Mental Toughness in the Classical Martial Arts

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ABSTRACT

The construct of mental toughness is in a state of evolution and refinement. The current study proposed to investigate; (1) the importance of mental toughness attributes from a Classical Martial Arts context, (2) the trainability of the mental toughness attributes from a Classical Martial Arts context, (3) and the extent to which classical martial artists perceive that attributes converge under broader, overarching sub-categories.

The current study used a two-phase approach to evaluate the perceptions of mental toughness in 174 non-competition based classical martial artists. Phase One used a survey (a) to assess the perceived importance and trainability of mental toughness, (b) to evaluate unique CMA (CMA) mental toughness components, and (c) to determine underlying factors via factor analysis. Phase Two used interviews to enhance study perspectives of 20 randomly selected CMA participants.

Phase One survey results support (a) the inclusion of all items as important to the mental toughness construct, (b) the trainability of all but 4 items, and (c) anticipation, learning attitude, and ethics as three unique CMA mental toughness components. The factor analysis supports the use of a six-factor model, which accounts for 60% of the variance, to explain CMA toughness. Phase Two promotes the use of several key themes as important to mental toughness in the CMA- conviction, commitment, conditioning, readiness to perform, distraction
control, and shifting focus of attention. Phase Two also provides insight into the context specific application of the six-factor model.

Previous perspectives on attribute importance, trainability, and general dimensions of mental toughness are supported by the current study. Variations exist between dimensions in the current study and those found previously. However, these differences are noted to exist more in context applications than in the essential meanings.
DEDICATION

Without the love, support, and empowerment of my wife, Jan Minnix, my son, Caden Minnix, and my daughters, Sarah and Hannah Minnix, I would not have the ability, interest, or drive to complete this doctoral program. You have been my mental toughness, my strength every step of the way. I truly feel like my doctoral degree belongs to you as much as it does to me. Words cannot describe how thankful and how proud I am of each one of you. This work is dedicated to you.
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Coaches and athletes have been searching for mental skills that will enhance their competitive edge over the competition. A review of literature pointed to mental toughness as being one of the more important determinants of peak athletic performance. Gould, Hodge, Peterson, and Petlichkoff (1987) reported that 82 percent of wrestling coaches ranked mental toughness as the primary quality related to competitive success. Williams (1998) denoted that mental toughness might be more important in determining the final outcome of a sporting event than factors such as speed and ability. As a result, sport psychologists and coaches have attempted to fashion training programs to develop mental toughness. This construct has only recently been the focus of serious research; thus its foundations are in a state of evolution and refinement. Without a thorough understanding of the construct, programs for developing mental toughness could be ambiguous and misleading.

Recently, rigorous scientific inquiry has lead to a more complete understanding of mental toughness (Bull, Shambrook, James, & Brooks, 2005; Connaughton, D., Wadey, R., & Hanton, S., 2008; Creasy, J., 2005; Jones, G., Hanton, S., & Connaughton, D., 2002, 2007; Stratton, R., 2004; Thelwell, R., Weston, N., & Greenlees, I, 2005). Investigators have defined mental toughness as: “Generally, superior ability to cope better than your opponents with the many demands and related pressures that occur at the highest level in sport” (Connaughton et al., 2008). In order to further define the boundaries of mental toughness, researchers have attempted to isolate the distinct characteristics of the construct. Jones et al. (2002) identified twelve mental toughness characteristics. In 2004, Stratton (2004) further developed the list of characteristics, adding eight. Creasy (2005) consolidated the characteristics found by Jones et al. (2002) and Stratton (2004). More recently, Jones et al. (2007) found that 30 characteristics were necessary to adequately describe the construct.

Although improved scientific rigor has advanced our understanding of mental toughness, studies have produced variations in its characteristics. Moreover, variations have been found with respect to wording used to describe the characteristics. Also, differences in the ratings of the perceived importance of characteristics have been discovered. The variations in characteristics could be due to the context specific nature of mental skills (Jones, 2007). Bull et al. (2005) and Connaughton and colleagues (2008) suggested that a thorough understanding of
the development of mental toughness requires the integration of context specific factors, such as the individual differences of the athlete as well as the sports setting in which the individual is engaged.

Individual differences and the success of mental skills programs have been well documented in the literature. Seabourne, Weinberg, and Jackson (1985) examined the performance effects of individualized mental skills programs using positive self-talk and self-regulation. The researchers demonstrated that individualized psychological intervention programs led to significantly superior physical performance in elite karate athletes. Hanin (1986) proposed a model, the Individual Zone of Optimal Functioning (IZOF), which explained the influence of individual differences among athletes on the correlation between anxiety and performance. More specifically, Hanin indicated that an optimal level of state anxiety would not be identical for all individuals. Rather, the amount of anxiety required to maximize performance varies between athletes. Gould and Tuffey (1996) performed an extensive review of literature, which indicated that the IZOF model consistently demonstrated a positive impact on performance.

The management of anxiety has been found to be an important characteristic of mental toughness. Connaughton et al. (2008) noted that mentally tough athletes perceived anxiety as an unavoidable yet manageable consequence of competition. Bull and colleagues (2005) stated that the mentally tough athlete thrives off of the pressures of competition. From Hanin (1989), Connaughton et al. (2008), and Bull and colleagues (2005) research, it is plausible to consider that mentally tough performers manage anxiety on an individual basis. Therefore, the development of mental toughness via anxiety management is possibly dependent on individual differences. Additionally, Smith (2006) indicated that the exact mechanism explaining how anxiety fuels the performance of a mentally tough individual, cannot be generalized, but varies from individual to individual.

It should be noted that the importance of individualizing mental skills programs has not been limited to anxiety management. Hanin (1997) extended the IZOF theory to include additional affective responses. The researcher indicated that individuals have a unique “recipe” of emotional ingredients serving as prerequisites for optimal performance. Therefore, mental skills programs designed to enhance performances must consider the athletes unique combination of emotional ingredients.
Cox (2007) indicated that it is not known whether the relationship between IZOF based mental skills programs and performance is influenced by factors such as sporting context. Smith et al. (2007) conducted a study where the effects of individualized and general visualization programs on hockey and gymnast performances were compared. The data demonstrated that visualization programs, which contained specific elements tailored to the sport context, were more effective than more general programs. For example, gymnasts who practiced visualization on the balance beam with gymnastics related attire, performed better than those who visualized their routines at home in a relaxed, lying position.

Sambolec (2007) demonstrated that the contexts, in which a persistent task was performed, influenced the extent to which a priming based mental skills program enhanced participant effort. In addition the priming based program was related to an increase in effort for subjects in a coactive context, whereas subjects receiving the program in either a solo or conjunctive context did not. The authors concluded that the mental skills program possibly enhanced motivation in the coactive group where personal outcomes and social evaluations of the individual are at stake. In other words, the nature of the coactive group possibly increased the drive to compete. The authors reasoned that the solo and conjunctive contexts lacked a competitive component, which resulted in a decrease in motivation. Interestingly, the authors stated that the differences in motivation between groups were independent from individual trait competitiveness. Apparently, the context in which the persistent task was performed was directly related to the effectiveness of the mental skills strategy.

Since context specific application of various mental skills programs has appeared to be related to their intended outcomes, programs geared to develop mental toughness may also require a sport specific context. Bull et al. (2005) stated that attributes of mental toughness might vary across a broad spectrum of sports. Thelwell and colleagues (2005) indicated that delimiting the study of mental toughness within a single, unexplored sport might provide variations in results. In fact, a pilot study conducted by the author (Minnix, 2006) used Creasy’s (2006) mental toughness inventory to assess the mental toughness attributes of karate athletes. The pilot study demonstrated slight variations in perspectives on mental toughness attributes. For example, karate athletes indicated that “having an unshakable self-belief” was ranked among the least important mental toughness attributes. Creasy (2006) found that “having an unshakable self-belief” was mid range with respect to importance. Connaughton et al. (2002) and Thewell et
al. (2005), however, found that “having an unshakable self-belief” was the most important attribute. Contrastingly, the karate participants reported that “having a passion for what you do” and “having internalized motives to succeed” were the most important attributes of mental toughness. Creasy (2006) also suggested “[having] a passion for what you do” as a primary attribute of mental toughness. It is possible that dissimilarities in context might influence the differences noted in attributes. Jones et al. (2007) supported this thesis. Moreover, Jones et al. (2007) indicated that contexts such as individual based sports could influence the rank order of attributes.

**Justification**

One venue that could account for these differences includes the solo and individual nature of karate. Regarding traditional karate, the solo context of the activity could limit the competitive drive while enhancing intrinsic forms of motivation through a mastery-oriented climate. On the contrary, the motivational climate of a team sport, such as soccer, could be more competitive. Therefore, motivation and success, in solo activities could be driven more by intrinsic sources such as having passion or loving what you do (King & Williams, 1997).

The classical martial arts (CMA) places less emphasis on a competitive environment (King & Williams, 1997) than competition based martial arts and other sports. More prominence is placed on self-defense. However, Creasy (2005) evaluated the perceived importance of various mental toughness attributes among twenty-two NCAA coaches from Division I, II, and III male sports teams. Therefore, the participants represented a context with a competitive structure. In fact, the majority, if not all investigations, which were reviewed in the literature, was conducted in a competitive context. Therefore, previous perspectives on mental toughness have been grounded in the competitive, comparative nature of sports. An important question should be proposed here. What perspectives do athletic participants who do not compete or compare with other “rivals” in the traditional since, afford to our current understanding of mental toughness such as the relative importance of the attributes?

Given research implications afforded by previous studies, the attributes of mental toughness found within CMA may vary from those previously described. Subsequently, mental toughness programs, which have evolved from studies within a competitive based context, may be inherently different from what is described in the CMA environment. Therefore, the attributes of mental toughness necessitate an investigation within a sport specific framework. To
date, few studies have investigated the perceived relevance of mental toughness attributes within a sport specific framework (Bull, 2005; Thelwell, 2005). In addition, no studies have delimited an investigation of mental toughness attributes to an individual sport in a non-competitive context. The purpose of this study will be to investigate the importance of mental toughness attributes within a context specific framework delimited to one individual sport with a low competitive component.

**Significance**

Results from this study could serve as a launching point for the development of a context specific mental skills program designed to develop mental toughness in individual, non-competitive based activities. According to Creasy (2005), three mental toughness attributes; conviction, internalized motives for success, and the ability to remain focused during personal life distractions, are possibly not trainable. Should these attributes present a higher order on the hierarchy within a non-competitive context, the development and implementation of mental toughness training programs may not be feasible. However, the relevance of training these factors has not been evaluated from the standpoint of a non-competitive sport. Furthermore, Creasy (2005) indicated that a limiting factor in developing mental toughness attributes is time. Subsequently, Creasy implied that teachability and time issues are areas worthy of further exploration. Since time appears to be a limiting factor for teaching mental toughness, attributes should be rank ordered in terms of importance. According to Creasy, time issues can be managed by delimiting training time to the most important attributes. The rank order of attributes appears to be influenced by the context or sport specific nature in which mental toughness is employed. Therefore, another purpose for this research is to establish the rank order of attribute importance and trainability of the attributes within a non-competitive sport context.

Furthermore, the results of this study could be used to further investigate the broader dimensions of mental toughness. As pointed out by Jones et al. (2007) the abstract nature of the subcomponents as opposed to the more sport specific attributes, might allow for a more adaptable, overarching coverage of attributes which may vary across a wide array of sport contexts. Another focus of this study, therefore, is to investigate overarching themes or umbrella terms from a non-competitive sport base.
Research Statements

What is the perceived importance of mental toughness attributes from a martial arts context?
To what extent do attributes of mental toughness converge under broader, overarching sub-categories from a martial arts perspective?
How trainable are the mental toughness attributes from a martial arts context?

Definitions

The following definitions were retrieved from Merriam-Webster Online Dictionary (Retrieved January 21, 2010) unless otherwise indicated.
Conviction -A strong persuasion or belief.
Determination – 1. The act of deciding definitely and firmly; also: the result of such an act of decision. 2. Firm or fixed intention to achieve a desired end.
Commitment – 1. An agreement or pledge to do something in the future; especially: an engagement to assume a financial obligation at a future date. 2. Something pledged. 3. The state or an instance of being obligated or emotionally impelled.
Conditioning – 1. The process of training to become physically fit by a regimen of exercise, diet, and rest; also: the resulting state of physical fitness.
2. A simple form of learning involving the formation, strengthening, or weakening of an association between a stimulus and a response.
Karate – A Japanese art of self-defense employing hand strikes and kicks to disable or subdue an opponent.
Kata – A set combination of positions and movements (as in karate) performed as an exercise.
Kumite – Fighting (Clarke, 2009).
Hojo Undo – Specialized supplementary training equipment used by Okinawa Karate Practitioners (Clarke, 2009).
Ude Tanren – Two person conditioning exercises (Clarke, 2009).
CHAPTER 2
Review of Literature

Theoretical Foundation

The theoretical foundation for this research on mental toughness is the Personal Construct Theory (PCT). Wepman and Heine (1963) indicated that the theory’s central idea is found in the construct. Pervin (1980) stated that a construct is a way of mentally organizing and interpreting the world. Constructed ideas based on past experiences enable individuals to create schemas for anticipating and interpreting events. Moreover, a construct becomes a set of expectations about how the world should behave. Schultz (1976) stated that constructs are developed when an individual observes facts or data associated with their experience and then interprets them.

The notion that a construct affords the individual the ability to anticipate and interpret events is a pivotal theme of PCT. As such, the PCT views the layperson, the individual as a scientist, who uses constructs, reckoned from lived experience to describe and predict events. According to the PCT, semi-structured interviews, such as the one carried out by the current study, can serve as framework for exercising participants ability to engage as scientists while exploring the meaning of mental toughness, the importance of characteristics, and perspectives related to teaching and development.

The fundamental postulate of the theory suggests, “A person’s processes are psychologically channelized by the ways in which he anticipates events” (Kelly, 1955, p. 46). According to Fransella (2003), the PCT concept of a person refers to an event that embodies the expression of personality. Fransella implies that the person cannot be separated from the event. Rather, the person and the event should be viewed as a whole. According to Pervin (1980), Kelly used the term processes to indicate that the person is not inert. Moreover, personality does not require some external stimuli such as motivation to begin expressing itself. Instead, Kelly (1955, p. 37) asserts, “[the person] is delivered fresh into the psychological world alive and struggling.” Schultz (1976) interprets the term channelized to imply that the person’s processes are directed through a network of channels. These channels, while subject to modification, are relatively stable, providing structure for the operation of a person’s processes. The term anticipation, according to Pervin (1980), requires the person to categorize events and then chart a course for subsequent behavior. Observation of the order in which one event follows another,
facilitates the process of charting. In other words, anticipation enables the person to chart future behaviors on the bases of patterns and regularities previously observed.

As previously explained, the PCT serves as an excellent theoretical foundation for mental toughness research because it allows the participants to infer interpretations and predictions about mental toughness through constructs derived from previous experiences. The appropriateness of using the PCT to explore mental toughness via personal experience and associated constructs can be further understood via corollaries of the PCT. As pointed out by Doyle and Parfitt (1997), select PCT corollaries imply that individuals have the ability to shape characteristics required for optimal sports performance, including mental skills.

Doyle and Parfitt (1997) posit that the individual corollary is one outcome of the PCT that enable researchers to use participant perception as a source of data for investigating psychological abilities. According to the individual corollary, “Persons differ from each other in their constructions of events” (Kelly, 1963, p. 55). This corollary attests that each individual offers unique perspectives with regards to the interpretation of situations, which he or she regards as important (Doyle & Parfitt, 1997). The individual corollary serves as an important theoretical basis since the premise for this study is to denote a mental toughness perspective that possibly differs from individuals of other sports. The current study is especially interested in the importance and development of mental toughness attributes from a martial artists perspective.

Another important corollary for this study is the commonality corollary. This corollary states, “To the extent that one person employs a construction of experience which is similar to that employed by another, his psychological processes are similar to those of the other” (Kelly, 1963, p. 27). Based on the commonality corollary, Schultz (1976) implied that individuals, who share similar cultural and group norms, mores, and ideals, would share common ground with regards to construed experiences. The commonality corollary is important to this study with respect to its potential impact on the development of future programs for mental toughness. As illustrated throughout the literature (Bull, 2005; Cox, 2007; Sambolec, 2007; Smith, 2007; Thelwell, 2005), the success of mental skills programs depends on their specificity to sporting context. In order for the results of the current study to be useful to for future program development within a CMA context, participant perspectives should emerge from individuals with similar norms, mores, and ideals. The current study participants are representatives of classical martial arts and should collectively propose attributes and developmental ideas that are
similar and specific to context. In addition, as with any teaching and learning process, feedback is essential. In order to provide program feedback, with respect to the effectiveness of mental toughness development, coaches must be able to measure progress. The relative importance of mental toughness characteristics, deemed essential to mental toughness in martial arts, should be fairly congruent across the sample studied. According to the commonality corollary of the PCT, the resulting characteristics could serve to formulate measures of mental toughness central to the CMA in general.

Measuring the relative importance of mental toughness attributes necessitates individuals to construe the attributes in a hierarchical fashion. According to Wepman and Heine (1963, pg. 214), “one of the most important characteristics of a construct is its position in a hierarchical system relative to others. A construct may, of course be quite independent of most constructs in the system, but it is likely to be super ordinate to some and subordinate to others.” According to one outcome of the PCT, individual construing systems will afford the ability to rank order mental toughness attributes in a hierarchical fashion from most to least important as well as most to least teachable.

Structuring mental toughness attributes into a hierarchical fashion requires each attribute be measured with regards to the degree of perceived importance and teachability. In rating importance, for example, participants rank each attribute on a scale of one to five with one being unimportant and five being very important. The scale identifies the dichotomous nature of each attribute. The dichotomous corollary states, “A person’s construction system is composed of a finite number of dichotomous constructs” (Kelly, 1963, p. 59). According to this PCT outcome, individuals have the capability to interpret and predict events via bipolar assessments. Based on the PCT, the mental toughness questionnaire seems to be an appropriate method to exploit participants’ perceptions of mental toughness.

As highlighted in the literature, (Bull, Shambrook, James, & Brooks, 2005; Connaughton, D., Wadey, R., & Hanton, S., 2008; Creasy, J., 2005; Jones, G., Hanton, S., & Connaughton, D., 2002, 2007; Stratton, R., 2004; Thelwell, R., Weston, N., & Greenlees, I, 2005) the majority of knowledge gained via investigations on individual perspectives of mental toughness has been ascertained from focus groups, interviews, and questionnaires. These methods are valuable with respect to their ability to evaluate individual and context specific perspectives and in line with principles of the PCT.
Mental Toughness

Mental toughness has become known as one of the most important determinants of peak athletic performance. Subsequently, sport psychologists and coaches have attempted to fashion programs for developing mental toughness. One potential problem with developing mental toughness programs lies in the fact that the components of mental toughness can potentially vary from sport to sport. Furthermore, many of the studies, which have investigated the characteristics of mental toughness and their development, have done so without controlling for the sport context. Only two studies have researched the attributes of mental toughness within a single sport, both producing variations in mental toughness attributes. Without a clear framework to guide the development of mental toughness training programs, instructions for developing the concept could be ambiguous and misleading. Moreover, the development of mental toughness may be specific to the context to which the construct applies. Therefore, the framework for developing such programs may be improved by considering the specificity of the sport context.

Bull et al. (2005) were among the first researchers to analyze the development of mental toughness. In addition, their investigation is the only study to date, which analyzed the development of mental toughness using a participant base delimited to a single sport, Cricket. The investigators purposively selected twelve participants who were considered to be England’s mentally toughest cricketers. The procedure for collecting information from the participants began with a focus group among the researchers. The focus group enabled the researchers to develop a framework that the participants’ interviews would follow. Regarding the development of mental toughness, the group decided that a portion of the interview should revolve around advice to young English players on how to develop mental toughness.

Results from the qualitative interviews proposed that certain externally imposed factors are influential in the development of mental toughness. Collectively, the investigators referred to the factors as environmental influences. The environmental influences were believed to serve as building blocks for the following progression of three tiers of mental toughness attributes; tough character, tough attitude, and tough thinking. As this portion of the literature review deals primarily with the developmental factors, these attributes will be discussed later in the document. The environmental influences, which were believed to form the foundation of mental toughness
development, included parental influence, childhood background, exposure to foreign cricket, and opportunities to survive early setbacks and the need to earn success.

The environmental influences are described by several quotes. Concerning parental influence, one participant stated, “[Dad] pushed me immensely and ruled with the stick a little but would do it and make sure [I] did it well.” Another quote illuminates the role childhood background plays in the development of mental toughness, “I would say [the mentally tough participants] were probably brought up from the school of hard knocks.” The value of exposure to foreign cricket is captured in the following, “I went to a cricket club where people didn’t know who I was and being an Englishman in Australia…you have to prove yourself more than an Australian.” Opportunities to survive early setbacks were deemed valuable as well. For example, one participant indicated that failure at a young age developed mental toughness by challenging to work harder and rationalize a purpose for continuing in the sport. Finally, the authors explained that the participants valued hard work and the importance of earning success.

Several important conclusions, with respect to developing mental toughness programs, were presented. First, Bull and colleagues concluded that pinpointing common mental toughness factors is important in our understanding of mental toughness program design. However, the researchers indicated that coaches and other professionals should avoid using unyielding developmental factors. Rather, developmental factors should be dynamic and flexible accounting for the individual’s unique context. The investigators also implied that understanding the development of mental toughness requires the scientific community to operationalize and further investigate the concept.

Connaughton et al. (2008) were the first to conduct an investigation with a primary focus on the development of mental toughness. The researchers recruited 7 of the 10 participants used in a previous study. Each participant underwent a semi-structured interview regarding their perceptions on the development of the mental toughness attributes. Study results indicated that certain aspects of mental toughness begin in the “early years” (defined as a mean age of 8.3 years). For example, three mental toughness attributes were identified as starting early; having an unshakable self-belief in your ability to achieve your competition goals, having an unshakable self-belief that you possess unique qualities and abilities that make you better than your opponents, and having an insatiable desire and internalized motives to succeed. Furthermore, the results indicate that specific underlying mechanisms are associated with the development of the
attributes. The development of an unshakable self-belief in the ability to achieve competition goals was related to vicarious experiences, coach’s leadership style, and social support. The vicarious experiences developed mental toughness via modeling performance and learning strategies by elite athletics exuding confidence. Results also indicated that coaches who set challenging yet realistic goals enhanced mental toughness. Finally, sources of social support, which provided optimal levels of support, such as transportation and encouragement without being overly involved and forceful made a greater impact on the early development of mental toughness.

Connaughton et al. (2008) indicated that the development of an unshakable self-belief that the athlete possesses unique qualities and abilities was also influenced in the early years. The mechanisms believed to be responsible for this attribute included the realization of mastery level performance reinforced by successful demonstration of ability in the training environment.

Finally, the development of an insatiable desire and internalized motives to succeed was noted as an important factor of mental toughness. Connaughton et al.’s (2008) results indicated that the previously mentioned mechanisms, plus enjoyment, played a role in developing this attribute. The coach’s leadership style, social support, vicarious experiences, and demonstration of mastery enhanced self-belief. The researchers explained that the increase in self-belief was associated with a positive affect. As long as the athlete enjoys the activity, the positive affect enhanced the athletes desire to continue experiencing success. Furthermore, Connaughton et al. found that the insatiable desire to succeed was enhanced by critical incidents and parental focus. Critical incidents included unfortunate mishaps such as parental divorce, death of a family member, etc. The critical incidents developed mental toughness by providing athletes with an alternative focus and a mechanism to escape misfortunes. By focusing on successful performance, the athlete is able to somewhat replace the negative affect of critical incidents with the positive effects of successful performance. In other words, critical incidents increased the athletes drive to escape life and experience something positive, the experience of success. Parental focus, which triggered intrinsic motivation, also played a role. For example, parents who focused on enjoyment of training and individual improvement rather than winning trophies were more successful in developing mental toughness.

Results from Connaughton et al.’s (2008) study tracked the perception of mental toughness development through the middle years as well. During the middle years (defined as
11.1 years), five additional attributes were believed to be developed; experiencing an increased determination to succeed leading to recovery from performance setbacks, learning to maintain technique and effort under distress by manipulating the boundaries of physical and emotional pain, accepting that competition anxiety is unavoidable and that coping is possible, learning to thrive on competition pressures, and learning to regain psychological control following unexpected, uncontrollable events. Results also indicate that mechanisms found during the early years continued to play a role in nurturing corresponding attributes 1-3.

Connaughton et al. (2008) exploration of mental toughness development introduced two additional mechanisms, which emerged from the middle years. Competitive and sibling rivalry were two mechanisms believed to be responsible for continued development of attribute 3 or the insatiable desire and internalized motives to succeed. The participants indicated that competitive rivalry increased motivation by providing a challenging goal. The mechanism termed sibling rivalry was defined as older siblings perceived as superior athletes. Participants stated that older siblings, who were perceived to be athletically successful, yet inspired them to improve, fueled their motivation to succeed.

The ability to bounce back from performance setbacks, which was defined as negative comments, injuries, and poor performance resulting in defeat, was viewed as an attribute of mental toughness developed during the middle years. Learning to deal with performance setbacks included exposure to competitive rivalry and social support, which subsequently promoted an insatiable desire to succeed. More specifically, competitive rivalry resulted in exposure to negative comments, injuries, and performance failures. The rivalry provided the participants the opportunity to learn to deal with setbacks by developing positive attribution strategies. Moreover, social support further nurtured determination. For example, one participant in the study stated, “rather than having a defeatist attitude, [my dad] would tell me to work out what went wrong and the work harder on these areas in training in order to be successful at future attempts” (Connaughton et al., 2008, p. 89). Finally, having an insatiable desire to succeed was perceived to play an important role in the development of bouncing back from performance setbacks irrespective of the influence from social support and competitive rivalry.

Pushing through the physically and psychologically demanding aspects of training and competition was perceived as another important attribute birthed during the middle years
The mechanisms responsible for the development of this attribute included competitive rivalry, social support, enjoyment of skills, and coach’s leadership.

Another attribute developed during the middle years included an acceptance of competition anxiety as normal and manageable (Connaughton et al., 2008). Participants in the study explained that individuals in their social support network described anxiety as normal. Furthermore, the participants indicated that the individuals within their social network assisted with rationalizing internally derived “thoughts and feelings.” The social network also played a valuable role in dealing with external sources of stress.

Regaining psychological control following unexpected, uncontrollable events was the remaining attribute developed during the middle years (Connaughton et al., 2008). As with many other attributes, an important mechanism responsible for this attribute was social support. The participants believed that an increased ability to rationalize thoughts and feelings following an unexpected event positively influenced how they reacted in these trying circumstances. Therefore, the participants attributed social support to regaining psychological control following performance setbacks.

During the latter years, Connaughton and workers (2008) found that attributes one through three and their related mechanisms were reintroduced. Regarding attribute one, however, three additional mechanisms emerged. The participants believed that reflection, experience in the competitive arena, as well as physical and mental readiness, further developed an unshakable self-belief in one’s ability to achieve competition goals. According to the researchers, attribute three; goal setting, self-talk, and reflection, further develops the insatiable desire and internalized motives to succeed.

Attribute five or the ability to maintain technique and effort while pushing back the boundaries of physical and emotional pain was also perceived to be further developed through the latter years (Connaughton et al., 2008). The mechanisms reported as being responsible for this attribute during the middle years were also believed to be in operation with regards to its development during the latter years. In addition, simulation training was believed to play a vital role in the development of attribute five. One participant in the study stated, “What I started to do though was to simulate in my mind myself being able to perform successfully under these challenging conditions, which gave me the belief that I could push these boundaries back” (Connaughton et al., 2008, p. 91). Furthermore, having an insatiable desire to succeed was
viewed to directly influence the ability to push through the physically and psychologically demanding aspects of training and competition.

As in the middle years, Connaughton and colleagues (2008) data revealed that social support was identified as a mechanism for dealing with the pressures of competitive sport. The ability to cope with and thrive on these pressures, however, was determined to be an outcome of the amount of competitive experience and physical and mental preparation. Regarding competitive experience, it was believed that the number of experiences proposed opportunities for athletes to associate feelings of pressure and anxiety with elated feelings intrinsically married to winning. Understanding the relationship between pressure and successful performance served as a means for athletes to cope with anxiety. Moreover, the participant explained that true success is experienced when anxiety and pressure accompanies a winning performance. As stated by one participant, “I’d hate to turn up to a race with no pressure and not be nervous and win it. You would not feel the same at the end” (Connaughton et al., 2008, p. 91). The participant also indicated that competition pressures feed the drive to physically prepare. The resulting physical preparation increases self-belief that the athlete can handle any competitive situation. Physical preparation driven by pressure then becomes a mechanism, which enables an athlete to feed his or her confidence. Furthermore, goal setting, imagery, self-talk, cognitive reconstruction, pre-performance routines, and simulation training were also believed to enable athletes to cope with anxiety and thrive on competition pressures. As previously indicated, the primary mechanism enabling these mental skills to influence coping and thriving occurred through self-belief. Subsequently, self-belief was believed to enhance the ability to cope with anxiety and thrive on competition related pressures.

During the final years, Connaughton et al. (2008) noted that the ability to regain psychological control, switch on a sport focus, remain fully focused despite personal life and competition specific distractions, and resist influence of competitors performances were the final attributes developed. Mental imagery, pre-performance routines, and process goals were the mechanisms reported responsible for the development of the final attributes. In addition, having an insatiable desire to succeed was determined to be an important mechanism for remaining focused on training despite personal life distractions. Experience of success empowered participants to avoid personal distractions and remain focused by encouraging them that the hard work would eventually lead to the desired outcomes. The experience of enjoying training served
as a greater reinforcement than social pursuits. Subsequently, training behaviors were more likely to be repeated than social outings. Competitive rivalry and social support also played a role in remaining fully focused despite personal life distractions. The ability to turn off a sport focus was enabled by social support and hobbies.

The investigators indicated that mental toughness was not necessarily a stable construct. Rather, mental toughness was suggested to require a certain level of maintenance. The maintenance of mental toughness was attributed to an insatiable desire to succeed, social support, and mental skills. These three mechanisms are related to the nurturing of the other attributes as well as mental toughness in a holistic fashion.

Connaughton et al. (2008) proposed several conclusions supportive of those forwarded by Bull et al. (2005). First, the authors highlighted specific mechanisms responsible for the development of mental toughness attributes. Many of these mechanisms were similar to those proposed by Bull et al. (2005) and included the following; earning success, opportunities to survive setbacks, childhood upbringing, and parental influence. It should be noted that although similar, subtle differences in the developmental factors were viewed between studies. Consider social support as an example. Connaughton et al. (2008) indicated that an optimal amount of support was needed. According to one participant (Connaughton et al., 2008, p. 6), “I had a lot of friends in my sport that had parents who were really over-involved and pushy in their training, but I was lucky. My parents provided me with the tools that I needed, in terms of getting to practice, being supportive, and providing an optimal level of interests…which turned me into a confident young kid.” This idea of support is different from Bull and colleagues (2005) who implied that mental toughness is developed by parental support that is pushy. Bull indicated (Bull & colleagues, 2005, p. 225) that a “quest for shared qualities is critical” but the environmental factors might require individualization in accordance with the uniqueness of the individual. Some individuals might need to be pushed more than others. Since Bull and colleagues do indicate that the developmental factors must be flexible and viewed within a specific context, the author proposes that differences in specifics of mechanism could be influenced by the context. Although Bull et al. used a team sport for the population base, comparisons with Connaughton et al.’s participants are difficult to make. This difficulty is assumed because Connaughton et al.’s participants were not delimited to the context of a single sport. In addition, Connaughton and colleagues indicated that the mechanisms do not necessarily
impact the development of toughness attributes in isolation, but are often employed in combination of two or more mechanisms, providing a collective venue for the development of one or more attributes. For example, enjoyment, coach’s direction with goal setting, vicarious experiences, as well as social support work collectively in the development of mental toughness attributes. The point is that understanding the development of mental toughness may require consideration of how the many mechanisms/attributes work concurrently or in tandem affording a holistic effect. Therefore, a holistic approach, which endorses the use of mental toughness development strategies, while considering contextual factors such as the individual’s personal background or sport setting, might provide a more substantial understanding of mental toughness development. Finally, Connaughton and workers claimed that a thorough understanding of the development of mental toughness requires a valid and reliable assessment of mental toughness. The author’s perception of this conclusion is that the scientific community is in need of a more complete understanding of the mental toughness attributes as they apply to specific individuals requiring unique settings and/or contexts.

Jones et al. (2002) conducted the first scientific investigation of mental toughness. Using a purposive sampling procedure, ten elite international athletes from various sports backgrounds were selected. The procedure for the study included three stages. Stage one consisted of a focus group in which three participants brainstormed the meaning of mental toughness. Following, the participants collectively organized their ideas into a single definition of mental toughness. The focus group was also required to identify characteristics associated with mental toughness. Stage two consisted of individual interviews with the remaining participants. First, the participants underwent interviews in which they were encouraged to individually explore the meaning and characteristics of mental toughness. Next, the participants were asked to comment on the definition and characteristics formulated in stage one. Stage three allowed the participants to individually and collectively revisit and refine the definition and characteristics of mental toughness. In addition, the participants were asked to rank order the characteristics in terms of their relevance to mental toughness on a scale of one to ten (1 = most important and 10 = least important).

The final definition that emerged from the study was as follows: Mental toughness is having the natural or developed psychological edge that enables you generally to cope better than your opponents with the many demands (competition, training,
lifestyle) that sport places on a performer, and specifically to be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure (Jones, et al., 2002.).

The researchers also coined twelve mental toughness characteristics. The characteristics were rank ordered in terms of importance and they are as follows:

1. Having an unshakable self-belief in your ability to achieve your competition goals.
2. Bouncing back from performance set-backs as a result of increased determination to succeed.
3. Having an unshakable self-belief that you possess unique qualities and abilities that make you better than your opponents.
4. Having an insatiable desire and internalized motives to succeed.
4. Remaining fully focused on the task at hand in the face of competition-specific distractions.
6. Regaining psychological control following unexpected, uncontrollable events (competition specific).
7. Pushing back the boundaries of physical and emotional pain, while still maintaining technique and effort under distress (in training and competition).
8. Accepting that competition anxiety is inevitable and knowing that you can cope with it.
9. Not being adversely affected by other’s good and bad performances.
9. Thriving on the pressure of competition.
11. Remaining fully-focused in the face of personal life distractions.
12. Switching a sport focus on and off as required.

