those who had fought professionally ($n = 4$), the average number of competitions was 3. Demographic information for the participants is provided in Table 1.

Procedure

The phenomenological methods used in this study were consistent with the recommendations of Thomas and Pollio (2002) and identical to those employed by Simpson (2009) in his study of professional boxers. Upon obtaining institutional review board approval, the primary investigator participated in a bracketing interview designed to identify his biases regarding MMA fighters' experience of competition. The interview was transcribed and analyzed by a group of researchers experienced in phenomenological methods. Themes identified by the group were noted by the primary investigator and repeatedly referred to during subsequent interviews with participants and data analysis.

He then conducted a pilot interview with a 33-yr-old male MMA fighter who had competed in 16 sanctioned MMA fights. This experience allowed the primary investigator to practice his interviewing technique and obtain feedback regarding the clarity of the interview question and quality of the interview (Thomas, Nelson, & Silverman, 2005). The interview was transcribed and analyzed with the assistance of the research group to identify themes associated with the participant's experience of MMA competition. The themes were then shared with the participant for verification. The fighter indicated that the interview question was clear, that the themes identified accurately depicted his experience, and that he appreciated the opportunity to "tell his story."

Prospective participants for the study were then identified and recruited by obtaining recommendations and contact information from MMA promoters and trainers that worked with them at city-level MMA associations. To qualify for the study, fighters had to have competed in at least one sanctioned amateur level MMA event and be able to provide a detailed account of their fighting experience (c.f. Dale, 1996). Although all the participants were male, there were no gender restrictions during the search for participants. One MMA trainer provided contact information for a female fighter he worked with, but the individual did not respond to the invitation to participate. All prospects were contacted, informed of the purpose of the study, and invited to participate. Interviews were subsequently scheduled at a time and place of convenience for each participant (e.g., private office, apartment, home, etc.).

Each interview began with a brief informal conversation followed by the completion of informed consent documents. At that point the participant was asked to think about his experiences as a MMA fighter and respond in as much detail as possible to the following open-ended question: "From thirty minutes before an MMA fight until the completion of the fight, what stands out for you?" The rationale for including the 30 min. interval before actual competition was based on previous research showing that precompetition moments are a significant aspect of the experience of combat sport participants (Chapman, Lane, Brierley, & Terry, 1997; Devonport, 2006; Eklund, 1996; Gould, Eklund, & Jackson, 1992a; Harpold, 2008; Milton, 2004a; Terry & Slade, 1995). All participants controlled the content and time course of their interviews (Thomas & Pollio 2002) with the primary researcher asking follow-up probe questions only to obtain additional clarification of participants' comments (Polkinghorne, 1989).

Table 1 Demographic Information

Pseudonym	Age	Years of Experience	Amateur Record (Win-Loss)	Professional Record (Win-Loss)	Interview Length (min)
Art	33	8	9-2	1-4	40
Bob	27	3	12-2	1-1	78
Charlie	34	8	6-3	2-0	40
Dan	36	5	24-4	NA*	21
Eric	32	16	2-0	6-6	44
Frank	34	3	0-1	NA*	21
Greg	24	4	8-2	NA*	30
($N = 7$)	($M = 31.4$)	($M = 6.7$)			($M = 39.1$)
	($SD = 4.3$)	($SD = 4.6$)			($SD = 19.5$)

* Nonprofessional fighter

All interviews were audio-recorded and ranged in length from 20 to 77 min ($M = 39$ min), which is within the normal parameters of most phenomenological interviews of this nature (Dale, 1996; Polkinghorne, 1989). Each interview was then transcribed and a copy of the transcript given to the participant to review for accuracy or clarify if necessary (Thomas & Pollio, 2002). Each participant's name and any other identifying information (e.g., other fighters' names, officials' names, fight locations, etc.) were replaced on the transcript with a pseudonym to preserve confidentiality as much as possible.

