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THE MENTAL CAGE: A QUALITATIVE ANALYSIS OF THE MENTAL GAME IN
THE
SPORT OF MIXED MARTIAL ARTS

by

MATTHEW E. HARPOLD

(Under the direction of Daniel R. Czech)

ABSTRACT

Past research dealing with power sports has dealt mainly with the effects of participation in such sports as boxing and wrestling (Endresen & Olweus, 2005). Results have shown that participation in such sports has led to an increase and enhancement of violent and nonviolent antisocial behavior outside of sport (Endresen & Olweus, 2005; Bloom & Smith, 1996). The sport psychology literature has thus far failed to encompass the lived experience or possible themes that arise that stem from being a part of this culture. The purpose of this study was to examine the amateur Mixed Martial Arts athlete and their experience with mental skill usage in both training and competing. This study utilized existential phenomenological methodology and a humanistic framework. Data was collected from a purposeful sample of six amateur MMA fighters. Results were analyzed to uncover possible common themes experienced by the amateur MMA athlete.

INDEX WORDS: Mixed Martial Arts, Confidence, Arousal, Discipline, Motivation.

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B.S., James Madison University, 2005

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Fulfillment of the Requirements for the Degree

MASTER OF SCIENCE

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2008

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INTRODUCTION

There is a somewhat new kid on the block in the world of combat sports. It may be hard to argue that any combat sport is entirely new. The basic ideas are pretty much the same in all combat sports. A combat sport (also known as a combative sport) is a competitive contact sport where two combatants fight against each other using certain rules of engagement, typically with the aim of simulating parts of real hand to hand combat. Boxing, sport wrestling, martial arts, and fencing all fit the above definition. Mixed martial arts (commonly referred to as MMA) is a combat sport in which two competitors attempt to achieve dominance over one another by utilizing a wide variety of permitted martial arts techniques in full contact, including striking and grappling. Well-known MMA organizations include the Ultimate Fighting Championship and PRIDE Fighting Championships. There has been some attention given to the more orthodox combat sports such as fencing, boxing, and the traditional single style approach to martial arts, yet little attention has been given to mixed martial arts.

Past research has shown that certain psychological dispositions actually can help facilitate optimal martial arts performance. Low self confidence and high anxiety have been shown to negatively affect martial arts performance (Anshel & Payne, 2006). A “managed intensity” which requires brief periods of highly intense concentration as well as physical energy should be utilized. Other dispositions such as self-motivation, self awareness, and self control have also been shown to be of benefit (Chung & Lee, 1994). Another disposition that has been shown to have a positive effect on martial arts performance is Competitiveness. Competitiveness has been defined as a “disposition to strive for satisfaction when making comparisons with some standard of excellence in the

presence of evaluate others in sport” (Martens, 1976). Contrary to popular belief not all elite athletes demonstrate this disposition. The ideas of intrinsic motivation and perceived competence also have been shown to occur in elite martial arts athletes (Anshel & Payne, 2006).

Other areas of past research have dealt with specific interventions used with individual martial artists. These interventions have ranged from using a mental plan as described by Bull, Albinson, & Shambrook (1986) and Orlick (1986), imagery, dissociation strategies, approach and avoidance coping, relaxation, and planning (Anshel & Payne, 2006). Behavioral strategies have also been addressed. These have ranged from goal setting, scheduling, self-monitoring, record keeping, social support, social reinforcement, modeling, and match simulation (Anshel & Payne, 2006). Applied sport psychology skills that have been utilized during competition include reducing cognitive processing, pre-cueing, cognitive appraisals, “psyching up”, positive self-talk, thought stoppage, effective coping, and attentional focusing (Anshel & Payne, 2006).

Despite the work with studying the elite martial artist’s dispositions and psychological skills training that could be possibly utilized with such athletes, little research is known to address the lived experience of the mixed martial arts athlete in regards to mental skills. The aim of the current study is to delve into this topic utilizing a humanistic framework (Hill, 2001). This framework treats the individual as a unique human being and not just an object as is the case in more traditional empirical methods. In addition to this fact, the individual is not just a subject but a co-investigator who will benefit from the research just as much if not more than the initial investigator (Hill, 2001). Since the phenomenon under investigation is a personal story it does not

necessarily lend itself to being observed and measured in a quantifiable unit. The researcher also assumes that each athlete provides meaning for his experiences. In the humanistic framework those meanings are shaped and molded by individual perceptions and social constructions (Hill, 2001). The researcher hopes to be able to further understand the experience of the mixed martial arts athlete using mental skills in order to expand the body of knowledge available, as well as to help coaches, trainers, and the athletes themselves understand more about the possible situations and demands placed upon such athletes. In developing these themes it might focus future research in order to provide the best possible services and intervention strategies to said athletes.

Thus the purpose of this study was to examine the personal experiences of mixed martial artist and their use of mental skills. The primary research question for this study was: What are the thoughts and perceptions about the mental skills needed for optimal fighting in the sport of mixed martial arts?

METHOD

Triangulation

Triangulation is the application and combination of several research methodologies in the study of the same phenomenon. Gathering the data and performing member checks, conducting a pilot study, observation of amateur mixed martial artists in action, as well as the primary investigator experiencing and observing mixed martial arts as a participant, accomplished this. Likewise, clarification of researcher bias was addressed by performing a bracketing interview, as well as journaling. Furthermore, a research team was utilized for theme development and to ensure the rich descriptions of the co-participant's experiences were found.

Bias Exploration and Bracketing

As stated by Czech, et al. (2004) there is a certain degree of researcher involvement in the phenomenological process that is of importance. Since the researcher is basically the instrument used in data collection, that instrument already has opinions about the phenomenon of interest. That is why it is of dire importance that certain steps be taken to insure that the bias of the researcher does not taint the data yielded by the participants. This suspension of assumptions is not only done prior to the study but during the study as well (Czech, et. al, 2004). This is done by clearly stating what assumptions the researcher actually has about the phenomenon under investigation (Swanson-Kauffman & Schonwald, 1988). A bracketing interview was conducted to allow the researcher to state any assumptions about mental skill use in combat sports such as MMA. Due to the researchers previous experiences as a wrestler and student of Tae

Kwon Do it helped to clarify the researcher's own experiences of using mental skills in combat sports.

Co-participants

The co-participants in this investigation were 6 amateur non-elite mixed martial arts athletes. The athletes were between 20 to 35 years of age, male, and had participated in at least one fight during the past year. The sample came from personal contacts and sources available to the researcher. Three of the fighters were from Statesboro, Georgia, two of the fighters were from Cincinnati, Ohio, and one fighter was from Richmond, Virginia. The athletes were chosen for this study as a purposeful sample (Hanson & Newburg, 1992) because they had the potential to provide a rich description of the experience of competition fighting and had a recent memory of this experience. The participants in this study were not aware of the purpose of the study until the interview was conducted.

Procedure

The procedures used in this research were non-invasive. Participation in the interviews was strictly voluntary, and the participants were advised that they could terminate the project at any time. Interviews were conducted over the phone as well as in person in a private setting to maintain confidentiality. These settings included the sport psychology lab located in the Hanner Building on the campus of Georgia Southern University with the co-participant in their residence agreed upon by the co-participant and researcher. Interviews also took place at the athlete's personally training facilities in private rooms. The co-participants in this study were specifically advised that: (a) the interviews would be audio taped for accuracy, (b) they can refuse to be interviewed or

stop the interview at any time, (c) they could inquire about the procedures at any time, (d) no royalties would be due to them for any subsequent publication, (e) the copies of the transcripts would be provided for them to review, and (f) the transcripts would be reviewed by the primary researcher and other researchers for identification of themes. It is important to note that the participants were thanked and appreciated at the end of the interview.

Research team members who read the transcripts to assist the primary researcher in identifying themes signed a release form in which they guaranteed confidentiality. The phenomenological research group was comprised of three graduate students. All members of the group have knowledge of the phenomenological method through graduate coursework. To increase confidentiality, the co-participants were informed that a pseudonym would be used for both their real name and any team affiliations mentioned on the audio tapes. The researcher kept a code sheet of the pseudonyms for the purpose of presenting the transcripts to the co-participants.

Interview Protocol

This interview consisted of a single open-ended statement, which allowed the participants to explore their experience with mental skills in fighting in the UFC. The following question was posed to all of the participants:

“In mixed martial arts, many athletes talk about the mental skills needed to perform at their best, what does that mean to you?”

Further probing interview questions were utilized for deeper elaborations and clarifications of their experience with using mental skills (Patton, 2002).

Data Analysis

The procedures for analyzing data were adapted more directly from those developed by Czech et al., (2004), Barrell (1988), Goodrich (1988), Hawthorne (1989), Ross (1987), and Henderson (1992) as outlined below.

Approaching the Interviews

Transcribing. All interviews were audio taped and then transcribed verbatim. The transcripts were typed by the primary investigator. The participants were able to view and obtain a copy of the transcripts both during and at the completion of the transcript. No one had access to the audiotapes but the primary investigator, and the participant. Once transcription of the audio tape was complete it was erased. The consent form, audio tapes, transcriptions, and code sheet with the alias names were kept in a locked box.

Patton (2002) points out that it is very important to obtain a verbatim transcript otherwise, the data may be distorted. Therefore, the transcripts were checked for errors by listening to the audiotape version of the interview and reading the transcript.

Obtaining a Grasp of the Interview. Checking for errors also allows the researcher to obtain what Kruger (1979) calls a holistic grasp of the data. As cited in Czech et al. (2004), this allows the researcher to obtain a sense of wholeness of the data even though in later phases parts of the data will be eliminated. Checking for errors also allowed me to disentangle the structure of the participant's experience.

Focusing the Data

Bracketing the data. Patton (2002) states that "the researcher "brackets out" the world and presuppositions to identify the data in pure form, uncontaminated by extraneous intrusions." In other words the researcher puts aside any preconceptions and

the data will be analyzed directly to the phenomenon in question. Once this was completed the data was treated with equal value and spread out for examination with all elements and perspectives having equal weight (Patton, 2002).

Phenomenological Reduction

Eliminating irrelevant, repetitive, or overlapping data. During the interviews the conversation involved information that was not relevant to the experience of the phenomenon being studied (Patton, 2002). Consequently, in the current study irrelevant, repetitive, and overlapping data was eliminated from the transcripts. Punctuation and grammatical changes were also added or taken out if needed.

Verifying the elimination of the data. The goal of this step was to have the co-participants verify that the edited version of the interview was correct and still had the thoughts and words that they wanted to express. Two participants clarified their transcripts after the editing process. Once the editing was completed the transcripts still remained a rich source of information and was easily read and placed into meaningful groups.

Releasing Meanings

Forming categories. The data was placed into meaningful clusters based on the similar themes that emerged (Patton, 2002). Both the research team and I placed the phrases that were similar into clusters. We then compared the clusters and categories were formed.

Identifying the themes. Once the categories were formed themes were created. These themes were analyzed over and over again until a consistent and concise

representation of each category was present and there were distinct differences between each separate category.

Describing the themes. Patton (2002) recommends that when presenting the results of qualitative data there must be: a) focusing and balancing and b) description and interpretation. Due to the large amount of information contained within the interview the data must be focused and balanced, meaning that some of it must be omitted in order to focus on the experience of mental skills in MMA. Patton (2002) also points out that when dealing with qualitative inquiry a thick, rich description of the experience is essential. Therefore, the data in the current study was presented in a clear and descriptive manner that captured the essence of the participants' mutual aspects of their experience of mental skills in MMA.

RESULTS

The results from my bracketing interview yielded two basic themes. These themes were goal setting and the idea of indomitable spirit. The idea of goal setting was thought to be so important by the primary investigator due to the large skill set involved in the mixed martial arts. The author postulated that it might be of benefit to organize ones workouts and skill set acquisition in the form of individual goals.

“Well from what I know about mixed martial arts the skill set is very large. You hear athletes talk about the stand up aspect of mixed martial arts as well as the ground game. I think for the athletes to maximize their potential and both of these areas clear cut goals would have to be set for performance and familiarity purposes.” (Primary Investigator)

The primary investigator also spoke about the idea of the indomitable spirit. During his time spent studying American Tae Kwon Do a major corner stone or mantra was the idea of the indomitable spirit. This idea could be summarized by the author as a “never say die attitude” or perseverance through opposition. The author thought this would be a key mental skill due his perceived beliefs about the demanding nature of the sport of mixed martial arts.

“Well one of the things that has stayed with me from my Tae Kwon Do days was the idea of the indomitable spirit. It was basically that internal drive and never say die attitude that was repeated verbally every day before training started. I guess if I still recall it, it must have been important. No matter how hard the different aspects of Tae Kwon Do got you were always reminded to push yourself physically and mentally.” (Primary Investigator)

As noted previously a pilot study was also conducted with one contracted Ultimate Fighting Championship mixed martial arts athlete. The aim of the interview was to better understand qualitative methodology as well as to solidify an appropriate framework and research question. The methodology utilized was semi-structured and the

main themes that arose were progression, public reactions, daily routine, emotions, motivation, comparison to other sports, friends and family, and life changes.

At the conclusion of the interview process, transcription and thematization of the interviews of amateur mixed martial arts athletes, the structure of the experience of mental skills in mixed martial arts could be discerned. The methodology described previously yielded the thematic structure. The analysis of the co-participant interviews revealed five themes. The first was confidence it's sources and importance in competition. The second was visualization and mental rehearsal and how it was used for both planning and error correction. The third was arousal regulation and the methods used to not only increase arousal, but decrease arousal as well. The fourth was Discipline/Mental Toughness and the fifth was motivation and subsequent sources of motivation. These five themes form a structure of the current mental skills or current uses of mental skills in the sport of mixed martial arts.