Jones et al. (2002) afforded several interpretations concerning the study results. The researchers proposed that the mental toughness definition was outcome based. According to the investigators, the fundamental elements of the definition are comparative in nature. Specifically, the participants defined mental toughness as being “better than your opponents.” Jones et al. indicated that one potential area of study and further insight into mental toughness might consist of comparing their definition with one generated by a population with a slightly different perspective on outcomes, such as ultra elite athletes. This is also the first study that attempted to
identify essential expressions of mental toughness. The reader should note that the expressions or characteristics are rank ordered according to importance. Number 1, or “[Having] an unshakable self-belief in your ability to achieve your competition goals,” was perceived by the study participants as being a key characteristic of mental toughness. Number twelve, “switching a sport focus on and off as required,” however, was perceived to be an attribute of less importance. Jones et al. (2002) implied that future studies might demonstrate that the weaker attributes presented here are more important for populations with different sports backgrounds. For example, attributes such as, “not being adversely affected by other’s good and bad performances” might be perceived as being more important by individuals who play team sports.

Another attempt to investigate the definition and characteristics of mental toughness was conducted by Bull et al. (2005). The researchers theorized that the conceptual and operational definitions of mental toughness would vary across a broad spectrum of sports. In order to test this implication, Bull and Colleagues studied the meaning of mental toughness within a different sport, Cricket. The researchers used a sample size of twelve, which was compatible with the sample size used by Jones, et al. (2002). In addition, the investigators attempted to strengthen their sampling technique by selecting twelve participants who were considered to be England’s mentally toughest cricketers. It should be noted that the selection of participants for this study was slightly different from the procedure used by Jones, et al. (2002). Jones and colleagues (2002) selected participants based on expertise in their sports, not knowledge of mental toughness. The procedure for collecting information from the participants began with a focus group among the researchers. The focus group enabled the researchers to develop a framework that the participants’ interviews would follow. The group decided that much of the interview should revolve around: a) the “winning mind” and mental toughness; b) personal theories relating to how each player acquired the winning mind; c) the role of the winning mind as it relates to pressure in developing through the ranks of Cricket; d) reflections on specific personal demonstrations of the winning mind in action; and e) advice to young English players on how to develop mental toughness (discussed previously).

Results from the qualitative interviews were organized into global themes. The global themes with similar meanings were divided into one of five general dimensions. The five dimensions included developmental factors, personal responsibility, dedication and commitment,
belief, and coping with pressure. It should be noted that a central definition of mental toughness was not produced by this study.

Bull et al. (2005) concluded that the global themes presented in their study afforded many similarities to the general categories of attributes from Jones and colleagues (2002). Self-belief, desire/motivation, dealing with pressure and anxiety, focus (performance and lifestyle related), and pain/hardship were broad overarching themes presented in both studies. The studies also shared more specific attributes exemplifying the global themes. For example, Bull and colleagues attributes such as “overcoming self doubt, focusing on improving weakness, feeding off physical conditioning, keeping perspective, good decision making, and honest self appraisal” were believed to share common ground with Jones et al (2002) attributes of “remaining fully focused, regaining psychological control, not being adversely affected by others performances, and accepting competition anxiety.” Bull and colleagues (2005) concluded that similarities found between theirs and Jones and colleagues (2002) study suggests trustworthiness for mental toughness attributes.

Bull and colleagues (2005) also suggested that subtle differences exist between the attributes produced in the studies. For example, Bull and associates uncovered an attribute, “competitiveness with self as well as others,” which is congruent with Jones et al’s (2002) definition of mental toughness but not specifically mentioned in their list of characteristics. The authors proposed that differences are positive adding further insight into the nature of mental toughness.

One factor that could explain the differences in characteristics between Bull et al’s (2005) and Jones and colleagues’ (2002) study may be the delimitation of the Bull and colleagues’ context to cricketers. Recall that Jones and colleagues (2002) did not use cricketers in their study. Furthermore, the representation of team sports was possibly negligible. Therefore, the sport context could provide one explanation for subtle differences in characteristics. The characteristics might be unique to mental toughness in cricketers or in a broader sense, team sports. An unshakable self-belief in your ability to achieve your competition goals was perceived by the study participants as being an important attribute of mental toughness. Number twelve, “switching a sport focus on and off as required,” however, was perceived to be an attribute of less importance.
Thelwell et al. (2005) examined the definition and characteristics of mental toughness within a Soccer context. The researchers indicated that exploring the definition of mental toughness in soccer might provide variation in results. On the contrary, similar results would serve to strengthen the validity of the definition and characteristics of mental toughness previously described by Jones et al. (2002). The selection criteria were similar to Jones and colleagues (2002). Only athletes who competed internationally at an elite level were chosen for the study.

Thelwell and colleagues’ (2005) study unfolded in two stages. During stage one, the investigators selected six participants to undergo an initial qualitative investigation. Using informal, individual interviews, the participants were asked to: 1) define mental toughness within a Soccer context, 2) compare their definition with the one formulated by Jones, et al. (2002), and adjust definitions as needed, and 3) identify characteristics they perceived to be related to mental toughness in Soccer. Stage two required the researchers to select forty-three additional Soccer players for the purpose of validating the definition and characteristics found during stage one. In addition, the participants in phase two rank ordered the importance of the mental toughest characteristics.

A final definition was derived from the study and included the following: Always cope better than your opponents with the many demands (competition, training, lifestyle) that Soccer places on the performer and, specifically, be more consistent and better than your opponents in remaining determined, focused, confident, and in control under pressure.

The following characteristics were identified in this study. Please note that the characteristics occur in order of importance and are as follows:

1. Having total self-belief at all times that you will achieve success.
2. Wanting the ball/wanting to be involved at all times.
3. Having the ability to react to situations positively.
4. Having the ability to hang on and be calm under pressure.
5. Knowing what it takes to grind yourself out of trouble.
6. Having the ability to ignore distractions and remain focused.
8. Having a presence that affects opponents.
9. Having everything outside of the game in control.
10. Enjoying the pressure associated with performance.

The authors concluded that the wording used to define mental toughness might differ from previous studies. However, the essential meaning is the same. Additionally, similarities exist between the characteristics described for Jones and colleagues’ (2002) and the present study. For example, the most important characteristic noted by Jones et al. (2002) and Thelwell et al. (2005) was self-belief.

The characteristics of mental toughness are similar for Bull et al. (2005), Thelwell, et al. (2005), and Jones et al. (2002). As illustrated in table 2.1, self-belief, desire/motivation, dealing with pressure and anxiety, focus (performance and lifestyle related), and pain/hardships were found in all three studies. It should be noted that the characteristics varied in terms of wording more than meaning. In addition, the rank order of characteristics was similar between the Thelwell and colleagues’ (2005) and Jones and colleagues’ (2002) studies. Self-belief was deemed the most important characteristic while characteristics dealing with pressure were less important.

Stratton (2004) sought to expand the previous list of mental toughness. He described eight characteristics identified by Cal Ripken as being keys to perseverance in sports. These eight additional characteristics of mental toughness are:

1. Take the right approach: always be ready to play.
2. Have a strong will to succeed: don’t let setbacks stop you from achieving your goal.
3. Have a passion for what you do: love what you do.
4. Be competitive: it’s not just about beating your opponent. You have to internalize competitiveness and take pride in what you do.
5. Be consistent: recognize and adjust to change so that you are always able to make a contribution to your team.
6. Have conviction: you have to be a little bit stubborn.
7. Strength: You have to be in good physical and mental condition. You must be psychologically prepared.
8. Personal management: don’t duck potential problems; take on the problems directly to prevent small problems from building into bigger problems.

Although others have argued that perseverance is a product of mental toughness,
Table 2.1

*Similarities in Attribute Themes between Various Study Contexts*

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<tr>
<th>Specific Attributes Between Various Study Contexts</th>
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<tr>
<td>Various Sports</td>
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<tr>
<td>Self belief</td>
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<tr>
<td>Unshakable beliefs</td>
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<tr>
<td>Motivation</td>
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<tr>
<td>Insatiable desire &amp; motives</td>
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<tr>
<td>Coping &amp; Focused Attention</td>
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<tr>
<td>Regaining psychological control</td>
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<td>Not adversely affected by others</td>
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Stratton stated that it was Ripken’s belief that these eight characteristics are necessary for perseverance to occur.

Attempting to clarify the essential components and definition of mental toughness, Creasy (2005) conducted an investigation of mental toughness within the context of 22 NCAA coaches. Creasy combined the attributes formerly coined by Jones et al. (2002) with eight additional characteristics indicated by Stratton as being related to mental toughness. Subsequently, the attributes were combined into a questionnaire. The questionnaire was designed to assess the extent to which participants believed that the attributes were relevant and teachable. The study procedure unfolded in two stages. Stage one consisted of assessing the participants’ perspectives on the importance and teachability of the attributes via a 5 point Likert scale. Stage one provided participants the opportunity to add to the number of attributes. Also, stage one provided an opportunity for participants to combine attributes perceived as being the same. Stage two consisted of semi-structured interviews with ten randomly selected participants from stage one. Based on results from stage one, the semi-structured interviews were designed to probe further into the participants’ perspectives.

Results from the questionnaire validated all components as essential characteristics of mental toughness. Furthermore, results from the questionnaire demonstrated that all components, albeit three, are teachable. Conviction, internalized motives for success, and the ability to remain focused during personal life distractions were presented as possible untrainable components. The semi-structured interview proposed that a limiting factor with respect to teaching these characteristics is time. The study participants indicated that time restraints would either not permit them to implement mental toughness skills programs or only address the most important attributes.

Creasy implied that teachability and time issues are areas worthy of further exploration. Since time appears to be a limiting factor for teaching mental toughness, attributes should be rank ordered in terms of importance. Subsequently, the time issue can be managed by delimiting training time to the most important attributes. However, as seen throughout the literature, the rank order of attributes appears to be influenced by the context or sport specific nature in which mental toughness is employed.

Jones et al. (2007) made the most recent contributions to the definition and attributes of mental toughness. As the original definition for mental toughness highlighted a focus on
competitive outcomes, the researchers selected participants associated with a large measure of competitive success. Therefore, athletes, coaches, and psychologist, who had achieved or were familiar with ultimate experiences of success, were selected. The investigators adopted procedures used by Jones and colleagues (2002), and addressed three issues; a definition of mental toughness, the attributes, and developing and overarching framework for the attributes.

Study results supported the validation of the previous mental toughness definition proposed by Jones et al. (2007). In addition, the participants produced 30 attributes:

1. Having an unshakable self-belief as a result of total awareness of how you got to where you are now.
2. Having an inner arrogance that makes you believe that you can achieve anything you set your mind to.
3. Having the belief that you can punch through any obstacle people put in your way.
4. Believing that you desire or hunger will ultimately result in your fulfilling your potential.
5. Refusing to be swayed by short-term gains (financial, performance) that will jeopardize the achievement of long-term goals.
6. Ensuring that achievement of your sport’s goal is the number-one priority in your life.
7. Recognizing the importance of knowing when to switch on and off from your sport.
8. When training gets tough (physically and mentally) because things are not going your way, keeping yourself going by reminding yourself of your goals and aspirations and why you’re putting yourself through it.
9. Having the patience, discipline, and self-control with the required training for each specific developmental stage to allow you to reach your full potential.
10. Remaining in control and not controlled.
11. Using all aspects of a very difficult training environment to your advantage.
12. Loving the bits of training that hurt.
13. Thriving on opportunities to beat other people in training.
14. Loving the pressure of competition.
15. Adapting to and coping with any change/distraction/threat under pressure.
16. Making the correct decisions and choosing the right options that secure optimal performance under conditions of extreme pressure and ambiguity.
17. Coping with and channeling anxiety in pressure situation.
18. Total commitment to your performance goal until every possible opportunity of success has passed.
19. Not being fazed making mistakes and then coming back from them.
20. Having a killer instinct to capitalize on the moment when you know you can win.
21. Raising your performance “up a gear” when it matters most.
22. Totally focusing on the job at hand in the face of distraction.
23. Remaining committed to a self-absorbed focus despite external distractions.
24. In certain performances, remaining focused on processes and not solely outcomes.
25. Being acutely aware of any inappropriate thoughts and feelings and changing them to help perform optimally.
26. Using all aspects of a very difficult competition environment to your advantage.
27. Recognizing and rationalizing failure and picking out the learning points to take forward.
28. Using failure to drive yourself to further success.
29. Knowing when to celebrate success and then stop and focus on the next challenge.
30. Knowing how to rationally handle success.

The attributes were found to cluster around 13 different subcategories; belief, focus, using long term goals as the source of motivation, control of the training environment, pushing yourself to the limit, belief during competition, staying focused, regulating performance, handling pressure, awareness and control of thoughts and feelings, controlling the competition environment, handling failure, handling success. Furthermore, the subcategories were categorized in 4 dimensions creating an overarching framework for mental toughness: attitude/mindset, training, competition, and post-competition attitude/mindset.

Jones et al. (2007) concluded that the results both supported and enhanced the understanding of mental toughness. One particular area of support was related to the definition. Participants viewed the definition as having two components, general and specific. Both components were deemed congruent with previous studies. One component included a general ability to cope with the demands of sports on an individual level. The second component was found to describe mental toughness in two specific ways. First, the definition addressed the specific outcome nature of mental toughness. Regarding the outcomes, the definition alluded to
the comparative nature of mental toughness. Moreover, mentally tough individuals “produce more consistent high-level performances via the use of superior psychological strategies and mental skills” (Jones et al., 2007, p. 260). The essence of this component is found in the fact that mental toughness requires a comparison with an opponent. Second, the component indicates that mental toughness employs the use of specific mental skills. Mental skills related to mental toughness, however, are defined by comparing those that are associated with mental toughness to skills that are less effective. Again, an understanding of the current definition is grounded in the competitive, comparative natures of sports.

According to Jones et al. (2007), the two components of the definition should not be viewed separately, as if the individual component can be separated from the specific component. More specifically, mental toughness cannot be fully understood by simply employing superior mental tactics in an isolated fashion. On the contrary, Jones and colleagues indicated that mental toughness could only be properly addressed by understanding how the mental skills work within an individual’s unique context.

The framework of the attributes was also believed to support and expand on previous research. Jones and colleagues (2007) indicated that the previous 12 attributes, found by Jones et al. (2002), were contained within the framework described above. In addition, the attributes were believed to enhance the understanding of mental toughness. The 30 attributes found in the current study were believed to serve as a comprehensive extension of the previous. The authors attributed the greater depth and expansion of the attributes to the sample of ultra elite athletes. By nature of their experience, the participants were believed to provide greater insight into the attributes than samples of previous investigations.

Jones and colleagues (2007) also concluded that the results support that some attributes might be more important than others. Furthermore, the importance of these attributes could be influenced by sporting context. The investigators indicated that although previous studies with different team sport contexts (Bull et al., 2005; Thelwell et al., 2005) have only demonstrated minor variations in attributes, contexts such individual based sports could have a substantial influence on the rank order.

Finally, Jones et al. (2007) concluded that the subcomponents presented within this study might be needed to evaluate mental toughness. The abstract nature of the subcomponents as
opposed to the more sport specific attributes, might allow for a more adaptable, overarching coverage of attributes, which may vary across a wide array of sport contexts.

Summary

In order to address monitoring of program effectiveness with respect to mental toughness development, Bull et al (2005) and Connaughton and colleagues (2008) indicated that there is a need to operationalize the construct of mental toughness. The investigators also inferred that a thorough understanding of mental toughness development requires that developmental factors and attributes be interpreted within contextual boundaries of factors such as the individual and sports setting. The scientific literature supports a measurable format for mental toughness in terms of specific characteristics and attributes. However, the literature is not completely settled on what attributes are to be measured. Moreover, subtle differences exist between the specific attributes produced in the studies. One subtle difference noted by Jones et al. (2002, 2007) and Thelwell and colleagues (2005) and also found in Creasy’s (2005) study was that within a given study, the importance of attributes are not necessarily viewed as being equal. Rather, the importance of the attributes typically falls into a particular rank-order of importance. In addition, the rank order of attributes, demonstrate minor variations across the studies. Furthermore, Bull et al. (2005), Creasy (2005), Jones et al. (2007), and Thelwell and colleagues (2005) noted subtle differences in the specific wording of the attributes. These investigators indicated that the minor changes in attribute wording and attribute rank-order of importance may be a natural outflow of varying perspectives of individuals from context to context. These differences, however, are the result of novel perspectives of individuals from different sports contexts. Newfound perspectives are believed to add further insight into the nature of mental toughness. As pointed out by Creasy (2005), such insight might be valuable in addressing issues such as time constraints because coaches and sports psychologists may only have enough time to address the most significant attributes. Therefore, it is important to address the wording and rank order of attributes relative to context.

The reader should note that the variance in sport specific attributes could be problematic. The problem issue does not seem to revolve around validity. Bull et al. (2005), Creasy (2005), Jones et al. (2002, 2007), and Thelwell et al. (2005) have all proposed thematically similar frameworks for mental toughness across a variety of sports. The commonality of the general themes from the studies demonstrates trustworthiness of the data. Creasy (2005), validated the
The problem lies in generalizing the assessment of mental toughness across a broad spectrum of sports. Jones et al. (2007) concluded that the abstract nature of the subcomponents as opposed to the more sport specific attributes, might allow for a more adaptable, overarching coverage of attributes, which may vary across a wide array of sport contexts.

The currently used attributes and definition of mental toughness, however, could have been shaped by the sporting context used for investigation. Jones and colleagues (2007) indicated that contexts such as individual based sports could have a substantial influence on the perspective of mental toughness. An apparent influence of the participant base used in former studies on the perspective of mental toughness could be related to the competitive or comparative nature of the sports. Bull and associates (2005) commented that certain mental toughness characteristic found in their study proposes a strong mix between task and ego perspectives. According to Ntoumanis and Biddle (1997), individuals in a mastery climate or with a task orientation demonstrate attributes more congruent with mental toughness than those in an outcome-based climate or with an ego orientation. In order to enrich our understanding of mental toughness it seems that investigating mental toughness from a non-competitive context as opposed to a competitive context is warranted.
CHAPTER 3
Methodology

Research Statement

The purpose of the current study was to investigate the perspectives held by classical martial artists on the attributes of mental toughness. More specifically, the study investigated: (1) the importance of mental toughness attributes from a CMA context, (2) the trainability of the mental toughness attributes from a CMA context, (3) and the extent to which classical martial artists perceive attributes to converge under broader, overarching sub-categories.

Participants

Most studies have investigated mental toughness in a competitive context. Study implications suggest that investigating mental toughness in another context might deepen our understanding of the construct. The current study will use a non-competitive context.

In order to address the appropriate context, the target population for this study included practitioners of CMA. CMA was chosen for this study because certain sub-populations of classical systems are less likely to be involved in competitive-based training than less traditional forms such as mixed martial arts and kickboxing. Classical martial arts are defined by the following characteristics; (1) the main emphasis is on skill development for self-defense and includes strikes, kicks, joint locks, throws/take downs, and weapons, (2) the standard training methods for self-defense emphasizes basics, one-man forms, prearranged fighting, semi-controlled fighting, and free fighting, (3) the style of self-defense is authenticated by reputable governing body of classical martial art organization in the Far East.

It should be noted that modernized classical systems retain some of the characteristics described above. However, many modernized classical systems include a sport element. For example, judo, taekwondo, and many karatedo stylists incorporate competitive elements into their regular training routines. On the other hand, many non-competitive based martial arts focus only on 1 CMA characteristic. For example, defensive tactics courses used by law enforcement agencies are non-competitive and focus on a single characteristic. Therefore, defensive tactics courses may not resemble the stereotypical idea of CMA. According to Kelly, (1963, p. 55) the individual corollary of the PCT infers that the perspectives of individuals are unique and situation based. Therefore, study participants who have experienced CMA training from a non-competitive context, were expected to provide unique perspectives apart from competitive
martial artists and non-competitive martial artist whose training methods were not characteristic of classical training. According to this PCT corollary, the development of a construct, such as mental toughness, requires the phenomenon to be experienced in the proper context. Therefore, this study delimited the target population to individuals who experienced non-competitive CMA.

The target population for the current study was delimited to a sampling frame identified via the Okinawa Martial Arts Preservation Society of America (OMAPSA). OMAPSA was this study’s preferred participant source because its members met the current study’s inclusion/exclusion criterion. Furthermore, the members were accessible through a membership list maintained by the organizations headquarters.

Participants of the current study were expected to provide a rich perspective on the importance, teachability, and sub-categories of mental toughness attributes. According to the PCT (Kelly, 1955) individuals are capable of inferring interpretations and predictions about a phenomenon through constructs derived from personal experiences. Implications from the Personal Construct Theory, therefore, indicate that individuals who have experienced mental toughness via CMA context are viable participants for study. Regarding OMAPSA, students are not fully introduced to the global experiences of CMA until black belt. After black belt, weapons training, pressure point self defense tactics, and open skills (free fighting) training becomes more prominent. Therefore, study participants were delimited to those who have been certified as black belts.

Doyle and Parfitt (1991) and Jones et al. (2007) have indirectly provided additional support for using the black belt as qualifying study criteria. Doyle and Parfitt (1991) provided construct validity for the theoretical implications of the PCT via performance profiling. The underlying assertion behind performance profiling states that athletes are capable of identifying and explaining important constructs, such as found in sport psychology, related to performance. According to Doyle and Parfitt (1991), performance profiling cannot be used in an unrestricted manner. The researchers indicated that performance profiling is more valid during times of large performance changes such as across periods of heavy training. Jones and colleagues (2007) stated that higher-level athletes will forward a greater understanding of mental toughness than lower level athletes. Typically, familiarity with large performance changes and periods of heavy training are more likely to be encountered by more experienced and higher level athletes.
The author believed that the black belt was a suitable criterion because it is indicative of an athlete who has experienced large changes in performance as well as periods of heavy training. OMAPSA practitioners introduce students to skill in a progressive manner. For example, beginning karate students first learn the basics, then progress to one man forms, then to prearranged sparring, and finally to open skills such as semi-free or free fighting. A beginning or even an intermediate student is limited in their experience of CMA primarily because the more advanced and rigorous training methods are introduced at a later time in a student’s martial arts career. Selecting students with limited exposure to the classical systems would posit a perspective on mental toughness that does not consider a global CMA experience. A beginning student, who has only experienced basic closed skills training, cannot provide a perspective on mental toughness from the standpoint of a CMA context simply because they have not experienced the context in its entirety. Analyzing mental toughness perspectives through isolated sections of classical characteristics, such as the basic closed skill characteristic, could potentially contrive distorted views. As non-CMA frequently share select characteristics with classical systems, viewing mental toughness through shared lenses may result in perspectives, which are subsequently confused with very different contexts.

Identification of OMAPSA members who have experienced all facets of CMA training was made possible by evaluating the members’ ranks. In order for an OMAPSA member to receive the rank of black belt, they must demonstrate the ability to perform all closed skill techniques with a high level of proficiency. In addition, advanced classical practices, such as open skills self-defense, are aggressively initiated at the black belt level. The reader should note that OMAPSA black belts must be eighteen years of age, thus no minors were allowed in the study.

A final delimiting variable was the inclusion of practitioner— instructors. Practitioner— instructors are martial artists who continue to practice in a traditional group structure. Group training for black belts is commonly harnessed to the role of instructor or assistant instructor. Therefore, practitioner— instructors usually experience a continued flow of influence from group formats. The author believed that practitioner— instructors were ideal candidates for this study because of the following factors: (1) Group practice provided some assurance that participants were engaged in the “culture” of CMA. Thus, practitioner— instructors were more likely to have received ongoing influence to group norms, mores, and ideals than solo practitioners.
Subsequently, practitioner— instructors’ martial arts experiences were more likely tied to the all-encompassing list of CMA characteristics described above. According to the commonality corollary of the PCT (Schultz, 1976), practitioners who experienced similar cultural and group norms, mores, and ideals, shared common ground with regards to construed experiences. Since a goal of this study was to provide a sample, which described a CMA mental toughness perspective, it was important to select individuals that were influenced by the CMA setting. Excluding individuals who trained solo rather than in a group format potentially decreased the possibility that the study’s perspective was influenced by ideas not shared in the classical context. As practitioners deviate from group settings, it is possible that memory decay becomes problematic in recounting contextual experiences. A second benefit of delimiting participants to practitioner-instructors included teaching perspectives on the development of mental toughness.

Two hundred and sixty-two members were identified on the OMAPSA master roster. Out of 262 identified, 15 members were no longer associated with OMAPSA. One member relocated and disassociated with OMAPSA. Seven members ceased training in OMAPSA related martial arts. Three members began emphasizing sport and competition. Four switched memberships to different martial arts organizations. Subsequently, the OMAPSA target population was reduced to 247 individuals.

One-hundred and seventy four participants responded to the CMMQ. Participants consisted of 21 (12%) females and 153 (88%) males. One hundred and fifty-two (87%) participants were Caucasian. Participants also included 2 (1%) Native Americans, 3 (1.7%) African/Americans, 7 (4%) Latino, and 7 (4%) Asians. The average age was 48 while spanning a range from 18 to 84. The average level of skill and experience was also documented according to participant reports of rank and years of practice. The average rank was 3.5 degree black belt. The average years of practice were 25 years. Phase One participant demographics are displayed in Appendix A.

The reader should note that one purpose of this study was to identify the extent to which classical martial artists perceive that attributes converge under broader, overarching sub-categories. This task was accomplished via statistical clustering of the attributes.

The population size, however, could have imposed limitations on the extent to which classical martial artists perceptions, defined how attributes converged under sub-categories.
**Table 3.1**

*Inclusion Criterion*

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>Non-competitive sport</td>
<td>Previous studies have investigated mental toughness from a competitive context. A non-competitive context is believed to provide a unique perspective on mental toughness.</td>
</tr>
<tr>
<td>Single Sports Context</td>
<td>Mental toughness may be unique from sport to sport. No studies have investigated mental toughness from a single sports context consisting of martial arts.</td>
</tr>
<tr>
<td>CMA</td>
<td>More likely to find non-competitive target population than non-CMA such as kick boxing.</td>
</tr>
<tr>
<td>Criterion for CMA</td>
<td>Focus is on mastery as opposed to competitive climate.</td>
</tr>
<tr>
<td>Skill development for self-defense.</td>
<td>Defines unique approach classical systems use to develop skills.</td>
</tr>
<tr>
<td>Standard training methods include basics, forms, prearranged fighting, and semi-controlled/free fighting.</td>
<td>Defines style of self-defense according to</td>
</tr>
<tr>
<td>Associated with governing body in</td>
<td></td>
</tr>
<tr>
<td>Far East</td>
<td>stereotypical examples emerging from the Far East.</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Black Belt</td>
<td>Assures exposure to classical systems as a whole.</td>
</tr>
<tr>
<td>Practitioner—Instructor</td>
<td>Assures exposure to classical systems as a whole.</td>
</tr>
<tr>
<td></td>
<td>Provides unique perspective from instructor’s standpoint.</td>
</tr>
<tr>
<td></td>
<td>Decrease chances of distorted perspectives related to memory decay.</td>
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</table>
Comrey and Lee (1992) pointed out that variance in sample characteristics decreases the likelihood that variable loading on factors will be suppressed due to selection error. McMillan (2004) contended that variance in sample characteristics is significantly depressed when survey return rates are less than 60%. On the other hand, McMillan (2004) and Mertens (2005) suggested that a response rate around 70% provides an adequate representation of the target population. According to Mertens (2005), five participants per question item is recommended with respect to clustering attributes via factor analysis. The current study demonstrated a 70% return rate and an 8.7:1 participant to question item ratio. Therefore, it is anticipated that the sample frame demographics adequately represent the OMAPSA population at large.

Phase Two of the current study used semi-structured interviews to explain and elaborate on the outcomes obtained in Phase One. Moreover, a sample of the original survey population was investigated for additional insight as to why attribute ratings and the presence or absence of attribute clusters was demonstrated. Due to the highly comprehensive nature of qualitative methodologies, an investigation of the full sample frame was not feasible. Therefore, Phase Two random probability sampling was employed. Random sampling was initiated by creating a numbered list of martial artists. The names were separated, placed in a hat, mixed thoroughly, and positioned so that the researcher was completely unaware of the name he was drawing. McMillan (2004) contends that 20 to 30 interviews are required to reach the point of saturation. Therefore, the names of 20 participants were drawn from the hat. Phase Two participants represented the target population with regards to average rank, practice time, age, gender, and ethnic background. The average rank, practice time, and age for Phase II participants was 3.85 degrees black belt, 26 years of practice, and 48 years of age, respectively. Phase One and Phase Two participants were similar in terms of Caucasian and non-Caucasian percentages. Phase One included 18 (90%) Caucasian participants while 2 (10%) were non-Caucasians. More specifically, the non-Caucasian participants included 1 (5%) male Asian and 1 (5%) male Latino. Similar to Phase One, the gender composition of Phase Two was predominately male (95%). Phase Two participant demographics are displayed in Appendix B.

**Instrumentation**

In order to answer the research questions, Phase One of the study used a questionnaire adapted from Creasy’s (2005) original tool (see Appendix C). The questionnaire provided a means for participants to rate their perceived importance and teachability of mental toughness.
attributes from a CMA context. More specifically, the questionnaire used a 5-point Likert scale to rate the importance and teachability of mental toughness attributes. In order to address the extent classical martial artists perceived the attributes to converge under sub-categories, scores from the questionnaire were extracted for factor analysis.

Acceptable levels of the questionnaire’s validity and reliability have been documented (Creasy, 2005). Creasy’s questionnaire was devised by combining 12 attributes from Jones et al.’s (2002) research with 8 characteristics of perseverance identified by Cal Ripken (Stratton, 2004). Creasy confirmed that each item on the survey was consistently rated by expert opinion as being independent and significant attributes of mental toughness. According to ratings, all coaches scored all attributes as being important components of mental toughness. The highest attribute score was 4.9 while the lowest was 3.9. According to the researcher, the difference in scores presented only a low variance. Furthermore, follow-up questions posited by Creasy resulted in support for stability reliability. Moreover, 100% of participants indicated that they would not change their initial ratings.

Jones et al.’s (2002) 12 attributes were described by a well-designed empirical study and substantiated in a follow-up study in 2008 (Jones et al., 2008). However, the 8 characteristics of perseverance emerged from a non-empirical analysis (Stratton, 2004). Creasy, indicated that the variance in questionnaire items from Jones & Colleagues’ study did not differ from the variance scores among items extracted from Ripken. Creasy concluded that the lack of variance demonstrated consistency among questionnaire items and provided further validity for the questionnaire.

In order to determine the fit of Creasy’s questionnaire within a CMA context, a pilot study was conducted (Minnix, 2006). It should be noted that implications of pilot study results are limited because of the way subjects were selected, homogeneity in demographics, low number of participants, and restricted range. Creasy’s questionnaire was administered to 9 male, Caucasian, classical martial artists. The participants scored the importance of each attribute on a scale of 1 to 5. Group scores were averaged according to each attribute. On average, participants rated all but 1 mental toughness attribute, “Thriving on the pressure of competition” as important. Measures of internal consistency were conducted by Cronbach's Alpha and Spit-Halves estimates. Chronbach’s Alpha and Spearman-Brown Coefficients were .73 and .75, respectively. Wininger (2007) indicated that reliability scores greater than .7 was considered to
be moderately reliable and trustworthy, at least in the context of group research. According to McMillan (2004), question clarity can encumber the reliability of questionnaires. Subsequently, participants were asked to comment on the clarity and appropriateness of questionnaire items. One participant stated, “[we] should contextualize competition. Is it internal or external?” Another participant stated, “I found the terminology difficult to apply to [CMA] training.” Analysis of the pilot study’s questionnaire suggested that the competitive undertone, found in a number of questions, could potentially influence the test’s reliability (see Table 3.2). In order to improve the questionnaire’s fit to the classical martial context, item modifications were made without changing the intent of the questions. It should be noted that subtle differences in the wording of the attribute questions have been found throughout the literature and may be the product of varying perspectives of different contexts (Bull et al., 2005; Creasy, 2005; Jones et al, 2007; Thelwell & colleagues, 2005). From the author’s standpoint, minor changes of wording serves to clarify abstract themes of mental toughness into concrete terms more applicable and specific to context. In order to improve the clarity of the tool from a martial arts standpoint, it was necessary to use a language more familiar to the population studied. The word performance was substituted for competition and sport. Furthermore, Creasy’s follow-up questions were modified to fit the current study context. The questionnaire contained three following questions: 1) Do you feel there are any characteristics of mental toughness, which are unique to CMA, not mentioned in the study? If so, can you describe them? 2) How important do you believe the characteristic(s) described is on a scale of 3 to 5 (3= Moderately Important, 4=Important, 5=Very Important)? (3) How trainable do you believe the characteristic(s) described is on a scale of 1 to 5 (1=Not at all Teachable, 2=Hardly Teachable, 3= Somewhat Teachable, 4=Teachable, 5=Very Teachable)? The modified questionnaire was renamed the CMA Mental Toughness Questionnaire (CMMQ) and can be found in Appendix D.

The current investigation also provides support for the validity and reliability of mental toughness attributes. Participant responses to the CMMQ importance and teachability scales were analyzed by using internal consistency measures. Cronbach’s reliability coefficients for the CMMQ measure of importance and teachability were found to be .85 and .90, respectively. Results from the current study confirm that each item on the survey is consistently rated by expert opinion as being significant attributes of mental toughness. SPSS output of Cronbach’s reliability data are presented in Appendix E. According to ratings, classical martial artists
Table 3.2

*Competitive Orientation of Attributes*

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Description of Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Belief in achieving competition goals</td>
</tr>
<tr>
<td>5</td>
<td>Regaining focus during competition</td>
</tr>
<tr>
<td>7</td>
<td>Focus during competition distractions</td>
</tr>
<tr>
<td>8</td>
<td>Make a contribution to your team</td>
</tr>
<tr>
<td>10</td>
<td>Be competitive</td>
</tr>
<tr>
<td>11</td>
<td>Turning a sport focus on and off</td>
</tr>
<tr>
<td>13</td>
<td>Pressure of competition</td>
</tr>
<tr>
<td>14</td>
<td>Be ready to play</td>
</tr>
<tr>
<td>15</td>
<td>Coping with competition anxiety</td>
</tr>
<tr>
<td>20</td>
<td>Coping with pain during competition</td>
</tr>
</tbody>
</table>
perceive all attributes as being important components of mental toughness. A detailed discussion of current study findings can be found in chapter 4.