All coinvestigators initially read each transcript several times independently to establish their individual understanding of the text and develop a larger sense of the participant's experience (Dale, 1996). They then met as a group, read each transcript out loud, and attempted to identify "meaning units" (Thomas & Pollio, 2002). The hermeneutic circle process was next employed to identify the meaning of each participant's experience. This process consisted of continuously relating specific parts of the interview to the interview as a whole, while simultaneously using a sense of the whole to further refine the understanding of specific parts (Thomas & Pollio, 2002). A triangulation procedure recommended by Guba (1981) and used in previous research (Gould, Finch & Jackson, 1993), also enabled the coinvestigators to achieve consensus regarding the "meaning units" and themes that emerged from the transcripts. The procedure included obtaining complete agreement among all researchers during all stages of the analysis process. Three of the transcripts were additionally analyzed with the assistance of the University of Tennessee Interpretative Research Group, which was comprised of faculty and graduate students familiar with phenomenological research (Thomas & Pollio, 2002).

After achieving group consensus as to how the meaning units related to the whole of each participant's experience, a process of idiographic interpretation was used to uncover the thematic structure of each interview (Dale, 1996). Once this process was completed for all of the interviews, the coinvestigators returned to the hermeneutic circle process by relating the idiographic structures of the interviews to each other to create a nomothetic structure that characterized the experiences of the entire group (Dale, 1996). This overarching structure consisted of patterns and relationships of higher- and lower-order themes that captured the fighters' experience as a whole (Dale, 1996; Thomas & Pollio, 2002). A final step for determining the accuracy of the thematic structure involved sending a description to participants for verification and feedback (Thomas & Polio, 2002). Specifically, participants were asked to indicate how the themes compared with their respective experiences of MMA competition. Three of the seven participants responded to the request and all indicated that the higher- and lower-order themes represented an accurate portrayal.

Results

Four higher-order themes emerged from the analyses that seemed to characterize the experience of MMA competition for the fighters in this study. They included, *cage reality*, *purpose*, *fighting skill*, and *community*. Table 2 depicts the overarching thematic structure, including higher-order themes, lower-order themes, and sample meaning units. Also indicated in the table is the number of MMA fighters that made statements consistent with each of the lower-order themes. Of the four higher-order themes, *cage reality* represented the context or ground (Heidegger, 1962) within which fighters experienced the three figural aspects of MMA competition: *purpose*, *fighting skill*, and *community*. Each of these higher-order themes, along with their respective lower-order themes and representative supporting quotes (with pseudonyms of fighters indicated), are discussed in the following sections.

Cage Reality

In most MMA competitions, fighters compete within an area the size of a boxing ring. However, the fighting space is octagon shaped, walled-in with chain link fencing, and secured with closed doors. It is commonly referred to as the "Octagon" or "the cage" (Van Bottenburg & Heilbron, 2006); the participants in the current study used the latter term to describe the space. Particularly salient for them was the *cage reality* that commenced with the closing of the cage door and represented the context of their experience of MMA competition. They described the world inside the cage as clearly distinct from the one outside the cage. *Cage reality* consisted of danger and ambiguity that could rapidly alter the course of the fight and produce sudden victory or defeat. Lower-order themes associated with the higher-order theme of *cage reality* included *unique*, *unpredictable*, and *physically extreme*.

Unique. The transition from outside the cage to inside the cage was clear and powerful for these participants. Bob used the expression "flip a switch" to describe the unique sensation of entering the cage. Others likened it to a one-of-a-kind experience that could consist of just about anything. Dan remarked that, "the fight is always different. It's never gonna be the same." The cage door closing also marked a defining moment in participants' choice to compete or survive. Art emphasized the finality of this feeling "...you hear that click of the door shut, you know there's only one way out. And it's either fight, or just get your butt kicked." Fighters also believed the cage environment was so unique that it could not be simulated in training. As Greg noted, "the amount you learn in the cage...in the fight actually...it's hard to learn that in training."