Table 1 provides a brief description of each of the participants. These participants in this study were all amateur or small pro fighters. All participants were of Caucasian descent. The sample came from the southeast, east coast, and mid-western regions of the United States.

Table 1. Description of participants

Gender	Background Training	Race	MMA Training Age
1. Male	Tae Kwon Do	Caucasian	5 years
2. Male	Boxing/ Brazilian Jiu Jitsu	Caucasian	2 years
3 Male	Tang Soo Do/ Brazilian Jiu Jitsu	Caucasian	2 years
4. Male	Wrestling	Caucasian	3 years
5. Male	Wrestling	Caucasian	4 years
6. Male	Muay Thai/ Brazilian Jiu Jitsu	Caucasian	4 years

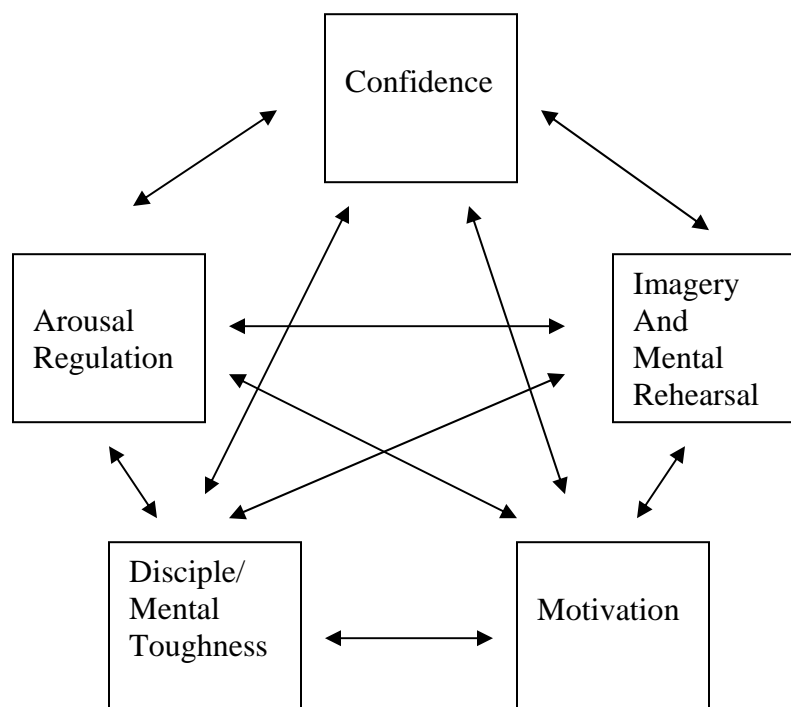
Furthermore, most of these themes contained sub-themes. For the theme of confidence, the sub-themes included (a) repetition, (b) scouting, (c) self talk, and (d) social support. For the theme of arousal regulation athletes utilized (a) breath control, (b) self talk, and (c) physical contact to regulate their arousal. For the theme of discipline and mental toughness the athletes spoke of (a) life style changes, (b) workout regimen, and (c) the process of cutting weight. For the theme of motivation the athletes stated that (a) they possessed an internal motivation and (b) that their actions were extrinsically motivated to train and compete. Table two outlines the themes and sub-themes.

Table 2. Description of themes and sub-themes

Themes	Sub-Themes
Confidence	Repetition Scouting Self-Talk Social Support
Imagery and Mental Rehearsal	
Arousal Regulation	Breath Control Self-Talk Physical Contact
Discipline/Mental Toughness	Life Style Changes Workout Regimen Cutting Weight
Motivation	Internal Extrinsic

The five part interrelated mental skills model used in the sport of mixed martial arts composed of confidence, visualization/mental rehearsal, arousal regulation, discipline/mental toughness, and motivation presents the mental skills currently being utilized by amateur mixed martial arts athletes. These mental skills were not only utilized in competition but in practice and training as well. Some athletes utilized more of the mental skills than others, but all were represented in the athlete's experience of the use of mental skills in the sport of mixed martial arts.

Figure 1. Thematic structure of the experience of using mental skills in mixed martial arts.



Theme #1: Confidence

The first theme that emerged from the data was the concept of confidence. Confidence is defined in the field of Sport Psychology as the “the belief that you can successfully perform a desired behavior” (Weinberg & Gould, 1995). Participants described confidence as the ability to step into the ring with a sense of knowing that they were going to beat their opponent. One athlete had this to say on the topic.

“I was just like you know, I knew this kid wasn’t going to beat me. I knew mentally that there was no way I was going to lose. I wanted it more. I felt like I worked harder and I wanted it more. There is no way he was going to take that from me.” (Participant #5)

Another athlete likened confidence to a mindset that could be turned on and off almost as if on a switch and be the deciding factor in a fight.

“But they were of a mindset where they were not going to get beat, or they were of a mindset that they were going to win and they did. I have also been in the same situation where I was outmatched physically but just kept coming, I just kept turning on that switch inside and eventually I wore them down you know.” (Participant #1)

One athlete had this to say when he suffered from a lack of confidence.

“He got me in an ankle lock. And normally I don’t tap, you don’t tap, and it was an Achilles, it wasn’t like a heel hook or anything like that so there wasn’t a whole lot of damage that he could have done physically. But I was thinking that I was beat, and I was like you know what, and I tapped. I regret it because I still think I could have beaten him. Emotionally and mentally I wasn’t in the fight.” (Participant #6)

Repetition. Some of the athletes mentioned that a big source of confidence for them was the idea of repetition. The athletes stated that repetition leads to a confidence in what one is doing. The athletes had this to say about the idea of repetition.

“The mental preparation when I first started fighting was hard for me. I would repeatedly always feel like I would be in it, always physically feel like I was good physically and everything and training well but mentally I just, I think that was the problem. I don’t know if I just wasn’t confident yet or I don’t know but I got a bunch of wins under my belt and I think the more time that your in there, the more comfortable you are, the more confident you are. And a lot of it is to do it performing in front of people. I’ve fought in front of 4,000 people or 5,000 people to a couple of hundred people. After awhile you start just becoming kind of second nature you do it more and more you get more comfortable in front of people fighting in the spot light. And it comes with just being in love for being in there. I think the more times your in there the more confidence your going to get.” (Participant #5)

“we will bring a lot of different people in to train with while I’m getting ready for a fight, a lot of people that are really good at different aspects of the sport. When I feel, if I’m training with these really good people, you know I dominate them in practice. We got some guys that are UFC fighters and stuff that I train with a few days and I dominate them, that’s just a huge confidence boost. I’m like if I beat this guy and this guy fights on Pay Per View, you know I’m definitely going to beat this guy that I’m fighting next weekend.” (Participant #5).

“Yeah, you train way harder than your ever going to fight. You know you put yourself through so much pain, so much fatigue that I never need it when I’m fighting. I kill myself in training so when I’m out there in a fight. So that’s my mental preparation a lot of it being physically sound, being in better shape it has always been like that. I wrestled since I was five and in college and everything and it’s like I might have wrestled somebody better than me, but if I worked harder or trained harder and I was in the gym more than there was no way this guy was going to beat me. So I think the whole hard work thing pays off. It’s kind of like what does it for me.” (Participant #5)

“So in order for you, if your going to get out of there without getting hurt, then you have to maintain calm and rely on the fact that you have been in this situation a hundred times a thousand times before. You know during the training that’s what it’s all about, if you can go through that training and put yourself in that position in the ring. Once it starts it’s a piece of cake.” (Participant #6)

“You kind of have to go in there having a particular style or having a particular skill already in mind. That’s why you see so many guys when they get announced on UFC or WC or stuff like that, they will say that he is a ground fighter or he is a striker, he’s Muay Thai stuff like that so the initial the styles I think that’s one of the big things they talk about in the mental game is just having the basic knowledge or a strong knowledge in anything or any kind of style that you go in there with. (Participant #3)

Scouting. Another source of confidence that the athletes referred to was the idea of scouting. Scouting was the act of studying an upcoming opponent. It usually involved learning the opponents fighting style and their strengths and weaknesses. Scouting allowed the fighters to pick apart other fighters skills and perhaps see where they may have advantages.

“ I look at their past record and who they fought. Like I recently lost to a guy who was 9 and 0, which I shouldn’t have and I want to fight him again, but the thing was he racked up a 9 and 0 record against guys who were 0 and 0. Each time he fought somebody it was their first fight. So I look at fights and say well look at this guy he looks tired, he looks winded, that was a terrible leg kick. I mean the guy had no looks of pain on his face, he didn’t wince when he got kicked so I don’t have to worry about his kicks. His hands, his punches, he hasn’t knocked anybody out. So I try to go on top of what I’ve seen, like I have found a past wrestling record to where I see guy’s actual scores of matches and I think their pitiful I laugh, well hell I never got beat that bad. I never lost to anybody that bad. So I always say well I’ve got the upper hand in wrestling, or his kicks are weak, or he’s never had a strong opponent yet. So I always look at things, kind of make

fun of them almost. If we watch video or I watch other guys I tend to make fun of them to kind of make myself feel better. Kind of like well what the hell is he doing here, what's this, well what's that for? Lose the edge and mentally have the upper hand." (Participant #4)

"I look at his record. I look at everybody he has fought. Sometimes I look at the people they fought. So you look kind of three generations back. Because he could have beat a bunch of people, but if you look at their record they could have had no fights at all, they could have been like an 0-4. You know you have to look at their record and if they've got some wins you have to see who they won to or who they lost to, how they won, how they lost. I like to see what they're good at you know how many if they won by submission, or knockouts, or technical knockouts. So I like to find a background see what he's good at. Standup, ground, and then come up with a game plan of how the fight is going to go down. And what I want to do to control the fight." (Participant #5)

Self Talk. The next source of confidence the athletes mentioned was self-talk. The athletes would use self-talk to reassure themselves that they were capable of performing well in their fights, to get out of tough situations in a fight, as well as in their training sessions. The co-participants had this to say about self-talk.

"I self talk, even in training I self talk, cause I will put myself in bad positions against guys who are less experienced or if I find myself in a bad position. I am a huge fan of self-talk. I will tell myself "I'm the best at this position, I'll be out of here shortly". "This is not how the fights going to end, I will be back to a dominant position soon." So calming myself down, positive self-talk. You know if some guy has got me in a submission. You know some guy locks in an arm bar I'm great at arm bar defense. I'm going to be ok. And telling myself, It sounds hokie, and a lot of the other guys don't buy into it, but the guys who have bought into it, because it forces you to calm down, you know your, I'm here it's bad but in thirty seconds it will be a different situation, in sixty seconds it will be a different situation, I'm getting out of here, I'm moving, I know the right steps, and talking to yourself, talking yourself through, self talk, positive self talk it makes you better and it keeps you calm. You know some guy gets you mounted, "it's ok, I'm the best at being mounted. I will be out of here in thirty seconds". This is good for me you know it's going to help me get the butterfly. It's going to help me get, so you know talking to yourself. I'm a big fan of self talk because it keeps you calm, and then it's a familiar territory. If you train and you self talk and you're fighting and all of a sudden it counts you know. Ok he's got me mounted that's fine. I'll be out of here in thirty seconds. (Participant #2)

“When you listen to your music, when you listen to your trainer, and you listen to every other voice in your head saying that you are going to do well, all those thoughts just kind of like shrink and you don’t really focus on them any more.” (Participant #3)

“This guy might be better than you, but you always want to think that you’re in better shape, that your stronger, your faster, your (have) better take downs, better striking, better everything. That’s always what you want to think. That’s always what you’re told and that’s always what you want to believe. But you do think what if this guys that, what if that, what if that, and there is what ifs is everything. But you just got to believe that you are better than the guy you get in the cage with.” (Participant #4)

“I always think, the guy I’m fighting, I always think he’s not as good as the other guys I’ve trained with or anything like that. And I say it’s just another training session this is where I’m putting it all to the test. Just relax and use your technique.” (Participant #4)

“You have to keep telling yourself every single day alright I’m better. I’m in better shape than this guy there is no way he is going to beat me.” (Participant #4)

“You know and I think with that, to just use a lot of positive reinforcement. A lot of telling yourself you know I’m going to win. You know your not going to beat me. After a while telling yourself that, thinking about it, I think you start believing it.” (Participant #5)

“I trained my ass off for that fight and I was at the point where I felt like I trained my ass off and there was no way that this kid worked harder than I did. There is no way. I just keep telling myself there is no way he wants this more than I do and there is no way he worked as hard as I did to get here. Just a lot of positive reinforcement, just keep telling yourself its repetitive stuff. Everyday I wake up, alright I’m going to work harder than this kid today.” (Participant #5)

“I just, like I know it just goes into you know I worked harder than he did. He wasn’t doing, you know he might have been I don’t know. But you know I’m telling myself there is no way he was doing eight minute rounds you know taking thirty seconds off and doing another eight minute round. Doing that for five, six, seven rounds. I mean he could have been. He might have been doing ten minute rounds but you know I just tell myself there is no way this kid was doing it. So I mean I go out there pound for pound for five minutes long when I know I can go pound for pound for eight minutes long.” (Participant #5)

“If I look at his record and I look at my record because you know a lot going into that fight about the person. If I have more fights than him I’m thinking I’ve been here more times than he has. I have more experience than he has.” (Participant #5)

Social Support. The last sub-theme that arose as a source or wellspring for confidence was the idea of social support. In the experience of social support systems many athletes talked about the confidence provided by training partners, corner men, and loved ones. These social networks allowed for positive reinforcement from an external source aside from the athletes own positive affirmations. Here is what some athletes had to say about social support and the roles of these social support systems.