Phase Two instrumentation consisted of the researcher and a standardized interview guide. According to Hein (2007), the researcher is the main tool by which the phenomena of mental toughness is investigated, analyzed, understood and articulated. Although a standardized interview guide was used, the data passed through the researchers personal, theoretical, practical and other lenses. To better understand the researcher’s lens, the researcher completed a reflexive analysis (Hein, 2007). By disclosing the researcher’s beliefs, assumptions and expectations of his positionality on the mental toughness phenomenon, the reader is empowered to better understand the perspective from with the research was conducted. The interview guide and researcher’s stance can be viewed in Appendix F and G, respectively.

The interview guide structure was based on qualitative methods described by Gould et al. (1993), Kelly (1963), Mertens (2005), and Patton (2002). The guide consisted of experience and knowledge questions designed to clarify, explore, and elaborate on Phase One questionnaire results. Phase Two questions were structured in a manner void of presuppositions, opposed to manipulating and leading participants’ answers, while discouraging dichotomous responses.

It was anticipated that the semi-structured interview would forward a more complete understanding of the research questions than Phase One methodology could afford in isolation. Moreover, this researcher believed that the interviews would promote an understanding of attribute importance as a function of the CMA context. For example, the author’s pilot study (Minnix, 2005) demonstrated that motivation was perceived as being important in a CMA setting. Previous studies (Jones, 2002, 2007; Thewell, 2005) used a competitive context to demonstrate that self-belief was rank ordered the most important attribute. Sambolec (2007) found that individuals who performed a persistent task within a competitive context were more motivated than individuals who performed the same task but within a non-competitive context. Sambolec’s (2007) study infers that competitive contexts possess indigenous factors that enhance motivation. With respect to mental toughness, it could be argued that athletes in a competitive context would not rate motivation as highly as classical martial artists simply because competitive athletes do not have the same perceived need. According to Sambolec’s (2007) research, a potential influence on perceived need for motivation includes the possibility that competitive environments naturally enhance drive. Although qualitative methodologies do not
address causation, the current study included a qualitative analysis of CMA perspectives in order to clarify our understanding of the specific application of mental toughness attributes in the CMA.

The author also believed that the qualitative addition to the current study served to provide a unique perspective as to how mental toughness is taught and developed within a CMA context. It is important to note that the development of CMA skills to a useful level requires a prolonged period of study. According to Sambolec (2007), a non-competitive context may result in a decreased drive to perform persistent natured tasks. Participants in the current study rated motivation as a primary attribute of mental toughness. Therefore, the ability to develop the attribute is of primary concern with respect to the self-defense performance. However, ratings of perceived teachability identified areas that were deemed not teachable. For example, “[Having] an insatiable desire to succeed” was deemed a non-teachable attribute.” Without clarification with regards to why this attribute was deemed not teachable, those without the attribute could be discouraged from learning self-defense via CMA. According to Creasy’s (2005) investigation, motivation was also rated as non-teachable. However, semi-structured interviews proposed that time issues influenced the teachability of the characteristics. Moreover, the teachability of the attribute was limited by time restraints as opposed to the true teachable nature of the variable. Creasy’s study serves as a typical example of the value for qualitative follow-up; important insight into the context specificity of teachability was afforded. Regarding the present study, the value of follow-up interviews should be more apparent to the reader. If motivation is only limited be time restraints, then, in the case of martial arts, time allocated for the development of motivation should be prioritized.

Procedure

This study unfolded in two phases. Phase One began by seeking approval from Virginia Polytechnic and State University’s Institutional Review Board (IRB). The IRB approval letter can be viewed in Appendix H. The recruitment letter, informed consent form, and questionnaire were written according to IRB guidelines. The recruitment letter (Appendix I) clarified the purpose of the research, explained IRB approval, described the confidential nature of the study, outlined eligibility criteria, and identified benefits of participation. The letter also provided instructions regarding the return of the questionnaire and contact information. The consent form (Appendix J) provided an explanation of the purpose of the research, procedures, risks, benefits,
confidentiality and anonymity issues, compensation, participant responsibilities, as well as the voluntary nature of the study. In order to link study participants with their responses while protecting confidentiality, study codes were employed. Prior to collecting data, the questionnaires were assigned a study ID. The study ID was then assigned to a participant. Using a separate document, the study ID was listed along side of the participants name and contact information. The document, including the participants name and contact information, was retained and stored in a private place by the primary investigator.

In addition to IRB approval, other issues were of noteworthy consideration in processing recruitment letters and questionnaires. According to McMillan (2004), mailed surveys have common return rates as low as 50-60%. Given a projected low return rate, it was anticipated that the final sample would include a group largely consisting of volunteers. McMillan (2004) stated that the use of volunteers can be especially problematic with the use of survey type instruments. Subsequently, study volunteers consist mostly of individuals with higher education, higher socioeconomic status, greater need of social approval, and more years of martial arts experience (McMillan, 2004). Therefore, one potential limitation of the current study could have included the extent to which results can be generalized to the OMAPSA sample frame and CMA at large. For example, educated individuals may have greater insight into the importance of the attributes than less educated participants. Therefore, educated individuals may be more likely to make connections between the importance of self-belief, performance, and ultimately mental toughness. As a result, educated individuals may be more likely to rate certain attributes, like those dealing with self-belief, as being more important than individuals with less education.

To address the issues related to low return rate, special attention was applied to recruitment letter and questionnaire design. Mertens (2005) contended that recruitment letters increase return rate by enhancing participant motivation. According to Mertens, motivation is enhanced by; appealing to authority, self-interest, sense of connection, and curiosity. Mertens(2005) also stated that recruitment letters should specify the time frame of the study as well as due dates for returning surveys. Furthermore, Mertens (2005) indicated that easy to complete, attractive questionnaires, can improve response rate. According to Mertens (2005), the questions and the pages of questionnaires should be numbered, appear professional and brief. Subsequently, the recruitment letter and questionnaire used in the current study were fashioned according to recommendations by Mertens (2005). All study information (recruitment letter,
informed consent, questionnaire, follow-up letters, etc.) was fashioned on a Virginia Tech CMA Mental Toughness Project business letterhead hardcopy or email document.

After IRB approval, the names and contact information for CMA instructors was obtained from the OMAPSA main office. The recruitment letter, informed consent form, and the CMA Mental Toughness (CMMQ) were mailed to the martial artists. McMillan (2004) and Mertens (2005) indicated that a low response rate can be additionally increased by proper follow-up with non-responses. Therefore, a postcard was sent to each participant (Appendix K) approximately one week after the initial instrument was mailed. All data from returned questionnaires were downloaded into a Microsoft Excel database. The date, which each respondent’s questionnaire was received, was noted on the file. The group, which responded to the initial mailing, was flagged as “first wave responses” in the database. The first wave respondents, or participants who responded to the first mailing, included 123.

Non-respondents were given 2 additional weeks to return questionnaires. Thereafter, a follow-up recruitment letter (Appendix L) and a duplication of the questionnaire was resubmitted to all non-respondents. The group responding to the follow-up recruitment letter was flagged in the database as “second wave responses.” The second wave respondents, those responding to the second mailing, included 20. The researcher followed-up with non-responding individuals via phone call. The purpose of the phone call was to determine the martial artist’s willingness to participate. Martial artists willing to participate were mailed the follow-up recruitment letter and questionnaire. The reader should note that non-respondents were given an additional 2 weeks to respond. Individuals responding to the phone call were flagged as “third wave responses.” The third wave respondents or those who responded to the third mailing included 31 participants. A total of 174 individuals from the target population completed the CMMQ.

Phase Two of the study was initiated by randomly selecting 20 individuals from the Phase One total respondent list. According to Mertens (2005), phone interviews should be kept to short durations and precluded by advanced notification. Subsequently, these 20 individuals were contacted in order to determine their willingness to participate in a 20-minute phone interview. During initial contact, the researcher collected the participant’s demographic information, explained ethical issues such as the voluntary nature of the study, informed consent, confidentiality, and anonymity/pseudonym use. The researcher explained the importance of describing personal perspectives and insights. Finally, the researcher and participant mutually
established times and phone contact information congruent with participant needs, convenience, and comfort.

Following the initial contact, an introductory letter (Appendix M) was sent to all individuals willing to participate. The introductory letter identified the researcher, re-visited the study’s purpose, and explained the procedures and expectations of the interview. The letter also stated the date and time, which the researcher was scheduled to contact the participant.

Data collection interviews began by general conversation and establishment of rapport. The participants were asked if they had any questions about the interview introduction letter. Next, the researcher retrieved the participant’s chosen pseudonym. The opening conversation quickly shifted to the interview guide protocol. During the interview, detail, elaboration, and clarification probes were used to expedite a rich cache of data. In order to create a friendly and fluid interview, prefatory statements were used at key transition points.

The researcher seemed to have a good rapport with the participants. All participants appeared to be personally interested and seemed happy to help with the study. Phone transmissions were relatively clear and data collection interviews were free from distractions. Thick descriptions were noted for most responses. Participants appeared intrinsically uninhibited during their descriptions. The uninhibited nature of participant’ responses were especially true for responses to the importance, teachability, conviction, commitment, readiness to perform, and unique attributes sections of the interview. However, the fifteen-minute interview time limit was ominous to the researcher. During interviews with Wheyshin, Aldeshi, and MHH (see Appendix T), the interviewer was not able to cover all sections due to time constraints. Although Wheyshin, Aldeshi, and MHH provided in-depth discussion of certain sections, time constraints prevented the researcher from exploring all areas. Occasionally, during other interviews, the researcher found it necessary to refocus the interview flow to the next section. However, the researcher did not terminate participant descriptions except in the case that new information was not being forwarded. Yet, it is possible that these interruptions affected the data by curtailing participants’ impending thought. It is quite possible that the time constraint restricted participant answers.

During each phone conversation, participant responses were transcribed, as much as possible, in a verbatim manner. However, the reader should note that audio recording equipment was not used in this study. Therefore, the researcher reviewed each transcript in great detail,
following the formal interview sessions. Furthermore, participants were mailed a copy of his or her personal transcripts. The participants were asked to review the transcript for errors and omissions. Participants noted no major discrepancies.

Data Analysis

Phase One data were downloaded from the Microsoft Excel database to SPSS for windows. Two hundred and sixty-two members were identified on the OMAPSA master roster. Out of 262 identified, 15 members were no longer associated with OMAPSA. One member relocated and disassociated with OMAPSA. Seven members ceased training in OMAPSA related martial arts. Three members began emphasizing sport and competition. Four switched memberships to different martial arts organizations. Subsequently, the OMAPSA target population was reduced to 247 individuals. A total of 173 individuals from the target population completed the CMMQ. It should be noted that the current study demonstrated a 70% response rate (173 participants/247 individuals in target population). McMillan (2004) and Mertens (2005) contended that low response rates may not have adequately represented the target population. Furthermore, McMillan (2004) and Mertens (2005) suggested that in the case of lower response rates, e.g., 50%, respondent and non-respondent groups should be evaluated for significant differences. In order to minimize the effects of a biased sample on population representation of results, the interpretation of research findings should be made in lieu of demographical differences between respondents and non-respondent’s. Furthermore, the scores for non-respondants can be used to assist in the determination of the generalizabilty of respondent study results. However, McMillan (2004) indicated that evaluating the differents between respondents and non-respondent groups are not necessary if the response rate is greater than 60%. Additionaly, McMillan (2004) and Mertens (2005) suggested that a response rate around 70% is sufficient for representing the target population.

Although the current study respond rates met the recommendations of McMillan (2004) and Mertens (2005), similarities between respondents and non-respondents were investigated. The reader should note that a detailed description of respondents’ results is found in chapter 4. Mertens (2005) indicated that non-respondents should be asked to provide their perspective on two or three questions. Additionally, the non-respondents answers should be compared to those provided by the original respondents. The current study asked 8 non-respondents to rate the importance and teachability of questionnaire items. The participants included 4 male and 2
female caucasians from the northeastern region of the United States, a Hispanic female from the southeastern region, and a male Caucasian from the Midwest. Ages ranged from 19 to 55 years. Rank and experienced ranged from 1st to 7th degree black belt and 12 to 38 years of practice, respectively. Similar results were observed between respondents and non-respondents. The reader should note that non-respondents rated all selected items as important, irregardless of age, gender, ethnicity, geographical location, years of practice, or rank. Teachability of mental toughness attributes were also perceived as similar between respondents and non-respondents.

On average, non-respondents rated all items, with the exception of thriving on pressure (CMMQ item 13), passion (CMMQ item 16), and insatiable desire (CMMQ item 17), as teachable.

Descriptive statistics were used to determine the demographic characteristics of the final sample frame. Internal consistency reliability of scores was assessed by Cronbach’s alpha coefficient. Mean values with respect to ratings of importance and teachability were calculated for each attribute. Mean values were arranged in terms of rank order of importance.

Phase One data were used to determine the extent to which participants perceive the attributes cluster under sub-categories. Comrey and Lee (1992) stated that factor analysis is used to identify underlying constructs responsible for inter-correlations among attributes. This study used SPSS to identify sub-categories of the attributes. First, the number of appropriate sub-categories was identified by Principal Components Analysis extraction method. Next, boundaries for inter-correlations and thus identification of the sub-categories were completed by Oblique Rotation procedures.

Phase Two used a whole text analysis according to guidelines provided by Glaser and Strauss (1967) and Strauss and Corbin (1998). First, the interview was transcribed verbatim. The transcription emphasized emotion, words, phrases, and sentences. Also, the interviewee’s tone of voice and speech rate was noted.

Next, the data analysis continued by reading the transcript with a particular focus on emphasis in emotions, words, phrases, and sentences. The first transcript reading was performed to get an overall feel for the interviewee’s experience with mental toughness. A second reading was performed to analyze the data within the context of the CMA.

Next, the text, which addressed the research question was underlined and grouped together as excerpts. During the excerpting process, particular emphasis was given to analyzing data in a molecular manner.
Excerpts were coded according to both explicit and implicit meanings by inductive procedures. Codes were recorded on a separate document and matched with the original transcript exerts. Codes were reviewed several times, in a recursive manner. The recursive analysis of text provided a means of comparison and contrast within the context of adjacent sentences. Finally, codes were clustered into homogenous groups until various heterogeneous categories emerged. The overall meaning for each discrete category was abstracted and captured by a label. It should be noted that the researcher spent a lengthy amount of time immersed in the data. An audit trail of the researchers immersion can be found in the researchers post interview notes and memos. The post interview notes and memos were composed at various stages throughout the data analysis to address data credibility, reflexivity, and excerpting, coding, and categorizing issues. Post interview notes and memos may be collectively viewed in Appendix N.
CHAPTER 4
Results & Discussion

The purpose of this study was to investigate the perspectives held by classical martial artists on the attributes of mental toughness. In addition, the current study proposed to investigate; (1) the importance of mental toughness attributes from a CMA context, (2) the trainability of the mental toughness attributes from a CMA context, (3) and the extent to which classical martial artists perceived that attributes converge under broader, overarching sub-categories.

Phase One Quantitative Study Results

Table 4.1 illustrates the group’s average rating of importance for each CMA Mental Toughness Questionnaire (CMMQ) item. Mean scores for all items were found to be 3 or greater. It should be noted that CMMQ scores of 3 were used to indicate that the corresponding item was considered important. Therefore, according to the group mean scores, all CMMQ items were considered important mental toughness attributes. The results below also demonstrate the rank order of importance for each CMMQ item. Table 4.1 indicates that item 5 or “Regaining psychological control following unexpected, uncontrollable performance specific events” was rated as the most important.

Table 4.2 illustrates the group’s average rating of teachability for each CMMQ item. It should be noted that CMMQ scores of 3 were used to indicate that the corresponding items were considered somewhat teachable. With the exception of items 4, 13, 16, and 17, all CMMQ items received mean scores greater than 3. Therefore, items 4, 13, 16, and 17 were not considered to be teachable characteristics of mental toughness.

The final research question ascertained the extent to which classical martial artists perceived that attributes converge under broader, overarching sub-categories. The Kaiser-Meyer-Olkin measure of sampling adequacy was scored at .814. According to Coughlin and Knight (“Exploratory Factor Analysis,” n.d.), high values, above .50, indicate that the test items may be grouped into smaller sets of underlying factors. Bartlett's Test of Sphericity indicated significant (p<.0001) relationships between the items. Subsequently, the Kaiser-Meyer-Olkin and Bartlett’s Test of Sphericity values indicated that a factor analysis was appropriate for determining if the CMMQ items could be grouped into smaller sets of underlying
factors. Results from the Kaiser-Meyer-Olkin and Barteletand Bartlett’s Test of Sphericity can be further investigated in Appendix O.

Principle Axis Factoring (PAF) was used for the initial factor extraction. Communalities from the PAF are listed in Appendix P. Factors were extracted on the basis of the Kaiser-Guttman rule. According to the Kaiser-Guttman rule, factors exhibiting eigenvalues greater than 1 should be extracted (Coughlin & Knight, n.d.). PAF extracted 6 factors with eigenvalues greater than 1. The extracted factors along with their contribution to the total variance in the data are presented in table 4.3.

PAF produced a six-factor model, which explained approximately 60% of the variance in mental toughness attributes. Moreover, the analysis suggested that a six-factor model superlatively explained mental toughness, from a CMA perspective. According to factor extraction, factor 1 described 25% of the total variance. Therefore, out of the six factors, mental toughness was primarily explained by the first factor.

Data from the initial factor matrix can be found in Appendix Q. According to Coughlin & Knight (n.d), items with factor loadings greater than .40 should be considered as related to a given factor. Prior to factor rotation, 13 items loaded on factor 1. Because factor 1 explained most of the variance, it was anticipated that multiple items would correlate with factor 1. According to Coughlin & Knight (n.d.), numerous correlations can impose difficulties with interpretation of the first factor. Furthermore, two items loaded on more than one factor. Item 14 loaded on factors 1 and 4. Item 10 loaded on factors 1 and 2. Again, these double loadings are not surprising. Given that factor one represented most items, it is probable that at least a couple of items that loaded in factor one would load on another factor.

According to Coughlin & Knight (n.d.), the initial factor matrix commonly exhibits bi-polar factors. The initial matrix proposed demonstrated negative loadings on several factors. Coughlin and Knight stated that the bi-polar nature of the initial factor matrix could create negative loading that complicates the interpretation of the factor structure. In order to address these issues, Coughlin and Knight suggested rotation of the initial factor matrix. Furthermore, Coughlin and Knight indicated that oblique rotation should be used to control for any potential relationships that may logically exist between factors. In order to determine relationships between factors, a factor score covariance matrix was run. The results indicated that factor 2 loaded on factor 4 and vice versa. Table 4.4 demonstrates the relationships between factors.
Table 4.1

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*Teachability of Mental Toughness Attributes*

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Table 4.3

*Total Variance Explained*

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Since potential relationships existed among two of the factors, the current study used oblique rotation to compute the pattern matrix. No factor loadings were noted between any other factors. The original oblique rotation results can be found in Table 4.5. Table 4.6 displays the items by factor.

Factor 1 items were analyzed for common underlying tones and named accordingly. Factor 1 items were labeled conviction/determination. Factors 2 through 6 were analyzed in the same manner. Factors 2, 3, 4, 5, and 6 were labeled commitment, readiness to perform, conditioning, distraction control, and shifting focus of attention, respectively. Items 1, 6, 5, 9, 13, 15, and 20 did not load on any of the proposed factors.

Phase One Qualitative Study Results

Question 21 of the CMMQ asked participants to describe any mental toughness attributes, perceived to be unique to the CMA, not included on the questionnaire. Participant responses to the CMMQ were coded (Appendix R), thematically analyzed, and categorized (Appendix S). A total of nine categories emerged from the analysis. The analysis produced three categories potentially unique to the CMA. However, six categories contained underlying tones previously found in the literature (Bull et al., 2005; Jones et al., 2002; Stratton, 2004; Thelwell et al., 2005). The following results present potentially unique categories first, previously found categories follow. It should be noted that although categories are discussed separately, they are not necessarily experienced in isolation from one another.

Unique Factors

Anticipation. Analysis of participant responses produced a category, which described a classical martial artist’s ability to foresee danger. Participants described the foresight required to sense danger as “Having the clairvoyance to circumvent unnecessary engagements” (112) and “Awareness or the ability to see situations before they happen” (98).

Anticipation was also described as the ability to predict the nature of an impending attack. The ability to predict intentions of a potential attacker is described as having the “Eye of the tiger or see into your opponent” (156). Moreover, participant responses specifically indicated that “being able to read your opponent is part of mental toughness” (101).

Finally, anticipation was explained as the ability to use predictions to determine a successful defensive intervention. The ability to use foresight for the purpose of determining the correct strategy for dealing with an assault is illustrated in the following excerpt: “have the
Table 4.4

*Factor Correlation Matrix*

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Table 4.5

**Oblique Rotation of Factor Matrix**

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<td>18</td>
<td>Bouncing back from performance setbacks as a result of increased determination to succeed.</td>
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<td>17</td>
<td>Having insatiable desire and internalized motives to succeed.</td>
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<td>4</td>
<td>Have conviction: You have to be a little bit stubborn.</td>
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<td>2</td>
<td>8</td>
<td>Be consistent: Recognize and adjust to change so that you are always able to make a contribution to your classmates.</td>
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<td>12</td>
<td>Personal management: Don’t avoid potential problems; take on the problems to prevent small problems from building into bigger problems.</td>
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<td>16</td>
<td>Have a passion for what you do. Love what you do.</td>
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<td>3</td>
<td>2</td>
<td>Strength: You have to be in good mental/physical condition. You must be psychologically and emotionally prepared.</td>
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<td>4</td>
<td>14</td>
<td>Take the right approach: Always be ready to perform.</td>
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<td></td>
<td>10</td>
<td>Be ready to give and test your best performance: It’s not just about beating your opponent. You have to internalize competitiveness (set non-comparative, performance goals) and take pride in what you do.</td>
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<td>5</td>
<td>19</td>
<td>Remaining fully focused in the face of personal life distractions.</td>
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<td></td>
<td>5</td>
<td>Regaining psychological control following unexpected, uncontrollable events (performance specific).</td>
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Switching a performance focus on and off as required.
intuition to see a situation coming and make a decision to proceed or remove yourself” (128).

Learning Attitude. Learning Attitude is another category proposed to be a unique CMA mental toughness component. Items in this category provided participant views on the nature of knowledge and learning. Furthermore, participant responses illustrated a proposed tough learning mindset required to learn the CMA.

Participants described the study of the martial arts as an ongoing process. Early in the process students are not necessarily granted full knowledge with respect to various CMA techniques. A lack of understanding, during the early phases of training, does not mean that the subject matter is incorrect. The early phases of training can be thought of as forwarding pieces of the puzzle to the learner. Furthermore, the learning process may require many years of study before the student develops a solid understanding of selected techniques: “a lack of understanding does not equate to being incorrect; often times it is years later that one comes to the realization of the true meaning of the lesson that was being taught” (37).

Participants believed that a more complete understanding of techniques could be gained with time. According to participants, learning in the CMA is ongoing. The CMA learning process never ends. Therefore it is important that the practitioner maintain a learning attitude: “[The CMA are a] dynamic and life-long process. Open mindedness that provides a continually expanding appreciation of the depth of the material” (92).

In order to continue learning, participants explained that a tough learning mindset was needed to function in the CMA. More specifically, participants indicated that it was important for the practitioner to remain engaged in the learning process. For example, participants stated that classical martial artists must be “willing to expand on them [instructions] through the teachings of others” (144) and to engage in “independent and critical thinking” (151).

Participants explained that remaining engaged in the learning process could be difficult. The reason being that learning required individuals to receive “correction without taking it personally [and accept] the fact that personal criticism is part of the training” (175). According to practitioners, humility is a required remedy for rejuvenating the learner’s attitude. As explained in response 21, “Never feel as if you know it all, you are always a beginner.”

In summary, participants viewed learning and knowledge as a dynamic and ongoing process. Furthermore, the process requires practitioners to remain cognitively engaged, open-minded and
receive corrections. According to response 37, “Once one achieves this state of mind it allows them to increase their mental toughness.”

**Ethics.** Ethics is an important part of martial arts training because it is woven throughout the subject matter of the CMA. This notion is exemplified by a popular martial arts motto, “karate begins and ends with respect.” Everything learned in karate, from the beginning to the end, is tempered with a sense of ethics.

According to study participants, ethics is commonly expressed by gestures of respect and value. Response 72 supported this notion in describing respect as having an “awareness of the greater purpose of life; solemn respect for self and others.” Perspectives on how respect and value were expressed varied among the participants. For example, participants described respect as being expressed in terms of having a genuine concern and desire to understand self and others: “Need to have patience with yourself, with others; people move at their own pace and take time” (116).

Respect was also expressed as a manner of providing help and assistance for those in need. Response 170 described one application of respect as, “offering [your strengths] to the team.” Another example of respect and value was portrayed in terms of physical protection for self and others: “[To remain] aware of one’s higher social duty to protect others using classical life protection methods coupled with character” (160).

Ethics were also described as having an “appreciation for the wisdom the elders can provide” (73). It is important to note that the tradition of the CMA embraces a process in which the master of a style passes on time honored knowledge to the archetypical student. As described by response 105, the martial arts tradition process provides a “sense of history. A connection to an icon perceived or real. Tradition.”

**Previously Found Factors**

**Motivation.** Participant descriptions of unique martial arts mental toughness attributes produced an underlying mental toughness factor akin to motivation. Moreover, the martial artists described two aspects of motivation being unique to the CMA context; source of motivation and persistence of effort. The source of mentally tough motivation, described as being unique to classical martial artist, was intrinsic to the individual. Furthermore, participants explained that classical martial artists should not derive their source of motivation externally. More specifically, participant responses indicated that martial artists should not base their martial
efforts on external reinforcements such as social recognition or competition with others. The following excerpt illustrates the idea that the source of motivation should be derived from the individual. According to response 145 and 146, “Classical martial arts are a lifelong commitment with very few pats on the back or outside recognition for accomplishments. It is about true love for why you do and feel as a result of training your system.”

Participants added that in addition to having a true love for the activity, the mentally tough martial artist should cultivate the “proper perspective on the true importance of achieving goals” (58), and having “clarity of purpose” (126). Moreover, participants expressed the need to identify reasons or a purpose for pursuing a specific path of action. Participants indicated that commitment to an effortful and serious process of self-reflection and discovery is required to clarify purpose.

Mental toughness is about clarity of purpose. For that knowing yourself is essential.…. This is about self-discovery. Martial arts offers a path to self discovery a path to access that knowledge but to honestly take a walk on that path the practice and study need to be more than a hobby it would need to border a vocation. (126)

Other participants elaborated on the process of self-reflection stating that it consists of “Understanding who you are: knowing your strengths and weaknesses” (168) and “[Discovery of] your demons and gods mentally... your strengths and weaknesses physically” (43).

Participants indicated that the direction of effort should be guided by clear goals that are based on the understanding of the self, including strengths and weakness. Failure to account for individual strengths and weakness can result in the creation of ambiguous goals. Subsequently, martial artists end up following a set of blueprints that are not consistent with his or her true purpose. According to response 126: “Without that knowledge [understanding of self] your goals become muddied and what you want to accomplish will not be prioritized correctly. You will lack direction.”

Participants provided numerous examples of goals perceived to be based on an understanding of the individual. One major emphasis that participants placed on goals was that they should not be based on social comparisons. As noted in response 42, “In non-competitive martial arts the enemy or opponent is yourself; you are the standard and the benchmark, you are the person both mentally and physically that you have to beat.”
Participants indicated that goals should concentrate on honing techniques. In the martial arts, basic techniques include stances, footwork, strikes, blocks, and kicks. The intent of training is to master the basics and then proceed to performing them in a variety of offensive and defensive combat maneuvers. According to martial artists, offensive and defensive combat techniques are enveloped within a unique martial arts exercise known as kata. Kata, the Japanese term for forms, include a pre-articulated set of offensive and defensive maneuvers, akin to a gymnastics floor tumbling routine, performed in a solo fashion. Martial artists also learn to use the offensive/defensive combat strategies found in kata against a training partner. In the martial arts, the kata, and the ability to apply kata’s indigenous combat techniques against an opponent, is a component of time-honored knowledge passed down through the generations. It is important that students strive to perform and apply kata according to the blueprint handed down through the generations. Thus, one important goal of the martial arts is to master kata. Participants alluded to the importance of mastering kata in the following: “Detail Orientation; commitment to perfection for technique and continuous improvement” (82).

Responses 154, 155, and 156 defined mental goals such as “mushin,” “a quiet mind,” and “seeing into your opponent”. According to participants, mushin is the Japanese term for no-mind or a quiet mind. Mushin is the ability to employ combat techniques with minimal internal chatter or conscious thought. Mushin also refers to the ability to gate out distractions and become fully engaged in the present, moment, a given technique. Response 34 described the phenomena in the following excerpt: “The ability to not care about performance or how others judge you, but only to compete with oneself. How to train without goals in mind, but only focus on process.” Participants further explained the process-oriented approach of goal setting follows: “Not thinking of either winning or losing nor success or failure, but only perfection” (114).

The ability to see into your opponent is the ability to identify performance relevant stimuli. As noted in the section on anticipation, the ability to see into your opponent was also viewed as the ability to process the stimuli in a manner that forwards predictions about the opponents’ intentions. Subsequently, this seeing enables the martial artists to anticipate the opponent and produce instantaneous responses. In the context of mushin, one should note that the ability to anticipate should not evoke streams of conscious thought. Rather, this “seeing” is more or less automatic. Subsequently, one goal of classical martial artists is to develop
automaticity of stimulus response coupled actions. More specifically, the development of anticipation to a point of automaticity is a goal requiring “long term self improvement” (155).

Participants described persistence of effort as the second aspect of motivation unique to the CMA context. Persistence was explained as being very important to the CMA because of the time commitment required to obtain certain goals. As previously mentioned, kata, the application of kata, and the ability to anticipate were among the goals requiring an extensive time commitment. This perspective on persistence is explained in response 36: “Unlike sport styles, one may have to practice years before they can test their knowledge and skills using full power and speed to get an appreciation for what they have learned. There is no instantaneous gratification or defeat.” Participants indicated that even basic skills and conditioning require a certain amount of perseverance. Martial artists described the possible time frames for ongoing persistence of martial training, as an initial duration from “20-15 years” (28) to no end in sight of training “3-7 days per week” (25).

Participants described a unique component of perseverance in the martial arts as the ability to continue training in the presence of discomfort and disappointment. According to participants, martial artist must be able to persist with training while blocking out cultural tendencies of work avoidance, pain cessation, and instantaneous progress in skill development. According to response 93, “To conclude, a primary component of mental toughness is the capacity to surmount or ignore the cultural conditioning that promotes immediate gratification.”

Belief. Analysis of unique attributes revealed that belief represented a dimension of mental toughness. Based on similar themes between belief attributes, the attributes were divided into two subcategories; the nature of belief and the direction of belief.

Participants described the nature of mentally tough beliefs as unshakable and non-condemnatory of others. According to response 131, a mentally tough belief is “faith in yourself; to not compromise.” Faith related to a type of belief that is based on a decision to believe in something or someone regardless of the presence or absence of supporting evidence for the choice. A mentally tough belief was also a belief that was “not judgmental” (100) or condemnatory of others. Moreover, a mentally tough martial artist does not feel the need to cast negative judgments on others for the purpose of boosting self-confidence.
The participants’ descriptions of direction of belief pointed to God, the individual, and tradition. Belief in God and the individual was described in response 131 as an unshakable “faith in God [and self].”

Participants elaborated on the direction of self-belief. More specifically, self-belief was described as belief in one’s individual strengths, trainability, and resurgence. Response 169 indicated that martial artists should be able to “rely on [their] strength.” Response 46 stated that the ability to “capitalize on the understanding that…with work and fortitude it is possible to improve ones self to realize [your] goal at a future point.” Furthermore, response 46 implied that even though an individual is not able to accomplish a given task at the moment, it is important to believe that task can be accomplished with training. This idea of belief in trainability contrasts the idea of learned helplessness or the belief that achievement is not possible even with hard work. Response 64 stated that it is also important to believe in resurgence. He indicated that during the course of training, martial artists encounters many distractions. The distractions could be in the form “emotional/relational problems.” Occasionally, these issues require a temporary suspension of training. Response 64 provided advice on resurgence, how to overcome and bounce back after suspension of training. Response 64 stated, “Almost never believe I can’t. Lots of emotional/relationship problems arise unexpectedly. Minds become disrupted; training is disrupted and resuming training is essential (whenever one is able to) it may take years.”

Management of Emotions. Participants described the mentally tough martial artist as one who is able to manage emotions through five venues; calm emotional disposition, feeling of security, adapt/go with the flow, humor, and increased knowledge.

Venue one includes the maintenance of composure during stressful situations by “[remaining] calm and relax in a dangerous and fearful situation” (109).

Participants also stated that mentally tough martial artists manage their emotions by maintaining a feeling of security and poise. Participants described this feeling of poise as a lack of fear of death and personal injury. Response (127) described this feeling of poise and security as invincible inner strength:

When you tap into your inner strength your body seems to become encased in an invisible armor and you feel indestructible as if you could go through a brick wall knowing you will not feel any pain what so ever, you feel untouchable, no fear in
complete focus, it’s like a like switch you can turn it on or off when need be (not everyone can tap in).

Venue three describes the act of “learning to flow” (67) with stressful situations. In order to flow, the martial artist must learn “acceptance of future events” (61) and to adapt “to work with one’s environment” (140).

The fourth venue suggests the value of humor in managing emotions. Moreover, the ability to mentally decrease the seriousness of certain stressful situations by a “cultivated since of humor” (124) seems to assist in coping and managing the emotions of mentally tough martial artists.

Venue five is based on response 132, “Replace fear and doubt with knowledge and understanding.” According to response 132, increasing knowledge about sources of fear and worry can alleviate certain emotions, such as fear and worry. For example, “fear of personal injury” (79) is a potential emotion confronted by classical martial artists. However, martial artist can nullify this fear by learning more about physiological limitations. By learning to avoid dangerous physical limitations, the martial artist no longer needs to be concerned about related injuries. Response 78 elaborated, “Pain tolerance; the ability to differentiate between discomfort and injury. Being able to use stress as a positive by actually learning to listen to your body’s signals.”

**Prolonged Conditioning.** Hojo Undo and Ude Tanren have been integral components of classical martial arts training for hundreds of years (Clarke, 2009). Hojo Undo makes use of indigenous Asian style farm equipment and other household appliances to enhance grip, stance, shoulder strength, and core power. Practitioners strike special appliances for the purposes of toughening up the hands, arms, legs, feet, and shoulders. Ude Tanren is a two man drill in which martial artists smash their arms against one another. This exercise also increases strength and durability of the limbs. Although conceptual similarities can be found between martial conditioning and contemporary functional training programs, the implements used are unique to the CMA.