Unpredictable. Highly related to the uniqueness of the competitive environment was the ambiguity and risk of instant and often violent changes in momentum. MMA

Table 2 Higher and Lower Order Themes of MMA Fighters with Representative Meaning Units

Higher Order Themes	Lower Order Themes	N	Representative Meaning Units
Cage Reality	Unique	6	Reality signaled by closed cage door Competitive environment difficult to simulate
	Unpredictable	5	Up and down momentum of fights One error can end the fight Chaos and flow
	Physically Extreme	7	Injuries a normal aspect of fighting Cutting weight impacts performance Competition physically exhausting
Purpose	Fighter's Mindset	6	Competition compared with war Survival mentality Unshakeable perseverance
	Commitment	7	Love for MMA competition Personal challenge of competition Winning during prefight a priority
	Fear	6	Opponent's desire to kill me Doubt and nervousness before competition
Fighting Skill	Controlling Self	7	Necessary for winning The welcomed first hit The powerful factor of adrenaline
	Cage Craft	6	Strategy before and during fight Necessity of automating skills Fight plans for different opponents Reading the opponent during the fight
Community	Opponent As Peer	7	A "just business" attitude Respect for the opponent
	Outside The Cage	7	Audience, family, and friends Crowd tuned out during fight Only coach's voice during fight

competitions are usually scheduled for 3 or 5 five-minute rounds of fighting, with a one-minute rest between rounds. However, participants emphasized the point that the chaotic nature of a fight could dictate a sudden end at any moment. Bob characterized his fights as a "roller coaster" experience with an outcome that was never certain. The fight's momentum could rapidly shift in and out of the fighter's advantage; one movement in error or momentary lapse of attention could bring an instant end to the fight. Charlie captured this unpredictable aspect of cage reality as battling on a precipice:

It's almost like a, a perfect storm...like it's controlled chaos and...I love controlled chaos. It's somethin'

that's out of control but at the same time somebody can step in and say, "Hey, this is enough." You know, you're teeterin' on that round of goin' over the edge and that's, that's where I wanna be.

An ironic aspect of the uniqueness of MMA competition, was the "flow" participants said they felt when they believed they were winning a fight. Thus, it appeared that somewhere between chaos and flow these fighters experienced the reality of the cage. When a fight "flowed" in their favor the fighters felt relaxed and in control, however when the tide turned and they felt they were losing, the experience became "fast and chaotic" (Greg) and "a cluster fuck in your head" (Eric).

Physically Extreme. MMA competition is a physically taxing and brutal event. Several factors contributed to the physical demands of cage reality and each weighed on the minds of the participants in this study. Fighters described the physical exhaustion of competition as being nearly as challenging as the physical threat posed by their opponents. As Greg put it, “...I didn’t want to go back out there [after a break between rounds]. I’ve got nothing left... I don’t even know how I’m going to survive this fight because, I’m just beat.” The participants admitted almost nonchalantly that injury is a normal aspect of MMA competition, however they believed that coping with injuries required the inoculation of experience. In other words, they felt that competitive experience created a resilient mindset and acceptance of the prevalence of injury inherent in a fight. Charlie captured the acceptance of injury when he said that, “...you have to make friends with getting hit,” while Dan seemed to possess an almost stoic attitude:

I’ve broke a lot of bones in my body from competing...You can lay down and quit or you can just fight with all you’ve got, and, uh, try and make it somewhere because, you know, you’re, uh, you’re the master of your fate...you decide.

In spite of their acceptance of the inevitability of physical injuries, the participants clearly sought to avoid them as much as possible. They were especially afraid of injuries to their limbs from grappling joint locks, which could jeopardize their everyday employment in addition to their fighting capabilities. Fighters also mentioned the physical threat that came with losing weight to compete in a lower weight class. In addition to sapping their physical energy and impacting their performance, weight loss could be a nagging mental stressor before a fight, particularly if the fighter had lost excessive amounts of weight. However, participants indicated that physical worries usually receded from their focus once the competition began.

Purpose

A second higher-order theme, which was the first of three that were figural or salient in the experience of the MMA fighters in this study, was *purpose*. This theme dealt with the personal significance participants ascribed to being an MMA fighter. Three lower-order themes were associated with the theme of *purpose: fighter’s mindset, commitment, and fear*.