“any kind of positive thoughts when you go in there, especially the music it just takes away all those negative thoughts and you don’t necessarily see yourself, um the idea of failing doesn’t come into the picture anymore it just completely gets pushed aside and that goes the same way for your trainers as well. I mean when your back there on the stage your trainers are constantly whispering stuff in your ears. Just saying you’re going to do well, you’re going to hurt this guy, you’re going to win the fight. So that’s kind of the doubts pushing away. I mean there is always that fear of going out there and losing a fight. I don’t think it, for us we hurt constantly just from rolling around in practice. So being hurt to us isn’t necessarily the main problem it’s more that ego, you know that losing in front of a hundred or so people watching you. That’s the big fear for us. We don’t want to do that. When you listen to your music, when you listen to your trainer, and you listen to every other voice in your head saying that you are going to do well all those thoughts just kind of like shrink and you don’t really focus on them any more.” (Participant #3)

“This guy might be better than you, but you always want to think that you’re in better shape, that your stronger, your faster, your (have) better take downs, better striking, better everything. That’s always what you want to think. That’s always what you’re told and that’s always what you want to believe.” (Participant #4)

“So you have to leave room for everything and I tend to have a good girl friend that kind of leave me stress free the week of or the week I’m dieting that kind of understands what I’m going through and understands my hunger and how exhausted I am and everything I’m going through for that week. So it’s kind of relieving having her there, helping me out at the same time, helping me out with the diet or helping me, urging me or helping me with anything I have to do through the day that I don’t feel like doing or too tired to do.” (Participant #4)

“You know I try to surround myself with a lot of positive people and I try to stay away from the negative stuff. My trainer, my training partners they are all real positive. I’m lucky I’ve got an awesome group of guys. My trainer (name deleted) he’s a super guy. I mean he’s constantly calling me leaving me voice mails just saying you know you’re going to be one of the best, you know you’re going to be in the UFC soon. You know nobodies going to stop you or you’re going to kill this kid. I just try to surround myself with a lot of positive things, not let any negative things bother me you know.” (Participant #5)

Theme #2: Visualization and Mental Rehearsal

The next theme was mental rehearsal and imagery. The athletes gave examples of their mental plans detailing initial plans, as well as contingency plans to react to what the opponent could possibly do. Some athletes stated it put them a step ahead of their opponent and would typically give them an edge over their opponent. The athletes stated that they used these skills to mentally prepare for the fight. Here is what the athletes had to say about the use of a mental plan.

“What I would try to do would be to go through my mind and visualize what I wanted to happen. Go through my mind and visualize step by step scenarios and the sequences that would happen and obviously you can’t choreograph a fight like that because you will never know how things are going to go or what the other persons going to do etcetera. But you can visualize when this happens this is what I’m going to do. This is what I’m going to try to do to impose my will on him and my strategy you know for instance when I fight somebody who is mostly a ground fighter or a BJJ type person or a wrestler that wants to take me down I am going to stand up and strike with them. So I visualize them shooting in. I visualize me stuffing the take down, I visualize them taking me down, I visualize me getting up. If I were fighting with a striker, I feel like I’m better on the ground. I visualize me shooting in, me taking them down. You know doing the different things like that. I kind of visualize some of the things that I want to happen and what I am going to do.” (Participant #1)

“you can sit there or what I do is I sit there and pick apart and see where I did this good and I see where ah man he was set up for that move why didn’t I do that, or gosh I screwed up right there I stepped right into that and I kind of replay it. I call it my rewind. I rewind and I see it in that movie screen in my head and that’s where some of that next time I see him do that I know or oh I see that he has a little jerk in his left hand before he throws the jab. Every time I see that little jerk that means the jab is coming I’m going in. So you know I’ll pick it apart and replay it like that in my head.” (Participant #1)

“constantly thinking before hand what happens if I get in this situation what happens if I get in that situation. Put your self in a bad situation and try to logically think through it. Alright what happens if I grab here what happens if I grab, experimenting and thinking, its really, really important because if you just do the same things, if you become a robot you’re never going to be able to adapt on the fly and you know its like practice when you first started saying your ABC’s I’m sure you were like a little kid A um what’s next B ok what’s next C and now because you’ve done it over and over again you can say your ABC’s A, B, C, D, and so fighting is the same way. Mentally preparing yourself. I’m going to do this he is going to do that and I’m going to do this he is going to do that. Constantly setting it up and thinking that way and moving in those terms and thinking the next step ahead that’s where you get better. When you can think faster than you move, that’s when your good a lot of guys move too fast because it is reactionary and they don’t think. When you can think faster and slow all your movements down that’s when your deadly that when your dangerous and that’s the most important thing about jiu-jitsu.” (Participant #2)

“Um, just plan what you’re going to do in a fight, usually a lot of times fighters find a game plan and don’t stick to it. If you stick to your plan, what you’re going to do right off the bat most of the time the fight seems to go their way. It seems to go our way when I stick to my plan. So I do get focused on what I want to do right off the bat. What I want to do when I get into the cage. What I expect him to do and what I can think about as far as like have back up plans if something else goes wrong. Like I like to throw a one, two, three, leg kick and if he moves out of the one, two, three I’m going to follow up with a one, two, outside leg kick or something like that, that always have what you train I mean you just keep training or practicing. It is kind of like a rehearsal constantly practice or rehearsal of what you want to do but your always doing what you like to do. So like constant rehearsal once you get into the cage it’s actually putting the rehearsal and everything to work. It’s a lot of practice and thinking things over and how you want the fight to go.” (Participant #4)

Theme #3: Arousal Regulation

The theme of arousal regulation emerged from the athletes’ comments about the importance of not “amping up” too soon and gassing out prematurely. The athletes discussed how some of them need to be in a calm state while others need a little push or in this case a physical blow to get their arousal to the optimum level. The use of breathe control was a very heavily discussed topic in order to calm the fighters down. Other sub-

themes that emerged were the use of self talk and being physically struck by the opponent.

Breath Control. Half of the athletes mentioned using some sort of breath control as an important technique to use to control arousal and energy levels both before and during the fight. One fighter had this to say about the importance of regulating ones arousal before and during a fight.

“there is just a huge adrenaline dump before a fight. And 99% of fighting is keeping your adrenaline, not getting amped too soon. And you see guys you know they are so amped in the locker room, they are ready to rip somebody’s head off and then they get out there and they have to sit for a couple of minutes while they’re introducing the other guy or they are setting up this or that and they’re done they’re spent before they even get out there. Really being able to pace yourself and really being able to say ok this quite possibly could go fifteen minutes and I need to be aware of that. You know you see guys go out there and they kill it the first round and the second round you know, the first round they fought like Tarzan, the second round they fought like Jane because they just had nothing left. So being able to mentally pace yourself and being able to control your breathing and to pick your spots you know” (Participant #2)

Athletes went on to elaborate exactly in what situation they may use breath control techniques. Some fighters mentioned that they mainly used them in the locker room before the fight and others stated that they used them during a fight typically when the fight went to the ground.

“I will take ten or fifteen seconds. I will calm my heart rate down. I will breath deep control the other guy. He is spazzing out. He is underneath, he is trying to get out from under me. I’m just going to calm down I’m not going to go for anything. The ref tells me to start moving alright I’ll move. But if not, I’m taking that fifteen seconds and calming down. I’m getting oxygen back in my system. You know and that’s a good thing. Having the discipline to know when those times are, it’s ok I need to calm down right now I need to control first before moving into the next dominant body position. I need to control right now and get my oxygen back before I start throwing strikes.” (Participant #2)

Participants also had comments about witnessing times when they noticed failure to use breathe control and the possible detrimental effects it can lead to.

“I had a fighter fighting and he was just (heavy breathing) and he wasn’t giving the cilia in his lungs any time to process that and stick any oxygen on those red blood cells. He wasn’t giving it anytime and you’ve got to breathe in and you’ve got to hold it for a second. It’s going to hurt and then you’ve got to breathe out. You’ve got to breathe in and hold it for a second and let your lungs work and breathe out and you need to control your breathing and be constantly aware of it you know and guys who are a lot greener even training in the studios, guys will just start breathing so heavily or they will stop breathing if their nervous, they will just stop breathing entirely. And you know that’s horrible for you. Just constantly being aware. I want to be able to breathe in the same fashion over and over and over again. (Participant #2)

“Just relax and use your technique and remember to breathe. Because breathing is one of the biggest things a lot of guys aren’t going to, stop breathing and get overworked or tired or exhausted after the first round because their not controlling their breathing or relaxing or doing something along that line. (Participant #4)

One athlete said he utilized breath control more in a pre fight routine that helped him calm his nerves before the fight. He stated that the ten minutes leading up to the fight were usually the hardest for him. This is what he had to say about his breathing routine.

“Breathing, I’d sit. A lot of people jump around and kind of get out the nerves. That tended to hype me up more. I would fight better if I wasn’t as hyped. I’d sit, early on in my martial arts I took Aikido which is not a very. I mean its good for holds and stuff, self defense but it I not a very street useful. But what it did teach me as well a Wing Chun Kung Fu is to maintain calm before the fight before the big event. Sit down do breathing exercises much like yoga I guess and just clear your mind and just go in and do what you do.” (Participant #6)

“Yeah, I would sit down I guess in aikido posture in the corner or back in the room. It is basically on your knees, sitting on your heels underneath your butt. Put your hands in your lap right below the naval. I guess three or four inches below the navel. Close your eyes just breath in deeply with your nose feel it in, the Japanese call it the Dantian which is the point your center right below your navel. Exhale and feel all the energy just flow out of you and all the nerves flow out of you and I would do that for about five minutes and there is another one where you raise your hands above your head and just release all the energy as you bring your hands down back to the center.” (Participant #6)

In summary the use of breath control is used not only to achieve a calming state before a fight but has been utilized in the actual act of fighting to avoid getting “amped” too soon.

Self Talk. Self-talk was also mentioned as a route to controlling arousal levels. It was sometimes used to control nervousness and sometimes instructional. This is what one fighter had to say about self-talk to control nervousness followed by one fighter comments about using it as an instructional tool.

“I keep telling myself hey this is what I train so hard for, so why be nervous you know why be nervous with something that I train every single day for.”
(Participant #5)

“Really being able to pace yourself and really being able to say ok this quite possibly could go fifteen minutes and I need to be aware of that. You know you see guys go out there and they kill it the first round and the second round you know, the first round they fought like Tarzan, the second round they fought like Jane because they just had nothing left.” (Participant #2)

Physical Contact. Not only were the mental skills of self-talk and breathe control noted as being mechanisms for controlling arousal but actual events in the fight could serve this purpose as well. Some fighters stated that actually getting struck would trigger there arousal levels, that they would “turn it on” at these points and sometimes overwhelm their opponents and pull out a victory. This is what two athletes had to say about this interesting phenomenon.

“Um I try to go in with the calm and relaxed, with a mixture of the focused game plan but usually after the first good lick I get I usually turn, there is a switch inside and I get angry and that’s when I flip and turn it on and that’s when I just usually overwhelm somebody really to be truthful with you.” (Participant #1)

“Yeah because when you get hit hard and that fear that anger that hurt and it spikes, you don’t really feel the pain as much as you know wow, alright, and you know like I said there is that switch and it clicks and you go in and sometimes it works out well cause you go in with more power more speed cause that adrenaline is going, that emotion is back in you and you just overwhelm them.” (Participant #1)

“Um, usually in a fight that um I don’t really tick until I get hit or until something goes wrong. Then it kind of comes out of me like I can say for example one of my fights I, a guy tried to do a take down on me and he actually did it and that’s when the anger and the frustration hit but there, like wow this guy just messed up he shouldn’t have taken me down. Or in my first fight a guy punched me or I mean the first hit and he hit me first and that’s where the frustration and anger sets in, saying wow this guy just touched me I’m not going to let him touch me anymore. I’m not going to let him do this anymore. (Participant #4)

In summary the mixed martial arts fighter uses breathe control and self talk to achieve a calm mindset or lower their arousal levels. This allows the athlete to not amp too quickly during a fight or when it might not even be necessary before a fight. There are also those fighters that benefit from receiving a blow in order to elevate their arousal levels.

Theme #4: Discipline and Mental Toughness

The fourth theme that emerged from examination of the transcripts was that of discipline and mental toughness. This theme was developed by examining the nuances of the sport as brought to light by the co-participants. The sub-themes were developed based on the situations that these athletes find themselves having to use a sense of discipline or mental toughness.

Life Style Changes. Many of the athletes spoke of lifestyle changes that they had to make once entering into the sport of mixed martial arts at a competitive level. Some participants cited regressions in social activities as well as drastic changes in daily routine. Here is what some athletes had to say about the lifestyle changes.