The significance of CMA conditioning in developing the mental component has been long embraced by practitioners (Clarke, 2009). According to Clarke, the ancient martial traditions of China and Okinawa viewed conditioning as an opportunity to promote physical and mental strength in tandem. Clarke states, “The conditioning of the body cannot be done in
isolation from the mind, because to condition one necessitate the involvement of the other. Discomfort and occasionally even real pain must be met, dealt with, and conquered” (2009, pg 3). Study participant 89 shares Clarke’s view, stating “supplemental physical conditioning” exercises are important for developing mental toughness. Response 148 suggested that a unique view of mental toughness in the CMA includes pushing the body during the conditioning process to continue “working even when fatigued.” Clarke adds to the study participants’ view on conditioning: “Taking it easy is not an option in the practice of Hojo Undo, because you are constantly pushing to stretch the boundaries of your limits and endurance” (2009, pg. 3).

Participants explained, however, the manner in which supplemental exercises, such as running or Hojo Undo influenced mental toughness is not realized during the short term. According to response 65, time is an important link between conditioning and mental toughness: “After continual body conditioning the mental toughness will develop. But not until a long period of conditioning.”

Focus of Attention. Focus of Attention was another category identified by participants as being important to mental toughness in the CMA. Participants indicated that the mentally tough martial artists should possess a focus of attention that is undisturbed. The undisturbed nature of focus related to a mental state in which various distractions are ignored or simply not attended. The ability to ignore distractions was also believed to create a complete and undiluted attention capacity for managing specific techniques. According to response 3, a mentally tough focus of attention is one that is single minded, undivided, and task oriented:

One must be willing and able to set aside physical feelings of pain and/or fatigue to allow complete focus on individual technique or on an opponent…mental toughness is more about ignoring physical and emotional boundaries rather than pushing them back. The later implies these are in the forefront of one’s mind and focus on limitations implies a limitation and hence a lack of mental toughness.

It should be noted that the undisturbed task oriented mindset explained above has received special credence in the CMA. “Mushin” (79, 95, 104, 155), for example, is a special Japanese term, used by classical martial artists, as well as participants in the current study, to explain an undisturbed mindset. More specifically, mushin is translated as “no mind”. One might think of this concept from a motor learning perspective as the ability to attend to environmental stimuli, process relevant information, carry out motor programs, and execute
motor skills in an automatic fashion driven by a subconscious level of awareness. This state of mushin has long been valued by martial artists and continues to be held in high regards as an import performance enhancing mode of focus.

A mentally tough focus of attention was also described to include the ability to shift the width of focus in accordance demands specified by a given activity. For example, response 30 stated that the focus of attentions should be varied from relaxed, to “situational focus,” to “attack focus,” and then back to situational or relaxed focus, pending on environmental demands. The relaxed focus was explained to be similar to a state of “day dreaming.” In the case of danger such as the approach of a possible assailant, the focus must be quickly changed to a situational focus. The purpose of the situational focus is to enhance “[awareness] of things going on around you.” In the event that the approaching assailant decides to attack, the focus narrows to allow for “a brief intense focus on the target [e.g. the assailant’s vital point].” Once the defender strikes the target and hopefully downs the assailant, the defender must quickly broaden the focus of attention to a situation focus. The situational focus allows the defender to reassess the environment for possible danger.

*Readiness for Combat Performance.* The final mental toughness characteristic unique to the classical martial arts was described as a readiness for combat performance. Readiness for combat performance was described as a unique mental toughness attribute of the CMA because of the context in which the classical martial arts are intended. Moreover, the context varies considerably from other activities, even it’s close cousin, sport karate. Participants explained that the CMA were intended for situations where “there is no referee…no one to call time and there is no stopping if you are hurt. There are no rules” (153). Response 125 outlined the intended context of classical martial arts in the following illustration:

The techniques only make sense if you take a look at the results the earlier masters were working for long before martial arts became a commercial venture and the training went from one on one to training groups of people for profit. They wanted to train people to live in a society where there is no police, officials were corrupt, and then your only chance of standing up for yourself lay in the hands at the end of your arms.

According to classical martial artists, the ability to perform in the contexts intended for classical martial arts requires mental toughness because the context necessitates the practitioner to perform in life and death situations.
According to participant responses, the ability to face life or death situations hinges on the practitioner’s sense of readiness for combat performance. The sense of readiness require that practitioners become willing to engage in life threatening altercations and are capable of accepting the consequences of the engagement. As described by response 8, mentally tough martial artists must be “[willing] to train and discuss techniques that are…permanently disabling/debilitating, i.e., eye gouge, joint attacks, etc.” Participants further described, “The CMA deal with actual self-defense, as opposed to tournament settings. Therefore, there must be a willingness to do whatever is necessary to succeed in a real encounter, to not quit” (38).

Other participants described a readiness for combat performance as “The willingness to see techniques for what they are and to be able to hurt another person” (11), and “[having] the mindset that no matter what I have to do, I will win” (153).

*Phase Two Qualitative Study Results*

Phase Two consisted of phone interviews with 20 randomly selected participants. The participants were selected from the Phase One participant subject pool. Each participant was contacted and asked to participate in the interviews. Participants who agreed to participate were sent an interview guide and preparatory guidelines for the interview. The interview guide included a copy of the interview questions. The preparatory guidelines provided information on the factors, titles assigned to the factors, and items in each factor. Participants were asked to review the questions and guidelines prior to the interview. During the interview, each participant was asked to provide his or her perspective on the importance and trainability of mental toughness. Participants were also probed for clarification and insight into the six-factor model. Furthermore, participants were probed for insight and clarification of the unique attributes, which were produced from participant responses to question 21 on the CMMQ. Finally, participants were asked to add any perspectives on mental toughness not previously covered. The interview transcripts are available for review in Appendix T. Using the qualitative analysis method previously described, participant responses were coded, thematically analyzed, and categorized. Please note that codes and categories can be examined in Appendix U. In order to protect the context in which participant responses were discussed, categories have been presented in the order of the pre-arranged flow in which the interview questions were delivered.

Responses to question one revealed that participants believed that mental toughness was important for five reasons; motivation, progress, coping, conditioning, and concentration.
Participant views on the teachability of mental toughness were also provided. Teachability was believed to be influenced by the expected rate of progression, individual differences, environmental influences, and the target attribute or component. Question three served two purposes: The first purpose was to obtain the participants’ perspectives on using the six-factor model with respect to the appropriateness of the model in describing the overarching themes of mental toughness. The second purpose was to determine the participants’ perspectives on the factors roles as they apply the CMA context. Analyses of participants’ views suggest the model describes the overarching themes in an acceptable manner. The participant views of roles played by the factors varied. Moreover, the conviction factor was viewed as the practitioner’s core beliefs, desires, and drive. Commitment was perceived as adherence to a course of action leading to desired outcome goals. Conditioning was viewed as a process and an outcome. The process included challenges and mental discipline. The outcome was viewed as an optimistic mindset. Characteristics of readiness to perform included ethical mindset, a distraction free focus, drive to inflict injury, possession of beliefs and values consistent with the drive to injure, and automatic processing of motor skills. Distraction control was viewed as an attempt to maintain a conditioned mindset by gating out worries, and personal concerns. Finally, shifting focus of attention was perceived as the ability to switch to a non-performance focus to a task oriented focus.

Question four addressed the participants’ views on the unique factors proposed by CMMQ question twenty-one responses. Moreover, question four assessed participant views on anticipation, ethics, and learning attitude. Analysis of question four responses produced three categories per factor. Each category provided participant views on the role each factor plays in CMA, its uniqueness, and its role as a component of mental toughness. The final question asked if the participant could add any perspectives on mental toughness not previously covered. Thematic analysis of responses to the final question did not reveal perspectives not previously covered. Therefore, those responses were absorbed by categories described in questions one through four.

Question 1: What is the importance of mental toughness attributes from a CMA context?

The following text presents the categories produced from analyzing the responses to question one. Each category represents a reason in which participants’ perceived mental toughness to be important in the CMA. The first category, for example, illustrated motivation as
an important reason for mental toughness. The rationale by which participants believed mental toughness influenced the categories are also presented. A summary of the perceived importance of mental toughness is displayed in Table 4.7

Motivation. Analysis of the data revealed that participants perceived mental toughness as being important to classical martial arts motivation. Mental toughness was believed to be important because the CMA do not provide significant amounts of behavior reinforcement. For example, classical martial arts do not emphasize competitions, venues that provide reinforcement via trophies. Doca explained, “[CMA] do not have a lot of competitiveness or sparring. So, rewards are not always out in front of you. You don’t have that type of encouragement to motivate you. Determination is important.” Doca added that some CMA are “set up to be structured.” CMA styles inherently possess a progressive, systematic arrangement of short term goals arranged on a continuum from basic skills to more advanced. The impact of this progressive structure on motivation, however, is questionable. Marcus explained that not all of the basics can be learned in a short-term manner:

Consider sanchin kata. You could teach someone every move in one hour. You train for twenty to thirty years and still make mistakes. A high level master could pick you apart. It’s frustrating to struggle learning something that seems so easy.

Marcus added that the inability to see short-term progress with basics, such as the kata sanchin, detracts from the practitioner’s motivation. Marcus described the influence of struggling with basics on motivation: “But if you don’t have mental toughness, and you are struggling with a technique, you just want to quit”. David indicated that an extensive amount of time is required just “to see the value of some of the techniques, like stances.” Shihan stated that the “monotony of doing the basics over and over” makes it difficult to “stick it out and progress over the years.”

As described thus far, the motivational factors in the CMA appear to be minimal. Subsequently, the question arises, where do classical martial artists derive their drive, their motivation? According to Doca, motivation in the CMA is related to long term purposes such as mastery of techniques and self-defense:

You have to stick with it. You have to have a big picture outlook. I began training 20 years ago. This early training was the foundation. If you want to defend
yourself you have to have mastery. You have to look at the long term. There are short-term goals but the main thing to focus on the big picture, mastery of skill and self-defense.

According to TJ, motivation is generated when a practitioner pursues their individual purposes for training. TJ described the discovery of personal relevance in the following: “The desire comes from finding something that you truly want to do. You find your deep purpose.” “Desire/hunger causes us to follow through with the behavior.”

TJ indicated that motivation to practice the CMA is enhanced when the practitioner’s purpose is linked to the purpose of the tradition. Moreover, the practitioner’s motivation is elevated when they find passion and personal significance in the purpose and processes of the tradition: “It’s about desire and passion. My thoughts have to do with respect for tradition, falling in love with the process. The respect and love comes along with the hunger for the process.”

Doca implied that the purpose of the CMA, at least in the long term, is mastery of skill and self-defense. Therefore, motivation appears to require practitioners to internalize mastery of skill and self-defense as personal goals. TJ indicated that when the practitioner pursues a goal considered to be personally relevant, he or she will enjoy the processes, the activities related to the long-term goal. TJ explained in the following excerpt: “You find your deep purpose. As a result you have the joy of doing, feeling the snap in the punch, a great kiai, is the compensator.”

The driving force exerted by personally relevant activities on an individual’s motivation appears to be connected to the enjoyment accompanying personally relevant activities. In the context of CMA, “feeling the snap in the punch, a great kiai” are examples of inherently rewarding experiences. As such, the joy of the experience drives the classical martial artists to continue with the activity, irrespective of short-term goals. Practitioners who enjoy the process appear unaffected by time concerns. Moreover, the efficacy of the CMA process in developing and maintaining motivation was described as a mindful and present centered focus on the activity. Furthermore, the mindful and present centered focus was described as a task oriented focus in which the practitioner lacks a sense of time urgency, is fully immersed, both mind and body, in the execution of a punch and kiai, the performance of kata, or kumite. TJ described the process in the following:

The process is void of time concerns. In modern society, human beings are geared to a
Table 4.7

*Perceived Importance of Mental Toughness*

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<td>Relevant activity</td>
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<td>Core belief</td>
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<td>Challenges with other students</td>
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<td>Confidence following a loss</td>
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<td>Conditioning</td>
<td>Sacrifice</td>
</tr>
<tr>
<td></td>
<td>Self-restraint</td>
</tr>
<tr>
<td>Concentration</td>
<td>Training and combat focus</td>
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</table>

Note. Original participant data, codes and categories can be found in Appendix M and N.
push button mindset. We want instantaneous results. We are a divided mentally/physically. We go to the office for the mental, then go to the gym for the physical.

Practitioners associated this veneration for the process, and subsequent mindful engagement of activity with a mastery goal orientation. According to Weinberg (2003), characteristics associated with mastery orientation includes a desire for mastery and possessing personal pride in accomplishments. An example of a mastery orientation, similar to that found in the CMA is illustrated in the following excerpt:

Mental toughness in martial arts is like mental toughness in life. I was in Spain performing and my boots broke, I was broke. I needed my shoes soon. The cobbler would not jump on the assignment. He said come back at 5 (the Spaniards take long lunches. He would not compromise his life rhythm). I went to get the shoes fixed at 5. He fixed the shoes and handed me my shoes with pride…as if he was Michelangelo and created a masterpiece.

According to participants, CMA motivation empowers the practitioner to remain mentally tough, strong, or sturdy in terms of possessing the ability or skill to maintain commitment to the process, pursue mastery, and remain determined, despite a lacking in rewards.

So, how is mental toughness related to motivation? Mental toughness was reported to play a role in discovering intrinsic motives. As indicated by TJ, the ability to find personal relevance in life can be a difficult undertaking. Finding purpose requires the individual to break new ground, stand alone, often going against a well-established norm.

If you can do what you want in life, you’re lucky. You have to be willing to follow your dream and find your purpose. However, this is a scary process. It’s hard to be an individual and be the first to do something unique to the self. For example,… I respect the first man that wore one [an ear ring]. He went against the norm to follow desire. The ones that jumped on the bandwagon and followed, I’m not so concerned with. It’s easy for everyone else to jump in and follow the crowd. Finding who you are and pursuing that dream is difficult.
With respect to the CMA, mental toughness is required to find personal relevance in a lifelong pursuit of skill mastery and self-defense and personal enjoyment in the day-to-day process of CMA practice.

*Progress.* Participants indicated that mental toughness is important for progression in the CMA. More specifically, participants perceived mental toughness as being important to fulfilling key requirements necessary for progression. According to Wolfeyes, the ability to “pursue and accomplish anything of real value” requires mental toughness.

Practitioners viewed mental toughness as being important with respect to three areas of progress, which included rank, skill, and the tradition or art. For classical martial artists, rank progression is accomplished by earning different colored belts. White belts are used to indicate a beginning status, green/brown for intermediate, and black for advanced. Once black belt status is achieved, practitioners continue to progress by earning degrees of black belt. For example, a first-degree black belt is a beginning black belt level while a tenth degree is the highest rank obtainable. According to Shihan, mental toughness “is required to go up in rank, higher in level.”

Mental toughness is also important for progressing skills to a level commensurate with mastery and self-defense. Mastery of skill and self-defense were described as long-term goals requiring a mindset geared to long-term development. According to Doca, the mindset geared towards long-term development, however, requires mental toughness.

You have to stick with it. You have to have a big picture outlook.

I began training 20 years ago. This early training was the foundation. If you want to defend yourself you have to have mastery. You have to look at the long term. There are short-term goals but the main thing to focus on is the big picture, mastery of skill and self-defense.

The significance of mental toughness is not limited to personal progress, however. Grizzly explained that preservation and progress of the CMA in general, is impacted by mental toughness. “To be a way of life you have to have mental toughness to be effective. Without mental toughness we would not have it [CMA] today. Without mental toughness the art would have died out.”

According to classical martial artists mental toughness influences progress via enabling factors. The factors which were reported to facilitate progress included fulfilling time
requirements, learning difficult techniques, overcoming the monotony of training, training with difficult others, and overcoming physical limitations.

The time required for progress is quite extensive. Figure 4.1 displays the time required for progress with respect rank. Moreover, the data imply that practitioners practice an average of 4 years to achieve the rank of black belt. Practitioners practice an average of 12 years to progress from beginner to second degree black belt. Thereafter, the years of practice required to reach subsequent levels is approximately 7.5 years per degree. The average total time demands and rank exhibited by this study’s participants were 25 years and 3rd degree black belt respectively. Individuals with higher ranks demonstrated higher average time commitments.

Martial artists indicated that time requirements for progress are not easy to fulfill. According to Pioneer, “only 50%” of classical martial artists will last more than 6 months. Pioneer adds that the dropout rate increases as “you progress in the ranks”. Needless to say, participants perceived mental toughness as an important factor in fulfilling time requirements. Regarding the fulfillment of time requirements, Pioneer stated, “anyone who sticks with something has it [mental toughness]. It’s tough to stick with anything.”

Practitioners indicated that the value and mastery of certain techniques also requires mental toughness. Marcus, explained that mental toughness enables the practitioner to persevere and struggle with techniques until he or she finally develops the skill. Marcus stated, “Consider a technique you want to master, if you’re having problems mastering that technique you just have to stay at it until you get it.“

The importance of mental toughness in learning is not limited to skill development. According to David, mental toughness is required to “see the value of some of the techniques, like stances.”

Mental toughness was believed to be important to overcome the monotony of training. Shihan stated that progress requires practitioners to perform “the same movements over and over.” The repetitive performance of basics, for example, was perceived as being a monotonous endeavor. Subsequently, mental toughness was viewed as impacting progress by overcoming the monotony of performing techniques such as the basics.

Another key factor to progression, which practitioners indicated was influenced by mental toughness, is the ability to train with difficult others. Wolfeyes signified that progress requires practitioner to work with individuals who are more skilled and not necessarily viewed as
Figure 1. Relationship between Rank and Time Requirements.
approachable. The ability to train with unfriendly individuals requires mental toughness. Wolfeyes explained the connection between mental toughness and progress via working with unfriendly others:

Anytime that your confronted with someone with superior skills that are not necessarily friendly towards you, well, you either get better or don’t continue. Really, the only way to get better is to work against those kinds of people. It takes mental toughness to continue working with those kinds of people.

A final factor, which practitioners believed to influence progress, is the ability to overcome personal limitations. Mental toughness appears to serve an influential role in progress by enabling individuals to overcome personal limitation. For example, classical martial artists indicated that progress requires fulfilling time requirements and sticking to the program. Kame noted that the ability to continue with training requires one to overcome personal limitations. Additionally, mental toughness was perceived as being important to overcoming personal limitation which might interfere with program adherence. “It’s important. It’s the ability to overcome ones physical abilities and limitations. The ability to continue training despite your physical limitations. It’s overcoming our personal struggles on the inside whatever they are.”

Coping. Mental toughness was perceived to empower coping in a variety of ways. For one, mental toughness enabled practitioners to maintain poise and engage in positive self-talk during stressful events, such as a significant loss. According to Wheyshin, mental toughness afforded one of her karate students the ability to cope with loss after having his vehicle involved in an accident. Wheyshin indicated that she and her student had been talking outside of her student’s car, just moments before the accident. Wheyshin stated, “If I had delayed leaving the area where the accident occurred, I and another student would have been injured. I really believe that God protected us.”

A significant aspect of this event included the fact that the “[student’s] car that was smashed was a new and expensive vehicle.” However, neither Wheyshin nor her student were harmed. According to Wheyshin, “[Both she and her student] were completely unscathed. My student maintained his composure, physically, mentally, and emotionally. His comment was, it’s [the new and expensive vehicle] an inanimate object.”
Wheyshin further explained, “For us it’s about life. It’s a way of life. It’s about survival, life, and death.” Wheyshin’s explanation attributed her and her student’s ability to maintain composure in daily life as stemming from martial arts mental toughness.

Participants also associated mental toughness with the ability to cope with significant loss, in the form of defeat. David explained that being defeated in a martial arts kumite session can be mentally devastating. The reason that defeat can be devastating relates to the classical martial artist’s perception of kumite. According to David, kumite can be perceived as the practitioner’s ability to perform in a realistic combat scenario. Consequently, a defeat could imply “[death] on the battlefield.”

David explained, “This type of loss is harder to recover from than losses in other sports. It’s difficult to get back your confidence.” For classical martial artists, mental toughness is perceived to be important for coping with a breech in confidence and “bounce back after a loss.”

**Conditioning.** Classical martial artists perceived mental toughness as being important for managing the rigors of training. For example, classical martial artists undergo a physical conditioning process known as “ude tandem.” Ude tandem is an exercise where one martial artist uses his or her arm to strike a training partner’s arm. The purpose of this exercise is to condition the body so that the practitioner can cope with physical punishment. However, the ability to undergo physical conditioning such as ude tandem, depends on the preexisting temperament of the practitioners mental conditioning. According to SID, “To condition your body you must condition the mind or have a certain level of conditioning already.”

SID implied that mental conditioning depends on the individual. It is up to the individual to control the conditioning process. However, situational factors, such as one's environmental upbringing could influence the practitioner’s decision regarding the mental conditioning process. “It is up to the individual to condition their own mind. It is going to be more difficult for a person not raised on the wrong side of the tracks.” According to SID, a person who is reared in an environment that mandated sacrifice and denial of self-gratifying pleasures might be more likely to pursue a mental conditioning process that affords the ability to deal with pain. Moreover, the ability to condition the mind and cope with discomfort or other stressful situations seems to be influenced by the practice of some form of self-restraint. This is reinforced by SID’s following excerpt; “You must be able to deny yourself the convenience of pleasure. Sacrifice of some kind is important.”
Concentration. Participants described a variety of scenarios, which challenge the classical martial artist’s ability to maintain focus. These scenarios were described to vary in intensity. The intensity was described as ranging from challenging training sessions to real life combat situations where the practitioner is severely wounded. According to participants, mental toughness plays an important role in maintaining focus during each of these challenging scenarios. For example, mental toughness was perceived to be important during training sessions when the practitioner is pushed to the limits of endurance or challenged to grasp complicated techniques. Monte described, “OK, when you are physically exhausted or unsure of what you are doing. For example, when learning something new, it [mental toughness] helps you to concentrate. It helps keep your mind in one place.”

Practitioners indicated that challenges to concentration become more intense as he or she progresses in rank. Subsequently, the importance of mental toughness in supporting concentration becomes progressively important. Al explained the importance of mental toughness on concentration in the following excerpt:

It is like a tool that allows you to maintain focus. As you go up in rank it helps you to perform better under pressure. During continuous sequences you can get hit, knocked off balance and you want to hesitate but you block it out and keep going. Could even be during basics and you keep going. You block out distractions, pain and etc.

Kuraku described the importance of mental toughness on concentration during real life combat scenarios. Kuraku illustrated the severity of possible combat scenarios by drawing on a law enforcement scenario. During the incident, a cop was shot “but able to fight through it.” Kuraku stated that “If you don’t die from major blood loss. You can survive. You can fight through it.” In order to fight through the event, mental toughness, in the form of drive, determination, with the ability to focus and block out distraction, is especially important. Kuraku provided an example of the influence of mental toughness on concentration in the following, “[It’s] like when Kurata was punched in the face but he said it’s not the end of the world. [Mental toughness] helps you not to be afraid. It’s the Warrior mindset. You can push through.”

Question Two: What is the trainability of mental toughness attributes from a CMA context?

The degree to which mental toughness can be taught was perceived to be dependent on many factors. These factors included the expected rate of progression, individual differences,
Classical martial artists explained that the expected rate of progression influenced the degree to which practitioners perceived the teachability of mental toughness. For example, Kame implied that mental toughness might be teachable but because of its slow progressive nature, “you probably would not be able to tell it.” Bilb explained that for classical martial artists, an extensive amount of training, “[training] beyond black belt,” is required before the practitioner begins to train many mental aspects.

The perceived teachability of mental toughness also appeared to be influenced by inherent traits. Karateka indicated that mental toughness is related to the survival instinct or fight or flight syndrome. According to Karateka, fight or flight is innate in everyone. Therefore, from a standpoint of instinct, mental toughness is not perceived as teachable. That is not to say, however, that mental toughness can’t be developed. Karateka explained:

The idea of teaching is not quite right. Mental Toughness is innate in everybody. I can take your survival instinct and draw up on it. It’s like an ink spot. I can take a little ink and draw it out to make a larger spot. Everyone has it to a certain degree.

TJ expanded on Karateka’s view on developing mental toughness. TJ’s perspective on developing mental toughness centered on the understanding of adaptation. According to TJ, “Your body respects tough training.” When exposed to tough training, the practitioner responds “by adaptation.” Adaptation is seen, for example, when practitioners are exposed to tough training in the form of combat or sparring exercises. During various sparring exercises, adaptation takes place by triggering the practitioner’s survival instinct. Karateka noted, “various [sparring] exercises help to evoke the fight or flight.” Bilb explained that the tough training associated with combat or sparring exercises facilitates adaptations in mental toughness via improved confidence:

[Mental toughness] comes along with the type of training that you have. It’s not the style of martial arts that matters, it’s the teacher and how they teach. I do not believe that you can go into a karate school and not have contact….we were taught in a tough and hard way. This way served to build confidence/toughness. There is as look in your eyes that say you don’t want to mess with this guy.

Other practitioners viewed that mental toughness is teachable. Grizzly explained the teachability of mental toughness by using a marathon running analogy: “A marathon runner hits
the wall. In order for him to go past the wall he has to have mental toughness.” Grizzly implied that that mental toughness is taught when the practitioner is instructed to “train and push yourself past what your body can take.” Pertaining to the running example, mental toughness is taught when the marathoner is instructed to push through the wall. Chantien explained that pushing the body’s limits is important for enhancing mental toughness in the classical martial arts as well. More specifically, he added:

We develop it by contact. We test on that. Our students have to spar for each test. For black belt the contact is more severe. During black belt sparing a student can get knocked down or hurt. The student has to have the mental toughness to get back up. In the case of sparring, pushing through limitations is equivalent to continuing the fight after an injury.

The teachability of mental toughness depends on the practitioner’s personality type. Some individuals are able to develop mental toughness without exposure to instructional strategies. Apparently, these individuals have personalities conducive to the facilitation of mental toughness. Others require some form of instruction or teaching in order to develop or learn mental toughness. Doca elaborated on the teachability of mental toughness in the following excerpt: “It can be taught to some extent. It depends on ones personality type. Some people have that innately. With others, it involves hand holding, we have to show them everything.”

Other factors that seemed to influence the teachability of mental toughness were the student’s beliefs and learning preference. MHH described the influence of learning preferences in the following:

it is the match between the student and the teacher that determines if mental toughness characteristics are teachable. You don’t always get that individual approach. Some students would rather have a group oriented approach rather than an individual patient approach.

Classical martial artists also explained that the teachability of mental toughness depends on the proposed attribute targeting for teaching. Some attributes are apparently more teachable than others. In certain situations, for example, dedication and commitment were not viewed as being teachable. According to classical martial artists, the development or learning of commitment depends on creating habits and improving mental and physical conditioning.
Shihan explained, “that we become dedicated by developing a habit of training [on a regular basis].” Pioneer added that the ability to train, to develop habits, is influenced by the practitioner’s level of conditioning:

Conditioning empowers me to be able to commit to a program. Make sure you train safely when you’re younger so you can stick to it when you’re older. I can train now because I am in as good as shape when I was 20. Commitment can work together with conditioning.

Participants indicated that conditioning influences the development of commitment and commitment influences conditioning. Moreover, practitioners must possess a certain level of commitment to comply with training schedules and experience increased levels of conditioning. As described by Shihan: “Everything else, mental and physical conditioning, the readiness to perform, distraction control, changing focus of attention, depends on developing habit or dedication.” Participants designated other factors, in addition to conditioning, as influencing commitment. Prior to developing habit and commitment, students must possess the prerequisites drive and determination. Drive and determination are important for developing commitment, because without personal drive and determination, the student will be unlikely to place themselves in situations that foster habit. Shihan explains the importance of drive: “They have to have a drive to begin with. We are not in a mandatory environment. People don’t have to show up to practice. They have to have the desire to start with.”

The teachability of commitment depends on drive. Therefore, the ability to develop commitment seems to hinge on the teachability of drive. According to Kuraku, determination and drive are not teachable. They must intrinsically exist within the practitioner: “The first two components, determination and drive, you can’t teach. You have them or you don’t. Can’t teach the drive. They have to have it or find it for themselves. You can’t coach desire.”

Even though determination and drive appeared to be non-teachable, participants implied that they could be influenced. Practitioners explained that group training could influence determination and drive. During group training, individuals learn to “ignore pain and fatigue and conform to social pressure and continue with training.” Subsequently, practitioners are able to push their bodies and minds through more demanding trials. Recalling TJ’s description of teaching mental toughness, “Your body respects tough training. It likes tough training by adaptation.” TJ added, that practitioners adapt to tough training, “[surviving] the negatives and
[pushing] through your training” by increasing mental toughness. David explained that mental toughness responds to group training by increased confidence and drive:

You can push people further as a group. As they see themselves go further as a group they realize that they can do more. Then their confidence grows. At which point they are more likely to push themselves more when they practice by themselves.

Participant responses exploring the teachability of conditioning also produced differing views. Kuraku’s perspective on the teachability of conditioning was that conditioning is “easier to teach” than determination and commitment. He explained that conditioning can be taught by instructing the practitioner how to respond to combat situations and providing an opportunity for the practitioner to practice those responses. According to Kuraku, combat scenarios can precipitate anxiety responses. These anxiety responses can include loss of certain motor skills, panic, and overall poor performance. Kuraku indicated that providing instructions on correct responses to combat situations and providing an opportunity to practice those responses, results in proper mental conditioning. Moreover, the practitioner response becomes conditioned; the practitioner is able to perform while managing inappropriate anxiety responses. Kuraku illustrated the teachability of conditioning in the following:

When your heart rate increases you lose fine motor skills and people panic and freeze. A person like Kurata or another fighter, used to bar fights, doesn’t get as nervous. But if you’re in the situation a lot, you get use to it. I saw a documentary of a police officer who taught his daughter how to respond to assaults. For example, if someone grabbed her backpack, how should she react? Someone actually grabbed her backpack one time, he did as she had been trained and she survived.

The reader should note that all participants do not consider conditioning teachable. SID, for example, “[doesn’t] think it can be taught.” SID’s view on the teachability of conditioning stemmed from his belief that conditioning requires the practitioner “to deny [themselves] the convenience of pleasure. Sacrifice of some kind is important.” The ability to deny pleasure and make sacrifices is “up to the individual.” Furthermore, SID explained that the teachability of conditioning is complicated by environmental influences: “It is going to be more difficult for a person not raised on the wrong side of the tracks. Considering SID’s excerpts in a holistic sense, it appears that practitioners, who grew up in tough environments, have experienced some degree
of mental preconditioning. Moreover, these individuals have been preconditioned from the standpoint that they have already developed the ability to deny pleasure and make sacrifices.

Conflicting views on the teachability of focus was noted in participant responses. Kuraku and Marcus indicated that focus is teachable. Marcus expanded on the teachability of focus in the following excerpt: “I have learned from my teachers that there are certain things you can do to focus/fix your mind that makes you tough.” More specifically, Marcus explained that his instructors taught him how to focus via verbal instruction and discussion.

For example, discussions with Master Fang [martial arts instructor]. He used to ask the question, what would you do if a bear charges you? He said you don’t have a choice. You have to fight. The bear is your food and you want to enjoy your meal. Killing the bear is enjoying your meal. You have to think you’re going to win no matter what it takes.

Other participants perceived that focus is not teachable, at least in the traditional sense. Monte explained that the idea of focus might be conveyed via demonstrations. Moreover, Monte explained: “The instructor can provide instances when they struggled but mental toughness helped them to focus and push through.”

One example used by instructors to teach focus included prearranged sparring drills known as bunkai. Monte indicated that during these drills “You can’t stop in the middle of a bunkai and try to figure out what you did wrong.” According to Monte, his instructors said that in order to “avoid getting tripped up over 1 or 2 moves, you move forward, don’t hesitate.” Further, Monte’s instructors explained, “Don’t second guess yourself, look at the bigger picture.”

Regarding learning attitude, participants felt that the component was more or less up to the student to independently develop. Participants indicated that students either pick up the correct attitude during training or “sort of fall away.” Chantien expanded by stating that learning attitude “is something [an obstacle] that students must conquer in themselves.” Participants were unclear as to the degree they perceived that a learning attitude is teachable. Learning attitude, however, is apparently not a component that classical martial arts instructions explicitly attempt to teach or develop.

According to participants, the CMA develops ethics. Some practitioners implied that ethics are taught while others state they are influenced. Chuck, for example, stated that mental toughness, in the embodiment of respect, “[is] taught from the first minute of class.” On the
other hand, Marcus indicated that many practitioners have “a good sense of ethics” before they begin training. Marcus added, however, that CMA training will further develop the practitioner’s ethics. Wheyshin stated that CMA training influences practitioners “ability to resist negative influences, and move in a positive direction.”

**Question 3a: What is the extent to which classical martial artists perceive that attributes converge under broader, overarching sub-categories?**

Participants were asked to review and comment on each factor of the six-factor model. Analysis of responses indicated that fifteen participants agreed with the factors conviction/determination and readiness to perform. Fourteen participants agreed with using commitment/dedication as a factor. Ten participants agreed with the factor conditioning. Eight participants agreed with using distraction control and shifting focus of attention as factors. Out of twenty participants interviewed, no responses indicated that any of the factors were inappropriate.

**Question 3b: Participant Views on the Six Factor Model**

Analysis of participant responses to question 3b produced various perspectives. Moreover, participants held varying views with respect to the role each factor plays in martial arts toughness. A summary of the participant perspectives of each factor is presented in Table 4.8. It should be noted that although participant responses were discussed within the framework of a given factor, they were not necessarily experienced in isolation from one another. Analyses of data suggest that interconnections exist between the various factors. Interview transcripts, codes, and categories of participant views of the six-factor model can be found in Appendix V and W.

**Conviction and Determination.** Analysis of participant interpretations of conviction/determination produced four views. The first view of responses described conviction/determination as instinct/traits. The second view described conviction/determination as beliefs and values. View three indicated that conviction/determination related to the practitioners desire and passion. The fourth view associated conviction/determination with drive.

View one responses described conviction/determination as enduring and stable psychological components innate to the practitioner. Additionally, participants explained that conviction/determination is similar to an individual’s temperament or disposition. Doca, for
example stated, “Conviction is more of a personality trait.” Karateka agreed that conviction/determination is an inherent disposition. He added, however, that this disposition is associated with an unconscious tendency to behave in a certain manner. With respect to the CMA, conviction/determination seems to be an instinct that facilitates survival behaviors.