Fighter’s Mindset. Participants used the figural language of warfare to characterize the rigor and challenge of MMA competitions. Art categorically stated that, “it’s a war.” Participants likened fighting to a battle, especially with regards to the tenacious attitude needed to persevere in the face of an extreme challenge. Fighters described themselves as becoming a “controlled animal” (Charlie) to achieve the survival mentality necessary to win, or at least complete the match without sustaining serious injury. Bob stated:

I’ve been in there enough to where I’ve just been getting the crap beat out of me. But something in your body doesn’t let you quit, you know, rather it’s your heart or if it’s just your will to win, your competitive side. You just keep coming and coming and coming and coming. And eventually, you know, you’ll break the guy’s will.

The perspective of dominating the opponent and “imposing your will” (Frank) on the opponent required a sustained and committed focus.

Commitment. MMA competitions tend to be infrequent, with fighters competing as little as once or twice per year. The remainder of the time they spend in training and preparing for competition. Long arduous training sessions require an unusual level of resolve and commitment. Eric expressed the sentiments of most participants when he stated that, “...everything I do in life is for this [MMA competition].” While training was important, these participants felt that competition was the crucible for testing their fighting skills against an equally committed opponent. Greg viewed competition as an opportunity to, “...test it, see how you’re gonna do when it really comes down to it.” For Dan competition was an opportunity to “...perform at the best of my ability” and put his skills to the test in a rigorous environment. Frank seemed to summarize the commitment and pride in purpose of these participants:

It [MMA fighting] puts you on a different level I think because you’ve done something that a majority of people hasn’t done. You know marathon runners say the same thing. You know, it’s [marathon running] something that only 1% of the population has done, or whatever the percentage is. Well MMA fighting is something that less than that [the number of marathon participants] has done. You know, stand toe to toe with somebody in a cage.

Fear. Despite their enjoyment of and dedication to the purpose of MMA competition, these fighters described a powerful fear they always experienced immediately before competition. Much of the fear was due to the *cage reality* they knew they would imminently be confronting. In some cases the fear was manifested in fighters’ perceptions of the opponent. “[T]he guy’s in there to kill you...there’s gonna be a clash” (Charlie). Prefight ruminations sometimes caused participants to doubt their abilities and motivation to compete. As Bob put it, “...[fighters] are scared to death pretty much.” Moreover, Charlie stated:

[W]hen it comes time to go, you know, your heart fell into your stomach and you was a nervous wreck. And you’d step in the ring and...your knees and legs felt like a rubber band stretched all the way, you was so tight, and it’s just like, why, why am I doin’ this?

However, once the fight began, participants realized they needed to manage the adrenaline that had been cre-

ated by their precompetition fears. This they were able to do as long as they devoted their focus to their opponent and the challenges of the fight. As Eric stated:

You know that was me controlling the fear. I let it out you know and then got rid of it you know. So you've got to work with your fear you know. You can't just say I'm not scared. That's not how you work with your fear. You've got say yeah I'm scared, fuck'n scared. I'm about to go in front I think there was 6000 people at that one you know? And get in the cage with this guy who's going to try to take my head off you know. So you have to use it [fear] not act like it's not there.

Fighting Skill

The second higher-order figural theme associated with participants' MMA competition experience was *fighting skill*. For them, fights were not a mindless brawl, but a complex athletic event in which thinking, technical skill, and competitive experience were required for success. Performing well within the chaotic environment of the cage demanded more than physical strength and fortitude. Fighters also had to control their physical and mental reactions to pain and fear, and possess a broad arsenal of skills that would give them a strategic and tactical advantage. These skills were evident in two lower-order themes that emerged under the higher-order theme of *fighting skill*: *controlling self* and *cage craft*.