“the mental aspect is that you have to be willing to watch what you eat everyday. I mean I eat the same six meals everyday when I’m training and they all suck, you know like, I run everyday I fight three times a week jiu jitsu, I do stand up three times a week, I make sacrifices as far as what I put in my body, supplements, what I put my body through. So I mean it is a long term daily discipline” (Participant #2)

“It is ridiculously disciplined. I buy all my meals on Sunday. I cook all my meals on Sunday and freeze them. I eat the same six meals I eat every three hours. I eat the same things. I watch my carbohydrate intake, my fat intake, my protein intake. I watch my water intake cause I mean I have to increase my water consumption, so that when I cut weight my body is used to that and can absorb the amount of water that I am going to have to put back in cause I am cutting 10, 15, 20 pounds depending on what weight class I am in. So I mean it is a constant, it’s a deliberate decision and it is a deliberate discipline. Like I mean I cannot, when I am cutting weight, I just weighed myself I weigh 220, I fight at 170 or 185 I’ve got to drop 20 pounds right now to just be close enough to cut and so doing that is something that I have to, I can’t eat a chocolate cake if it comes into work. I can’t go to a restaurant, I can’t go to el sombrero if all my friends want to go to el sombrero because I have to eat the same thing I have to. So I mean it is a deliberate sacrificial decision that I have to make on a habitual basis and there is no room for error because if you’re a half pound over they tell you to get back in the sauna, you know there is no mercy to it.” (Participant #2)

“The mental toughness that you have to go through the constant training the repetition, being able to break old habits. Not necessarily going out to the bar every night just to get hammered I mean you actually have to think about well if I do this It’s going to jump into my training so you kind of have to have that mental toughness as well.” (Participant #3)

“Sacrifices, well I’m married and divorced by age twenty five. She liked it but she didn’t like as much time as I had put into it. We had other problems but I think it was a major role. I mean I was doing it before I ever met her so she knew it was kind of part of the package. I mean it has been a life long dream of mine to be a professional athlete and finally by the age of twenty four I was a professional athlete. It is something I’ve wanted my whole entire life so. A lot of sacrifices I don’t go out to clubs. I don’t drink at all. I drink once a year, New Years, maybe. I don’t go out. It makes it hard with relationships because you know you are dating somebody they want to go out on the weekends and have a good time and stuff. I’ve got to wake up Saturday morning and go train. So you make a ton of sacrifices. You kind of isolate yourself from old friends. I mean I don’t really talk or hang out with my old friends that I used to talk to and hang out with before I started training full time. Pretty much all my training buddies, my trainers are my family because I spend so much time with them. And we are on the road every week. I was in Virginia four weeks ago. The weekend after I was up at the top of Michigan for my buddies fight. The weekend after that I was in Columbus Ohio.

The weekend after that I was back in Florida. Next weekend I'm down in Tennessee and the weekend after is a local fight. So yeah if I'm not fighting I'm cornering somebody, I'm helping somebody. Your life is full time with, has to do with fighting. I'm training. I do personal sessions, training sessions with people. You know that want to get in shape and stuff, so I work with them. So it's always something about fighting. So yeah, a ton of sacrifices." (Participant #5)

Work Out Regimen. Another subtheme that emerged from the transcriptions as it related to discipline and mental toughness was the actual work out regimens themselves.

"So you know guys that go into the gym and it is back day or back and bi's or chest and tri's that's not my program. My program is Monday I'm going to do all upper body compound movements. Wednesday I'm going to do all lower body compound movements or some combination of the two and I am really giving myself enough time to work through that and then you know like on a Friday when I'm tired it's the end of the week I fought three or four times you know I'll do plyo you know I'll do a bunch of prehab work on my shoulder girdle because or is rough around my hammys you know stuff like that its going to be really important to strengthen those small stabilizer muscles and keep my body in good shape as far as that's concerned. So you know I mean it really depends. I don't lift for strength I don't lift for like, I got buddy's who are body builders or power lifters its not what I'm lifting for so it really changes the way you approach the gym you know its not that exciting to put a 45 on each side and do a dead lift because you know everybody wants to dead lift 300 400 and when your dead lifting 135 you look like a weenie but its getting me what I need and that's what I got to keep track of when I'm in the gym" (Participant #2)

"Yeah there is definitely a heavy regimen. I mean for someone who is really adamant about it your up here every single day of the week except for maybe one or two days on the weekends stuff like that constantly training. Whenever I prepare for a fight it is usually workout in the morning, a few calisthenics, just stuff to get the blood pumping get you ready to go through out the day maybe a little skill work hand work, ground work whatever you concentrate in. Break for lunch, then you may have an hour or two off that and then you go right back into it. It's just being able to push yourself knowing that this stuff is going to suck, it's going to hurt, it's painful and you don't necessarily want to do it but it's one of those prices you have to pay in order to win or in order to succeed in sport." (Participant #3)

"You know that is what I train my as off for every single day, two or three times a day, six, seven days a week for me to get in that cage and fight. That's the fun part. Training and everything else is the hard part. Sweating and training everyday and being tired and worn out all the time that's the hard but getting in the cage and fighting that's the fun part, that's the part that pays off." (Participant #5)

Cutting Weight. In conjunction to the idea of a lifestyle change another sub-theme that developed was the idea of cutting weight. This is what a few athletes had to say about their experiences with cutting weight.

“So I mean it is a constant, it’s a deliberate decision and it is a deliberate discipline. Like I mean I cannot, when I am cutting weight, I just weighed myself I weigh 220, I fight at 170 or 185 I’ve got to drop 20 pounds right now to just be close enough to cut and so doing that is something that I have to, I can’t eat a chocolate cake if it comes into work. I can’t go to a restaurant, I can’t go to el sombrero if all my friends want to go to el sombrero because I have to eat the same thing I have to. So I mean it is a deliberate sacrificial decision that I have to make on a habitual basis and there is no room for error because if you’re a half pound over they tell you to get back in the sauna, you know there is no mercy to it.” (Participant #2)

“But as far as training when I’m six to eight weeks out from a fight my diet gets ridiculously clean and there is no messing up there is no flubbing a meal, it just doesn’t happen cause I mean it’s not worth it. You know one missed meal can negate eight weeks of training it’s not, I mean that Big Mac is great but it does not, it’s not worth it.” (Participant #2)

“Sometime it is more of an accomplishment for me making weight than it is winning fights. I lose about twenty pounds in about seven days. It is not exactly the healthiest but it is not the most dangerous because I do I mean I start a diet two weeks out don’t really notice anything until after the first week. But once I’m in that last week comes the hardest three or four days of training. I mean your hungry, your thirsty, your on water restriction, everything you eat is dry or plain. Your not always focused or there mentally because your always thinking about something else or your miserable.” (Participant #4)

Theme #5: Motivation

The fifth theme that emerged from the examination of the transcripts was motivation. The athletes discussed their sources for motivation during the fight as well as during training.

Internal. Some of the athletes talked about an internal source of motivation that they use in the sport of MMA. Here is what a few athletes had to say about this internal motivation.

“I am a firm believer that every “little boy” wants to grow up to be something great and it is that “little boy” inside of you that you know wants you to succeed and wants you to do better and or any voice within you that says you can do this, you are a strong individual, you can persist past this and push through it.”
(Participant #3)

“but most of the time it is just guys saying you know digging deep down inside their heart and what they want and saying I will not give up I will not quit.”
(Participant #3)

“I was just in a place mentally where nothing was going to bother me. The people were booing and I, my corner people were like I couldn’t believe I was smiling the whole time. I was just, I got in the cage I was bouncing around, I was just smiling, I was having a good time because that’s where I want to be. You know those people don’t understand what goes into it and that’s my favorite place in the world to be. That’s why I work so hard because I want to be in that cage fighting.” (Participant #5)

“You have to be a competitive minded person and the fact of the matter is you’re trying to hurt the guy.... Ironically enough my mother. She is hyper competitive. She grew up in Charleston, West Virginia to a very bad home and she is very driven and she has pulled herself out of that and now she very successful. And my dad has always been very, you don’t back down. A kid in my neighborhood came and flicked me off one day and my dad shut the door and said you stay out there and you deal with it. So ever since then that was my first confrontational situation where, and my dad was like you take care of it or people are going to walk all over you. You’re a little guy, deal with it, Napoleonic complex I guess.”
(Participant #6)

In summary the internal motivation takes many forms from a “little boy” inside ones head, to a seemingly simple love of being in the ring, or a set of values possibly instilled at an early age. This internal drive allows the athletes to compete free from external forces and subversion.

External. Many of the athletes mentioned how their intensity in training was elevated by either a physical presence or thoughts about what an opponent might be doing. Some participants described their experiences with training partners and coaches providing motivation for workouts and competition.

“And especially like me you know when I work out alone I don’t get as many reps, I don’t go as fast cause I will have a set exercise and I’ll time it and my times stink when I’m alone. My times are much better when I have someone pushing me or some one saying “go go go” and get that last rep you know get it set. So as far as that is concerned I mean you know there are days when you go to the gym and your just going through the motions and there are days when you go to the gym and you are just ready.” (Participant #2)

“Yes, very much so like just being able to say I’m not going to quit, I’m not going to give up. One of the things that we have here just within our black belt program is that we actually force the guys to take a commitment and at anytime if they want to break that commitment you know we are going to straight up tell them we don’t think it is right for you to give up on your hopes and dreams and just this is something that you really want to do regardless of how much it sucks you’re not going to quit. I don’t care how much it hurts or how much other people may ridicule you, or look down on you for not being there. You’re not necessarily get to go out to the parties every night. But it is something you really dive into, that you commit yourself to.” (Participant #3)

“Your trainers are a big help as well. Having someone sitting over you screaming in your face while your doing the workouts it really just amps you up. You know saying sometimes very demeaning things but the end result is that it usually fires you up and makes you want to do better.” (Participant #3)

“Well there comes a time when anybody trains or anybody’s putting themselves through conditioning or something hard to where you just want to quit or you don’t think you can do anymore. Then somebody else says five more, one more round, do something else, one more thing, one more thing, always sitting there encouraging you, always helping you, always when your at your worst always encouraging you and helping you and pushing you to do more to do a little bit extra. Telling you that your really good, your just tired, your exhausted. This is where we want you right now. This is the last round of the fight right here. This other guy is not doing that, or something like that. So encouragement basically from another teammate or people training with me.” (Participant #4)

Another type of social facilitation that was discussed was the use of the opponent to motivate the athlete both in training and in the actual fight.

“Oh yeah I definitely use that as a motivator because I am miserable and during that misery you think about the guy and you’re just thinking about well I can’t wait to weigh in and get in the cage and put it on him for making me lose this weight. I mean if you think about it, it’s not his fault. You’re making a choice to get in the cage yourself but you want to mentally find that anger or find that to get in the cage with him and say you made me lose twenty pounds I’m going to kick the shit out of you for that. I defiantly use that as something like I always tell

myself this guys making my week miserable he's making my life miserable, I'm going to ruin him." (Participant #4)

"I train really hard and a majority of the time harder than anybody I train with and I like to get to a place where I feel like I've trained harder than anybody I'm going to fight or the person I'm going to fight coming up. That plays a big role for me, feeling like I have physically, in better shape and I'm not going to get tired. My cardio and everything is going to be better than his." (Participant #5)

Summary

The co-participants in this investigation were very open and interested in discussing the use of mental skills in the sport of mixed martial arts. Some participants spoke of the mental skills used in training, some of the skills used in the minutes before the fight, and others of the skills utilized during the actual competition. All participants had examples of their uses of mental skills in the sport of mixed martial arts. Some even went into depth and outlined exactly what the mental skill was. For example participant six physically showed me his breathing routine that he would do while waiting in the locker room before a competition.

In addition the athletes in the mixed martial arts community were more than willing to share their time and knowledge with the researcher. They expressed much interest in the topic of the study and some were looking forward to the final version of this thesis. This is of importance since the co-participant stands to gain from this research equally if not more than the primary investigator.

DISCUSSION

The purpose of this chapter is to explain this investigation by examining the existing literature in the use of mental skills in the world of sport outside of mixed martial arts. It will also help to tie together the how and possibly the why these skills are apparent in the sport of mixed martial arts. Each section will commence with a description of the results of the theme to be discussed and then will conclude with associated research from other areas of sport and possible rationale of why MMA athletes utilize these skills. The end of these sections will provide suggestions for further research as well as general conclusions.

Confidence

The theme of confidence was prominent in the mental skills used by the MMA co-participants in this investigation. Confidence is defined in the sport psychology literature as “the belief that you can successfully perform a desired behavior” (Weinberg & Gould, 1995). Quotes such as “I was just like you know I knew this kid wasn’t going to beat me. I knew mentally that there was no way I was going to lose. I wanted it more. I felt like I worked harder and I wanted it more. There is no way he was going to take that from me.” (Participant #5) seem to fit nicely into that definition. A possible rationale for these findings might be the importance of having confidence going into a fight. In the sport of MMA there is basically three ways to win a fight. These ways include submission, knock out, or decision. In the first two situations physical pain or serious injury could result. An athlete going into a fight with a self-doubt that they will come out the victor could possibly be putting them selves into a very dangerous situation. With little to no past research found pertaining to the construct of confidence in MMA we are

left to look outside of the sport. Past research has shown that the ideas of robust self-confidence as well as resilient confidence, exist amongst elite English cricket players (Bull et al., 2005). Elite Olympic and Commonwealth Games athletes cited an unshakable self-belief that one possesses unique qualities and abilities that make you better than your opponents as one of the key components to mental toughness (Jones et al., 2002). In addition self-confidence is a mental skill that is common among many elite and successful athletes. It has been noted in multi gold medal winners from both the Olympics and World Champion competitions in ice hockey and individual sports such as speed skating, wrestling, track, freestyle skiing, synchronized swimming, bobsledding, and swimming (Durand-Bush & Salmela, 2002). In addition, male cyclists reporting high levels of self-confidence and low state anxiety performed better than their opponents who reported having high levels of state anxiety and low self-confidence in the Tour de France (Dunn & Dishman, 2005).