Karateka’s view on conviction/determination follows:

I think a few of those areas might be one thing. I think they might be derived from survival instinct. For example, determination and readiness to perform comes from basic survival instinct. They may be related to fight or flight. It may have to do with the ability to switch between the angry animal and calm social creature.

View two excerpts provided a similar view. Moreover, the data suggest that conviction is related to enduring and stable psychological components, such as a participant’s personality. However, view two focuses on specific components, such as the practitioner’s beliefs and values. For example, Al associated conviction/determination with the practitioner’s conscious personality. More specifically, he related conviction/determination to specific aspects of personality such as beliefs: “The word conviction. When I think about conviction I think about ego. Seems like ego is involved. There is belief with conviction. “

An example of belief was provided by Pioneer. From the perspective of conviction, Pioneer described belief as a trust or belief in the efficacy of a particular program. Furthermore, he explained that belief is trusting that a martial arts program or style will offer benefits found to be personally relevant: “Conviction is the belief that this program is something you want to obtain. You have to believe in the program. “

The data from view three suggested that conviction is related to desire. TJ alluded to the liaison between conviction and desire in the following excerpt; “How do you maintain your conviction, your desire? It’s going back to all of that stuff discussed on the first question. It’s about finding your thing.” Note that TJ indicated that conviction pertains to finding something that has personal value, meaning, and purpose. For example, TJ stated; “The desire comes from finding something that you truly want to do. You find your deep purpose. “

View four excerpts also described conviction as drive linked to underlying beliefs. Participants viewed conviction as a driving force that influences the classical martial artist’s behavior. In order for martial artists to behave in a certain way, it seems that drive is necessary. Participants indicated that the drive to behave in a certain way originates in the mind, from the
Table 4.8  
*Participant Perspectives on Factors*

<table>
<thead>
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<th>Factor</th>
<th>Participant Perspective</th>
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| Conviction/Determination      | Stable personality trait  
|                               | Core beliefs                                                                 
|                               | Desires                                                                     
|                               | Determined drive                                                           |
| Commitment/Dedication         | Adherence to actions leading to success  
|                               | Being cognitively engaged/problem solving                                    
|                               | Helping other Students                                                     |
| Mental/Physical Conditioning  | Exposure to challenges resulting in adaptation                                
|                               | Discipline                                                                  
|                               | Gate out negative thoughts                                                  
|                               | Focus on positive, optimistic thoughts                                        
|                               | Outcome                                                                     
|                               | Cultivation of a single, optimistic mindset.                                 |
| Readiness to Perform          | Defined by performance context                                               
|                               | Demonstrations                                                              
|                               | Sparring                                                                    
|                               | Real Life Altercations                                                      
|                               | Manner in which context defines readiness                                    
|                               | Performance affected by anxiety                                              
|                               | Performance affected by drive to engage                                      
|                               | in violent behavior.                                                         
|                               | Performance affected by unpredictability                                    |
of scenario.

Characteristics of Readiness
  Manage anxiety and distraction free focus
  Drive to inflict injury
  Deep beliefs consistent with drive to inflict injury
  Automatic processing of motor skill instructions
  Ethical considerations

Distraction Control    Block out worries, concerns, and other personal issues.
                        Attempt to maintain conditioned mindset.

Shifting Focus of Attention    The ability to switch a non-performance to a task oriented focus.

Note. Supporting data, codes and categories can be found in Appendix M and N.
practitioners' beliefs. Grizzly described the connection between belief, drive, and behavior in the following: “The body follows the mind. If your head’s not there your behaviors will not follow. Your behavior follows your conviction.”

Conviction was also described as a belief that drives one to behave in a determined manner. Practitioners viewed determination as being very important in overcoming obstacles. TJ provided an illustration of how he perceived that conviction served to increase his drive and overcome a setback.

Years ago I was training in the dojo. One of the guys I trained with performed a throwing technique. I fell and broke my wrist. I went back and trained with one-armed push-ups. It is a conviction for the commitment.

Wolfeyes added that drive and determination is important to manage the common obstacles such as training severity and boredom. Wolfeyes following excerpt illustrates the importance of determination in overcoming obstacles, “You need determination to push you through. The student must be determined to reach beyond the boredom and get something out of the training. You have to get past the boredom and continue to learn.”

Commitment. Participant perspectives of commitment parallel those bestowed upon conviction/determination. According to one participant, Doca, “Not much of a difference [exists] between factor one [conviction] and two [commitment].” The similarities seen between conviction and commitment seem to involve an association with drive. According to participants, commitment is a natural product of underlying motives. For example, Bilb indicated that his commitment to learning the martial arts was the result of underlying motives. Moreover, Bilb stated that he committed to the martial arts because he saw something in it that appealed to him.

I was committed to karate from day one. I knew from the beginning that this is something I wanted to do, commit to long term. The reason being, because I saw something in karate that I really liked and believed in.

The reader should recall that participants described convictions in a manner that is consistent with a practitioners’ belief system. According to participants, the practitioner’s belief system serves as drive, underlying motives. These motives, in turn, facilitate the classical martial artist’s behavior. From the viewpoint of conviction and determination, underlying motives results in determined, persistent behaviors. Moreover, the emphasis on behaviors, from the perspective of
conviction, relates to the ability to overcome obstacles. Conviction declares that a practitioner behaves in particular manner because the behavior is consistent with the practitioner’s personality, psychological core. Subsequently, the practitioner’s core motives and drive are not likely to be altered via impending environmental influences.

A key feature of commitment, which was emphasized by participants, included the importance of taking right actions. Furthermore, participants indicated that a mentally tough commitment manifests itself in the form of actions required for success. Pioneer explained that individuals, whose goal is to learn the CMA, commitment is necessary. Moreover, Pioneer implied that without commitment, expressed in the form of program adherence, success is not likely. Pioneer explained: “if I am going to learn Uechi-ryu or anything else, stick-to-itiveness is needed. Commitment is important.”

Grizzly indicated that commitment is more than showing up for practice. Rather, commitment requires the practitioner to cognitively engage in the activity. Specifically, commitment requires the classical martial artists to take responsibility and formulate decisions about the activity. Grizzly explained his concept of commitment in the following: “Dedication and commitment. Again, it starts with the mind. If you want to be successful at something you have to commit to it. You have to have discipline, sacrifice and structure.”

Marcus expanded on Grizzly’s notion of cognitive engagement in commitment. Marcus noted that improvement requires the martial artist to engage in problem solving:

Dedication stands out more important than any of the others. You must be dedicated to see results. You can be distracted one or two times in the dojo, but you must be dedicated to show up for practice and overcome those problems keeping you from mastering a technique.

From Grizzly and Marcus’s perspective, commitment requires martial artists to problem solve.

Finally, participants viewed commitment, not only in the sense of being committed to personal gains. Commitment was also viewed as being the act of providing assistance to others. Bilb, for example, compared commitment to marriage. “I was married to it (CMA) when I saw it. If you commit yourself you want to contribute. A lot of people are selfish but a true martial artist is not just in it for himself. He helps teach others.” From Bilb’s illustration, commitment also appears to manifest itself as an interest in the success of others.
**Conditioning.** Participants described physical conditioning as continual exposure to situations that cause adaptation and physical growth. This process, as described by the participants, is akin to the overload principle contained in human physiology. Moreover, a muscle that is required to contract, while moving a progressively heavier load, adapts physiologically. Furthermore, the muscle makes appropriate adaptations, which allows it to move heavier weight. Grizzly explained, “If you want to meet a goal, progress, you have to have to be constantly challenged. Physical overload is required to progress. If you want to be conditioned you have to physically and mentally struggle.”

Mental conditioning was also described as a discipline. As discipline, conditioning was viewed as a process in which the practitioner trains his or her mind to eliminate negative thoughts. Moreover, Sid indicated that classical artists must strive to “[make choices] to follow a certain way.” Furthermore, Sid added that the classical martial artists must reject negative, self-defeating thoughts in favor of those of that cause them “to feel strong and optimistic.” According to SID, mental conditioning is a discipline. “It’s natural to take the easy way. We have to work to be able to shake off disappointment. Not really being angered about things you don’t have control over.”

The outcome associated with mental conditioning was described as a mental dwelling of sorts, single-minded, absent from negative self-defeating thoughts. SID described the conditioned mental dwelling in the following:

Mental conditioning involves mental discipline. You have to make that place of focus your home. Your safe place. A place where you feel strong and optimistic. A warrior’s mind is unified into a strong, single, whole. A warrior needs nothing for his safe place. He is already at home because his mind is conditioned, where it needs to be. He doesn’t have to go looking anywhere in particular for a given focus. A conditioned mind is who he is.

**Readiness to Perform.** The participants’ view on readiness to perform was dependent on the context in which a performance is to take place. Moreover, readiness appeared to be shaped by unique characteristics of a given context.

Participants described formal martial arts demonstrations as one context in which practitioners must be ready to perform. Unique characteristics of demonstrations, which define readiness, included performing CMA techniques in front of spectators. Practitioners indicated
that these contexts could lead to performance anxiety. Subsequently, anxiety can result in performer feeling unprepared, not ready to perform. Monte described his view in the following excerpt:

I think I am ready but the techniques go out the window during a high stakes performance. A few years ago, we did a demonstration at a county fair. I felt like I was prepared. However, during the actual performance, anxiety set in and I felt like a beginner.

According to Monte, anxiety is a factor related to readiness in one performance context of the CMA.

Readiness to perform was also defined by combat scenarios. More specifically, practitioners perceived that combative scenarios define readiness to perform via dangerous actions and techniques commonly employed in these settings. According to classical martial artists, combative actions define the meaning of readiness to perform in several ways. One, participants indicated that violent contexts trigger anxiety responses. Furthermore, these violent contexts were perceived to influence the participants' ability to cognitively process information, make decisions, and execute various motor skills. Grizzly provided a personal account of how a real time scenario affected performance:

Your fine motor skills go when you're stressed. Your ability to process info goes. For example, during an actual confrontation, I responded with lethal force. I was not consciously aware of how I responded. Others informed me as to the extent of my response which was not at all what I had experienced.

According to Grizzly, combat contexts define readiness to perform in terms of preparedness to manage responses associated with anxiety. Two, readiness to perform in contexts requiring life and death decisions requires drive. An interesting example, which illustrates the drive required to be ready to perform, was provided by Kame. Kame compared the readiness needed by classical martial artists to readiness to deal with life or death issues in a church service. Moreover, Kame indicated that certain topics discussed in a church service prompt participants to make serious, sometimes stressful, decisions. He indicated that some participants are able to engage these issues. The ability to engage, according to Kame, stems from drive.

With readiness to perform, you might feel anxious but knowing that you are able to cope and go through with it [the performance] is mental toughness. Think about church.
Church often prompts us to think about life and death and make decisions. Those sitting in the back don’t want to be in the limelight or to be called upon. Those in the front, they kind of want it. They want to take part in everything. They want to take part in those kind of decisions.

A third manner which combat scenario were believed to define readiness relates to the unpredictable nature of combat environments. Specifically, these contexts are unpredictable because a pending attack occurs without warning or opportunity for the practitioner to prepare. It should be noted that the unpredictability of the context could range from moderately unpredictable to a total surprise. The degree of unpredictability is also believed to shape what participants consider to be readiness. For example, free style sparring is a moderately unpredictable scenario. With free style, the practitioners are aware that an attack is coming. Therefore, some opportunity is given for practitioners to make mental preparatory adjustments. However, David indicated that the practitioner has no idea what type of attack is coming or when the attack will be delivered.

Readiness to perform might be unique in that it requires the ability to react at a moment’s notice. You have to be able to apply what you are learning. You have to be able to react to surprise. It’s like moving from semi free sparring to free sparring. Mentally and physically [technique] you know what to do. However, it is difficult to apply those abilities in free sparring. It’s hard for people to get in the game.

Real time altercations, on the other hand, usually represent a higher level of contextual unpredictability. During free style sparring, the practitioner has time to make mental preparations. However, this is not always the case with real time altercations. Practitioners indicated that real time altercations could occur in a moment’s notice when least expected. Marcus explained the unpredictable nature of real time altercations in the following: Readiness to perform is extremely important for true fighting. A true fighting situation could happen as a surprise, sucker punch. If you are not ready then you lose. In a dojo you have time to get ready and prepare for fighting. This is not always true with true fighting. You could be in your living room enjoying a TV show with your family then someone breaks in on ya. Ya don’t have time to prepare.

According to participants, a practitioner might be able to successfully execute motor skills in a predictable context. However, the practitioner may have difficulty defending in an
unpredictable environment. Subsequently, the context of CMA appeared to define readiness to perform. In the case of combat, readiness to perform was characterized by the ability to perform in an unpredictable environment.

As mentioned above, practitioners defined readiness to perform according to context. As far as the CMA were concerned, contexts included demonstration and combat scenarios. Participants indicated that readiness to perform in demonstrations and combat contexts requires practitioners to manage anxiety. Readiness to perform in combat contexts also requires practitioner to possess drive for engaging in violent behavior and ability to perform in an unpredictable environment.

According to participants, readiness requires three general contextual characteristics. Moreover, readiness requires anxiety management, drive to engage in violent behavior, and the ability to perform in an unpredictable environment. The following section conceptualizes participant views on the characteristics of readiness needed to deal with environmental demands.

For example, a ready mindset was perceived to be consistent with a focus that is not affected by conditions of the scenario. Within this focus, the participant is not affected by various sources of anxiety or fear. Al explained the anxiety free focus as follows:

> Readiness to perform is to set aside a mental place. A place where you are ready and not affected by other circumstances. Whether you’re nervous, can you block that out and pay attention to what’s going on? Get the tunnel vision. You could be distracted by your fear. But you can’t focus on all the things that could happen to you. Everything goes back to your training.

Cultivating drive was also viewed as important for readiness to perform, especially the drive necessary to engage in violent behavior. The cultivation of drive was perceived as the result of changing the practitioner’s mindset from a nurturing, altruistic drive to one that is determined to inflict injury on another person. Karateka stated, “determination and readiness to perform comes from basic survival instinct. They may be related to fight or flight. It may have to do with the ability to switch between the angry animal and calm social creature.”

Karateka implied that the drive to inflict harm to another person emanates from the practitioners psychological core. Moreover, the ability to cultivate the readiness drive requires adjustments to be made deep within the self, at the level of the practitioner’s basic instinct.

Participants stated that the ability to adjust instinctive drives is not an easy undertaking. Switching on the readiness to perform drive requires deeply rooted nurturing human tendencies
to be temporarily ceased in favor of a determined disposition geared towards termination of another individual’s biological existence. From Aldeşi’s point of view, “It is a deeply rooted genetic trait for people to help and not harm each other.” Aldeşi adds, “In order to develop a willingness to hurt another person, one has to go against barriers in our basic genetic make-ups. This requires mental toughness.” Aldeşi indicated that a readiness to perform drive branches from the practitioner’s desire to accomplish a purpose or goal. Moreover, readiness to perform requires that the classical martial artists participate in life threatening altercations because the scenario provides a venue for accomplishing a personally relevant goal. Furthermore, the practitioner feels the need to pursue the personally relevant goal because he or she believes that fulfillment of the goal will lead to a feeling of personal accomplishment.

You have to come to terms with your intention and make a decision before the life or death situation ever occurs. You also come to the point that this is what you want to do, you want to prove yourself.

Participants further described the readiness to perform mindset as one that is prepared to respond in an appropriate manner. According to participants, responses should be developed to a high level, guided by automatic processing. In addition, responses should be guided by a well-developed sense of awareness. Finally, responses should be governed by ethical considerations.

According to Aldeşi, the ability to respond in an automatic manner was of paramount importance. The participant indicated that automaticity of movement is especially important in a life or death scenario. In real time altercations, practitioners do not have time to think about the requisites and ramifications of lethal altercations. Quick responses are mandatory.

It’s simply facing combat, blanking out the mind, and going into your training mode. You are willing to give lethal force to the other person. I come to terms with what I need to do to take people out. You have to perform very quickly. So you need to operate from muscle memory.

The time frame for responding in real time altercation contexts is very small. Once the practitioner engages an assailant, there is no time to warm-up and prepare. Hesitation in response can mean the difference between success and failure. There is no second chance for redemption. Chantien described the importance of an immediate response in the following:

Readiness to perform. In life you don’t get a second chance. You don’t have time to warm up. You have to turn it [techniques/mental focus] on immediately. Readiness to
perform is not just about having the physical skills and ability. It’s the mental ability needed to employ the skills at a moment’s notice upon demand.

Participants indicated that information-processing programs required to adapt motor responses to contextual demands should be automatic. These motor programs should operate with minimal cognitive regulation of movement. Wheyshin described a situation in which her cognitive function had been compromised by a head injury. However, because she had learned to perform at a high level, her movements were guided by automatic processing. Wheyshin did not have to consciously regulate her movement.

One day, my son asked me to do Kigihowa (sticky hands exercise). I did sticky hands. I felt unstable but the muscle memory was there. My body just took over, from deep inside beyond conscious thought and awareness.

Sid metaphorically explained readiness to perform by comparing the readiness of an armed aircraft carrier to that of CMA. The aircraft carrier has a prefabricated battle plan in which “Everyone has been trained and knows what to do.” During an actual assault, there is no time to review plans. If the plans have not been learned at a deep level, then the response time will be to slow. Sid, however, explained that a readiness to perform mindset does not depend on cognitive processing of information. Regarding readiness, he adds, “They don’t have to think. They respond.” Likewise, classical martial artists must possess a level of readiness in which she or he has mentally engrained self-defense skills and strategies. Furthermore, the classical martial artists must be able to access and employ those skills in a moment’s notice, without conscious processing of information.

Classical martial artists indicated that a response associated with a mindset that is truly prepared relies heavily on sensitivity and awareness. Moreover, the ability to respond in an appropriate manner requires that the stimulus identification phase and response phase be tightly integrated. Bilb described the ability to process information and follow-up with an appropriate response in the following excerpt:

Over a period of time you develop a sense of danger. Over years of training your readiness to perform improves. You have to be careful that you don’t hurt someone. For example, one of my friends suddenly grabbed me, I reacted and hurt him. You are very sharp when something like that happens. If you walk down a dark alley. It’s like being in a dark room; you can feel it…There is an awareness, an ability to anticipate. Another
example is the You Move I Move exercise. You watch for subtle movements in your partner. You are on your toes, constantly reading your surroundings.

Finally, participants explained that responses associated with readiness would be amiss without ethical considerations. Specifically, Aldeshi indicated that the readiness to perform mindset associated with CMA “should [only] be taught to the right person.” For example, Aldeshi explained that the CMA were changed in 1902, for the purpose of teaching martial arts in Okinawa public schools. The CMA practiced prior to that date were geared mainly for life and death scenarios. In order to popularize the art in the school systems, the techniques were modified. For example:

You [can] train hard to kick the gut, but not the throat. If we teach to kill we get rid of our students.

According to Bilb, many participants do not develop the mental aspects of martial training until “you go beyond black belt.” Aldeshi stated, “You don’t learn the actual art into you are 2nd or 3rd degree. Evidently, classical martial artists do not believe that novices or school children are prepared to develop aspects of the readiness to perform mindset. Furthermore, experience and years of training in the CMA appear to be the pre-requisites to developing a readiness to perform. Pioneer illustrated this idea in the following excerpt:

[Readiness to perform, distraction control, and ability to change focus] are just part of the program. You work on drills, mindset, the tools of your style. In the process you achieve a certain amount of skill in those areas. They are a natural outflow of program. These things come with training not necessarily something that is before.

Distraction Control. Participants were asked to provide their perspectives on the items belonging to the distraction control category. Factor five items included (19) remaining fully focused in the face of personal life distraction, and (5) regaining psychological control following unexpected, uncontrollable events (performance specific).

Participants viewed distraction control as an attempt to maintain a single-minded focus that serves the classical martial artists as a mental sanctuary. Please see SID’s perspective on mental conditioning for a detailed explanation of the classical martial artists mental sanctuary (pg. 128). Participant views distraction control as a struggle to block out and/or remove personal qualms and grief from the practitioner’s mental sanctuary. SID’s perspective on distraction control follows:
“Distraction Control has everything to do with mental toughness. It can take the form of worries, heartaches, personal emotion. We fight our own demons, get our own forts cleaned out. We must make our fort a safe place, a designated place to put our focus. Distractions are not welcome there.”

Switching a Performance Focus On and Off. Participants were asked to comment on factor six item; 11. Switching a performance focus on and off as required.

Chuck explained that classical martial artists are taught to switch from a non-performance to a performance focus upon entering the dojo. “We have been taught from day one when you bow [upon entering the dojo] you leave your problems behind.” According to practitioners, the transition is not easy. It is difficult for the practitioner to switch their focus and to maintain the switch once it has been made. Sid explained that a mentally tough person, however, has the ability to switch to a performance focus and remain in their element:

With changing focus of attention, a mentally tough person, if they move their focus, mental toughness is our route. Mental toughness is innate. There is always a challenge between staying in our element and focusing on something we shouldn’t.

Question Four: What is the importance of mental toughness attributes from a CMA context (participant views on proposed unique factors)?

Question four addressed the participants’ views on the unique factors proposed by CMMQ question twenty-one responses. Moreover, question four assessed participant views on anticipation, ethics, and learning attitude. Analysis of question four responses produced three categories per factor. Each category provided participant views on the role each factor plays in CMA, its uniqueness, and its role as a component of mental toughness. The final question asked if the participant could add any perspectives on mental toughness not previously covered.

Anticipation. Participants were asked to provide their perspective on anticipation as a unique CMA component of mental toughness. Analysis of participant responses produced three sub-categories. The sub-categories included the importance of anticipation, the uniqueness of anticipation, and the significance of anticipation as a mental toughness component. An overview of these categories indicated that anticipation is important to CMA and is uniquely applied to the CMA context. However, participant responses as to the significance of anticipation as a component of mental toughness were inconclusive. The reader is referred to table 4.9 for a summary of participant views on anticipation.
Participants viewed anticipation with primary importance to CMA. The importance of anticipation in the CMA can be found in one very important purpose. CMA are about self-protection. Whether the CMA afford protective abilities via physical engagement or avoidance, its primary aim is survival. Anticipation seems to play a pivotal role in survival because the practitioner’s ability to engage in or avoid conflict is largely governed by anticipatory strategies. Wolfyeyes presented a general notion of the importance of anticipation in the following:

Anticipation outlines what martial means, it’s what martial arts are all about. How to fight or how not to fight. If I can anticipate that I should not be here or change something then you can avoid loss or being attacked.

Practitioners viewed the ability to fulfill the primary purpose of CMA, which is self-protection, as being dependent on various facets of anticipation. Kame explained one facet of anticipation, important for self-defense, as “being aware of surroundings.” Kame compared the lack of awareness to “walking straight ahead with blinders on.” Furthermore, a lack of awareness was viewed as an oversight of warning signs, possibly affiliated with a potentially dangerous situation. For example, Chantien noted, “if a homeless guy gets in your space you were not aware.”

SID explained that awareness requires the practitioner to “[look] for something that’s out of place” in the environment. For classical martial artists, items that are out of place could serve as indicators of impending attack. In the context of martial arts, sparring provides a classical example of such indicators. Pioneer indicated that during sparring matches, the practitioner pays attention to the opponent’s body language. As practitioners transition from a casual conversational or instructional mode to a combat or sparring mode, “subtle shifting of weight” occurs. Pioneer supposed the “subtle shifting of weight” to be associated with the practitioner’s intention to attack. These subtle shifts serve as warning signs. Subsequently, the classical martial artists can use the warning sign to prepare a defense for the attack.

According to participants, anticipation or the ability to attend to warning signs is related to the classical martial artist’s ability to shift attention. During casual conversation contexts, for example, one practitioner may focus on another practitioner’s (the opponents) face. During a conversational context, the practitioner’s focus may shift to a narrow external focus, i.e., the conversationalist’s face is the focus of attention. As the practitioners transition to a combat mode, the opponent might move a leg or foot. Moving the foot or leg positions the practitioner
for an attack. If the practitioner does not adjust the focus accordingly, he or she will miss the opponent’s change in leg position. Moreover, the practitioner will miss a warning sign for the attack. Kuraku explained, “Anticipation may be similar to the ability to adapt to change, etc. It’s about changing your focus to fit the environment.” Al added to the concept of shifting attention in the following:

With regards to anticipation, you narrow in and focus on what you’re doing. Then you are able to respond before you realize it. It’s not exactly anticipation. It’s more of a sensitivity. Your subconscious mind is taking over. It’s kind of related to focusing in.

Notice that Al reiterated on the nature of attention shifting. That is, Al indicated that awareness of relevant environmental stimuli requires the practitioner to “narrow in and focus on what [she or he is] doing.” The implications of Al’s statement could be interpreted to mean that awareness requires practitioners to shift their attention to and from wide and narrow perspectives. Al also conveyed a varied perspective to the notion of awareness in that it seems to be governed by subconscious processes. According to Al, awareness infers to the subconscious ability to shift ones attention in a manner that enables the practitioners to detect relevant environmental stimuli.

Wolfeyes described another facet of anticipation as “baiting” the opponent. The practitioner baits the opponent by provoking the opponent to respond in a predictable manner. The triggered response is facilitated when the practitioner provides the opponent with a particular stimulus. For example, the practitioner could present an opening in his guard. In doing so, the martial artist is able to limit the opponent’s arsenal. Since the opponent’s arsenal is limited, the practitioner is more likely to correctly anticipate the opponent’s attack and select an appropriate defensive response. Wolfeyes described his perspective on anticipation in the following:

There are several things you can do to improve your survival ability rate. This can be seen in kata. Why, in the kata, am I being attacked in a certain way? Why do I step forward with my right foot and block? It’s usually because you’re presenting an opportunity to the opponent, which makes him want to attack in a certain way. It’s like baiting the person. You [set them] up so they do what you want them to do. Then you
<table>
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<tr>
<th>Participant Views</th>
<th>Rationale</th>
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<tbody>
<tr>
<td>Important for self-defense</td>
<td>Attend to warning signs.</td>
</tr>
<tr>
<td></td>
<td>Control the nature of the opponents attack.</td>
</tr>
<tr>
<td>Not unique</td>
<td>Found in other activities as well.</td>
</tr>
<tr>
<td>Unique</td>
<td>Unique in application.</td>
</tr>
<tr>
<td>Significance as a mental toughness component</td>
<td>Inconclusive. Responses were mixed.</td>
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Note. Supporting data, codes and categories can be found in Appendix O and P.
can cut down on the odds of what your opponent can do. He’s punching at my head because I have made that opportunity for him. People lose because they have given the opportunity to a person.

Out of 20 participants, 3 indicated that they were uncertain as to the uniqueness of anticipation in the CMA context. Moreover, participants implied that the concept is not unique in that it is only relevant to CMA. According to David, “Any athlete [from all sports] will try to anticipate the opponent.” In addition to physical activities, Shihan explained that anticipation maybe valuable in vocations such as business.

These attributes are not just unique to martial arts or activities that require you to be physically tough but also mentally tough, as in business. In this sense they may not be unique. For example, I think they may play a role in business.

Three participants specifically indicated that anticipation is unique in the CMA. Participants described the uniqueness of anticipation to occur in the way it is applied. Shihan used a sensitivity training drill to describe this facet of anticipation. Before analyzing Shihan’s excerpt, clarification of the sensitivity exercise is required. During sensitivity training, classical martial artists are paired into groups of two. One member of a group touches his or her forearm with the forearm of the other group member. One member serves as the leader. The leader initiates the exercise by moving their arm in a circular fashion, chest level, and horizontal with the floor. The other member serves as the follower. The follower attempts to follow the circular movement. The follower accomplishes their movement by sticking to the other members forearm. At some point during the exercise, the leader attempts to change his or her motion from a smooth circular movement to an abrupt thrusting action. Specifically, the leader attempts to hit the follower in the torso with his or her palm. The follower’s challenge is to quickly detect the stimuli, that is, the change in the leader’s action. Note that the change in the leader’s action is detected in the followers forearm. This is possible because the forearm remains in contact throughout the entire exercise. Subsequently, the change in motion, detected by the followers forearm, serves as a warning that the something is different. With practice, the follower learns to associate the change in movement with a strike to the torso. According to Shihan, sensitivity training teaches the practitioner to predict movements by associating specific cues with following responses. In the above illustration, the cue was a change in the feel of an opponent’s movement. That is, the leader changes from a smooth circular movement to an abrupt straight
one. The response is an attempted torso strike. As soon as the follower detects the change, he or she knows that a torso strike is about to occur. Shihan described anticipation in the following exert:

Anticipation is unique to martial arts training in that you know what the opponent is going to do, like Master Fang’s sensitivity training…We can also do this with beginning white belt students. Sometimes we can know what they do before the actual encounter.

The participants’ perspective on the significance of anticipation as a component of mental toughness was inconclusive. While 4 participants explicitly stated that anticipation was not a mental toughness component, 6 individuals implied that the possibility existed. DOCA, for example, stated, “Anticipation seems to be what martial arts kind of things looks like along the lines of mental toughness.”

Kame also implied that anticipation is contextually associated with CMA. However, he stated that anticipation is an outcome of training but the concept “shares a very small amount with mental toughness.” Al provided yet another point in favor of anticipation being a component of mental toughness. However, Al argued that anticipation is related to mental toughness via focus. Specifically, Al perceived that anticipation is related to mental toughness “in terms of staying focused on task.” All participants, however, did not share Al’s perspective. Grizzly explained that the ability to focus is not necessarily related to mental toughness. Rather, Grizzly’s response seemed to reinforce Kame’s perspective on anticipation. Moreover, the ability to focus is perceived as more of a training outcome than a mental toughness component. Grizzly stated, “Anticipation does not have to be related to mental toughness. It may be mental awareness, be aware of the environment. Your training and experience helps you read certain ways.”

In review, anticipation was perceived to be a central component of the CMA. It is also believed to be unique to the martial arts, at least in the way it is applied. The role anticipation plays in mental toughness, however, is inconclusive. Practitioners agreed that anticipation may be important as a form of awareness or an ability to focus on performance. However, the degree to which this awareness or task oriented focus is a component of mental toughness is uncertain.

**Ethics.** Analysis of practitioner views on ethics produced three sub-categories; importance as guiding principles for practice, uniqueness of ethics, and the appropriateness of
ethics as a mental toughness component. Participant views on ethics are summarized in Table 4.10.

Participants viewed ethics as guiding principles for humane practice of martial arts techniques. The practice of CMA requires guidelines because practitioners exchange potentially destructive techniques. Because practitioners come from a variety of backgrounds, ethical beliefs on using these techniques are not always consistent. Thus, ethics serves to unify practitioners with respect to moral practices of dangerous techniques. Aldeshi elaborated on ethics in the following:

In the dojo, you have a variety of backgrounds that come together. There is a need to get the folks all on the same page and provide common ground to work with. Rules help to constrain people, provide a guide for using lethal force, and unite people on a common ground.

Monte stated, “Ethics is incredibly important.” “They provide guidance on how to use techniques.” Guiding principles, however, do not appear to provide a complete description of ethics. Without personal self-control, the rules have little worth. From an ethical standpoint, rules take on meaning when the target cultural group adheres to the rules. Participants indicated that adherence to guiding principles requires self-control. Grizzly illustrated, “Ethics for [one] person may not be difficult, not require self restraint. It’s specific to the person, the individual. To another person, politeness may not come so easy. It comes back to developing discipline, self-control. It’s behavior modification.”

From the CMA perspective, ethics requires self-control in the sense that the practitioner must possess the ability to demonstrate specified manners. More specifically, CMA ethics requires that practitioners control their techniques in compliance with guiding principles. Participants viewed ethics as principles which serve to regulate the practice of potentially dangerous martial arts skills. Furthermore, participants viewed ethics as a form of self-control which facilitates adherence to these principles. In addition, classical martial artists conceived ethics as self-control that transcends external manifestations of behavior. Moreover, ethics is viewed as a form of self-control, which pervades the whole practitioner, mind as well as body. Self-control should regulate the practitioner’s internal processes as well. For example, classical martial artists implied that combat could result in practitioners receiving various types of blows. The outcome can result in altered internal processes including an altered self-esteem.
Moreover, the person receiving the blow could interpret the outcome in a variety of ways. The practitioner could attribute the blow to a lack of ability thus leading to a feeling of inferiority. Control of internal processes requires that the practitioner engage in combative contexts, receive blows while maintaining composure. David explains the ethics from the respect of controlling ego in the following:

In the martial arts where individual are trying to hit each other, ethics are very important. Being ethical requires one to be able to control ego. In other situations [during training], it’s not personal if you hit someone you respect. You show respect by pushing the other person.

Practitioners’ interview responses appeared to produce another view on ethics consistent with the concept of altruism. Moreover, practitioners indicated that the CMA are not designed for the sole purpose of self-serving interests. That is not to say that one CMA purpose does not include the acquisition of self-defense skills. Self-defense is one purpose and ethics serves as a guide for practicing those abilities. Kuraku indicated that to the classical martial artist, however, the purpose of CMA is “more than the sum of its parts.” Moreover, the purpose transcends individual self-interest of empowerment and self-defense. The purpose of CMA is about “protection, protecting those in need.” Kuraku explained the meaning of ethics in the following excerpt:

Ethics, respect. It means something. It’s not just about kicking butt. It has to mean something. I love the saying, with great power comes great responsibility….With that kind of training it [respect] has to go along. The judgment of when to use it is important. There are no reasons to have to fight. But there is every reason to know how to fight. You have all of this knowledge and power, what do you do with it?

Kuraku viewed ethics as an altruistic behavior, manifested in the form of life protection, which gives meaning to the martial arts. Wheyshin expanded on the altruistic notion to protect in the following:

We live karate. Karate is our life. We teach it six days per week. We offer something that everyone needs. I can give them a gift that they can walk away with. It’s about survival for us, physically, mentally, spiritually.

Wheyshin indicated that protection can be extended to others by empowering those in need to survive on their own. Moreover, she implied that survival is not limited to the physical
Table 4.10  
*Participant Perspectives of Ethics*

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<th>View</th>
<th>Description</th>
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<tbody>
<tr>
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<td>Practitioners</td>
<td>Instructions for safe practice</td>
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<td>Personal Control of Ego and Behaviors</td>
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<td></td>
<td>Value/Respect for tradition</td>
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<td>Teachers</td>
<td>Selection of students</td>
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<td>Found in other activities.</td>
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<tr>
<td>Unique</td>
<td>Different application to martial arts practice.</td>
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<td>Significance as a Mental Toughness component</td>
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Note. Supporting data, codes, and categories can be found in Appendix O and P.
domain of self-defense. Survival also pertains to protecting the practitioner’s mind and spirit. Wheyshu referred to several situations which illustrated ethics from the viewpoint of mental and spiritual survival. These situations appear illustrate heartfelt attempts to promote survival beyond the realm of routine self-defense. Wheyshu provided the following illustration:

There was a martial arts gathering where…kata was done as a prayer for my daughter, and other US service men and women who died in combat. Now, my karate dojo provides academic scholarships, in the name of my daughter. Through such events, the memory of my daughter is prolonged. It prolongs the true spirit.