Controlling Self. The precompetitive fear and challenge of the competitive environment inside the cage required participants to be able to control internal processes. If precompetitive fear was not lowered to a manageable level when the fight began, performance suffered. Most participants attributed such decrements to unmanaged anxiety or excessive adrenaline. They also believed that the ability to control fear and manage adrenaline during competition could only be learned through experience. Greg characterized his learning experience as follows:

...first time ever got in the cage, never did anything to fight somebody. And I was just so nervous you know. The adrenaline was just, you know, couldn't never control that adrenaline rush of, you know calm down and do what I knew I had to do and try to, try to fight. Whereas, you know compared to like my last two fights, you know much more relaxed, really not nervous at all.

Fighters discussed adrenaline as a power source that could either enhance or hinder their performance. The essential ingredient for managing adrenaline in a positive way was control. Eric best summarized his experience of controlling adrenaline in the following excerpt:

...you know you're very nervous, your adrenaline is going to kick in, it's going to affect your stamina. Then your stamina starts going and it affects your

skill. If you control the fear and use [adrenaline] you know at the right time then it's going to make you a super powerful force.

Regardless of their ability to control adrenaline, most participants' precompetitive nervousness ceased when they received the initial blow from an opponent. Some even described the first strike as a relief because it brought them face to face with the physical reality they had been ruminating about before the fight. While participants struggled to control adrenaline surges that ebbed and flowed with the momentum of the fight, they experienced little nervousness after the initial physical contact with their opponent in the cage.

Cage Craft. A second component of fighting skill was tactical in nature. The participants believed that success in MMA competition required an intelligent use of fighting techniques, a well-developed plan, and an ability to measure their opponent's skill during the course of a fight. As one put it, "...it's a game, a chess game....you gotta outsmart your opponent just like he's trying to outsmart you" (Art). The fighter's ability to implement a successful strategy rested on a solid foundation of fighting skills that had been automated during training and required no conscious thought for execution in the cage. As Bob stated:

...your body is going to feel it and before you can even think about it, it's like opening the door or tripping and sticking your foot out in front of you or just standing up anything. It's [technical skills] a habit. You do it [execute the skill] and you're like, you know, I don't even remember thinking that I needed to do that but I done it.

Fighters built their competitive strategy on prefight knowledge of the opponent's fighting background. While all MMA fighters rely on a variety of fighting styles during competition, they tend to prefer and become known by a particular fighting style. An MMA competitor's strength may be wrestling, karate, kickboxing, or jujitsu. In preparation for a fight, participants scout their opponent to develop a competitive strategy for responding to the opponent's stronger skills. In so doing, fighters can sometimes negate the opponent's ability to leverage his strength against them. The process of observing and adapting occurs during a competition as well. Fighters carefully pick up on their opponent's actions and expressions to learn more about the opponent's preferences and adjust their own competitive strategies. As Dan noted:

you learn a lot about your opponent in the first 30 seconds of the fight. How he, um, how he approaches you...I can read a lot just by judging his character...the look in his eyes, whether he's gonna win or lose the fight, um, his strength. You can...finally feel his strength, and you know what you...have to do to...persevere...in the cage. Then you...you adapt to your situation.

Community

The final higher-order figural theme that emerged from the interviews with these MMA competitors was *community*. Although MMA competition is a one-on-one event, these fighters were also aware of the influence of numerous other people they encountered before and during the fight. The major theme of *community* was characterized by two lower-order themes: *opponent as peer* and *outside the cage*.

Opponent as Peer. In spite of participants' perspective of the competition as a battle, and their general belief that the opponent possessed a lethal intent for the match, these fighters did not view their opponents as enemies. In some cases they even talked about the opponent with an obvious level of emotional detachment. In those instances they focused more on adapting their own performance to successfully counteract the strengths of the opponent rather than worrying about the opponent per se. During the fight participants had neither positive nor negative emotions toward their opponent. Eric summarized this sense of emotional detachment:

There's no bad blood....so to me it's just like I said, just business. We're just going to get in there and fight. I've got no problem and you've got no problem with me and we're going to fight and we're going to hurt each other, try to hurt each other, and when it's over, it's over.

After a competition, participants said they usually felt respect for and fraternity with their opponent. Even if they had lost the competition they appeared to hold little malice or grudge toward the opponent. Rather, it appeared that an important aspect of these fighters' enjoyment of MMA competition was the "level of respect that competitors have for each other and the level of sportsmanship" (Frank).