Repetition. Weinberg and Gould (2007) state that performance accomplishments allow for a base for self-efficacy judgments due to the fact that they are based on one's mastery experiences. This draws from Bandura's (1977) theory on self-efficacy. Successful experiences tend to lead to increases in self efficacy. Conversely failures will tend to diminish self efficacy. One study conducted with gymnasts found that participants that were described a target task and then allowed to practice that task with feedback and physical assistance performed better on that task than a control group who received instruction, but no verbal feedback or physical assistance. (McAuley, 1985). A more current study conducted by Hays, Maynard, Thomas, and Bawden (1997) found that 14 elite athletes reported that preparation was a source of confidence. They also found that

all male athletes in the study, one team athlete and six individual sport athletes reported that competition outcome was a source of confidence. It was interesting to note that only three male athletes derived confidence from competition performance. Three female athletes cited competition outcome as a source of confidence and all seven female athletes in the study cited competition performance as a source of confidence. These reports are concurrent with those produced by the co-participants from the current study.

Scouting. Scouting can be defined as the traditional planning of a match strategy from a set of priori information for later use against an opponent. This was demonstrated by the athletes looking at their opponents fighting style and fight records. One study examining elite squash players found that each player would perform consistently when competing against the exact same opponent but when the performance differed when competing against different opponents (McGarry & Franks, 1995). This might be an important consideration for MMA athletes due to the fact that athletic performance has not been shown to be consistent across opponents. Future research should examine the performance patterns among athletes in MMA.

Self Talk. Self talk is defined as “the verbal dialogue in which athletes interpret their feelings and perceptions, evaluate themselves, and give instructions or reinforcement (Hackfort & Schwenkmezger, 1993). Participant three supplied this example of self talk “I’m the best at this position, I’ll be out of here shortly. This is not how the fights going to end”. Self-talk has been theorized to affect performance due to the fact that it increases confidence and regulates arousal (Hardy, Jones, & Gould, 1996). The use of self-talk to promote confidence was supported in a study examining female collegiate tennis players. Volleying ability was assessed with improvements noted in

confidence in ability to win points at the net, frequency of attempts to approach the net, and their rating of effectiveness at the net. One of the players even had this to say after the implementation of the self talk routine, “I’m definitely more confident now than before” (Landin & Herbert, 1999). Another study conducted by Goudas, Hatzidimitriou, and Kikidi (2006) found that motivational, instructional, and kinesthetic self- talk improved shot put performance in club track athletes. The athletes also stated that the motivational self-talk helped their concentration and confidence.

Social Support. Social support is positive feedback and encouragement provided by teammates, coaches, and even friends. Many of the co-participants gave experiences of how social support gave them confidence to be able to achieve in both competition and practice. Hays, Maynard, Thomas, and Bawden (2007) found that 8 out of 14 elite athletes cited support from their family, partners and/or friends as sources of confidence in both competition and preparatory training. This is concurrent with what the co-participants of the current study had reported. Hays, Maynard, Thomas, and Bawden (2007) also found that 13 out of 14 elite athletes cited their coach as a source of confidence. Three out of the six females that cited the coach as a source of confidence found that coaching advice was a source of confidence and all six stated that they derived confidence from the social support provided by the coach. Five of the males, who reported the coach as a source of confidence, reported that the belief in their coach to establish appropriate training programs was a source of confidence. Four of the males cited that the way they were treated by the coach gave them confidence and three males reported that the support staff was a source of confidence. The reports of athletes

receiving confidence from their coaching staff is concurrent with the sources provided by the co-participants of the current study.

Visualization and Mental Rehearsal

Half of the athletes mentioned the use of visualization and mental rehearsal as mental skills utilized in the sport of mixed martial arts. These mental rehearsals allowed the athletes to not only formulate a game plan to be used in the actual competition but to mentally rehearse and correct errors in their technique. The sport of MMA is very technical. Quotes such as “I know that if you watch it and spend some time paying attention to it, it’s not nearly as brutal as you’d expect or as you would think. It’s actually more technical, more of a sport.” (Athlete 1 from Pilot Study) and “I think for some people, we are just out there fighting. They don’t realize when the fights on the ground, they think it is boring on the ground, but on the ground it is more of a chess match. You know you got to think three moves ahead of the person” (Participant #5). Statements such as these would lead us to believe that these athletes are using imagery and mental rehearsal as a means to establish mental blue prints as to how they would like the fight to go, supporting the ideas behind symbolic theory (Sackett, 1934). Weinburg and Gould (2007) refer to imagery or mental rehearsal as creating or recreating an experience in the mind. For these athletes these experiences took the form of step-by-step scenarios complete with initial as well as contingency plans.

Past research with Karate athletes using a technique called visuo-motor behavior rehearsal, which utilizes relaxation as well as imagery, has been shown to actually improve three measures of karate performance over control groups. These three measures were skill, combinations, and sparring. Those trained in visuo-motor behavior rehearsal

also exhibited lower levels and activation of state anxiety than the control group (Seabourne et al., 1984). A replication of this study conducted with mixed martial arts athletes would be a direction for future research.

Another study conducted by Harris and Robinson (1986) looked at muscle innervation as a result of utilizing two imagery perspectives amongst 36 advanced and beginning Karate students. Results showed that internal imagery produced more muscle activity than external imagery. Based on the results from this study interventions to be used with mixed martial arts athletes should focus on an internal imagery perspective. Further research is necessary to conclude the effectiveness of this imagery perspective in the sport of mixed martial arts.

Arousal Regulation

The athletes cited the importance of the need to “keep your adrenaline” or “not getting “amped” too soon (Participant #2). In the sport psychology literature arousal regulation or more broadly stated energy management is the “ability to effectively manage various feeling states (e.g., arousal, anxiety, anger, excitement, fear) to achieve personally optimal physical and mental energy for performance” (Tenenbaum & Eklund, 2007). In the sport of MMA it is very important to regulate your use of physical energy as well as mental energy. Athletes commented on the ten-minute window before a fight and how during this ten minutes it was very easy to get over aroused. If we take a look at the Individualized Zones of Optimal Function or IZOF we see that there is a relationship between the anxiety response, athletic performance, and the individual (Hanin, 2000). The theory contends that optimal arousal levels differ for each individual and can possibly range from high to low based on the activity itself. A possible rationale for the

use of energy management is that participation in the sport of MMA could have a particularly detrimental outcome in the form of injury or even concussion. Another possible explanation lies in the comments provided by the co-participants in that being over aroused could make the difference between a win and a loss. “ You see guys gas all the time, cause they go too hard too fast and those last few minutes they just lay their, or a punch that wouldn’t even phase them normally drops them because they are just done, they are spent.” (Participant #2). The idea of losing to some athletes is far worse than the idea of being injured. “So being hurt isn’t necessarily the main problem, it’s more the ego, you know that losing in front of a hundred or so people watching you. That’s the big fear for us...Yeah I have been hurt far worse practicing than I have in an actual fight” (Participant 3). “I don’t want to do this, do that. I don’t want to screw up. It’s just too much worrying” (Participant 5). It might not be the fear of injury that leads these athletes to manage their energy before and during a fight, it might be a fear of failure. Further research into this area is needed.

Studies have shown that elite athletes possess the ability to manage and cope with negative feeling states such as anxiety, fear, and pressure. One such study conducted by Gould, Dieffenbach, and Moffett (2002) examined the psychological characteristics of Olympic champions. Ten Olympic champions, winning a total of 32 Olympic medals were interviewed. These athletes were found to be free from worry, scored high on activation, relaxation, and emotional control. Qualitative results obtained in this study also helped to support these findings. Elite athletes have also been shown to utilize energy management techniques (Durand-Bush, & Salmela, 2002).

Breathe Control. Breathing exercises have been used in the martial arts for quite some time. The Nishino Breathing Method developed in the 1970's by Aikido master Kozo Nishino is one such method. The method involves deep breathing practice and the visualization of an internal energy flow. It also involves some gentle body movements such as twisting and relaxing. When using this breathing method in conjunction with exercise participants were found to report lower stress levels and elevation in heart rate were attenuated (Kimura et al., 2005). Since one of the athletes went into very great detail about his breathing strategies it could be hypothesized that the cultural use of breathing exercises in martial arts could explain for their use in the mixed martial arts.

The athletes stressed the importance of being able to pace yourself and not getting “spent” before the fight even begins, but also to use it during the actual competition. They stated the importance of breathing in this process. Breathe control is an important part of relaxation. Weinburg and Gould (2003) state that when you are calm your breath is likely to be smooth, deep, and rhythmical. On the other hand when you're tense your breath is more likely to be short, shallow, and irregular. Athletes commented on being aware of the increased breathing and being able to consciously slow it to an appropriate level.

Self-Talk. Some athletes reported the use of self-talk to help reduce their arousal or intensity. Self-talk as mentioned previously is useful in the act of increasing confidence and regulating arousal (Hardy, Jones, & Gould, 1996). One intervention conducted with five elite field hockey players from the EHL found that the use of self talk in conjunction with other mental skills helped to reduce the frequency of experienced cognitive anxiety symptoms, decreased the frequency of experienced somatic anxiety

symptoms and helped to restructure the interpretations of anxiety for two players (Thomas, Maynard, & Hanton, 2007). Another study examined the effectiveness of a cognitive behavioral stress management intervention among college athletes. The intervention consisted of relaxation, imagery, and self-talk. The treatment group showed less competitive anxiety and negative affect than the control group (Megan, 2005). This might help to explain why the athletes in the sport of MMA chose to use self-talk as a means to regulate their arousal. Further research should be conducted with these athletes to probe into the use of self-talk on arousal.

Physical Contact. One of the more interesting reports given by the co-participants was the phenomenon of getting hit and the arousal increasing effects that it had. Statements such as “after the first good lick...there is a switch inside and I get angry” and “I don’t really tick until I get hit or something goes wrong” are examples of this phenomenon. If we look at learning psychology, one study showed that when rats received electrical shock they would respond by showing aggressive and defensive postures. They did note that as the number of shocks increased the postures would shift from an oppressive threat posture to a submissive crouch posture (Reynierse, 1971). This might be important to bring to athletes attention so they don’t rely on this strategy too much. Further research has looked at stress exposure and affective modulation of aggressive behavior in men and women. The study showed that women under a high stress condition responded with less aggression than those under low stress. Men exposed to high stress exhibited more aggression than those in the low stress condition (Verona & Kilmer, 2007). These findings might have practical implications when coaching or training male and female mixed martial arts athletes. If the two groups respond

differently to getting hit then they would need to be instructed differently about this arousal regulation mechanism. Further research is necessary to fully uncover these differences in the sport of MMA.

Discipline and Mental Toughness

The theme of discipline and mental toughness emerged due to the combination of life style changes, workout regimen, and cutting weight being mentioned by many athletes. In the field of sport psychology mental toughness has been referred to as a variety of positive responses to situations, which have included the ability to persist and refuse to give in, overcome setbacks and poor performances, cope with excessive pressure, and not let adverse situations affect performance (Thelwell, Weston, & Greenless, 2005). In the interviews given by the co-participants they used the terms discipline and mental toughness interchangeably. Some athletes would refer to these aspects as being disciplined while another would use the term mentally tough. The construct of being disciplined seemed to be instrumental to not only success in the sport of MMA but the culture of the sport as well. If the athletes are not able to deal with the training and physical demands both inside and outside the sport, it seemed that sport participation and success in the sport would suffer. “Yeah I mean it is a sport you really got to dedicate yourself to. You go to make a lot of sacrifices for” (Participant #5). “It just seems like so many of the people that say hey I can do that they don’t want to. They don’t want to put that effort or make that commitment to do it. That’s why I think you see so many of these guys in the UFC, that don’t train as hard as they should, end up washing out after their three fights and then you never see them again” (Participant #3). Based on

the subject matter and ideas expressed by the co-participants these three sub-themes can easily integrate into the definition of mental toughness.

Life Style Changes. Many of the athletes talk about how, do to the nature of the sport of MMA, that they had to change their lifestyles. Participants talked about how they used to interact with friends, go out to bars, and eat what ever they wanted at restaurants. You know one missed meal can negate eight weeks of training it's not, I mean that Big Mac is great but it does not, it's not worth it" (Participant #2). One athlete even spoke of a terminated relationship. Based on the statements by the co-participants much of that has to change. Most of the athletes talked of their training being very regimented, thus causing them to make sacrifices in what they did with their free time. Jones et al. (2002) by questioning internationally successful athletes found that mental toughness lies in the innate or learned ability to cope with many demands such as competition, training, and lifestyle better than an opponent. Bull et al. (2005) identified a theme related to mental toughness in elite English cricket players entitled independence. This theme encompassed the ability to be independent, and take responsibility for themselves. This independence also included responsibility outside of the performance arena., in essence the ability for the athlete to take responsibility for their overall professional development. The athletes' concerns about going to a bar jumping in to their training, or eating a meal that could derail their diet could be considered them taking responsibility for their own professional development.

Work Out Regimen. Some athletes in this study went into great detail about their personal workout regimens. These regimens not only included long hours in the gym and sparring, but were held most days of the week as well. Some athletes even cited that they

were in the gym training everyday of the week. “I mean for someone who is really adamant about it your up here every single day of the week except for maybe one or two days on the weekends stuff like that constantly training” (Participant 3). “You know that is what I train my as off for every single day, two or three times a day, six, seven days a week for me to get in that cage and fight” (Participant 5). These statements might tie into Bull et al.’s (2005) theme of independence at it relates to independence within the sport of MMA itself. It also ties into other themes developed in this study such as exploitation of learning opportunities, a belief in quality preparation, and going the extra mile. The belief in quality preparation is demonstrated in Participant #2’s response of his workout regimen. He believed his workout regimen was more beneficial to what he wanted to achieve than the traditional approach to lifting used by his peers. The theme of exploiting learning opportunities was marked by the desire to use learning opportunities and keep learning. This might be argued as a component of mental toughness that explains for the amount of time the co-participants spent training. Participant #3’s statements about the amount of training dedicated to skill work. More research is necessary to understand the opportunities to learn and advance one’s skill set in MMA practice and competition. The theme of going the extra mile is captured in Participant #5’ statement of “Sweating and training everyday and being tired and worn out all the time that’s the hard but getting in the cage and fighting that’s the fun part, that’s the part that pays off.”