Having a sense of value and respect for self, others, and the tradition, represented yet another view. According to participants, individuals who exhibit self-worth in their actions are perceived as ethical. For example, individuals with self-worth appear to exert more effort during performances and learning. Marcus explained, “Ethics have lot to do with having pride in yourself, valuing yourself, others. If you value yourself and take pride in your actions, your mind will be open to improving yourself, learning.”

Chuck elaborated on ethical actions related to self-worth by using his karate class as an example. According to Chuck, individual ethics are demonstrated during challenging workouts when students are required to push themselves. After completing the challenge, individuals experience an increase in self-worth.

Respect. Self respect cultivated with physical training. If I am teaching, my classes are a little different. Shut the AC off and put everyone through hard training with kata. After an hour you develop a sense of accomplishment, you made it through. I had a sense of accomplishment. Increase value and self-worth.

Participants implied that value and respect should be extended to classmates as well. During challenging training episodes, individuals should strive to help their classmates as well. According to Monte, ethics in the martial arts requires practitioners to not only focus efforts on pushing themselves, but also their classmates. Monte described, “You and your training partners are there not just for themselves but to help others as well.”

Participants noted that colleagues working together for the purpose of achieving excellence in challenging environments, experience an increase in reciprocated value. Bilb explained that individuals, who experience challenging practices together, build a sense of
solidarity and shared respect. Bilb stated, “We have all been through tough training together. Tough training builds camaraderie much like the camaraderie found between servicemen.”

Participants indicated that ethics is also demonstrated by expressing value and respect for the tradition. The application of these expressions was described within the contexts of practitioners and instructors. Practitioners appear to express respect for the tradition by not “[starting] a fight” (Bilb) and “submission of what you want to do to the art your studying” (Doca), and “[understanding] the value of time in learning” (MHH). “Also, the teacher is responsible for the student he produces.” Therefore, teachers must use discretion in determining the character of students he or she instructs.

Not starting fights simply indicates that students should refrain from violence unless a context requires self-defense. Submitting “what you want to do to the art you’re studying” implies that the student should practice martial arts in a manner that is compliant with the methodology of his or her chosen style. According to Doca, the student should not comply with a given style in actions only. Rather, students should comply with the styles regulations and methods because the student “[trusts] the teacher and the style.”

The value of time required for learning is perceived as another expression of ethics. MHH described the value for time as the correct attitude for leaning. Moreover, he expands that when practitioners understand that learning requires a certain amount of time, they are more likely to exhibit patience with the learning process. MHH stated, “I think this value of time is really about attitude for learning. If you understand the value of time in learning, you don’t have a problem taking the time to help someone.”

Participants provided a final view of ethics serving as guiding principles. This view included the instructor’s discernment in teaching dangerous self-defense techniques to students. Practitioners indicated that the decision to pass on potentially life threatening perseverance skills requires consideration of the learners ethical standing as well. As the teacher is “responsible for the student he produces” (Aldeshi), he or she must be careful not to pass on lethal techniques to unethical individuals. It is important that students exercise self-restraint and other important ethical pre-requisites prior to receiving instruction in life protection skills. In the case of CMA, a teacher may refuse to teach student life protection skills if the student lacks rational judgment, discipline, and self-restraint. Wolfeyes elaborated:
In the martial arts, a teacher may not teach you something if you’re not ethical. Say there is a secret technique that will work 100% of the time. The teacher might want to know how you will use it, what you will do with it before they will teach it to ya.

Analysis of participant responses to the ethics portion of the interview produced a second category, which described the uniqueness of the ethics in the CMA. From a general standpoint, ethics were not viewed as being unique to the martial arts. Out of 20 participants, 3 indicated that ethics was not unique to the CMA. For example, participants stated that ethics “may play a role in business’ (Shihan), and “are also found in other activities” (Wolfeyes). According to 1 participant, however, ethics was viewed as being unique to the martial artist from the standpoint of how they are applied. Moreover, disciplinary tactics, such as push-ups, can be used in the martial arts to correct behavior and promote self-control. Pioneer added that discipline can’t be applied the same way in other settings. For example:

They can’t do that in school, they will get sued. But in karate, this makes them feel like they are doing something unique, different, and special. Discipline (ethics) causes them to feel unique. The student feels good about achieving these traits in class.

The participants’ perspectives on the significance of ethics as a component of mental toughness were mixed. Out of 20 participants, 2 questioned the appropriateness of ethics as a component. One individual was especially doubtful. Al stated, “With ethics, I would not directly relate it to martial arts. You would have to stretch that to make it. You can be ethical but not mentally tough.

Eight participants indicated that ethics was a mental toughness component. The remaining participants did not explicitly comment on ethics as a component. The reader is referred to Appendix O and P for supporting data. For example, one participant related ethics to mental toughness as follows:

Whether in business or martial arts it is important not to take the easy way out. The easy way is not always the best way or the most ethical way. You have to be mental tough to resist the easy way.

In the previous excerpt, Shihan described ethics as a component because behavioral adjustment can be a difficult endeavor. According to Shihan, potential difficulties of complying with ethical standards result in ethics being “naturally related to mental toughness.” Grizzly elaborated on the connection between ethics and mental toughness. He agreed that behaving
ethically might be more difficult than the alternative. Additionally, Grizzly added that ethical behavior is more difficult because it requires self-control. However, Grizzly clarified that all ethical behavior cannot be classified as a laborious task:

Ethics is not a component of mental toughness for everybody. For example, some individuals were raised in church to be polite and respectful. Later, that person could begin studying martial arts, which requires respect. Ethics for that person may not be difficult, not require self-restraint. It’s specific to the person, the individual. To another person, politeness may not come so easy.

The significance of ethics as a component of mental toughness is unclear. One participant explicitly stated that they are not related. Other participants suggested that ethics is a component. However, in the event that ethics would possibly serve as a component, participants were not certain if ethics should be considered a component for all classical martial artists.

Learning Attitude. Analysis of the practitioners’ responses to the interview section on learning attitude produced four categories: definition of learning, characteristics of an effective learner, uniqueness of learning attitude, and learning attitude as a mental toughness component.

Participants defined learning as a process of adding new information to a pre-existing knowledge basis. One example included kata. Kata can be thought of as a prearranged set of self-defense techniques. According to practitioners, the acquisition of kata movements requires the students to add new skills to those previously learned. The process of adding old skills requires the student to actively engage in the material by rehearsal and independent work. Kame provided an example of the constructivist approach to knowledge within a martial arts context:

You work on kata over and over and perfect details. At times you can’t see the difference. But over a period of time you can see, someone else can see the improvement. Knowledge does not happen overnight. If you don’t build upon teachings and carrying out things [practice/homework] you become stagnant and lose most of what you learned.

Monte stated that a “good learning attitude” is very important for CMA practice. Participants indicated that specific characteristics of an efficacious learning attitude are needed to optimize learning. One characteristic believed to be important is a mindset engaged in the learning process. Participants implied that classical martial artists engage in learning via
Participants viewed mindfulness as a means to engage in learning by becoming fully absorbed in the present. In other words, students learn by maintaining a second by second focus of attention on the instructional setting. Moreover, it is important for students to keep up and stay in tune with the pace of the lesson. Students should not allow preconceived thoughts to distract them from staying in the present. MHH explained, “The process-oriented attitude is that you wait to see what is coming. You don’t ruminate on what is going to happen. You are mindful. Its mindfulness.”

Participants perceived that another means of engagement is the establishment of an open mind. Because of the unique teaching and learning context, found in the CMA, participants believed that an open mind is important. The CMA context was viewed as being very different than that typically experienced by westerners. Practitioners attributed the difference in context to societal regulation. Moreover, practitioners indicated that the CMA are not practiced in a democratic context. Subsequently, practitioners need a different mindset for learning the CMA. David elaborated on the importance of open mindedness in the following excerpt:

I feel this is more important in the martial arts where culture influences how it is taught. The martial arts were not developed in a democratic society. It requires a different mindset, adopting cultural values. It requires having an open mind about what you are learning and how it is taught.

As previously mentioned, the CMA instructional format is not necessarily conducive with a democratic society. Moreover, the students do not necessarily get a vote on what they will learn. Furthermore, the teacher, not the students, dictates the subject matter. The democratic teaching style can be problematic. For example, students can become resistant to instruction in areas they feel they already know. In CMA, practitioners can become indifferent to instruction on particulars regarding concentration and biomechanics of technique. In order to remain engaged in the CMA learning context, however, students must establish an open mind. Sid explained that students must become “humble enough to listen and committed enough to learn beyond their present level.” In order to continue learning, practitioners learn to pay attention to the information, and consider how the information can be used to improve performance.
According to Kame, practitioners should always attempt to expand on what they know. He explains below:

A lot of people are under the assumption they know everything. Especially the mental part of knowing; how things should be done and how you react. I want to be able to expand on an instructor’s teaching on mental abilities like meditation, the finer points of kata. The finer points of kata have to do with how to concentrate. The biomechanics, what to feel. Some say my way is the only way but there are other ways. Take what we already know and build.

Participants explained that a learning strategy, which encourages students to independently discover ideas, could be used to engage students in learning. MHH, implied that instructors can guide students in the learning process. However, instructors should not necessarily provide the answers, at least not initially. Instructors should provide opportunities for students to discover the answers in an independent manner. MHH described, “Subsequently, for attitude of learning we should leave it to the student to discover how to interpret something. Don’t make it a black and white thing. Encourage them to find answers themselves.”

Classical martial artists viewed organization of thought processes as another means to engage in learning. According to Grizzly, organization of thought processes requires individuals to regulate their own learning. Learning requires making decisions that facilitates more efficient processing of information. According to Grizzly, “Attitude towards learning; anything you do towards learning is a discipline, it goes back to your mindset, having to sacrifice, requires mental toughness. Discipline requires a structured thought process.”

Self-worth was also perceived as a characteristic of a good learning attitude. Apparently, individuals who value themselves are confident in their learning abilities. MHH stated that individuals who “have a sense of self-worth” are more effective learners.

The uniqueness of a learning attitude was also described from a CMA perspective. Five participants specifically indicated that learning attitude is not unique from the perspective that it is limited to the classical martial arts. For example, Monte stated that learning attitude in the CMA is “not unique. [It] is important in other [activities] as well.” For example, Shihan stated that learning attitude “may play a role in business.” Doca stated that learning attitude “is important to academics.” One participant, however, indicated that learning attitude was unique to the CMA. Pioneer stated that learning attitude might be unique because “the way we train
students puts a lot of importance on those attributes.” Pioneer adds, “[learning attitude is] unique because we are able to teach these in a way that maybe school [for example] can’t.”

Out of 20 participants interviewed, 6 specifically indicated that learning attitude was a significant component of mental toughness. Furthermore, the responses of 2 participants implied that learning attitude was a component. None of the participants stated that learning attitude was not a component. Participant responses, codes, and categories can be found in Appendix O and P. One participant (Monte 16) stated that “learning attitude”, along with “determination and dedication [is] most important.”

Participants described learning attitude as being an important component via association with other mental toughness attributes. Moreover, classical martial artists explained that learning attitude was a component of mental toughness because it is associated with conviction, perseverance, and commitment.

Kame explained that learning attitude is influenced by conviction. In order to illustrate the importance of conviction in learning, Kame compared the challenges of receiving martial arts instruction to instruction pertaining to a life and death medical scenario:

Now I am having medical problems. As long as I can build on what the doctors tell me, I can improve. If I don’t, I don’t improve or I die. Mental toughness is part of all of that. But, it depends on the individual person, what they believe. None of this means anything if you don’t have a faith. Faith is the center of everything. Our faith gives us life. Faith, our convictions often determine what we can learn and our behaviors. Without my belief, my convictions, I would not feel the need to listen to my doctors and do what they say.

Pioneer added to the notion that learning attitude is influenced by the practitioner’s beliefs. According to Pioneer, a practitioner might be less inclined to engage in learning if she or he does not believe or value the instructions.

As far as attitude towards learning, I could join a baseball program. The coach could ask me to do drills and I can go along with them. Someone else could say, these drills are not good and I am no longer open to the training.

Learning attitude also appeared to be similar to determination. Marcus provided his view of the connection between learning attitude and determination in a frustrating learning scenario. In this scenario, an experienced student is critiqued on a very basic technique. The student could respond in a frustrated manner because he or she believes that have already learned and
surpassed basic levels. A student with the proper leaning attitude would respond in a more pleasant manner. Marcus’s illustration follows:

Consider sanchin kata. You could teach someone every move in 1 hour. You train for 20-30 years and still make mistakes. A high level master could pick you apart. It’s frustrating to struggle learning something that seems so easy. However, if you have the right attitude about learning, you more or less enjoy the new discoveries [laughing].

According to Marcus, correct learning attitudes are more likely to prompt students to continue learning, even when learning is basic. On the contrary, poor learning attitudes are more likely to result in premature cessation of learning, lack of adherence, and determination. Marcus elaborated, “It [learning attitude] is a component…if you don’t have mental toughness, and you are struggling with a technique, you just want to quit. If you have the right attitude about learning you are more likely to continue.”

Grizzly and Sid explained that learning attitude is related to mental toughness via commitment. The reader should note from a previous section (pg. 126), that participants described commitment as discipline and passion. Grizzly’s view of a learning attitude attributed its link to mental toughness via discipline. According to Grizzly, “Anything you do towards learning is a discipline, it goes back to your mindset, having to sacrifice, requires mental toughness. Discipline requires a structured thought process.” In the above excerpt, Grizzly implied that learning requires discipline. In order to learn, students must exert self-regulatory practices such as the organization of thought processes and decision-making.

Sid provided a perspective on learning, which attributed its link to mental toughness via passion. Sid describes:

There is nothing more passionate than mental toughness. Attitude towards learning puts a passion into your mental toughness. The ability to learn reflects in a person that they are humble enough to listen and committed enough to learn beyond their present level. That within itself is discipline.

As described in the commitment section, passion was viewed as an expression of the practitioners drive for a given activity. Furthermore, drive and passion served to ground the classical martial artist commitment for training and performing. Additionally, a deep level of engagement was believed to express commitment, fueled by passion or drive. Sid’s excerpt implies that the proper learning attitude fosters commitment to a given activity. Moreover,
practitioners who have the correct learning mentality are more committed because she or he efficaciously engages the activity.

A summary of participant views on learning attitude can be found in figure 4.11. In review, participants indicated that learning attitudes are related to mental toughness via association with other mental toughness components. For example, conviction is the practitioner’s core beliefs, which subsequently provide practitioners with drive. With regards to learning attitude, participants viewed conviction as the practitioner’s value for learning. If the classical martial artists value a set of instructions, he or she is more likely to experience need and drive to learn. Kame and Pioneer indicated that value for instruction prompts effective learning attitudes. More specifically, participants indicated that conviction leads to an open mind and the ability to listen to instruction. In turn, effective learning attitudes appear to prompt additional mental toughness components such as determination and commitment.

**Summary of Results**

As previously indicated, the purpose of this study was to investigate the perspectives held by classical martial artists on the attributes of mental toughness. More specifically, the intent of this study was to investigate; (1) the importance of mental toughness attributes from a CMA context, (2) the trainability of the mental toughness attributes from a CMA context, (3) and the extent to which classical martial artists perceive that attributes converge under broader, overarching sub-categories.

Regarding question one, classical martial artists perceived that all attributes are important components of mental toughness in the classical martial arts. Collectively, mental toughness attributes were viewed as being important to motivation, progress, coping, conditioning, and concentration in the CMA.

Phase One results identified three potential mental toughness components unique to CMA; anticipation, ethics, and learning attitude. Phase Two results verified learning attitude as a possible component. Participants indicated that learning attitude was an important component because the learning process in the classical martial arts is dynamic and lengthy. Moreover, practitioners are subject to prolonged learning experiences that require mental toughness. Participants indicated that learning attitude serves as an important component in the learning experience via a confident and engaged mindset. Phase Two results were inconclusive regarding participant views on the significance of ethics and anticipation as mental toughness components.
Table 4.11

*Participant Views on Learning Attitude*

<table>
<thead>
<tr>
<th>Views</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of learning</td>
<td>Learning is a constructivist process</td>
</tr>
<tr>
<td>Characteristics of a good learning attitude</td>
<td>Engaged Mindset</td>
</tr>
<tr>
<td></td>
<td>Positive Self Worth</td>
</tr>
<tr>
<td>Uniqueness of learning attitude</td>
<td>Found in other activities</td>
</tr>
<tr>
<td></td>
<td>Unique in the way it is applied</td>
</tr>
<tr>
<td>Learning attitude as a component of mental</td>
<td>Associated with mental toughness via</td>
</tr>
<tr>
<td>toughness</td>
<td>other components</td>
</tr>
</tbody>
</table>

Note. Supporting data, codes and categories can be found in Appendix O and P.
According to Phase One results, all attributes were considered to be trainable except the following attributes; (4) Have conviction: You have to be a little bit stubborn, (13) Thriving on the pressure of performance, (16) Have passion for what you do. Love what you do, and (17) Having an insatiable desire and internalized motives to succeed. Phase Two results produced participant perspectives on the trainability of mental toughness that were mixed. Specifically, the ability to train mental toughness depended on the following factors; 1) expected time for progress, 2) individual differences such as beliefs, learning preferences, environmental influences, and personality, and 3) the target mental toughness component. The first factor indicated that the trainability of mental toughness requires a lengthy time period. Therefore, mental toughness is viewed as being trainable only if the practitioner has ample time to practice the martial arts. Factor two indicated that success in training mental toughness is possible when individual differences act as enabling factors. For example, individuals reared in a tough environment, according to participants, develop mental toughness easier than their counterparts. Finally, some components appeared more teachable than others. For example, conviction and determination were believed to be developable but not teachable. Other components, such as concentration were viewed as teachable.

As demonstrated by question three results, mental toughness attributes to converge under six overarching subcategories; conviction, commitment, conditioning, readiness to perform, distraction control, and shifting focus of attention. Phase Two results suggest that conviction is similar to stable personality traits such as core beliefs, desires, and motives. Results also suggest that commitment is similar to conviction from the perspective of desire and drive. However, commitment also includes adherence to successful actions: cognitive engagement in training sessions and helping other students. Participants viewed conditioning as a form of discipline as well as exposure to challenges. Conditioning was also viewed as the result of exposure to mental and physical challenges. Participants characterized readiness to perform as a distraction free focus, drive to inflict injury, having values consistent with drive to inflict injury, automaticity of motor skills, and ethical mindset. Distraction control was perceived as the ability to block out worries and concerns. Finally, results suggested that shifting focus of attention is the ability to change focus as dictated by a given task.
Results from the current study support those found previously. Stratton (2006) and Creasy (2005) indicated that Sport Psychologists and NCAA coaches viewed all items on the Mental Toughness Questionnaire as important. Results from the current study are essentially the same. The current study indicates that all mental toughness attributes are important. Interestingly, attributes from the mental toughness questionnaire have been viewed as important under varying contextual differences. It could be argued that Stratton and Creasy assessed perspectives from a competitive context. However, the current study evaluated perspectives from a non-competitive context. The only difference in attributes occurred in the wording. For example, Stratton (2006) and Creasy (2005) found that “having an unshakable self-belief in your ability to achieve your competition goals,” is an important mental toughness attribute. The current study also found that “having an unshakable self-belief in your ability to achieve your goals” is important. In order to increase the contextual relevance of the attributes, however, the current study constructed slight modifications in the attribute wording. The reader should note that although slight variations exist in the wording, the attribute meanings remain essentially the same. Therefore, one conclusion drawn from the current study is that the attributes are viewed as important from competitive and non-competitive contexts alike.

It should be noted that Creasy’s (2005) Mental Toughness Questionnaire (2005) adopted twelve items from Jones et al. (2002). Therefore, the validity of Jones and colleagues attributes has actually been replicated across four studies. Using a population of elite competition based athletes, Jones et al. (2002) produced the twelve original attributes. The competitors predominately represented a variety of individual sports. Stratton and Creasy studied the attributes in a competitive context as well. However, Stratton and Creasy investigated the perspectives of sport psychologists and coaches. The current study evaluated Jones et al.’s attributes, albeit modified, in a non-competitive martial arts context. Interestingly, these studies produced similar perspectives as to the importance of Jones and colleagues’ attributes, irrespective of varying contexts.

Bull et al. (2005) and Thelwell et al. (2005) proposed similar attributes as well. For example, Bull explained “Resilient Confidence” as comparable to Jones and colleagues’ “unshakable self-belief “attributes. Thelwell and colleagues (2005) stated that “Having total
self-belief at all times that you will achieve success” is also similar to an unshakable self-belief. “Determination to make the most out of ability” and “Wanting the ball at all times when playing well and not so well” were described as synonymous with Jones’s “having an insatiable desire and internalized motives to succeed.” “Thrive on competition” was proposed as being similar to “Thriving on the pressure of competition.” Thelwell and colleagues’ “Having the ability to ignore distractions and remain focused” could be compared to Jones’s attributes such as “Remaining fully focused.” Bull and colleagues (2005) and Thelwell et al. (2005) also produced attributes related to Jones’s “Thriving on the pressure of competition.” Again, it should be noted that consistencies among attributes were found irrespective of context. For example, Bull et al.’s and Thelwell’s et al.’s findings emerged from a cricket and soccer context, respectively.

Creasy’s (2005) mental toughness questionnaire (2005) also included eight attributes forwarded by Stratton (2004). As mentioned, these eight attributes were found to be important in three different studies (Stratton, 2006; Creasy, 2005; current study). In addition, Bull and colleagues (2005) found similar attributes in a cricket context. For example, it could be argued that Bull’s “Competitiveness with self as well as others” is similar to the present study’s “Be ready to give and test your best performance: it’s not just about beating your opponent. You have to internalize competitiveness and take pride in what you do” and Stratton’s “Be competitive: it’s not just about beating your opponent. You have to internalize competitiveness and take pride in what you do.” Once again, the similarities in perceived importance of mental toughness attributes seem to be consistent throughout the literature. More specifically, the attributes pertaining to self-belief, motivation/desire, focus, and dealing with anxiety and pressure appear to be generalized across a variety of sporting contexts.

Phase One study results proposed three mental toughness attributes unique to the CMA. These attributes included anticipation, ethics, and learning attitude. However, Phase Two participants did not substantiate these claims. Moreover, Phase Two participants provided mixed views concerning the appropriateness of using anticipation and ethics as unique CMA mental toughness components. With regards to the appropriateness of using learning attitude as a unique attribute, seven out of 20 interviewees indicated that it is a component. No interviewee indicated that learning attitude was not a component. The additional thirteen interviewees did not comment. An interesting side note, however, is that many of the participants explained the relevance of anticipation, ethics, and learning attitude as CMA mental toughness attributes, by
association with pre-existing attributes. For example, anticipation was described as a facet of maintaining a task focus. Drive and determination was viewed as an expression of ethics. Learning attitude was associated with coping and persistence. The extent to which anticipation, ethics, and learning attitude represent unique mental toughness attributes for classical martial artists is inconclusive. Given their close relationship with pre-existing attributes, it is plausible that anticipation, ethics, and learning attitude are context specific super-ordinate or subordinate applications of attributes already established.

Results from the present study also support previous investigations of the teachability of mental toughness attributes. Classical martial artists rated all attributes, with the exception of 4, as teachable. As illustrated in table 5.1, the results from the current study, as well as those presented by Stratton (2006) and Creasy (2005) indicate that “[Having] conviction” and “[Having] an insatiable desire” are not teachable. The current study as well as Stratton’s (2006) study indicates that “[Having] passion” is not teachable. Finally, the current study as well as Stratton’s (2006) study indicates that “Thriving on pressure” is not teachable. The attributes, which have been demonstrated as non-teachable, across the greatest number of studies, relate to self-belief and motivation.

In order to understand the teachability of belief, it is important to understand the concept of conviction, at least from the CMA standpoint. According to the factor analysis, classical martial artists view conviction as a compilation of 4 attributes. The reader should note that, “[Having] conviction” and “[Having] an insatiable desire” are included in the 4 attributes. Apparently, from a CMA standpoint, conviction includes beliefs and desire/motivation. During Phase Two of the study, participant perspectives on conviction were solicited. Classical martial artists describe conviction in terms with what Weinberg (2003) refers to as the “psychological core” or the fundamental level of personality. According to study participants, conviction is viewed as a personality trait that includes core beliefs, values, and drive. As a personality trait, classical martial artists view conviction as relatively non-teachable. Since conviction is perceived as a personality trait, it is innate. Moreover, participants describe the trait as something that cannot be taught.

Current study results suggest that although conviction and drive cannot be taught in the traditional sense, they can be developed, evoked, or drawn upon. Furthermore, results indicate that childhood upbringing is important in the development of mental toughness attributes such as
<table>
<thead>
<tr>
<th>Non-teachable Attributes</th>
<th>Minnx (Classical Martial Artists)</th>
<th>Stratton (Sport Psychologists)</th>
<th>Creasy (Male Coaches)</th>
<th>Stratton (Female Coaches)</th>
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</thead>
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<tr>
<td>Have conviction: You have to be a little bit stubborn</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Have an insatiable desire and internalized motives to succeed.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Have passion for what you do. Love what you do.</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Thriving on the pressure of performance.</td>
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<td>Remaining fully focused in the face of personal life distractions.</td>
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Note. X indicates that a study determined attribute as non-teachable.
conviction and drive. These results support previous findings by Bull et al (2005). Bull indicated that resilient confidence is an enduring characteristic developed via exposure to certain environmental influences. Thelwell et al (2005) also indicated that mental toughness is nurtured during experiences with specific environmental conditions. According to participants of the current study, the environmental conditions that seem to evoke conviction and drive include tough training in individual and group formats as well as various exercises requiring contact such as fighting drills.

Results on the teachability of mental toughness are also in agreement with those from previous studies with respect to time demands. Current study results indicate that the development of mental toughness is progressive and slow. Creasy (2005) found that NCAA coaches perceived time as a limitation in the teachability of mental toughness. Therefore, it seems logical that athletes focus on the attributes easier to teach. Results from the current study indicate that it might not be feasible to focus on attributes dealing with conviction and drive. This statement is especially true in situations where time is a limitation.

Previous investigators, Jones (2002), Bull (2005), Thelwell (2005), Stratton (2007), and Weinberg (2006) proposed that mental toughness attributes converge under several themes (please see table 5.2 for more detail). The current study suggests that attributes converge under 6 themes or factors. Classical martial artist described factor 1 as conviction. Moreover, participant descriptions of conviction concur with the previously found dimension, belief. Interestingly, belief has been found over a wide variety of sport contexts. Therefore, it seems logical to presume that belief is a core theme of mental toughness, regardless of the sporting context. One subtle difference is noted between perspectives of belief in this and previous studies. Previous studies separated motivation from belief. However, the current study indicates that belief and drive work in a collective manner.

Factor 2 was described as commitment. Interestingly, commitment has been previously suggested as a mental toughness theme (Bull, 2005; Weinberg, 2006). However, classical martial artists’ description of commitment differs from Bull (2005). While Bull and colleagues (2005) describes commitment as a drive or motivation, classical martial artists perceive commitment as adherence to specific actions leading to success. Additionally, the classical martial artists’ description of commitment appears to be more consistent with what Bull and
Table 5.2

*Similarities among Essential Themes found in Studies*

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<tr>
<td>Conviction Drive</td>
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</tr>
<tr>
<td>Commitment</td>
<td>Personal Responsibility</td>
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Note. M indicates Motivation, P indicates dealing with pressure.
colleagues refer to as personal responsibility. Interestingly, factor 2 correlated with factor 4, or readiness to perform. According to participants, readiness to perform requires classical martial artists to engage in specific actions leading to success. Therefore, participant responses seem to support the correlation found between the two factors. The difference between the two factors appears to relate to the specificity of readiness. While commitment refers to a course of action geared towards success in a general sense, readiness specifically defines characteristics of preparation for specific contextual challenges. For example, readiness requires classical martial artist to engage in dangerous situations with violent behavior. These situations require individuals to deal with anxiety related to danger and violence.

The current study did not pinpoint a specific factor related to anxiety and pressure. Previous studies, however, indicate that managing anxiety and pressure is a common theme. Interestingly, the current study did find that anxiety management is an important facet of readiness to perform. Furthermore, participant ratings indicate that attributes associated with anxiety are important. A possible explanation is that managing pressure and anxiety becomes more meaningful to classical martial artists when they are grouped with other attributes. In a sense, this study supports the literature in that anxiety and pressure management is a core theme. However, the grouping of attributes statistically, may uncover underlying factors which make previously found themes contextually relevant.

Results from the current study suggest that conditioning is an independent mental toughness category. Interestingly, no other studies have indicated conditioning as a specifically represented and independent mental toughness category.

The current study also concurs with the literature in using focus as a major category for mental toughness. Moreover, the factor analysis grouped the attributes “Regaining psychological control following unexpected, uncontrollable events (performance-specific)”, and “Remaining fully-focused in the face of personal life distractions” into one category. Although previous studies did not group these specific attributes via factor analysis, similar groupings have been made via thematic analysis (Jones, 2002, Thelwell, 2005, Stratton, 2006). It should be noted that slight variations appear to exist between the current study and Jones (2002). For example, Jones (2002) indicated that “Remaining fully-focused on the task at hand in the face of competition-specific distractions” falls under the category of focus. Interestingly, the current study’s factor analysis did not group the competition-specific focus attribute under distraction.
control. Moreover, current study results indicate that distraction control emphasizes the practitioner’s ability to block out worries, heartaches, and personal emotions. Current study results indicate that blocking out performance-specific distractions is not a priority for classical martial artists.

Another difference between the focus categories of the current study and others such as Jones (2002) includes the use of the attribute “Switching a sport focus on and off as required.” Jones (2002) placed the attribute under the general category of focus. However, results from the current study suggest that the attribute serves as an independent factor or category. Phase Two interviews also imply that distraction control and changing focus of attention should be treated as separate categories. According to classical martial artists’ perspectives, changing focus of attention emphasizes the initiation and maintenance of a task oriented focus. The participants did not emphasize distraction control in the context of task focus. However, distraction control, according to participants, is the ability to set aside personal life distractions.

Finally, result from the current investigation concurs with those from previous studies with respect to rank order of importance. Previous studies ranked belief and motivation as the most important attributes while focus and dealing with pressure were less important (Jones, 2003; Creasy, 2005; Thelwell, 2005; and Stratton, 2006). Regarding the current study, little variance is note between numerical determinants of attribute importance. Therefore, the current study’s rank order of importance is believed to be inconclusive. According to the factor analysis, however, belief and drive, in the collective form of conviction, is the most important mental toughness dimension. Conviction described the majority of variance (25%) in mental toughness. The factors, which addressed anxiety management and focus, were readiness to perform, distraction control, and shifting focus of attention. The factor analysis described these categories as less descriptive with regards to the variance in mental toughness. Readiness to perform accounted for 2.8% of the variance, distraction control accounted for 2.8% of the variance, and shifting focus of attention accounted for 2.09% of the variance in mental toughness. In conclusion, the rank order of importance remains fairly constant across a broad range of sports contexts.

**Implications**

Several studies have investigated mental toughness within competitive-sport contexts. However, this is the first study to investigate mental toughness attributes in a non-competitive
setting. Given the fact that the current study found similar results, with respect to attribute importance, future studies should consider evaluating the relevance of mental toughness attributes in other non-competitive populations.

Qualitative analysis from the current study suggests that anticipation, ethics, and learning attitude are potential mental toughness components for classical martial artists. However, it is uncertain if these are unique components or simply related to mental toughness via previously found attributes. Further evaluation of these potential categories might provide a better understanding of mental toughness and how mental toughness might differ by context.

The current study is also the first to perform a factor analysis on mental toughness attributes. The current study proposes a six-factor model that is thematically similar to previous studies. Moreover, belief, motivation/desire, focus, and dealing with anxiety and pressure of performance are recurrent themes found throughout the literature, irrespective of context. However, the unique arrangement of attributes within each factor produced slight variations, at least with respect to the interpretation of each category. For example, current study results indicate that belief and motivation should belong to the same category, named conviction. Furthermore, results from the current study’s factor analysis propose that several attributes from Stratton (2004), be grouped under the factor, commitment. Interestingly, the unique arrangement of Stratton’s (2004) attributes affords a different view on commitment than described previously (Bull, 2005). Therefore, the current study suggests that factor analysis be considered for assisting with the determination of context specific application of mental toughness attributes and themes.

Results from the current study as well as others (Jones, 2002; Thewell, 2005; Creasy, 2005; Stratton, 2006) rank belief and motivation as the most important mental toughness categories. However, the current investigation and others (Creasy, 2005; Stratton, 2006) indicate that belief and motivation are difficult to teach. For example, Creasy’s (2005) and the current study’s results indicate that time concerns could potentially limit the ability to target all facets of mental toughness. Therefore, future studies should focus on attributes found teachable.

Finally, sports psychologists and coaches should develop mental toughness programs on the basis of context specific categorical objectives. For example, classical martial artists should consider teachable categories from the six-factor model produced in the current study as target objectives for developing mental toughness programs.
REFERENCES


Integrating Diversity with Quantitative, Qualitative, and Mixed Methods (2nd ed.)


## Appendix A

### Phase One Participant Demographics

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</tbody>
</table>
Appendix C

Creasy’s Mental Toughness Questionnaire

Directions:

Please rate each characteristic in two ways. First, rate the importance of including each characteristic as being essential to mental toughness by circling the number that indicates your feelings on the 5-point scale. Next, indicate to what degree you perceive each characteristic to be teachable (trainable) using the 5-point scale. Take your time and give thoughtful consideration to each response. Questions 21 and 22 will ask for additional analysis based on the characteristics provided. Please do not omit any items.

Of Little Importance  |  Moderate Importance  |  Important  |  Very Important
Unimportant            |  Importance           |  Important  |  Important
1                     |  2                    |  3          |  4          |  5

Not at all Teachable  |  Hardly Teachable    |  Somewhat  |  Very Teachable
Teachable             |  Teachable           |  Teachable |  Teachable  |  Teachable
1                     |  2                    |  3          |  4          |  5

- Having an unshakable self-belief that you possess unique qualities and abilities that make you better than you opponent(s).