Outside the Cage. The precompetitive period was an occasion for participants to experience the influence of the audience or significant others. When this happened the magnitude of fighters' precompetitive nervousness increased and their sense of purpose for competing seemed to be heightened. In keeping with the unique nature of *cage reality*, the audience at a MMA competition seemed to contribute to the powerful impact of the event for the fighters. As Dan stated:

You know, you got all these people staring at you, and cheering for you, you know, and booing you, so you know, it's kind of – it's kind of – it's kind of a trip. It's something you'll – you'll never get used to, you know, because it's, uh, every – every crowd's different.

However, once the competition began and the demands of the fight became their total focus, fighters' appeared to have little or no awareness of anyone outside the cage. The only individual that might occupy some of

their focus was their coach or corner man, who provided periodic encouragement and guidance when necessary. Fighters acknowledged that even in the midst of the chaos and noise of cage reality they could hear their coach's voice. As Greg described it:

...thousands of people there...yelling and screaming, but for some reason for me it's just always been, you know, never heard the crowd, never heard people yelling...but you can hear...you notice the coach's voice telling you what to do.

Discussion

The primary aim of the current study was to examine the experience of MMA fighters during actual competition. The results of in-depth phenomenological interviews revealed that the experience of these participants was characterized by four higher-order themes. The first, which represented the context or ground (Heidegger, 1962) within which figural aspects of the fighters' experience emerged, was *cage reality*. Arguably, the most important finding of this study, *cage reality* represented the chaotic nature of competition and the importance fighters placed on being "ready for anything." This theme also brought to the forefront the need for a fighting mentality and maintenance of emotional control, which was revealed in two of the three higher-order figural themes, *purpose* and *fighting skill*, respectively. The final higher-order theme, *community*, suggested a complex interaction of participants with those around them, both before and during the fight. It should be noted that while all four higher-order themes represented separate entities of the MMA experience for these participants, they were closely interrelated. For example, the theme of purpose was only experienced in the context of cage reality.

Relationship of the Findings to Previous Research

A number of findings in this study appeared to be consistent with those of previous research in sport psychology and several other fields. The lower-order theme *unpredictable* reflected the chaotic nature of competition and reinforced participants' perceptions of the need to continually adjust their strategy and movements during a fight. This result is consistent with the findings of earlier ethnographic research with MMA fighters (Spencer, 2009) and other studies in sport psychology examining the performance experience of MMA and judo participants (Blumstein, Lidor, & Tenenbaum, 2005; Harpold, 2008; Matsumoto, Konno, & Ha, 2009; Milton, 2004b). Moreover, the lower-order theme *physically extreme*, which emphasized participants' acceptance of injury as a normal aspect of competition, is similar to the results of previous anthropological and sociological studies of MMA fighters (Downey, 2007; Spencer, 2009), boxers (Wacquant, 1995), female rowers (Pike & Maguire, 2003), and Australian footballers (Grange & Kerr, 2010).

In all instances, fighters in the current study emphasized the necessity of being able to withstand pain to achieve success in competition, a finding that was also obtained in previous research with elite male decathletes (Dale, 2000).

The survival mentality and metaphoric comparisons to warfare mentioned by the current participants is consistent with the theme of mental toughness emphasized by intercollegiate wrestling coaches and elite kickboxers in earlier studies (Devenport, 2006; Gould, Hodge, Peterson, & Petlichkoff, 1987). The present fighters also talked about precompetitive nervousness leading to *fear*, which is a common finding in research on combat sport athletes (Devenport, 2006; Eklund, 1996; Harpold, 2008; Gould et al., 1992a; Gould et al., 1987; Milton, 2004a) and a phenomenon reported in a recent study with collegiate rugby players (Mellalieu, Hanton, & Thomas, 2009). In addition, the participants experienced doubts about their abilities before competition, similar to those reported by fighters (Milton, 2004a) as well as elite figure skaters (Gould et al., 1993) in earlier research.