Cutting Weight. The process of making weight can be an arduous task for mixed martial arts athletes. “Sometime it is more of an accomplishment for me making weight than it is winning fights” (Participant #4). It not only requires constant monitoring “I just weighed myself I weigh 220, I fight at 170 or 185, I’ve got to drop 20 pounds right now

to just be close enough to cut” (Participant #2), but also careful planning. Participant 2 stated “when I’m six to eight weeks out from a fight my diet gets ridiculously clean and there is no messing up there is no flubbing a meal” and Participant 4 stated “I lose about twenty pounds in about seven days. It is not exactly the healthiest but it is not the most dangerous because I do I mean I start a diet two weeks out don’t really notice anything until after the first week”. A study examining 197 wrestlers from nine high schools in a rural county found that increased activity and food restriction were the most common weight loss methods. Water restriction and spitting were also cited as unsafe methods though not as frequently. It was interesting to note that these athletes were aware of the harmful effects as well as the decreased performance related to dehydration. Those athletes who identified wrestling as their major sport were more likely to utilize rubber suits, spitting, water restriction, and even diet pills over those who were multi sport athletes. Desire to win and coach/teammate were the greatest motivators behind weight loss efforts (Marquart & Sobal, 1994). In sports such as MMA where weight restrictions are in place for competition weight loss strategies should be evaluated and improved upon. Further researcher should examine the weight loss practices of the mixed martial arts athlete as well as to develop safe and effective strategies for doing so.

Motivation

Motivation is defined as the direction and intensity of one’s effort (Sage, 1977). Without motivation we would not be inclined to elicit behavior. Any athlete must be motivated to participate in their sport by some means whether it is internal or external. The demands and sacrifices that the primary investigator has seen in the lives of these athletes might provide rationale for why the theme of motivation was so prevalent in the

experience of mental skills in MMA. With this possible rationale some sources of motivation must be in place for them to continue participation in this demanding sport. Many of the athletes talked about not only the duration of their training sessions but the frequency as well. Several athletes even cited training on weekdays and weekends.

Internal. Many of the athletes interviewed stated that they participated in MMA because they personally wanted to be there of their own free will. Statements such as “I got in the cage I was bouncing around, I was just smiling, I was having a good time because that’s where I want to be” are a prime example of this. The statements provided by the co-participants demonstrate an internal motivation that is free from external pressures. Research has shown that those behaviors that are authentic or self-authored or endorsed rather than those that are externally controlled provide for more interest, excitement, and confidence which leads to enhanced performance, persistence, and creativity (Ryan & Deci, 2000). In the world of exercise adherence it has been shown that people with more self-determined motivations exhibit higher levels of exercise effort and better exercise performance as compared to those individuals who had less self-determined motivations (Vansteenkiste et al., 2004). A study conducted by Hodge et al. (2008) found that male and female Masters athletes from six different sports enjoyed their participation, committed, and were predominately intrinsically motivated. Future research should aim to examine the motivations of MMA athletes as well as to develop strategies to increase intrinsic or internal motivation.

Extrinsic. Many athletes reported that they found motivation in the presence of others. Some co-participants stated that their coaches and training partners were sources of motivation. If we look further into Deci and Ryan’s Self Determination Theory (2000)

we see that individuals seek out the needs of autonomy, relatedness, and competence. Training partners and coaches could be supplying the athletes with the needs of both competence and relatedness. This theory is demonstrated by participant #3's comments about lifting. "When I work out alone I don't get as many reps" and "My times are much better when I have someone pushing me". It was also noted that one gym in particular where Participant #2 and #3 trained utilized the use of contracting or the idea of an accountability partner. If a member of the gym decided to quit, that member will be confronted by their training partners about his/her decision to terminate their participation in the sport.

Others stated that that the mere thought of what their opponents might be doing was enough to motivate them. One athlete even stated that he blamed his opponent for making him lose weight in preparation for a fight. It was this blame that provided him with a source of motivation. The idea of an opponent even though he is physically absent could be a new addition to the ideas encompassed in motivation theory. This topic requires further research in order to fully grasp this concept.

Despite the insight into the use of mental skills in the mixed martial arts provided by the current study it does have its limitations. The current study contained possible limitations in that all athletes were Caucasian and only consisted of 6 participants. The mental skills used by the mixed martial arts athletes interviewed could have been a cultural artifact. Further investigation with other ethnic groups is necessary. Some mental skills such as focus and the use of music in motivation could not be included in the thematic structure do to only one participant reporting the use of these particular mental skills. The author speculates that a larger sample size might have led to the reoccurrences

of these mental skills. The author also noted that since the interviews took place both in person and over the telephone that nonverbal communication was not apparent in the phone interviews. This was most apparent when one athlete used hand gestures to represent his breathing routine. Another possible limitation of this study is the use of amateur athletes. We can not infer that professional mixed martial arts athletes would use the same mental skill set as amateurs so further investigation with this particular population is necessary.

This is not to say that coaches, trainers, corner men, and Sport Psychology consultants should not take note of the mental skills used by the amateur MMA athletes in this study. It is actually quite the opposite; these skills were predominant in, as well as integral to the experience of mental skills in the sport of MMA. Corner men, trainers, and coaches should take note of the skills that these athletes are using and support and encourage their use. Sport Psychology consultants should work to educate this population on the appropriate and proper use of mental skills, as well as introduce new ones as appropriate to help maximize athletic performance. Although the current study provides a rich description of the use of mental skills in the sport of mixed martial arts, it is only a launching point for truly understanding the mental skills used in this new and quickly growing sport. Future research should examine each theme separately to further the knowledge of these mental skills and how they are applied in the sport of MMA. Quantitative, semi-structured, and mixed methodological approaches could all be utilized to further the understanding of mental skills in MMA.

Conclusions

Based on the results of this investigation the following conclusions that can be drawn are that:

- MMA athletes in this investigation stated ideas pertaining to confidence and its importance in the sport of mixed martial arts.
- MMA athletes in this investigation found repetition to be a source of confidence
- MMA athletes in this investigation found their own internal dialogue to be a source of confidence.
- MMA athletes in this investigation found the support of others as a source of confidence.
- MMA athletes in this investigation use imagery and mental rehearsal to formulate strategy as well as to work on error correction.
- MMA athletes in this investigation cited the importance of not getting “amped” too soon and gassing out.
- MMA athletes in this investigation used breathe control techniques to manage their energies
- MMA athletes in this investigation used self-talk to manage their energies.
- MMA athletes in this investigation found the event of getting struck by opponents an arousal inducing experience
- MMA Athletes in this investigation thought of themselves as being very disciplined and mentally tough athletes.
- MMA athletes found the life style changes, workout regimen, and process of cutting weight an exercise in this idea of mental toughness and discipline.

- MMA athletes in this investigation stated that their motivation to participate in said sport stemmed from an internal desire to participate.
- MMA athletes in this investigation cited social facilitation and encouragement as a source of motivation.

Recommendations for Coaches, Sport Psychology Consultants, and Sport Researchers

Based on the results from this study, the follow recommendations for coaches, sport psychology consultants, and sport researchers are presented.

- 1) Coaches and Corner men should provide athletes with verbal encouragement before a competition and learn what types of dialogue provide confidence for their athletes.
- 2) Coaches and Sport Psychology Consultants should teach and encourage the appropriate use of self-talk and positive affirmations to boost confidence and regulate arousal.
- 3) Coaches should provide for training situations that are more challenging than actual competition to help boost confidence in competition.
- 4) Coaches and Sport Psychology consultants should teach and practice breathing techniques and possibly other means of arousal regulation with their athletes, especially those who “amp” too soon or suffer from poor energy management skills.
- 5) Coaches should help athletes adjust to life style changes and provide support for both the nature of the strenuous work outs and process of cutting weight.
- 6) Coaches should help nurture the internal motivations of their athletes and provide for social facilitation when possible. Coaches should also refrain from

using extrinsic motivation when a strong intrinsic drive is in place to avoid undermining intrinsic motivation.

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APPENDIX A
RESEARCH QUESTION, LIMITATIONS, DELIMITATIONS,
ASSUMPTIONS, AND DEFINITIONS

Research Question

What are the thoughts and perceptions about, as well as the actual application of mental skills in the mixed martial arts profession?

Limitations

1. Participants will be selected primarily through personal contacts
2. Results may not be generalizable to all combat sports

Delimitations

1. A small sample size will be utilized
2. Purposeful sampling will be used to identify participants
3. All participants will be of amateur status

Assumptions

1. Participants will accurately and truthfully describe the phenomenon in their own words during the interview
2. Participants will be able to articulate information in their interviews
3. The phenomenological interview is a valid method for producing a thick, rich description of the individual experience of using mental skills in the sport of mixed martial arts.

Definitions

1. Qualitative Data - Direct quotations capturing people's perspectives and experiences. They capture and communicate someone else's experience of the world in his or her own words (Patton, 2002).
2. Triangulation - Strategies for reducing systematic bias and distortion during data analysis (Patton, 2002).
3. Phenomenological Analysis – Seeks to grasp and reveal the meaning, structure, and essence of the lived experience of a phenomenon for a person or a group of people (Patton, 2002).
4. Mixed Martial Arts – practitioners mix the various martial arts to make a complete fighter (Sheridan, 2007).

5. Amateur Fighter- A non-elite fighter competing in fights for fun or a purse and not affiliated with any of the major MMA organizations.

6. Humanistic Framework – The holistic development of individual human potential (Hill, 2001)

APPENDIX B
EXTENDED REVIEW OF LITERATURE

EXTENDED REVIEW OF LITERATURE

Behavioral Strategies

Goal setting has been used in a wide variety of sports and activities so it would make perfect sense that this strategy would apply to martial arts as well. According to Anshel if a goal is set at a level that is unrealistic or in which achievement is very difficult feelings of anxiety and a sense of failure may occur (2003). Goals should help to direct a competitor's efforts in the direction of executing a specific skill or using a certain strategy. When goals are set appropriately goals the athlete should experience feelings of increased motivation and a sense of satisfaction that their performance has improved.

An example of an appropriate goal in the martial arts include: "I will execute 'x' technique with 100 percent accuracy". The 'x' in this case could include blocks, punches, kicks, and reflex action. Other examples include "I will improve my confidence before I face my opponent", "I will feel relaxed before a bout", and "I will successfully land 'x' number of kicks and punches (Anshel & Payne, 2006).

Scheduling has also been a behavioral strategy that has been used in the martial arts profession. While scheduling is similar to goal setting it basically involves the ideas of maintaining proper frequency and content of the training sessions as well as to ensure that all events leading up to a competition are organized and prepared (Anshel & Payne, 2006). This requires that the athletes establish objectives for training and mental preparation times be established, completed and evaluated. The use of scheduling allows the athlete to monitor their improvements in their skill set as well as what possible changes might need to be made.

Another behavioral strategy used amongst martial arts competitors is the self-monitoring checklist. This strategy requires both the athlete and the individual coach to jointly determine the types of mental and physical components necessary to achieve optimal performance. These self monitoring checklists might include training routines executed on certain days of the week, the use of particular stretching exercises, mental preparation techniques both thoughts and habits, dietary habits, sleep patterns, and other actions that must be planned and executed according to the specific desired behavior. This strategy serves as a reminder to the athlete to perform the necessary tasks on the appropriate days of the week or the hours leading up to a competition. In the same vein, psychologists have used a behavioral strategy called record keeping. Record keeping is where the athletes record their thoughts and feelings and actions about their performance in either a practice situation or an actual competition. This strategy allows for athletes to compare improvements or detriments to a baseline performance.

Emotional States and the Martial Arts

Robazza, Bortoli, and Hanin (2004) conducted a study to determine if pre-competition idiosyncratic emotions, bodily responses, and task specific qualities (whether they are physical, technical, or tactical performance characteristics) helped to determine the performance of ten high level karate athletes. The Individual Zones of Optimal Functioning (IZOF) model was utilized. The athletes were first asked to recall their best and worst karate performances to help develop scales composed of 33 idiosyncratic items. The 33 items were composed of 12 emotion related items, 12 items for bodily responses, and 9 items dealing with task specific qualities. These scales were then later used to compare actual emotions, bodily responses, and task specific qualities of the

athletes 15 minutes prior to the first round fight in ten different competitions spanning the entire season. The results found differences in the idiosyncratic emotions and bodily responses between the elite performances and the less than elite average performers. Performance differentiation was revealed on such variables as facilitating pleasant emotions, facilitating unpleasant emotions, inhibiting unpleasant emotions, and inhibiting unpleasant bodily symptoms. The researchers found that compared to average performances the higher mean scores of both emotions and bodily symptoms were associated with good performances whether the emotional states were inhibiting or facilitating. The overall findings revealed that good achievement was associated with an emotion state that was distant from the dysfunctional individual zone as outlined by the IZOF method. This is parsimonious with the “in and out of zone” idea behind the IZOF framework and past findings from other studies.

Achievement goals have also been examined in Aikido and Judo (Gernigon & Herve Le Bars, 2000). The authors wanted to know if achievement goal orientations, both task and ego, differ as a function of the fighting sport that is practiced. In this case do Judo which is competitive and aikido which is non competitive differ in achievement goal orientations. The author also wanted to know if achievement goal orientations differ as a function of the level of experience and gender. Subjects composed of both children and adults were asked to complete the French version of the Perception of Success Questionnaire. A series of MANOVA's and follow up ANOVA's revealed that amongst the children's group, aikidokas were more task oriented than judokas, experienced aikidokas were less ego oriented than beginner aikidokas and experienced judokas, and experienced judokas were more ego oriented than beginner judokas. For the adult group

the authors found that experienced aikidokas were both less task oriented and ego oriented than both beginner aikidokas and experienced judokas. The authors found no significance for gender and argue the relationship between task orientations and the competitive context.