1  2  3  4  5  Importance

1  2  3  4  5  Teachable
• Strength: You have to be in good physical and mental condition. You must be psychologically and emotionally prepared.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Having an unshakable self-belief in your ability to achieve your competition goals.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Have conviction: You have to be a little bit stubborn.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Regaining psychological control following unexpected, uncontrollable events (competition specific).

<table>
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<tr>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>
• Have a strong will to succeed: don’t let setbacks stop you from achieving your goal.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Remaining fully focused on the task at hand in the face of competition-specific distractions.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Be consistent: Recognize and adjust to change so that you are always able to make a contribution to your team.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Not being adversely affected by others’ good and bad performances.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>
• Be competitive: It’s not just about beating your opponent. You have to internalize competitiveness and take pride in what you do.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Switching a sport focus on and off as required.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Personal management: Don’t avoid potential problems; take on the problems to prevent small problems from building into bigger problems.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>

• Thriving on the pressure of competition.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Teachable</td>
</tr>
</tbody>
</table>
- Take the right approach: Always be ready to play.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
<th>Teachable</th>
</tr>
</thead>
</table>

- Accepting that competition anxiety is inevitable and knowing that you can cope with it.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
<th>Teachable</th>
</tr>
</thead>
</table>

- Have passion for what you do. Love what you do

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
<th>Teachable</th>
</tr>
</thead>
</table>

- Having an insatiable desire and internalized motives to succeed.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Importance</th>
<th>Teachable</th>
</tr>
</thead>
</table>
- Bouncing back from performance set-backs as a result of increased determination to succeed.

1  2  3  4  5 Importance

1  2  3  4  5 Teachable

- Remaining fully-focused in the face of personal life distractions.

1  2  3  4  5 Importance

1  2  3  4  5 Teachable

- Pushing back the boundaries of physical and emotional pain, while still maintaining technique and effort under distress (in training and competition).

1  2  3  4  5 Importance

1  2  3  4  5 Teachable

- Are there other components of mental toughness that should be included that are not listed above? If so, list them and rate each using the two scales you have used for rating the previous 20 items.

- Do you believe that any of the above components should be combined to form an individual component of mental toughness?
Appendix D
CMA Mental Toughness Questionnaire (CMMQ)

CMA Mental Toughness Project
Please Return to:
Doug Minnix
357 Triangle Road
Bluefield, VA 24605
Email: dminnix@bluefield.edu
Phone: (276) 322-2656

CMA MENTAL TOUGHNESS QUESTIONNAIRE (CMMQ)

Directions:
Please rate each characteristic in two ways. First, rate the importance of including each characteristic as being essential to mental toughness by circling the number that indicates your feelings on the 5-point scale. Next, indicate to what degree you perceive each characteristic to be teachable (trainable) using the 5-point scale. Please note that the scale is explained below. Take your time and give thoughtful consideration to each response. Questions 21, 22, and 23 will ask for additional analysis based on the characteristics provided. Questions 24-28 will ask for background information. Please do not omit any items.

<table>
<thead>
<tr>
<th>Rating Scale</th>
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<th>Of Little Importance</th>
<th>Moderately Important</th>
<th>Important</th>
<th>Very Important</th>
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<tbody>
<tr>
<td></td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Not at all Teachable</th>
<th>Hardly Teachable</th>
<th>Somewhat Teachable</th>
<th>Very Teachable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
1. Having an unshakable self-belief that you possess unique qualities and abilities that make you better than your opponents.

1 2 3 4 5 Importance

1 2 3 4 5 Teachable

2. Strength: You have to be in good physical and mental condition. You must be psychologically and emotionally prepared.

1 2 3 4 5 Importance

1 2 3 4 5 Teachable

3. Having an unshakable self-belief in your ability to achieve your performance goals.

1 2 3 4 5 Importance

1 2 3 4 5 Teachable

4. Have conviction: You have to be a little bit stubborn.

1 2 3 4 5 Importance

1 2 3 4 5 Teachable
5. Regaining psychological control following unexpected, uncontrollable events (performance specific).

1  2  3  4  5  Importance

1  2  3  4  5  Teachable

6. Have a strong will to succeed: don’t let setbacks stop you from achieving your goal.

1  2  3  4  5  Importance

1  2  3  4  5  Teachable

7. Remaining fully focused on the task at hand in the face of performance-specific distractions.

1  2  3  4  5  Importance

1  2  3  4  5  Teachable

8. Be consistent: Recognize and adjust to change so that you are always able to make a contribution to your classmates.

1  2  3  4  5  Importance

1  2  3  4  5  Teachable
9. Not being adversely affected by others’ good and bad performances.

   1  2  3  4  5  Importance

   1  2  3  4  5  Teachable

10. Be ready to give and test your best performance: It’s not just about beating your opponent. You have to internalize competitiveness (set non-comparative, performance goals) and take pride in what you do.

   1  2  3  4  5  Importance

   1  2  3  4  5  Teachable

11. Switching a performance focus on and off as required.

   1  2  3  4  5  Importance

   1  2  3  4  5  Teachable

12. Personal management: Don’t avoid potential problems; take on the problems to prevent small problems from building into bigger problems.

   1  2  3  4  5  Importance

   1  2  3  4  5  Teachable
13. Thriving on the pressure of performance.

1  2  3  4  5 Importance

1  2  3  4  5 Teachable

14. Take the right approach: Always be ready to perform.

1  2  3  4  5 Importance

1  2  3  4  5 Teachable

15. Accepting that performance anxiety is inevitable and knowing that you can cope with it.

1  2  3  4  5 Importance

1  2  3  4  5 Teachable


1  2  3  4  5 Importance

1  2  3  4  5 Teachable

17. Having an insatiable desire and internalized motives to succeed.

1  2  3  4  5 Importance

1  2  3  4  5 Teachable
18. Bouncing back from performance set-backs as a result of increased determination to succeed.

1 2 3 4 5 Importance

1 2 3 4 5 Teachable

19. Remaining fully focused in the face of personal life distractions.

1 2 3 4 5 Importance

1 2 3 4 5 Teachable

20. Pushing back the boundaries of physical and emotional pain, while still maintaining technique and effort under distress (in training and performance).

1 2 3 4 5 Importance

1 2 3 4 5 Teachable

21. Do you feel there are any characteristics of mental toughness, which are unique to CMA, not mentioned in the study? If so, can you describe them?

22. How important do you believe the characteristics described in the last question rates on a scale of 3 to 5 (3= Moderately Important, 4=Important, 5=Very Important)?
23. How trainable do you believe the characteristic described rates on a scale of 1 to 5
   (1=Not at all Teachable, 2=Hardly Teachable, 3= Somewhat Teachable, 4=Teachable,
   5=Very Teachable)?

24. My current rank/dan is: ________________________________

25. Total years as a classical martial artists: ________________________

26. My ethnic background is:
   a. African-American
   b. Asian
   c. Caucasian
   d. Hispanic/Latino
   e. Middle Eastern
   f. Multiracial (please explain) ________________________________
   g. Native Indian (please explain) ________________________________
   h. Other (please explain) ________________________________

28. My geographical location is: ________________________________

Please Return to:
Doug Minnix
357 Triangle Road
Bluefield, VA 24605
Email: dminnix@bluefield.edu
Phone: (276) 322-2656
### Appendix E

**SPSS Cronbach’s Reliability Coefficient Output for the CMMQ**

Table E1

*Correlation Matrix for CMMQ Items 1-9*

<table>
<thead>
<tr>
<th></th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2</td>
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<tr>
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<td>0.340</td>
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<tr>
<td>C8</td>
<td>0.199</td>
<td>0.256</td>
<td>0.273</td>
<td>0.131</td>
<td>0.049</td>
<td>0.213</td>
<td>0.265</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C9</td>
<td>0.131</td>
<td>0.093</td>
<td>0.102</td>
<td>0.127</td>
<td>0.093</td>
<td>0.187</td>
<td>0.222</td>
<td>0.281</td>
<td></td>
</tr>
<tr>
<td>C10</td>
<td>0.027</td>
<td>0.122</td>
<td>0.120</td>
<td>0.086</td>
<td>0.062</td>
<td>0.088</td>
<td>0.199</td>
<td>0.354</td>
<td>0.154</td>
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<tr>
<td>C11</td>
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<td>0.289</td>
<td>0.245</td>
<td>-0.027</td>
<td>0.285</td>
<td>0.232</td>
<td>0.133</td>
<td>0.232</td>
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<tr>
<td>C12</td>
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<td>0.209</td>
<td>0.154</td>
<td>-0.026</td>
<td>0.234</td>
<td>0.259</td>
<td>0.467</td>
<td>0.167</td>
</tr>
<tr>
<td>C13</td>
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<td>0.269</td>
<td>0.226</td>
<td>0.256</td>
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</tr>
<tr>
<td>C14</td>
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<tr>
<td>C17</td>
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<td>0.006</td>
<td>0.316</td>
<td>0.347</td>
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<td>0.209</td>
</tr>
<tr>
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<td>0.408</td>
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<tr>
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<td>0.191</td>
<td>0.396</td>
<td>0.424</td>
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<td>0.255</td>
</tr>
<tr>
<td>C20</td>
<td>0.205</td>
<td>0.085</td>
<td>0.268</td>
<td>0.191</td>
<td>0.137</td>
<td>0.453</td>
<td>0.392</td>
<td>0.185</td>
<td>0.168</td>
</tr>
</tbody>
</table>

Note. C followed by a number represents a specific item from CMMQ. Pearson correlation coefficients are found in cells.
Table E2
*Correlation Matrix for CMMQ Items 10-20*

<table>
<thead>
<tr>
<th></th>
<th>C10</th>
<th>C11</th>
<th>C12</th>
<th>C13</th>
<th>C14</th>
<th>C15</th>
<th>C16</th>
<th>C17</th>
<th>C18</th>
<th>C19</th>
</tr>
</thead>
<tbody>
<tr>
<td>C11</td>
<td>0.132</td>
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<td></td>
<td></td>
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Note. C followed by a number represents a specific item from CMMQ. Pearson correlation coefficients are found in cells.
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Table E4

*Correlation coefficients for CMMQ importance items*

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<th>R&lt;sup&gt;2b&lt;/sup&gt;</th>
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Note. Cronbach's Alpha for complete CMMQ importance scale = 0.8465. <sup>a</sup>Item-adjusted total correlation. <sup>b</sup>R=multiple correlation squared.
Table E5

*Correlation coefficients for CMMQ teachability items*

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Note. Cronbach's Alpha for complete CMMQ teachability scale = 0.8978. aItem-adjusted total correlation. bR2=multiple correlation squared.
Appendix F
Interview Guide

I. Rapport Building. Talk about something you have in common. Ask what style they practice, how their training is going.

II. Purpose and Nature of Interview. Thank you for speaking with me this ________________. The purpose of this interview is to better understand the results from the survey. The interview will give us more freedom to discuss the nature of mental toughness according to your experience. This interview will consist of 6 questions exploring the importance and teachability of the mental toughness attributes. The questions are open-ended; they are designed to allow you to respond in a way that you feel is most appropriate, from the perspective of a classical martial artist. There are no right or wrong answers. The interview will take no more than 15-20 minutes. I will record your comments as they are given. The information from this interview will be analyzed and written up as part of my research.

III. Confidentiality and Anonymity. As previously mentioned, the data gathered from this interview will remain confidential and your anonymity will be retained. In order to protect your anonymity I will replace your name with a pseudonym. Do you have a name that you would like for me to use? ________________________________

IV. Begin Data Collection Interview.

a. “I would like to start by having you focus on the importance of mental toughness from a CMA perspective.”

1. “What is your impression about mental toughness in the classical martial arts?”

   1) Follow-up question: “What role (if any) do you think mental toughness plays in the CMA?”

   2) Probe: “What you are telling me is very important. Can you give me an example?”

b. “Now I would like to shift our attention to the teachability/trainability of mental toughness from a CMA context.”
2. “What do you think about teaching mental toughness to classical martial artists?”

1) Elaboration Probe: “Can you tell me more about?”

c. “At this point I would like to focus on the results of the survey.” “The results indicated that mental toughness is best explained by a combination of 6 factors.” “These factors are: 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention.”

3. “How do you feel about these results?”

3b. “What role (if any) do you think these factors play in mental toughness?”

a. “Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey.” “The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics.”

4. “How do you feel about these results?”

1) Follow-up question: “What role (if any) do you think these factors play in mental toughness?”

End interview – “Is there anything else you would like to add? Is there anything else that you think I should know?” “Thanks for taking the time to share your perspectives.”
Appendix G

Researcher Stance

The researcher’s position on mental toughness has been influenced by various factors. These factors include, but are not limited to the researchers, personal history, demographics, and beliefs. The following information is an attempt to disclose the researcher’s reflexivity and personal views on mental toughness. The reader is encouraged to examine the current study’s results, interpretations, and conclusions in lieu of the following factors.

Personal History

My perspectives on mental toughness began to take shape early in my childhood years. My parents were hard drivers. They emphasized the importance of hard work and determination. When it came to challenges, whether they were in the form of physical confrontations, scholastic endeavors, or difficult domestic chores, my parents discouraged avoidance patterns of any kind.

During these early childhood years, I believe that I lacked important pre-requisites or “life skills” needed to overcome my life challenges. Therefore, I felt that I was often unable to fulfill my parents’ expectations, namely in the form of determination, and hard work. Lacking various “life skills”, my attempts to deal with childhood problems were met sequentially with failure, timidity, and a sense of learned helplessness.

As I grew older, I spent more time with my dad, especially in an occupational context. His school of labor instilled a sort of mental/physical toughness and implicit edge of confidence. In addition, my father introduced me to many of his colleagues where I gained acceptance into his world. This acceptance, in turn, provided me with a sense of significance and self-worth. Also, as I grew older, my mom and dad provided me with additional opportunities, which developed my confidence. More specifically, they were instrumental in providing the material and cognitive tools that I needed to withstand difficult challenges. For example, sacrificial giving of various resources such as sport club dues, transportation, even a study abroad, were examples of my parent’s commitment and support. If not for the financial, transportation, emotional, and other resources afforded by my parents, my struggle with timidity and learned helplessness would continue to dominate me even today.

One example of an area in which my mom and dad provided opportunity for developing confidence and experiencing mental toughness included my athletic background. During my
teen-age years, I began practicing karate. Perseverance in the face of pain and discomfort were highly promoted training virtues. My teachers frequently tested me by striking my body and pushing my physical endurance to the limits. Enduring the challenges of training over an extended period of time, up to the present date, has been rewarded with higher ranks, learning new skills, and a heightened sense of physical and mental abilities. Working through the challenges of karate training was not left to sheer personal fortitude. My teachers provided me with various sources of support. My teachers encouraged me, provided emotional support, and information. In order to buffer the challenges of training, my instructors introduced me to more advance coping strategies and mental skills such as meditation, Chi Gong, Tai Chi.

As a result of my prior experiences, hard work and determination has been engrained in my mind as very important psychological factors related to toughness and subsequent success. My later childhood experiences suggest that social support can be instrumental in building confidence and a toughness of sorts. From an interviewer standpoint, my childhood experiences might help me more readily identify with attributes, which embody hard work, determination, confidence, and social support, as being pivotal to the phenomenon. It is possible that this lens will influence my interpretation and understanding of survey and interview results. For example, I must not assume that participant examples of determination and hard work are intended to be mental toughness attributes. Such examples can’t be assumed to have the same characteristics or outcomes as my childhood experience. However, using direct quotes, clarification probes, and elaboration probes should assist in conveying the participant’s original intent. I also believe that my martial arts background has provided important insight into mental toughness attributes. This common ground has helped me to develop relevant clarification, elaboration, and detail probes. On the contrary, my similar background may lead me to make assumptions about the interviewees’ responses. Subsequently, it is possible that my probes could become leading.

**Demographics**

Various demographical categories are relevant to my investigation. I am a 40 year old male from southern West Virginia. These demographic traits define an era when the flow of information and opportunity was fairly isolated from my geographical location. Individuals were taught that anything worthwhile is worth working and waiting for. If a karate practitioner wanted to train with a master, he or she had to go to Japan. If you wanted to discover the secrets of karate, you would have gone on a treasure hunt for rare karate texts and learn to read
Japanese. Acquiring skill and developing higher-level abilities required determination and perseverance, both factors related to mental toughness. Nowadays, we live in a “microwave” generation. Media makes skill acquisition for younger folks easy and quick. Subsequently, younger karate students have a different mindset than I do. As I am more familiar with the older mindset for skill acquisition, it is possible that I will more readily identify mental toughness factors in a different context than the younger generation. This is especially true with younger individuals who live in geographical location where the dissemination is more forthcoming. On the other hand, my martial arts experience has not been confined to Appalachia. Martial arts experiences in various states of the US as well as Japan and Okinawa provides some commonality with the way various ethnic groups and peoples from foreign geographical locations might experience mental toughness. As a male Caucasian, my sensitivity to perspectives from various non-Caucasian and female backgrounds on mental toughness could be unintentionally dim. This handicapped perception could undermine rapport leaving my data collection somewhat dismantled.

My education has formed a bent in the manner that I perceive the underlying constructs of mental toughness attributes. Based on my study of sport psychology, for example, I believe that mental toughness attributes fall into the following categories: confidence, motivation/determination, coping, and focus of attention. This pre-conception could influence the way I name factors and interpret participant responses. My education also determines how I perceive the importance of various attributes. For example, one might believe that a person can have passion and still fold under pressure. However, from my educational studies, I believe that passion is related to intrinsic motivation. Intrinsic motivation drives you to stay in the game and deal with pressure simply because you love what you are doing. Furthermore, I believe that intrinsic motivation decreases anxiety, increases confidence, and helps one stay focused under pressure.

Beliefs

I have various beliefs, which could influence my position on mental toughness. I have the belief that personalities, values, and core beliefs are related to one’s faith. I also believe that personal values and core beliefs serve to debilitate or promote the growth of a martial artist’s mental toughness. Therefore, I believe that faith can serve to enhance or negate mental toughness. I also believe that mental toughness can be developed or inhibited by the type of
social interactions one experiences. For example, I believe that effective role models deposit measures of self-worth and acceptance in young athletes. Subsequently, self-worth serves to enhance mental toughness. I believe that the development of mental toughness requires the martial artist to be exposed to enabling circumstances for prolonged time periods. I also believe that one inherent mechanism of the CMA, know as “Nan-gyo” or the way of hardships, could play a developmental role in mental toughness. Since the CMA are a “Do” or way of life, I believe that it is an effective vehicle in mental toughness development.

As an interviewer, I should be aware that faith, social interactions, self worth, and hardships are not necessarily going to be an issue for every student. Mental toughness may also reside in other undiscovered areas, which exists beyond the confinements of my past experiential, gender, cultural, and professional related views.
Appendix H
IRB Approval Letter

Office of Research Compliance

Carmen T. Green, IRB Administrator
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DATE: March 24, 2009
FWA00000572 (expires 1/20/2010)
IRB # is IRB00000667

MEMORANDUM

TO: Richard K. Stratton
Douglas Minnix

FROM: Carmen Green

SUBJECT:
IRB Exempt Approval: “Mental Toughness in the CMA” , IRB # 09-275

I have reviewed your request to the IRB for exemption for the above referenced project. The research falls within the exempt status. Approval is granted effective as of March 24, 2009.

As an investigator of human subjects, your responsibilities include the following:
1. Report promptly proposed changes in the research protocol. The proposed changes must not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subjects.
2. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.
cc: File

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Appendix I
Recruitment Letter

CMA Mental Toughness Project

Dear Karate Instructor,

Research suggests that mental toughness is a deciding factor in the quality of athletic performance. I would like to invite you to participate in a research study of the importance of mental toughness in the CMA practiced in a non-competition setting.

Individuals interested in participating should be a black belt instructor of a classical martial art. If you believe you meet these criteria, your participation would be greatly appreciated. Your input could serve to enhance our understanding of mental toughness and augment mental training methods used in the CMA. Before deciding to participate, please read the informed consent enclosed within this packet.

In order to participate, please sign the consent form and then complete the enclosed questionnaire. Questionnaire directions can be found on the first page of the questionnaire form. Completion of the questionnaire should take no more that 15 to 20 minutes. I have provided a preaddressed, pre-stamped envelope for you to return your questionnaire as well as the signed consent form. Be assured that your participation is understood to be voluntary and your anonymity and confidentiality will be protected.

I also want you to be aware that part of this study could involve a phone interview. Twenty participants, who complete this questionnaire, will be randomly selected for the task. The phone interview will take no more than 15 to 20 minutes. Individuals selected for the interview will be contacted approximately 1 month after completion of the questionnaire.

Please note that this research is being conducted in fulfillment of my PhD at Virginia Polytechnic Institution and State University. The Virginia Polytechnic Institution and State
University Institutional Review Board has approved this project. Should you have any questions, don’t hesitate to contact me.

Thank you,

Doug Minnix,
357 Triangle Road
Bluefield, VA 24605
Email: dminnix@bluefield.edu
Phone: (276) 322-2656
Appendix J
Informed Consent

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
Informed Consent for Participants of Investigative Projects

Title of Project: Mental Toughness in the CMA
Investigator: Douglas W. Minnix, PhD Candidate, Virginia Polytechnic Institute and State University

I. Purpose of this Research
You are invited to participate in a research study of mental toughness in the CMA. This study includes two phases. During Phase One, 200 classical martial art instructors, including you, will be asked to complete a mental toughness questionnaire. During Phase Two, 20 Phase One participants will be randomly selected to undergo a phone interview.

II. Procedures
During the first phase of the study, I will ask you to complete a mental toughness questionnaire. The questionnaire will direct you to rate the degree to which 20 components of mental toughness are perceived as being important and teachable. The questionnaire also includes an area for you to describe components of mental toughness not already included. The questionnaire should take no longer than 20 minutes to complete. After all questionnaires have been returned to the investigator, 20 participants will be randomly selected. The 20 randomly selected participants will be asked to undergo a phone interview. If you are selected, I will contact you by phone or email to make arrangements. During the interview, you will be asked to share your perspectives on the importance and teachability of select components of mental toughness. The phone interview should take no more than 20 minutes.

III. Risks
The risks of participating in this research are minimal.
IV. Compensation and Benefits
No compensation will be provided for this study. No promise or guarantee of benefits has been made to encourage participation. However, the information collected in this study will provide researchers in the field of sport and exercise psychology with greater insight into mental toughness. A summary of the research results will be available to participants. Should you be interested in the results, please contact the researcher.

V. Extent of Anonymity and Confidentiality
The individual results of this study will be kept strictly confidential. At no time will your results be made known to any person outside of the project’s research team. The confidentiality of your results will be protected by limiting your identification on the questionnaire to a study code. Only you and the investigators will be able to match your personal identification with the study code. During the interview process and final write up procedures, only pseudonyms will be used to describe you or anyone that you mention. Furthermore, any information presented during the interview process that could identify you or others mentioned in the study will be altered. The investigator will securely store your personal information. Immediately following the study, your personal information will be destroyed. Please note that it is possible that the Institutional Review Board (IRB) may view this study’s collected data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. Freedom to Withdraw
Your participation is completely voluntary and you are free to withdraw from this study at any time without penalty. Should you choose to withdrawal from the study, any information collected on you will be destroyed. You are also free to answer or not answer any questions or participate or not participate in any activity that you choose without penalty.

VII. Subject's Responsibilities
I voluntarily agree to participate in this study. I have the following responsibilities: to complete a questionnaire on mental toughness, return the questionnaire to the principal investigator, and possibly participate in a phone interview as described above.
VIII. Subject's Permission

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent.

_____________________________________________________ Date____
Signature of Participant

_____________________________________________________ Date____
Signature of Witness

Should I have any pertinent questions about this research or its conduct, and research subjects’ rights, please contact:

Douglas W. Minnix, PhD Candidate/Co-investigator, (276) 322-2656/dminnix@bluefield.edu
Dr. Richard Stratton, Faculty Advisor/Principal Investigator, (540) 231-5617/rstratto@vt.edu
Dr. David M. Moore, Chair, IRB Research Division, (540) 231-4991/moored@vt.edu
CMA Mental Toughness Research Project

Dear Karate Instructor,

I would like to take this opportunity to thank you in advance for participating in the CMA Mental Toughness Research Project. You are one of a few martial artists who have the background required for this study. **Therefore, your input is essential!**

Last week a questionnaire was mailed to you. If you have already completed and returned it, please accept my gratitude. If not, **please complete the questionnaire as soon as possible.** Because the questionnaire was sent to a unique sample of martial artists, it is extremely important that your views be included in the study.

**If you did not receive the questionnaire, or it was misplaced, please call today or email today. I will send you another questionnaire if needed. My contact information is listed below.**

Sincerely,

Doug Minnix
357 Triangle Road
Bluefield, VA 24605
Email: dminnix@bluefield.edu
Phone: (276) 322-2656
Appendix L
Follow-up Recruitment Letter

CMA Mental Toughness Project

Dear Karate Instructor,

About 3 weeks ago, you were invited to participate in a study of mental toughness in the CMA. Your responses are especially valued!! Your answers could possibly have an important impact on our understanding of mental toughness and could be used to augment CMA mental training methods. Please be assured that your participation is understood to be voluntary and your anonymity and confidentiality will be protected.

I have enclosed a duplicate informed consent, questionnaire, and an additional preaddressed, pre-stamped envelope for you to use. If you have already completed and returned the survey, I thank you and please pardon the intrusion. If you have signed the consent form and completed the questionnaire but have not had the chance to return it, please discard the duplicate. If you have not had a chance to review and sign the consent form please do so prior to completing the questionnaire. Also, I would greatly appreciate it if you would complete the questionnaire as soon as possible. To complete the questionnaire, please review the directions found on the questionnaire form. Completion of the questionnaire should take no more that 15 to 20 minutes.

This research is being conducted in fulfillment of my PhD at Virginia Polytechnic Institution and State University. The Virginia Polytechnic Institution and State University Institutional Review Board has approved this project. Should you have any questions, don’t hesitate to contact me.

Thank you,
Doug Minnix
357 Triangle Road
Bluefield, VA 24605
Email: dminnix@bluefield.edu
Phone: (276) 322-2656
Appendix M

Phone Interview Introductory Letter

CMA Mental Toughness Project

Dear Karate Instructor,

A better understanding of the ways in which classical martial artists perceive mental toughness, requires your experiences and insights. In order to ascertain your unique martial arts experiences and insights, I would like to invite you to participate in a phone interview.

Participation in this interview is simple and straightforward. I will contact you by phone on the date we previously established. That date and time is **month/date/year/ at 00:00 pm/am**. The interview should take no longer than 15-20 minutes.

During the phone interview, I will ask you a series of questions. These questions will ask you to share your ideas on the importance and teachability of various components of mental toughness. **Please keep in mind that there are no right or wrong answers in this type of interview:** I want to learn about your perspectives and opinions, whatever they may personally be for you. Following the interview, I will send you a copy of the transcript for your review. Should you note any errors or omissions in the transcript, please forward that information to me.

Be assured that your participation is understood to be voluntary and your anonymity and confidentiality will be protected. I will be using an alias in place of your name and any information that could be used to identify you or individuals mentioned during the interview will be altered.

Unfortunately, there is no compensation for participation. However, this study could provide valuable insight into the importance and possible development of mental abilities found
within the unique setting of CMA. Also, the research results will be available to interested participants.

Thank you for agreeing to participate in this study. If you have any questions about the study, or if you would like to discuss anything else, please don’t hesitate to contact me. I look forward to our interview!

Thanks again,

Doug Minnix
357 Triangle Road
Bluefield, VA 24605
Email: dminnix@bluefield.edu
Phone: (276) 322-2656
4/17/09
I am beginning to realize that I have preconceived beliefs about mental toughness in the CMA. One, I believe that internal motivation is very important for success in the martial arts. This is an attribute that I seem to easily identify with when noted on the participants unique attributes. This type of motivation is irrespective of rewards, social reinforcement, and favorable comparisons with norms. This belief tends to capture my focus a draws me in to develop this idea more than some of the other ideas.

5/13/09
I have the understanding (based on my previous study of mental toughness) that motivation is an attribute of mental toughness. For one excerpt, found in subject 24, “While studying CMA one needs self motivation and is rewarded with pride in achievement,” I want to code this as a type of motivation afforded by self awareness of achievement. In other words, I believe that the participant is saying that a unique attribute of mt in ma is motivation fueled by self awareness of achievement. I see them as belonging to each other. From this point of view, I see this as intrinsic motivation. However, when you consider the previous statement, the subject indicates that a unique attribute is a balance of ego and sacrifice. The participant seems to imply that the ego has to do with some kind of reward. Because of my sport psychology background, I take this to mean an ego orientation which depends on external rewards. I am trying to fit his statement into my reflexive understanding of motivation. I think I need to think outside of my box and enter into the participants’ personal world. I will start over and break each excerpts down carefully into smaller excerpts, looking closely for shifts in meaning. I need to code at a more microscopic level.

5/15
I often find myself unable to make sense of a statement. Therefore I often find myself going to the next line in order to make sense of the previous one. For example, I am not sure what
participant code 35 means in isolation. Real life applications of techniques. Does it mean that applying real life techniques are mental toughness…? That doesn’t make sense to me. “Nothing taught in the classroom can compare to what you will experience mentally and physically when you are forced to apply your art in a real-life situation.” When we look at the next setting, the participant seems to imply that it has to do with a particular mental state one needs to possess in order to function in a life or death scenario.

5/21
I conducted a members check with “Kevin” regarding his survey. Since he completed the survey 4 weeks ago, he indicated that he would not change any of his answers. I asked him to elaborate on his unique attributes. Regarding his first response, “Patience; Unlike sport styles, one may have to practice years before they can test their knowledge and skills using full power and speed to get an appreciation for what they have learned. There is not instantaneous gratification (or defeat)” he indicated that the development of proper biomechanics, defenses and counters, takes time. These factors must be done without thought. In actual combat we don’t have time to think and check ourselves. However, the power must be there, be developed in order to use them in combat. His clarification makes me think of other participant responses that automaticity is important for performance. However, we must be mentally tough, at least from a discipline/persistence/perseverance perspective to achieve automaticity.

I also asked him to clarify his second unique component or “Accepting that a lack of understanding does not equate to being incorrect; often times it is years later that one comes to the realization of the true meaning of the lesson that was being taught. Once one achieves this state of mind it allows them to increase their mental toughness.” He gave a specific example in one of the training forms, an unusual stance that he could not explain its purpose, etc. He stated that just because we don’t understand it doesn’t mean it is incorrect and should be discarded. We have to come to the realization that some understanding will come later. We continue to strive to understand the technique. Once we come to the point that we believe that the realization/understanding will come latter we increase our mental toughness. We increase our mental toughness because we increase our belief, our confidence in what we are doing. This
leads me to reflect on one of the original attributes, “having an unshakable self-belief in your ability to achieve your performance goals.

5/19
I did a members check with “Einstein.” The participant indicated that “Humility – the ability to be strong enough to accept criticism with grace and a positive attitude” is a unique martial arts attribute of mental toughness. In order to clarify the attribute, Einstein shared his story of how a “Kevin” had helped his karate tremendously. In order to improve, however, he had to be willing to accept correction. If he had not been able to accept correction, he would not be willing to continue with this teacher.

6/22
I am finding that both macro and micro analysis is necessary. Macro because many of the responses (for a given individual) essentially reinforces a central concept. Consider the excerpt accompanying code 126, for example. Much of the excerpt explains the environment in which many of the martial arts developed. The environment was lawless leaving many individuals to defend themselves. In many cases, the act of defending involved life or death scenarios. The background information, as illustrated in this memo, serves to support the main idea. In this instance, the main idea seems to “A Warriors Mentality.” Micro because the responses (for a given individual) shifts meaning from excerpt to excerpt.

6/23
Some of the responses (entire section for a given individual) are not included in the coding because I see the information as being background information with respect to teaching or CMA in general and not related to the concept of mental toughness. Participant 138’s response, for example, “The penalty of not performing, ie losing the game vs losing the battle. Martial arts strip down to the core of the person. There is little social mores or norms. This is what distinguishes martial arts from sports,” explains the difference between CMA and sport based martial arts more than granting insight into mental toughness from a CMA perspective.
As mentioned on 6/22, both micro and macro analysis seems to be relevant to his study. Another case in point can be found for code 46. Regarding this code, I focused on part of the excerpt, “that with work and fortitude it is possible to improve ones self to realize the goal at a future point. So instead of “giving up” continue to work for that currently un-achievable goal.” As a result, I initially coded this excerpt as “Patience/Endurance.” After re-reading the entire passage, however, I realized that confidence was the participants core intent. Moreover, the participant indicated that “The ability to acknowledge and capitalize on the understanding… that with work and fortitude it is possible to improve ones self to realize the goal at a future point.” In other words, it is the individual’s confidence in their patience and endurance that is important.

The recursive nature of qualitative analysis becomes more and more evident as I with prolonged emersion into the data. For example, I initially isolated the word self-development (code 138) and coded it as self-development. I isolated self-improvement (code 158) and coded it as self-development. I developed a category as self-development but realized that self-development was so abstract that almost all the excerpts could fall under that code. In my opinion, it was much too broad to be an indicator of a mental toughness component. After re-evaluating the category goal setting, however, I realized that many of the excerpts had to do with a long-term focus. I re-examined several excerpts that related to long term focus such as the excerpt in code 138 and 158. Furthermore, I re-examined the excerpts in light of the participants complete response. Subsequently, I found that the code 138 and 139 had more to do with the long term focus of CMA.

Post interview note and memo. I just completed my first interview. The rapport was good and I felt like the participant was honest, open, and willing to contribute. The interview was open, friendly, and communication flowed effortlessly. I had several immediate impressions from this interview. One, the participant indicated that mental toughness is essential to martial arts because it allows students to persevere through the long tedious process of basic training, essential to progress. This seems to reinforce the factor analysis which indicated that most of
mental toughness is explained via the first factor determination. Note that a synonym for
determination is perseverance/persistence. Two, also of interest is the possibility that
determination helps copes with monotony. Being determined and convicted, by definition,
requires have a belief or coming to terms with what you believe. If your convicted about
something you’re more likely to remain determined and persistent during monotony. Your able
to cope with the adversity. Three, intrinsic motivation is a prerequisite to developing mental
toughness. We can’t force a person to place themselves in a situation that fosters MT. They
have to have the drive, desire, intrinsic motivation to come to practice. In light of this interview,
intrinsic motivation serves to promote determination and conviction. Four, dedication is fostered
by developing habits. For example, persistently attending class fosters a habit. We become
trained to continue with a certain action, regardless of the repercussions. Consider the habit of
smoking and how difficult it is to change the persistence to smoke. Dedication depends on
persistence/determination to perform an action with depends on one’s internal desire. Five,
factors 3-5 (mental/physical conditioning, distraction control, changing focus) depend on
dedication. Six, anticipation and ethics are not truly unique to martial arts. Anticipation requires
you to be aware of what’s going on around you and make predictions accordingly. At this point,
I am thinking that anticipation has something to do with focus of attention. Ethics, the ability to
act in accordance with a set of values, requires mental toughness. Sometimes a person of ethics
must be mentally tough to resist the path of least resistance and take the best route. From this
standpoint, I believe that mental toughness is a component of ethics. Is this
resistance/struggle/inner battle called discipline? Does that make discipline a component of
mental toughness?