A common finding in combat sport research is participants' perceptions of the importance of maintaining an appropriate arousal level for success in competition (Cheng, Hardy, & Woodman, 2011; Devonport, 2006; Eklund, 1996; Gould, Eklund, & Jackson, 1992b; Gould et al., 1987; Harpold, 2008; Milton, 2004a). The lower-order theme *controlling self*, which emerged in the current study, is consistent with recent findings indicating that the best predictor of elite, tae-kwon-do performance is a perceived sense of control (Cheng et al., 2011). The present findings are also in line with previous MMA research suggesting that arousal regulation, particularly the ability to control precompetitive nervousness as well as the surges of adrenaline that occur during competition, is something fighters learn through the competitive experience (Milton, 2004a). It should be noted, however, that the current participants often experienced a facilitative arousal adjustment at the beginning of a fight when they encountered initial physical contact (e.g., a punch or kick), which also alleviated their precompetition nervousness and fears. In addition, the present participants experienced adrenaline surges as an energy source that, if managed effectively, could facilitate performance during competition; a belief reported by fighters in earlier MMA research (Harpold, 2008) as well as elite swimmers (Hanton & Connaughton, 2002).

The lower-order theme, *cage craft*, is consistent with the results of previous MMA and combat sport research (Blumstein et al., 2005; Harpold, 2008; Matsumoto et al., 2009; Milton, 2004b; Spencer, 2009; Wacquant, 1995, 2004). Moreover, participants in the current study stressed the imperative for fighters to automate their skills to achieve successful execution in the chaotic cage environment. The need for skill automation has been a common theme in the sport psychology literature on judo (Blumstein et al., 2005; Matsumoto et al., 2009) and in ethnographic research on MMA fighters (Spencer, 2009) and boxers (Wacquant, 1995, 2004). Consistent with ear-

lier observations (Blumstein et al., 2005; Spencer, 2009), the results of the current study indicated that improved skill automation allowed participants to focus more on developing competitive strategies that minimized the strengths and exploited the weaknesses of opponents rather than on fighting technique per se.

Extensions of Previous Research

Several findings of the current study appear to extend the results of previous sport psychology research on MMA. Perhaps most significant was the lower-order theme *unique*, which emphasized the irreproducible nature of competition. Previous sociological studies on MMA (Spencer, 2009) and boxing (Wacquant, 1995) had portrayed the experience of competition as the culmination of preparation and highlight of fighters' lives, respectively. Participants in the current study added to that notion by talking about each competitive experience as a new challenge, how the closing of the cage door sealed them into an experience unlike anything else, and that training could not fully prepare them for the demands of competition.

While combat sport athletes in general recognize the chaotic nature of competition (Spencer, 2009; Wacquant, 1995), the current participants provided additional clarification of this concept with their detailed descriptions of the ebb and flow of a fight and the ways a match can rapidly shift in a competitor's favor or degenerate into a blur of shock and confusion. Their interviews also suggest a more nuanced perspective of injuries and pain than reported in previous research. While these fighters accepted the reality of both injury and pain as normal aspects of competition they also pointed out that there was a limit to the degree of injury participants could tolerate. In particular, they emphasized the destructive nature of grappling joint locks that could disable a fighter for long periods of time; greatly inhibiting training for future competition and the quality of their everyday lives.

The lower-order theme, *opponent as peer*, extends previous research by suggesting that these fighters adopted an impersonal perspective of the opponent, which allowed them to focus on the rapid and chaotic flow of the fight, the strategies they needed to use, and ways they might maximize their own chances of winning while minimizing those of their opponent. At the same time, the current participants viewed their opponents as respected peers and fellow athletes competing in a uniquely violent and competitive event. They respected the physical sacrifices of all MMA fighters and accepted the dangers that the sport's participants were willing to endure. These fighters appeared to hold no malice for the opponent, regardless of the outcome of a match, or fault the opponent's actions for injuries incurred in competition.