Boxing Performance Enhancement

Some sport psychology literature has dealt with the ethical issues regarding certain combat sports, namely boxing. Is it ethical to help one man physically harm another for the sake of sport? Heyman (1990) wrote a position paper directly dealing with said issue. He states that since most psychologists are from middle class backgrounds their belief structures typically mirror middle class values. Heyman recalls the APA's Council of Representatives passing of a resolution to support the abolishment of boxing and states that this act may call into question the ethics of a psychologist working with boxers. He further goes on to state that the APA conducted no scientific inquiry into the question nor presented a thorough review of scientific literature. He states that middle class values tell us not to settle disputes with our fists, only to fight as a last resort, and by no means should we fight for fun. The author realizes the potential dangers boxing holds but likens it to a seemingly healthy runner who suffers cardiovascular trauma leading to death while running, working out, or participating in other forms of physical activity. The author goes on to bring up such issues as the fact that every year there are football players who are seriously injured or die as a result of practice or during games, yet we dare not bring football under scrutiny. The author goes on to bring up the fact that between 1918 and 1950 when boxing had its highest popularity in the United States, New York reported 43 deaths from baseball and only 22 deaths from boxing. He

then argues that alcohol, tobacco, and illicit drugs are far more dangerous to a larger number of people than boxing, and an act of prohibition would probably follow in the same manner as the above substances and in the end be counterproductive. The article wraps up by describing ethical dilemmas Heyman has encountered while working with boxers and other sports figures. The author's final thoughts include ideas of thinking realistically instead of simply. He also states that further research is necessary to uncover the exact dangers of boxing and of ways to make it safer and reduce those dangers.

Another article by Reiter and Desprospo (2003) calls attention to the findings from several studies that have uncovered long-term neurological symptoms associated with boxing. Besides the head trauma associated with boxing, dysarthria, memory defects, cerebella vestibular dysfunction. and sensory, motor, and cognitive defects. The authors state that these injuries are located in areas of the brain needed for academic, vocational, and social functioning. With the increase in the use of Neuropsychological tests among contact sports boxing has lent itself to neurological research. The repetitive contact to the head can lead to a condition known as dementia pugilistica. The authors state that neurological testing should be employed for the evaluation of amateur and professional fighters. Boxers should also be tested periodically in the case of said athletes experiencing multiple concussions to reduce the risk of significant damage to the brain.

Wrestling

An in depth qualitative investigation of the 1998 US Olympic Wrestling team regarding psychological factors influencing performance during the Seoul Olympics was conducted by Eklund, Gould, and Jackson (1993). Past research has shown the differences between medalists and non medalists, but the present study's purpose was to

distinguish differences that might be present among six medal winning wrestlers. The six medalists ranged from 23 to 29 years of age. An interview guide was used to help minimize interviewer effects and interviews were conducted within six months of the Olympic Games. Results did reveal that differences did exist between the six medaling wrestlers. Differences included the medalists perceptions of expectations placed upon them and the content and complexity of their pre-performance mental preparation strategies.

Gould, Weiss, and Weinburg (1981) wanted to identify the psychological characteristics of successful and non-successful Big Ten wrestlers. They had forty nine wrestlers competing in the Big Ten championship tournament complete a psychological skills inventory dealing with both psychological factors used in both competition and training. They analyzed 22 cognitive variables and two performance measures which were win-loss record and tournament placement with t-tests and discriminant function analyses. They found that self confidence, maximum potential, and the use of attentional focusing were the most important variables distinguishing between the two groups. Successful wrestlers were more self-confident, indicated that they were closer to achieving their maximum wrestling potential, and only focused their attention on wrestling related information prior to a match. Contrary to previous studies few differences in coping responses to anxiety levels, and actual anxiety levels were apparent between the successful wrestlers and the less successful wrestlers.

Gould, Horn, and Spreeman (1983) conducted a study to examine the constructs of precompetitive anxiety competitive anxiety in junior elite wrestlers. They had 458 junior wrestlers, ages ranging from 13 to 19, participating in the United States Wrestling

federation Junior National Championships rate their typical levels of anxiety prior to and during a match. They also analyzed the relationship between success, years of wrestling experience, age, trait anxiety, and precompetitive and competitive state anxiety using univariate and regression analysis. No significant differences were found in precompetitive anxiety and competitive anxiety patterns between successful and non-successful wrestlers as well as less experienced wrestlers versus more experienced wrestlers. The authors also found that age was not related to either competitive anxiety or precompetitive anxiety. The authors did find a significant difference between high trait and low trait anxiety wrestlers in regards to precompetitive anxiety and competitive anxiety. Descriptive statistics were also ran and revealed that all wrestlers became worried or nervous in 67% of their matches. These nervous or worried feelings were seen as both facilitative and detrimental to performance.

Gould, Horn, and Spreman (1983) set out to identify sources of stress in junior elite wrestlers. They had 458 junior wrestlers, ages ranging from 13 to 19, participating in the United States Wrestling Federation Junior National Championships rate the frequency in which they felt that they experienced 33 sources of stress before a match. Descriptive statistics revealed that sources such as performing up to ones ability, improving on one's last performance, participating in championship meets, not wrestling well, and a focus on losing were all identified as major sources of stress. By using factor analysis the authors found that the 33 sources of stress loaded on three separate factors. These three factors were labeled as follows, fear of failure-feelings of inadequacy factor, external control-guilt, and social evaluation. A multiple regression analysis revealed that wrestler trait anxiety and years of wrestling experience were significant predictors of the fear of

failure-feelings of inadequacy factor. Trait anxiety was also found to be a predictor of the social evaluation factor. The most and least frequent sources of stress were identified in this study but the authors conclude that individual differences are present in the perceived sources of stress.

Qualitative Methods

Susan Jackson use qualitative methods to evaluate the idea of flow states in elite figure skaters (1992). Sixteen elite female skaters where interviewed to get their lived experience with flow states in skating. They were also asked about which factors led to achieving optimal flow states during performance. Factors that were thought to lead to flow included a positive mental attitude, positive pre-competitive and competitive affect, maintaining appropriate focus, physical readiness, and for pairs, unity with partner. Factors that were thought to detract from flow included physical problems/mistakes, an inability to maintain focus, a negative mental attitude, and a lack of audience response.

ADDITIONAL REVIEW OF LITERATURE REFERENCES

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APPENDIX C
INFORMED CONSENT



COLLEGE OF Health and Human Sciences

DEPARTMENT OF Health and Kinesiology

INFORMED CONSENT

Hello. You are being asked to participate in a study being conducted by Matthew Harpold and Advisor Dr. Dan Czech from Georgia Southern University. I am currently a 2nd year graduate student getting my Master's in Sport Psychology. Dr. Czech is the Associate Professor in the Sport Psychology department. I am interested in studying the lived experience of using mental skills in MMA amongst male professional fighters from a phenomenological qualitative approach.

The purpose of this research study is to interview male professional fighters (n=6-8) Participation in this research will include the completion of a phone interview with the principal investigator. The interview will be transcribed verbatim and you will be given the opportunity to review the transcripts and make changes to your comments. The audio tapes will be stored in a locked file in the researcher's office as well as the names that go along with each of the interviews. The tapes will be destroyed one year after the completion of the study. The researchers will be the only people with access to the tapes. The interview will take approximately 30 minutes and will be conducted through a phone interview. The results of this study may help to gain insight into the mixed martial arts experience as well as to serve as an entry point for further investigation of the sport.

There are no anticipated risks. There are no direct benefits to you for participating in this research study.

The information that you give in the study will be handled confidentially. Your information will be assigned a code number. The list connecting your name to this code will be kept in a locked file. When the study is completed and the data have been analyzed, this list will be destroyed. Your name will not be used in any report.

You have the right to withdraw from the study at any time without penalty. You may decline to answer certain questions. If you wish to withdraw from the study then tell the researcher who will immediately stop the interview. If you decide to withdraw

after data has been collected then contact the researcher who will destroy the data collected. You will receive no payment for participating in the study.

Participants have the right to ask questions and have those questions answered. If you have questions about this study, please contact the researcher named above. To contact the Office of Research Services and Sponsored Programs for answers to questions about the rights of research participants please email oversight@georgiasouthern.edu or call (912) 486-7758.

You must be 18 years of age or older to consent to participate in this research study. If you consent to participate in this research study and to the terms above, please sign your name and indicate the date below. Your participation in the study is completely voluntary. You will be given a copy of this consent form to keep for your records.

Title of Project: The Experience of Competing in The Ultimate Fighting Championships-
An Existential Phenomenological Investigation

Principal Investigator: Matthew Harpold, PO Box 8076 Statesboro GA 30460, 540-314-7109, harpolme@gmail.com

Other Investigator(s): Dr. Dan Czech, PO Box 8076 Statesboro GA 30460, 912-681-5267,
drczech@georgiasouthern.edu

Participant Signature

Date

I, the undersigned, verify that the above informed consent procedure has been followed.

Investigator Signature

Date

APPENDIX D
REVIEWER CONFIDENTIALITY AGREEMENT

Georgia Southern University
College of Health and Human Sciences
Sport Psychology

The Experience of Competing in The Ultimate Fighting Championships- An Existential
Phenomenological Investigation

Research Confidentiality Agreement

I, _____ (print name) will be taking part in the study on the
Experience of competing in the sport of mixed martial arts.

I understand that as part of the research process, I am expected to maintain the confidentiality of the participants in the study to the best of my ability. I will have access to personal and private information in the course of this project. I agree to treat this information in the way that I would want personal information about myself treated.

I will treat all information about the participants I review as confidential. I will not discuss the information given by the participants with anyone other than the research team. I will keep the identities of the participants strictly confidential, unless they have consented to have their names used in the report.

This issue of confidentiality has been discussed with me and I agree to the terms of this agreement.

Signed _____

Date _____

Approved _____

Date _____

APPENDIX E
DEPARTMENTAL IRB FORMS

Georgia Southern University Office of Research Services & Sponsored Programs Institutional Review Board (IRB)		
Phone: 912-681-0843		Veazey Hall 2021
		P.O. Box 8005
Fax: 912-681-0719	IRB@GeorgiaSouthern.edu	Statesboro, GA 30460

To: Matthew Harpold
130 Lanier Drive Apt. 312
Statesboro, GA 30458

Dan Czech
P.O. Box 8076

cc: Charles E. Patterson
Associate Vice President for Research

From: Office of Research Services and Sponsored Programs
Administrative Support Office for Research Oversight Committees
(IACUC/IBC/IRB)

Date: March 11, 2008

Subject: Status of Extension Request for Approval to Utilize Human Subjects in Research

After a review of your Extension Request for research project numbered: **H07184**, and titled "**The Experience of Competing in the Ultimate Fighting Championship – An Existential Phenomenological**", it appears that (1) the research subjects are at minimal risk, (2) appropriate safeguards are planned, and (3) the research activities involve only procedures which are allowable.

Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that the Institutional Review Board has approved your extension.

This IRB Extension approval is in effect for one year from the date of this letter. If at the end of that time, there have been no changes to the research protocol; you may request an extension of the approval period for an additional year. In the interim, please provide the IRB with any information concerning any significant adverse event, **whether or not it is believed to be related to the study**, within five working days of the event. In addition, if a change or modification of the approved methodology becomes necessary, you must notify the IRB Coordinator **prior** to initiating any such changes or modifications. At that time, an amended application for IRB approval may be submitted. Upon completion of your data collection, you are required to complete a *Research Study Termination* form to notify the IRB Coordinator, so your file may be closed.

Sincerely,

Eleanor Haynes
Compliance Officer

Research Compliance Consolidated Cover Page

Georgia Southern University

For electronic submission: Your proposal narrative should already be completed and saved. Next complete cover page and “Save As” a word document to your computer or disk named “Coverpage_Year_Month_Date_lastname, First initial.doc”. Then open and complete Informed Consent Checklist.

Application for Research Approval

<i>Investigator Information:</i>		
Name of Principal Investigator: Matthew Harpold	Email: harpolme@gmail.com	For Office Use Only: Protocol ID: _____ — Date Received:
Phone: (540) 314-7109	Address: 1400 Statesboro Place Circle Apt 167 E Statesboro, GA 30458	
Department: Health & Kinesiology		
Name(s) of Co-Investigators: Dr. Dan Czech	Title of Co-Investigator(s): Associate Professor	
Personnel and/or Institutions Outside of Georgia Southern University involved in this research:		
<i>Project Information:</i>		
Title: The Experience of Competing in The Ultimate Fighting Championships- An Existential Phenomenological Investigation		
Brief (less than 50 words) Project Summary: The Ultimate Fighting Championship has become increasingly popular and the elite athletes themselves have been catapulted into the star light. I hope to gain an understanding of their daily lives and the actual fighting experience through qualitative interviews. The purpose of the present study is to explore the professional UFC “lived” experience of fighting and their daily lives as a fighter.		
<i>Compliance Information:</i>		
<i>Please indicate which of the following will be used in your research:</i>		
<u>X Human Subjects (Complete Section A: Human Subjects below)</u>		
<input type="checkbox"/> Care and Use of Vertebrate Animals (Complete Section B: Care and Use of Vertebrate Animals below)		
<input type="checkbox"/> Biohazards (Complete Section C: Biohazards below)		
Section A: Human Subjects		

Number of Subjects: 7	Project Start Date: 11/1/07 Project End Date: 5/1/08 (no more than 1 year)
*Date of IRB education completion: 2/2/06 (attach copy of completion certificate)	
<i>Purpose of Research:</i> <input checked="" type="checkbox"/> For use in thesis/dissertation <input type="checkbox"/> Completion of a class project Publication (journal, book, etc.) <input type="checkbox"/> Poster/presentation to a scientific audience <input type="checkbox"/> Results will not be published <input type="checkbox"/> Other	<i>Please indicate if the following are included in the study:</i> <input checked="" type="checkbox"/> Informed Consent Document <input type="checkbox"/> Greater than minimal risk <input type="checkbox"/> Research Involving Minors <input type="checkbox"/> Deception <input checked="" type="checkbox"/> Generalizable knowledge (results are intended to be published) <input type="checkbox"/> Survey Research <input type="checkbox"/> At Risk Populations (prisoners, children, pregnant women, etc) <input checked="" type="checkbox"/> Video or Audio Tapes <input type="checkbox"/> Medical Procedures, including exercise, administering drugs/dietary supplements, and other procedures
Check one: <input checked="" type="checkbox"/> Student Faculty/Staff <i>If student project please complete advisor's information below:</i>	
Advisor's Name: Dr. Dan Czech	Advisor's E-mail: drczech@georgiasouthern.edu
Advisor's Phone: 681-5267	Advisor's Department: Health and Kinesiology P.O. Box: 8076
<i>Signature of Applicant:</i> X	Date:
<i>Signature of Advisor (if student):</i> X	Date:
<u>Section B: Care and Use of Vertebrate Animals</u>	
Project Start Date:	Project End Date: (no more than 1 year)
<i>Purpose of use/care of animals:</i>	<i>Please indicate if the following are included in the study:</i>

<input type="checkbox"/> Research <input type="checkbox"/> Teaching <input type="checkbox"/> Exhibition <input type="checkbox"/> Display	<input type="checkbox"/> Physical intervention with vertebrate animals <input type="checkbox"/> Housing of vertebrate animals <input type="checkbox"/> Euthanasia of vertebrate animals <input type="checkbox"/> Use of sedation, analgesia, or anesthesia <input type="checkbox"/> Surgery <input type="checkbox"/> Farm animals for biomedical research (e.g., diseases, organs, etc.) <input type="checkbox"/> Farm animals for agricultural research (e.g., food/fiber production, etc.) <input type="checkbox"/> Observation of vertebrate animals in their natural setting
Check one: <input type="checkbox"/> Student <input type="checkbox"/> Faculty/Staff <i>If student project please complete advisor's information below:</i>	
Advisor's Name:	Advisor's E-mail:
Advisor's Phone:	Advisor's Department: P.O. Box:
<i>Signature of Applicant:</i> _____ <i>Date:</i> _____ X	
<i>Signature of Advisor(if student)/Dept. Chair(if faculty):</i> _____ <i>Date:</i> _____ X	
Section C: Biohazards	
Project Start Date:	Project End Date: (no more than 3 years)
<i>Biosafety Level:</i> <input type="checkbox"/> Exempt <input type="checkbox"/> BSL 1 <input type="checkbox"/> BSL 2	<i>Please indicate if the following are included in the study:</i> <input type="checkbox"/> Use of rDNA
<i>Signature of Applicant (Faculty ONLY):</i> _____ <i>Date:</i> _____ X	

Please submit this protocol electronically to the Georgia Southern University Compliance Office, c/o The Office of Research Services & Sponsored Programs, P.O. Box 8005. The application should contain all required documents specific to the committee to which you are applying. Questions or comments can be directed to (912)681-0843 or ovrsight@georgiasouthern.edu

**GEORGIA SOUTHERN UNIVERSITY INSTITUTIONAL REVIEW BOARD
INSTRUCTIONS FOR PREPARATION OF PROPOSAL NARRATIVE**

For electronic submission: First complete the proposal narrative in entirety and “Save As” a word document to your computer or disk named “propnarr_Year_Month_Date_lastname, First initial.doc”. Then open and complete Cover page.

Please respond to the following as briefly as possible, but keep in mind that your responses will affect the actions of the Board. Clearly label your responses in sections that correspond to the specific information requested. You may insert your responses in each section on this page, leaving a space between the question and your answers. Narrative should not exceed 4 pages.

The application should be submitted electronically or 2 duplicate copies sent to the Office of Research Services and Sponsored Programs, at P. O. Box 8005, Statesboro, GA 30460, and should contain, in this order: a signed cover page, the informed consent checklist page, the project proposal narrative, and the informed consent that you will use in your project. Additional information, such as copies of survey instruments, advertisements, or any instruments used to interact with participants should be attached at the end of the proposal clearly designated as an Appendix.

Personnel. Please list any individuals who will be participating in the research beyond the PI and advisor. Also please detail the experience, level of involvement in the process and the access to information that each may have.

Principal Investigator: Matthew Harpold
2nd Year Graduate Student under Sport Psychology
Involvement in all phases of the study

Co-Investigator: Dr. Dan Czech
Advisor under sport psychology
Involvement in all phases of the study
Experienced Qualitative Researcher

Research Team: Thesis committee and fellow graduate students: Ted Hoffman, and Jocelyn Fisher (All members of the committee have completed the IRB Training)
Involvement in helping with finding themes after interviews
Fellow graduate students have some experience with the qualitative process

Purpose. 1. Briefly describe in one or two sentences the purpose of your research. 2. What questions are you trying to answer in this experiment? Please include your hypothesis in this section. The jurisdiction of the IRB requires that we ensure the appropriateness of research. It is unethical to put participants at risk without the possibility of sound scientific result. For this reason, you should be very clear on how participants and others will benefit from knowledge gained in this project. 3. What current literature have you reviewed regarding this topic of research? How does it help you to frame the hypothesis and research you will be doing?

What appears to be lacking in sport psychology literature is the examination of Mixed Martial Arts athletes and the “lived” experience of the use of mental skills when competing in the UFC. The present study was designed to examine the phenomenon by obtaining it from the first-person

perspective of UFC fighters themselves, using a phenomenological framework. Each participant will be interviewed on their experience in order to gain an understanding from their perspective. The knowledge from this study will hopefully be beneficial for professionals and amateur fighters, as well as fans trying to gain an understanding of the sport.

Describe your subjects. Give number of participants, approximate ages, and gender requirements (if any).

Describe how they will be recruited, how data will be collected (i.e., will names or social security numbers be collected, or will there be any other identification process used that might jeopardize confidentiality?), and/or describe any inducement (payment, etc.) that will be used to recruit subjects. Please use this section to justify how limits and inclusions to the population are going to be used and how they might affect the result (in general).

Participants

Fighters: 6-8 professional and amateur fighters will be interviewed for the study

Age: Approximately 20-40

Gender Requirements: Male

Recruitment: A purposeful sampling procedure will be used. Purposeful sampling seeks information rich cases, which can be studied in depth (Patton, 1990). The participants will be 6-8 male professional or amateur fighters who train for an compete in MMA competition.

Data Collection: The purpose of the data collection will be to collect in-depth descriptive information from the fighters on the experience of using mental skills in MMA competition. Information will be collected by interviewing the participants on their experiences in both training and competition in said sport. The interview will take place over the phone but will be done in a private place as to respect confidentiality for all participants. Each interview should last approximately 30 minutes with a main interview question and a series of subsequent probing questions. Real names and other identifying information will not be collected or used. There is a possibility that the identity of the participant will be visible through the reporting of their interview data. To address this issue numerous qualitative trustworthiness issues will be employed such as member checking, whereby each participant is given the opportunity to review the transcripts for accuracy and clarity. No inducements will be used in this study. As is standard for qualitative research, a small purposeful sample will be studied (statistical power and generalizability issues do not apply to qualitative research).

Methodology (Procedures). Enumerate specifically what will you be doing in this study, what kind of experimental manipulations you will use, what kinds of questions or recording of behavior you will use. If appropriate, attach a questionnaire to each submitted copy of this proposal. Describe in detail any physical procedures you may be performing.

This study will employ phenomenological framework as the qualitative interview methodology. The principal investigator will be conducting all the interviews as well as a research team who will help in the data analysis process. Each member of the research team will sign a confidentiality form. For the interview process each of the participants will sign an informed consent explaining the process and for them to agree to participate in the study. The interviews will be audio recorded, transcribed verbatim and analyzed qualitatively using a content analysis

procedure recommended by several experts in qualitative research (e.g., Flick, 2006; Patton, 2002). The interviews will take place over the phone during the best time for the fighters. There is one question that will be asked and then probing questions will be employed as needed (See Attached). Once all data is collected an interpretive group will be used in order to form themes from the interviews. Each of the members will sign a confidentiality form in order to keep all info between the members involved in the research process.

Research involving minors. Describe how the details of your study will be communicated to parents/guardians. If part of an in-school study (elementary, middle, or high school), describe how permission will be obtained from school officials/teachers, and indicate whether the study will be a part of the normal curriculum/school process. Please provide both parental consent letters and child assent letters (or processes for children too young to read).

N/A

Deception. Describe the deception and how the subject will be debriefed. Briefly address the rationale for using deception. Be sure to review the deception disclaimer language required in the informed consent. **Note:** All research in which deception will be used is required to be reviewed by the full Board.

N/A

Medical procedures. Describe your procedures, including safeguards. If appropriate, briefly describe the necessity for employing a medical procedure in this study. Be sure to review the medical disclaimer language required in the informed consent.

N/A

Risk. Is there greater than minimal risk from physical, mental or social discomfort? Describe the risks and the steps taken to minimize them. Justify the risk undertaken by outlining any benefits that might result from the study, both on a participant and societal level. Even minor discomfort in answering questions on a survey may pose some risk to subjects.

After careful consideration, the researchers do not think there are any real risks. I am hoping that they are all comfortable with their sport and will not decide to change their life style after being interviewed. Still, there are no real risks to any of the participants included in the study.

Carefully consider how the subjects will react and address ANY potential risks. Do not simply state that no risk exists, until you have carefully examined possible subject reactions.

Cover page checklist. Please provide additional information concerning these risk elements. If none, please state "none of the items listed on the cover page checklist apply." [Click here](#) to go to cover page for completion.

CERTIFICATION OF INVESTIGATOR RESPONSIBILITIES**By signing below I agree/certify that:**

1. I have reviewed this protocol submission in its entirety and I state that I am fully cognizant of, and in agreement with, all submitted statements and that all statements are truthful.
2. This application, if funded by an extramural source, accurately reflects all procedures involving human participants described in the proposal to the funding agency previously noted.
3. I will conduct this research study in strict accordance with all submitted statements except where a change may be necessary to eliminate an apparent immediate hazard to a given research subject.
 - a. I will notify the IRB promptly of any change in the research procedures necessitated in the interest of the safety of a given research subject.
 - b. I will request and obtain IRB approval of any proposed modification to the research protocol or informed consent document(s) prior to implementing such modifications.
4. I will ensure that all co-investigators, and other personnel assisting in the conduct of this research study have been provided a copy of the entire current version of the research protocol and are fully informed of the current (a) study procedures (including procedure modifications); (b) informed consent requirements and process; (c) anonymity and/or confidentiality assurances promised when securing informed consent (d) potential risks associated with the study participation and the steps to be taken to prevent or minimize these potential risks; (e) adverse event reporting requirements; (f) data and record-keeping requirements; and (g) the current IRB approval status of the research study.
5. I will not enroll any individual into this research study: (a) until such time that the conduct of the study has been approved in writing by the IRB; (b) during any period wherein IRB renewal approval of this research study has lapsed; (c) during any period wherein IRB approval of the research study or research study enrollment has been suspended, or wherein the sponsor has suspended research study enrollment; or (d) following termination of IRB approval of the research study or following sponsor/principal investigator termination of research study enrollment.
6. I will respond promptly to all requests for information or materials solicited by the IRB or IRB Office.
7. I will submit the research study in a timely manner for IRB renewal approval.
8. I will not enroll any individual into this research study until such time that I obtain his/her written informed consent, or, if applicable, the written informed consent of his/her authorized representative (i.e., unless the IRB has granted a waiver of the requirement to obtain written informed consent).
9. I will employ and oversee an informed consent process that ensures that potential research subjects understand fully the purpose of the research study, the nature of the research procedures they are being asked to undergo, the potential risks of these research procedures, and their rights as a research study volunteer.
10. I will ensure that research subjects are kept fully informed of any new information that may affect their willingness to continue to participate in the research study.
11. I will maintain adequate, current, and accurate records of research data, outcomes, and adverse events to permit an ongoing assessment of the risks/benefit ratio of research study participation.
12. I am cognizant of, and will comply with, current federal regulations and IRB requirements governing human subject research including adverse event reporting requirements.
13. I will notify the IRB within 24 hours regarding any unexpected study results or adverse events that injure or cause harm to human participants.

14. I will make a reasonable effort to ensure that subjects who have suffered an adverse event associated with research participation receive adequate care to correct or alleviate the consequences of the adverse event to the extent possible.
15. I will notify the IRB prior to any change made to this protocol or consent form (if applicable).
16. I will notify the IRB office within 30 days of a change in the PI or the closure of the study.

____Matthew Harpold_____
Principal Investigator Name (typed) Principal Investigator Signature Date

____Dr. Dan Czech_____
Faculty Advisor Name (typed) Faculty Advisor Signature* Date

***Faculty signature indicates that he/she has reviewed the application and attests to its completeness and accuracy**