The results of this study also provide additional insights into MMA fighters' passion for competition and the opportunity to test their abilities. While other combat sport athletes have expressed a similar love for their sport in general (Simpson, 2009; Spencer, 2009;

Wacquant, 1995), the current participants said their affection for MMA was primarily, if not entirely, centered on the competition experience. The metaphoric language they used, comparing MMA competition to warfare and insisting that a fighter must possess incredible perseverance in the face of potentially severe injury, represent additional extensions to the experiences of combat sport athletes reported in previous literature (Downey, 2007; Spencer, 2009; Wacquant, 1995).

Finally, the lower-order theme, *outside the cage*, appeared to be another unique aspect of the current study. For these participants, the audience in general and significant others in particular influenced their precompetition thoughts and feelings, which in some cases carried over to their performance. However, once competition began, most reported little awareness of anything going on outside the cage. This was likely due to efforts on the fighters' part to narrow their focus of attention almost totally on the opponent, although in some cases they mentioned hearing the voice of their coach or corner man providing tactical assistance or emotional support in situ.

Limitations

It should be noted that there were several limitations to the current study. Since only four of the seven participants had competed professionally within MMA, it is possible that the experiences of these fighters are different from those that compete at the most elite MMA levels, such as the Ultimate Fighting Championship (UFC) league. In addition, all of the participants in this study were males and citizens of the United States. Thus, it is possible that their experiences may not be the same as those of females or fighters from other countries. Overall, the findings should not be considered generalizable to the larger MMA population, due among other things to the limited age range and gender of participants. However, the rich and in-depth descriptions of the participants represent initial insights into the possible mental and emotional demands of the sport.

Recommendations for Future Research

The findings of the current study suggest several potentially fruitful lines of future research with MMA participants. First, it would be beneficial to learn more about the experiences of fighters representing different levels of competition, from beginning to the most elite. Second, since MMA fighters spend the vast majority of their time in training for fights, it would be informative to examine the nuances of their training experience. Recent research with professional boxers (Simpson, 2009) suggests that the training experience has its own constellation of personal and professional challenges. A similar study with MMA fighters would possibly provide important insights into the broader lives of MMA fighters. Third, since most MMA participants, including the fighters in the current study, enter the sport from a previous background in

other combat sports (e.g., boxing, judo, wrestling), it would be interesting to examine the developmental transitions made by MMA athletes during the course of their careers (c.f., Alferman & Stambulova, 2007; Wylleman & Lavallee, 2004).

Practical Implications.

The present findings suggest several possible applications for MMA fighters, coaches, and sport psychology consultants. The higher-order theme of *cage reality* suggests that simulations of the intensity of actual competition may be difficult during training. However, any activities that provide fighters with the opportunity to enhance the rapidity with which they are able to adapt their strategies and actions to the chaotic competitive MMA environment would likely be beneficial. The use of a random practice schedule that challenges fighters' ability to read and react to a variety of possible situations (Schmidt & Wrisberg, 2008) might be beneficial. The results also suggest that arousal regulation skills may be as important as technical fighting skills and tactical decision making for success in competition. Thus, coaches and consultants might provide helpful assistance for MMA fighters by encouraging them to assess changes in their arousal during training sessions and exploring various strategies for raising or lowering arousal in response to the ever-changing demands of a competition. Coaches and consultants might also increase fighters' awareness of the ways physical events of a match (e.g., getting hit), perceptions of the opponent, and precompetition connections to the crowd can impact their arousal level and help them prepare effective responses to such occurrences.

Conclusions

Based on the results of this study it might be concluded that the competition experiences of these MMA fighters are characterized by extremely intense and chaotic struggles with opponents they respect. Such experiences are fraught with numerous fears that represent a significant departure from the world of everyday life. For these participants, MMA competition represents an opportunity to evaluate not only their fighting skills, but to measure their mental and emotional toughness in competition. Finally, the results suggest that while MMA fighters face challenges that are similar to those of other combat sport athletes (e.g., arousal regulation, need for automated skills) there may be dimensions that are unique to their competitive experience (e.g., the combination of complexity and chaos).

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