7/23/09

Post interview note and memo. Just completed the interview with “David.” David was open and
cordial. There was an effortless flow during the conversation with the exception of a couple of
areas. One area had to do with how mental toughness was taught. He paused for about 30
seconds or so but was able to derive with a response. He indicated that he had just gone over the
pre-interview instructions in a rushed manner. I think it is important to encourage future
participants to take time in thinking about the pre-interview instructions. Also, there was one
area where I had phone interference. Subsequently, I missed his example on how factors 1, 2,
178

and 3 related to mental toughness. He agreed however, to review the document and make corrections as needed. Also, I need to be careful asking yes or no questions. For example, I asked if David felt that ethics are a part of mental toughness. I need to be more mindful of this in the future. There were also a couple of areas where I would have liked to ask more probing questions. For example, I could ask David to elaborate on readiness to perform. For example, I could attempt to clarify what he means my “It’s hard for people to get in the game” by asking him to elaborate on areas that make it difficult to “get in the game.”

7/24/09

I am beginning to see a pattern in the codes. One, code six and 7 indicates that commitment to training, especially without immediate gratification, is a very important area. This was indicated in both David and Shihan’s report. In code 8, David indicated that this type of commitment is built on a trust in one’s teacher. This notion is very similar to Shihan’s comment that dedication requires a habit, persistently repeating a behavior. Shihan’s description of habit development closely resembles determination and conviction. Both these terms are about coming to terms with a belief. My impression is that in David’s case this belief is similar to trust in your teacher, your style. David indicated that this commitment originates with the individual and can’t be taught. Shihan stated that the habit and thus dedication originates from the individual drive and can’t be taught. According to David and Shihan, commitment is foundational to mental toughness and can’t be taught, they originate with the individual. I believe that I can influence these areas through your belief and trust. If I can influence what you believe and trust I can strengthen your habit, which strengthens your commitment and ability to persevere. Everything else is built on that foundation. It is also my impression that determination/conviction can be influenced by group instruction. As people are motivated by the group, they work harder and achieve more. Subsequently, their confidence/belief/trust grows in the group. This trust strengthens determination and conviction which in term enhances commitment, etc. David also had a different perspective on ethics. According to David, ethics are a component of mental toughness. One, ethics requires respect. Respect requires control of the ego, especially if you get hit or criticized in practice. Sometime respect requires a timid small person to push a larger person. In both cases, emotional control and coping as well as positive attribution strategies are warranted. Possibly, ethics reaches into the realm of mental toughness via coping skill or control
of emotions. So now we have two views on ethics. Shihan says ethics is related to mental
toughness by discipline, not taking the easy path. David says via emotional control. Do we not
have disciplines to learn how to cope? As we practice a discipline do we learn how to cope,
strengthen our convictions. Are convictions similar to coping? Are not ethics not about what
you believe in, what you value. Does this not have common ground with conviction. Maybe
coping helps us to deal with our convictions.

7/27/09
Post interview note and memo. Completed the interview with “Marcus.” Marcus was very
helpful and cordial. However, at times, I felt like he was a little distracted and his mind was
elsewhere. In addition, Marcus had not reviewed his pre interview prep guidelines. I could have
rescheduled the interview so he would have time to review. However, Marcus had recently
started a new job and he was very busy. We decided it was best to proceed. He did not mind
going over the 15 min mark in order to clarify information that he did not have a chance to
review. Because I have had past experiences similar to Marcus, I felt like it was easy to code
many of his excerpts. Consider code 10, “for example, discussions with Master Liu I coded the
excerpt as pep talk.” I had attended the same seminar in which Master Liu gave this
“discussion.” From my perspective, this discussion was similar to many of the energizing
strategies used by coaches. Therefore, I coded, from my perspective, Marcus’s underlying
intent. In addition, a recursive approaching to coding the excerpts helped me to clarify Marcus’s
underlying intent. More specifically, Marcus gave an example of the “discussion.” As I had
heard Master Liu give this example discussion on several occasions, I immediately identified
with Marcus’s intent. However, I realize that my perspective is different from Marcus’s.
Moreover, my experience with Master Liu’s discussion seemed more like a pep talk. However,
during Master Liu’s discussion, I was processing the experience as an energizing strategy, a
tactic that I had studied in sport psychology. Marcus, on the other hand had not studied sport
psychology. He may have processed the discussion in a different way. His experience could
have been more cognitive in nature. He could have processed the information from more of a
critical thinking standpoint where misconceptions and core beliefs were changed. Subsequently,
I recoded code 10 as “discussions were used to focus the mind and build mental toughness.”
My collective impressions from Marcus’s interview and others, is that determination and commitment are very important foundational factors on which the other factors are developed. From David and Shihan’s perspective, dedication can’t be taught. Other aspects can be taught. From Marcus’s perspective, mental toughness can be taught as far as obtaining a determined mindset. According to his example, Master Liu fosters determination by discussion. Marcus commented on readiness to perform. He stated that readiness to perform related to being able to react to surprise attacks (as in a real fight) without having to make any last minute preparations. I also get the impression that attitude and ethics could be unique mental toughness factors for various reasons. The masters will not teach one who is not ethical or who does not have a learning attitude. It is difficult to get ready to perform if I don’t have a teacher to help me. Next, ethics and attitude for learning both serve as motivators. An ethical person is one who takes pride in their work and values others. This person may be motivated to train in order to protect themselves and family. An open-minded person is a person who loves to learn. They are more likely to persevere during difficult teaching because they like the process of learning…learning motivates them. In conclusion, Marcus suggests that open-mindedness and ethics seem to interact with motivation, readiness, and conditioning to influence mental toughness. Shihan indicates that ethics is part of mental toughness because you have to be tough to resist the easy way and follow the correct path. From that point, it seems that ethics are related to mental toughness perhaps through conviction or commitment. David proposes another connection. He states that respect is also a component of mental toughness. If you get hit or criticized during practices you have to control your ego, anger. Sometimes you have to hit someone, you have to control your fear. In both instances, it seems that ethics influence mental toughness via emotional control.

Post Interview Note for Wolfeyes. Wolfeyes was very open and cordial. He was willing to provide additional insight into areas where follow-questions were asked. My house was quiet, the phone reception was clear, and there were no distractions. One area that stumped me during this interview is when I asked him to comment on the 6 factors. He mentioned that these descriptors may not be meaningful/understandable by everyone. I could improve by asking a
follow-question such as can you recommend different ways to present these categories. However, it was not until I review the notes that I realized this. One thing that I could do is do a follow up and ask if he wouldn’t mind to suggest different terms for the six factors. One area that I liked about the interview was the discussion on anticipation. I felt like he clarified the attributes potential link to mental toughness. That is, Wolfeyes suggested that anticipation requires focus and concentration. In order to anticipate, you must not get tunnel vision or perceptual narrowing. In order to pick up on relevant stimuli, you must maintain a fairly broad focus. A mentally tough person is one who can control the influence of their emotions and focus. I believe that this also relates to the uniqueness of the focus. Your focus is dependent on your situation. Perhaps the situation, the range of stimuli that needs to be processed is unique to the martial arts and the particular combat situation one is in. The regulation of emotions, arousal, needed to optimize focus is dependent on the interaction between the specific situation, the techniques they will use, and the person. I believe this goes back to the IZOF model. A mentally tough person could be an individual who’s personality trait (low anxiety, etc) matches the techniques used and the situation (the range of stimuli in a given situation). For example, a moderately anxious person performing techniques that are not any extreme end of the gross-fine motor skill continuum will not have to struggle to make extreme adjustments in arousal level to perform well. Additionally, the situation may require only a moderate range of stimuli to be processed for predictions to be made. We might say that this person is mentally tough in this UNIQUE situation. However, the ability to shift attention is not unique.

7/29/09
Post interview not and memo. I had traveled to DC and talked with Monte and his classmates about 1 month ago. I trained and had dinner with he, his instructor, and his classmates. I felt like I established rapport at that time. I felt like the interview went well. Monte was open, cordial, and willing to share his thoughts. He had previewed the interview guide and preparatory guidelines beforehand. He was familiar with the results, including the participant responses, codes, and categories. My main problem was taking notes. We only had 15 minutes for the interview and he had much to say. The problem was getting much of what he said in my notes. At any rate, I reviewed the transcript and filled in gaps with my interpretations. In addition, Monte indicated that he would be glad to review the transcript for validation purposes.
7/29/09 @ 8:00– Post Interview Note for Karateka

The interview started out with karateka seemingly tense. Karateka seemed very reserved, as if he did not want to share too much information. The reason for this is not apparent. The phone lines were clear and both locations quiet. There were no distractions. I probably could have improved this by discussing similar interests such as our karate style and similar training experiences prior to the conversation. However, I had the impression that he wanted to get the interview over as quickly as possible. The interview lasted 15 minutes and I was able to cover the majority of questions. I did not have time to ask as many follow-questions as I would have liked.

7/29/09

Follow-up note. Code 24 appears to be consistent with Weinberg’s definition of achievement motivation. This type of motivation refers to a person’s efforts to master a task, achieve excellence,…and take pride in exercising talent.

7/30/09

My initial impression is that Monte believes that the ability to persist in the face of struggle (learning difficulties and physical exhaustion) is mental toughness. He does not believe that mental toughness is teachable, at least in the traditional sense. Rather, it can be demonstrated. Ultimately, the development of mental toughness is left up to the individual. Monte indicated that mental toughness can be demonstrated by showing instances where practitioners are exhausted or struggle with performing a technique. He indicated that the demo can be supplemented by verbal encouragement. More specifically, not to second guess yourself or get tripped up over 1 or two techniques. On the other hand, one can learn to deal with struggles to learn by keeping the big picture in mind. Monte indicated that all factors are important, especially conviction and dedication. He mentioned that readiness to perform was an important factor. He explained that dojo skills do not necessarily transfer to high stakes performance. A readiness to perform is the ability to take what you learn and apply in a high stakes/high pressure/anxiety scenario. Monte also indicated that although mental toughness factors, ethics and leaning attitude are not unique to martial arts. Ethics are an important component of mental
toughness in that they provide guidance (self control and discipline) for using self-defense techniques and requires mutual concern and consideration among training partners (control of ego).

8/1/09
I am attempting to write up my narrative for the qualitative analysis of CMMQ number 21. The first issue is how to present the information. Since all categories that emerged were not truly unique, I decided to separate the unique factors from those found by other investigators. During this process, I began to reflect on how I had labeled the categories also noted by previous investigators. I merged the discipline/self-regulated/motivation category with the goal setting category. The reason for that merging was based on Weinberg’s () description of motivation. He defines motivation as the direction and intensity of one’s effort. My categories reflected goal setting and persistence. Goal setting is similar or the same as direction while intensity represents effort and persistence. Therefore, goal setting and persistence were combined under one category and termed motivation. Weinberg also presents a model of motivation that included autonomous goal achievement strategies. These strategies included mastery oriented goal setting and other strategies in which the setting and regulation of goal behaviors were internalized. Moreover, the behavior was not affected by external sources. Originally I had divided the categories as being specifically related to the types of goals set (goal setting) and strategies used to pursue those goals (motivation). By merging the goal setting and motivation categories, the data provided a more robust and complete description supporting Weinberg’s description of autonomous goal achievement strategies.

8/3/09
Impressions. At this point I am beginning to see possible triangulation between the factor analysis, responses to unique questions, and previous categories. 1.Conviction is like belief and possibly related to source of motivation and ethics. Ethics is about connectedness, feeling valued, feeling good about what you do. These are also factors in the source of motivation. Also conviction because it is motivation driven by a belief of some kind, a belief that you have fixed your mind on. Attitude towards learning could be related to belief, motivation, ethics because it has to do with ones belief about knowledge, being respectful-because you have a sense of value
and worth for others, yourself, the style/tradition. Open minded learners are also more persistent learners so it could be associated to commitment and dedication. 2. Commitment and dedication is related to persistence because they both have to do with sustained effort over a period of time. However, this is fueled by your source of motivation, conviction, value (ethics). 3. Conditioning relates to conditioning in several places. 4. Readiness could relate readiness in the unique factors as well as Emotional and Psychological Preparedness. 5. Concentration and shifting focus could relate to distraction control and attentional focus.

8/4/09
Impressions. The interview went very well. Pioneer was open, cordial, and light hearted. In fact, he has been extremely helpful and encouraging through the entire process. Pioneer had several problems with the survey. He felt that many of the items were ambiguous. He had a difficult time answering the items just because he wasn’t clear on how mental toughness was defined. My impressions is that he feels that mental toughness has a lot to do with commitment and perseverance. He also indicated that belief was similar to conviction and stick-to-it-ive-ness was related to commitment. Ethics, belief, source of motivation, and conviction are similar, according to Pioneer. Teachable attitude relates to belief, ethics, and motivation. Pioneer suggested that mental toughness is highly specific and the specific nature of mental toughness depends on source of motivation/purpose. This makes sense to me because the type of activity one does will influence ones purpose. He indicated that purpose/source of motivation influences the nature of mental toughness via the attributes.

8/15/09
Readiness to Perform seems to be a factor emerging from the study. This factor seems to describe characteristics needed to manage an actual combat situation. In order to get another opinion, I sought the opinion of a colleague, who is a classical martial artists, teaches defensive tactics to law enforcement personal, and is a law enforcement agent. I asked him to exam the codes, excerpts, and subsequent thematic conclusions. According to my colleague, these excerpts deal with life or death, self-preservation. He believes that from this view we are looking at the situation more serious. He stated, “we have always been taught from day one is you do not die. When we train, in simulations, when an officer gets shot he keeps fighting. To train for real life
we use simunitions, a gun shell casing with a soap powder included. You see the hit. But you train that if you get shot you don’t stop. Also we teach that if you are on a call, you work out in your mind the many possible outcomes. You get as much info as you can ahead of time from the dispatchers. We are trained to know the difference in what happens to your body, your heart rate change. Now we are in condition white, condition yellow, heart rate increases. You lose fine motor at above 115 bpm. Then you go to condition read you lose complex motor skills, your gross motor skills 145 condition black can be fatal its around 170 bpm. You get reduce bleeding from wounds. But you could have a heart attack. Conditioning is important. You lose cognition at about 145 bpm and you have to depend on instinct. We do relays while clearing malfunctions. Train to correct problems like reloading, fixing malfunctions. You can do it with your eyes closed. I think its mental toughness, but it comes with experience more than in anything. Every situation will be different. Experience more than anything brings this type of mental toughness. You bring a positive attitude and confidence. A younger and older cop could both get in a fight with the same guy. The older cop will come out on top because, he, I, don’t lose. In life and death situations the older experienced man will win. It’s all about the mindset. Do visualization, you have to visualize everything that you are going to do. You actually see this person coming. You see the strike and him hit the ground. That is more important than full contact. Visualization helps to prepare for battle. Visualization tricks your mind. It’s more difficult to make a kill when it’s up close and personal. Use an orange to get over the fear of eye gouges. They are looking at it differently than a hunter. You have to change your perspective. A person needs to know what might happen, he could crap on himself. But they need to know it’s OK. It appears things are going in slow motion. Criminals know if you’re not on your game. You look sloppy. You are aware of your surroundings. The ability to anticipate and visualize what is going to happen is very important. See them before they see you. You can’t get complacent. You have to keep your guard up.” In summary, I believe that my colleagues description supports my interpretation of readiness to perform. Readiness in the CMA is a survival mentality. This mentality requires the martial artists to be able to apply lethal techniques in a stressful, unpredictable, context. Techniques must be developed to a high level, to a level of automaticity.

9/20/09
Ethics is another area that seems to be emerging in my study. In order to get another perspective on excerpts, codes, and developing themes I consulted a colleague who has a great deal of experience in this area. Following is a description of my colleagues interpretation of excepts I placed in the ethics category. He states, “We saw this during the Vietnam war. We began giving 19 year olds major fire power that made him more lethal than marines of the past. These young men were often put in difficult situations and had to make last minute high stakes decisions about military maneuvers. Unfortunately, civilians were often victims to violent force. As a consultant for a military character program I developed a program to teach individuals to handle these high stakes combat situations. The idea is to develop what we call the “Just Warrior.” I used the ancient Okinawa warriors or Bushi as a model. This model begins with a sense of duty and service. The Bushi was pushed to preserve the culture, which was threatened for a number of reasons. The village life was the core of their survival. One group was responsible for growing sugar cane. The younger people, who did all the work, had to be protected. The older people had to be protected because they lived among the younger generation, handing down generational knowledge. For example, they explained the best way to plant the crop. The Bushi’s role was to protect all of that. The role was life protection for life of the village.” My colleague also indicated that the Just Warrior concept was related to a readiness to perform because he (the Just Warrior) had to be ready to go right then and there. There was no prior notification, TV broadcasts of a sporting/boxing event, etc. My colleague indicated that the Just Warrior was related to ethics. “Because of his skills, the Bushi possessed a martial culture. The higher goal was to society.” My colleague indicated that ethics (in the context of the Just Warrior) was related to Mental Toughness. “The relationship exists because it is a particular mindset that enables a good person, to make mental adjustments which allows them to kill for defense or reason of social justice. Unfortunately, society does not always work in a supportive manner for these warriors. Police officers, for example, are suspended for two weeks, have their badges and guns removed, and sent to extensive counseling, following a shooting. This does not empower a warrior’s mindset and their ability to function when needed. The Okinawa villagers, on the contrary, would throw a party and celebrate their protector’s victory. They empowered their mindset.” According to my colleague, Ethics explains the proposed codes and excerpts. This category is about upholding the martial arts code. It is about service and using skills in an autonomous and moral way. It also seems to be related to readiness to perform and ones belief.
system. It also seems that readiness to perform, conviction/belief, and ethics are somehow related.

10/16/09
A common factor seems to have emerged from reviewing the perceived importance of mental toughness. Practitioners indicate that mental toughness is important for progress. Moreover, mental toughness seems to be important for progress via interactive with key factors related to progress; time requirements, monotony, difficult learning, personal limits, and working with difficult others. The way mental toughness seems to interact with each factor is where we find commonality. Determination, single-mindedness, persistence is needed to meet these requirements.
## Appendix O

### KMO and Barletts’ Test

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Note. p<.0001
### Appendix P
### Communalities

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Note. Extraction Method: Principal Axis Factoring.
### Appendix Q

#### Initial Factor Matrix

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Note. Extraction Method: Principal Axis Factoring.

a. 6 factors extracted. 36 iterations required.
## Appendix R

**CMMQ Question 21 Participant Responses**

### Participant Information

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<td>1</td>
<td>Maintaining focus on performance of technique in spite of internal and external distraction (my fear, pain, and adversary), however without a large focus on competition and my ego beating your ego. Rather, the focus is on staying alert, responsive, and on task without a conscious internal dialog. [1]</td>
</tr>
<tr>
<td>2</td>
<td>I don’t know if this is necessarily something that is a characteristic of “mental toughness” but it is essential, I think, to training CMA, and is implied in many of the questions—that is, being capable of training and pushing yourself with little or no supervision or encouragement. You won’t succeed if you constantly require external motivation and reinforcement. [2]</td>
</tr>
<tr>
<td>3</td>
<td>One must be willing and able to set aside physical feelings of pain and/or fatigue to allow complete focus on individual technique or on an opponent. Similar to #20 but mental toughness is more about ignoring physical and emotional boundaries rather than pushing them back. The later implies these are in the forefront of ones mind and focus on limitations implies a limitation and hence a lack of mental toughness. The perfect slogan for mental toughness is Nike’s “just do it” or let go of all notions of limitation. [3]</td>
</tr>
<tr>
<td>8</td>
<td>Being able to devote yourself to demanding effort, day in, and day out[4], with no prospect of the effort ever ending. [5]</td>
</tr>
<tr>
<td>9</td>
<td>Less fearful in other areas of life (more peace). [6]</td>
</tr>
<tr>
<td>10</td>
<td>Almost insurmountable challenges to train your mental toughness. Not day to day…but once-in-a-while “to chew you up and spit you out’ experiences. Things that let you know you can do it again (or take more) if life dishes it out. [7]</td>
</tr>
</tbody>
</table>
The willingness to train and discuss techniques that are not competition legal and
permanently disabling/debilitating, i.e., eye gouge, joint attacks, etc. [8] These types
of techniques are an integral part of CMA, but not “polite.” Teaching, training, and
discussing these techniques helps reinforce them and desensitize the practitioner to
using them.

Visualizing an opponent when there isn’t one there. Performing kata at full force,
while visualizing what the opponent would be doing. [9]

When a non athletic karateka keeps plowing ahead even though his/her peers forge
ahead and leave him/her behind. It will take this one 10 years to achieve what the
peers have achieved in half this time. Yet this karateka keeps inching along and
eventually attains knowledge and commensurate rank. Karate is a marathon, once you
commit to it, the journey is life long and ranks don’t matter, knowledge matters.
mental toughness is an aspect of Karate. [10]

The willingness to see techniques for what they are and to be able to hurt another
person when it is a must. [11]

The ability to visualize yourself succeeding and performing well. [12]

Patience is critical. CMA require a lot of time and dedication to become proficient on
the lowest level. [13]

Discipline. [14]

Breathing to calm yourself. Mushin; empty mind. Relaxation. [15]
CMA is life protection. The way of personal preservation within battle and in health. The ability to train for life and death not just performance. This is a natural belief built from proper training, and self-discipline. Do or Die.

Real life applications of techniques. Nothing taught in the classroom can compare to what you will experience mentally and physically when you are forced to apply your art in a real-life situation. The mental aspect of training changes dramatically after your concepts and theories are put to the test.

A negative characteristic of mental toughness as relates to #20 is that physical pain denial in training can lead to more severe and long term physical problems. It’s good to be tough, but not stupid.

Personal Discipline: regardless of opponents and strive for ego-less development, a knowledge that on a freeway, “there is always a car in front and a care behind.”

Holding the idea that our greatest competition is ourselves. This is put on the back burner in sport.

Never feel as if you know it all, you are always a beginner. A high quality of mental toughness allows one to be friendly, kind and accepting of others there is no need to show it. Somehow people can sense it. It alleviates the fear of being of being perceived as weak or gentle.

I believe that you must have the genetic disposition to be a warrior. I have seen it in students I have taught over the years. Some have it some don’t.

The ability to not think, when appropriate, and just do.
Student needs to demonstrate prolonged persistence[25]. Must be willing to train 3-7 days per week, in and outside of dojo. Must do this constantly. OK, a week or two off on vacation but then right back into routine. Like Woody Allen said, “90% of life is showing up.”

Perseverance; make time to train even in our hectic lifestyles. [26]

The combination of mind, breath, body = one mind and one heart[27]

Consistency and Longevity. Many people can train hard for a few years. It’s rare to find people who do it consistently for more than 20 or 15 years. [28]

Mental toughness shouldn’t be being bold nor stubborn. Self-confidence should not be mixed with arrogance. Mental toughness directly correlates with ability to respect others. [29] Point is not to overcome others, but have ability to understand/comprehend others (environment) and respect them.

Lack of Focus. Day dreaming; void if situation is not safe. Situational focus; be aware of things going on around you. This should be ones focus most of the time. Attack focus; a brief intense focus on target. Attack focus should return to situational focus rapidly. [30]

Respect for life & ethics[31]

I can’t think of a unique characteristic but one of the life qualities important to mental toughness is true love of one’s self. I don’t mean vanity but love. [32]

Humility; the ability to be strong enough to accept criticism with grace and a positive attitude[33]

Ability not care about performance or how others judge you, but only to compete with oneself. How to train without goals in mind, but only focus on process. How to subvert ego and needs to will of group and teachers to conform, but still perform individually. [34]

Calm, to control ones emotions in training[35]
1) Patience: Unlike sport styles, one may have to practice years before they can test their knowledge and skills using full power and speed to get an appreciation for what they have learned. There is no instantaneous gratification or defeat. [36]

2) Accepting that a lack of understanding does not equate to being incorrect; often times it is years later that one comes to the realization of the true meaning of the lesson that was being taught. Once one achieves this state of mind it allows them to increase their mental toughness. [37]

The CMA deal with actual self-defense, as opposed to tournament settings. Therefore, there must be a willingness to do whatever is necessary to succeed in a real encounter, to not quit. [38]

I am not sure how to describe this, but my sensei has always said that it is easy to teach someone how to fight but almost impossible to teach someone to fight. [39] As you can probably see by the teachability factors in your survey.

Perfection, or STRIVING for perfection[40], of technique and the need to practice always to achieve the degree of perfection needed to attain the confidence necessary for the mental toughness that is the core of CMA. [41]

In non-competitive martial arts the enemy or opponent is yourself; you are the standard and the benchmark, you are the person both mentally and physically that you have to beat. [42] You have to find your demons and gods mentally. You have to find your strengths and weaknesses physically. [43] You have to envelope these traits and learn to will and control them. [44] You have to bring your mind, body, and spirit together at a precise moment in time for precise movements, techniques, and mental clarity. [45] When all this happens, then you begin to learn about the art and yourself. I feel that if you are lucky if this happens several times during your martial arts career. I can safely say that I could count on less than one hand how many times this has happened.
for me, and I eagerly look forward to the next time. With all this said, I wish I could put a name or a label on this “characteristic” but I can’t….yet.

The ability to acknowledge and capitalize on the understanding that even though you are not able to achieve a certain goal (or level of achievement) at the current moment; that with work and fortitude it is possible to improve oneself to realize the goal at a future point. So instead of giving up continue to work for that currently un-achievable goal. [46]

The desire to perform to the limit of one’s own best, even knowing that best is inferior to others. [47]

The need to become familiar, have a certain familiarity with, life and death issues on a regular basis, if not a daily basis. [48] Coping and managing with pain healing in oneself and others[49]. Understanding and appreciating the passage of time. The value of an hour, day, a year. [50]

Only a student motivated by strong internal drive is going to develop mental toughness. That cannot be taught. Encouraged, yes. Taught, no. One indicator of mental toughness is how much study the student takes up outside the dojo. In my experience, few students go beyond what is taught in the dojo, mostly in organized classes. Maybe that’s the American way, but speaking for myself, I’ve always found individual study the most rewarding path to mastering Uechi-ryu karate over nearly 50 years of study and contemplation. [51]

If mental toughness is not something you were born with or something developed over the course of your life then respect and honor[52] under the guidance of an affective Sensei and your passion for life and living can be the first platform to becoming mentally tough as a Martial Artist. MT can’t be developed without continuously challenging the mind and body[53]. This also brings us to another necessary ingredient to attaining MT which is effort. Without effort everything in life falls apart. Difficult to teach but easier to inspire if the MA has an attitude conducive to MT and the Sensei has the tools and experience required to inspire the student toward MT.
The ability to disengage emotional states[54] and release the ego[55].
The ability to check personal pride at the door so that one can be fully open to the
top of experience at hand (in training and performance).
The meditative qualities of kata and drill, while perhaps not unique, are unusual and
typical of CMA. They certainly contribute to mental toughness, focus[56], peace of
mind in stressful situations[57], and proper perspective on the true importance of
achieving goals. [58]

Long term commitment is very important. I define a successful mentally tough
martial artists as one who has continued to train and improve for 20, 30 may 50 years.
This is a much more difficult goal than winning at competition. It takes a special type
of mental toughness to keep pushing despite the effects of age. [59]

From a CMA context, number 2 should be 2 questions; one to address the mental and
one to address the physical. From a CMA context, you don’t necessarily need physical
conditioning to be mentally tough. From a CMA context, conviction and stubbornness
is not the same. From CMA, consistency and adjusting to change so that you can
make a contribution to your team is not the same. Consistency is important. Being
ready to give your best performance is important but not the same as internalizing
competitiveness and taking pride in what you do. Personal management/not avoiding
potential problems is not the same as taking on problems to prevent them from
building into bigger ones. Accepting and coping with anxiety are not the same.
Having a passion for what you do is not the same as loving what you do. Having
internalized motives to succeed is important but not having an insatiable desire.

Emptying the mind; not anticipating [60] but rather accepting whatever comes
next[61].

My original instructors always said to focus to encourage us in over training— I thought
focus was physical; they meant mental focus and to continue training regardless of pain, lack of muscular endurance, cardio endurance, sloppiness of techniques; yet they meant to push the mind beyond your endurance, physical and mental endurance; focus the mind and allow the body to catch up with time; [62] I hate these comment “I cant”; Don’t rest mentally upon your rank because your body will slide backwards; you need both to be above average.

The ability to focus yet maintaining a view taking in all outside factors/events[63].

Almost never believe I cant. Lots of emotional/relationship problems arise unexpectedly. Minds become disrupted; training is disrupted and resuming training is essential (whenever one is able to) it may take years. [64]

After continual body conditioning the mental toughness will develop. But not until a long period of conditioning. [65] Only then, will (#5-regaining psychological control following unexpected, uncontrollable performance specific events) sink in.

Willingness to face life/death situations. [66]

Learning to flow with situation, acceptance, and gentleness. [67]

The self-reflection born of patience is extremely important; everyone teaches it but not everyone “gets” it. So I guess it is moderately teachable. It is why the simplest movements/techniques are taught first, because they take the longest to master. [68]

I’m not sure this is toughness, but it is mental.

Martial arts helps develop and build a strong mind and body through the achievement of self-determination[69], discipline[70], self-confidence[71], and awareness of the greater purpose of life; solemn respect for self and others[72] and appreciation for the wisdom the elders can provide. [73].

You cannot let your ego run the show, or your life. In CMA, the focus must always be on, unless you are asleep (it just is used in different directions). Thriving off of the pressure of performance is not good because it seems like the ego is in control. I’ve taught karate for many years. One of the important things I’ve gleaned from this is that you cannot be a god. When I demonstrate any form, I always make it clear that even a white belt can make a comment if they see something that conflicts with what
they expect. Too often I have seen very senior karate masters who have deteriorated in performance. This is universally because they refuse to accept comments on their practice form others. Even a student who has half your experience is still very experienced. And, their eyes are outside your body and can see things you cannot.

The role of a good teacher that sets an example of what a practitioner should be. Too many teachers of today teach for profit and do not teach with the passion to make their students the best they can be!

Having the ability to defuse a heated situation without resorting to violence when violence would be the easier alternative. [75]

Ability to visualize opponents and the effect of your technique during kata. [76]

Self discipline (Bushido) such as honesty, integrity, and respect [77] to be an aspect of mental toughness which was not addressed in your survey. This too is a very important part of training. Many of our “so called” martial artists lack these virtues.

Pain Tolerance; the ability to differentiate between discomfort and injury. Being able to use stress as a positive by actually learning to listen to your body’s signals. [78]

Mushin; no mindedness[79] unique, hard to teach, must occur within experience.

Overcome fear of personal injury. [80]

Strategic Thinking; applying a clear picture of the goal to the appropriate execution approach. [81]

Detail Orientation; commitment to perfection for technique and continuous improvement. [82]
Big picture thinking; understanding and quickly evaluate causes and effects of decisions. [83]

Visioning possibilities; creating a mental picture[84] of a goal to achieve it. [85]

Fighting Spirit; an indomitable internal driving force that creates a feeling of kill or be killed or you’ll have to kill me to stop me! [86]

126 Self Hypnosis. [87]

Meditation/Visualization[88].

Running; supplemental physical conditioning[89].

127 N

128 To react to the real threat without taking the time to think and analyze (the act whether it is right or wrong because if you do not react you will lose). [90]

129 I believe there is a NO FEAR attitude[91] in most martial artists, which is naturally instilled, which attracts them to the martial arts. I do believe it is teachable as with anything through repetition. What we are exposed to influences our thoughts, actions, and reactions.

130 N

Importance. Personality trait receptive to the concept that martial arts training is a dynamic and life-long process. Open mindedness that provides a continually expanding appreciation of the depth of the material[92]. These two characteristics run counter to attitudes promulgated by Western culture which packages other sports and athletic activity as value-added entertainment. The mental toughness of a martial artists accrues with time, simultaneously fuels the student’s ability to distinguish between fad-based, “just add water,” activities and the (more likely) reality that proficiency, in any discipline, is acquired through practice, ongoing research, engagement with peers, and heuristically-inspired effort. Interestingly, this process-oriented approach only appeals to a small segment of the populace. Often, beginners are frequently unconscious of this important component. And, while people may set goals, mental toughness is often merely an extension of the (simultaneous) development of the appreciation of the psychological changes that are an ongoing element of martial arts training. For those who persist, this subtly-nuance appreciation may become the overarching goal, rather than proficiency, rank or status. Most sports
serve the egos of their practitioners, provide a plethora of statistics-based entertainment and moments of media-glorified performance. They also provide armchair entertainment for the athletes of yester-year. By contrast, CMA training is frequently a solitary activity more akin to swimming. For many practitioners, it is about developing and realizing the potential of self...in the holistic, or Asian sense. To conclude, a primary component of mental toughness is the capacity to surmount or ignore the cultural conditioning that promotes immediate gratification. [93] This is actually more an attitude that can be developed rather than an inherent quality such as a talent. Further, mental toughness manifests itself in expressions of calm, self-confidence that provide a foundation from which to engage with challenges. Adversity, be it physical or psychological, is approached from a position firmly grounded in techniques that although they may have been learned in a regimented environment, are meant to be used creatively and to serve as resources in critical-thinking. Many students begin martial arts training to enhance feelings of power. Many have been victims of abuse and often perceive martial arts training as a source of protection or, possibly, revenge. They often want, and need, techniques they can use immediately. However, even the simplest techniques require practice to be used effectively. Thus, students are immediately confronted with the fallacy of an “easy answer”. Engaging students’ curiosity and conveying the potential of CMA is the first step in overcoming the belief that the martial arts are, as with many western sports, simply a matter of developing physical strength, some basic knowledge and a modicum of skill. Ezee-peezy! Helping a student perceive the benefits of process-oriented training is a unique component of CMA training. It is also an integral component in the evolution of “mental toughness.” It is my experience that a heuristic approach works best.

Teachability. The answer to this question is often dependant on the student’s age, environmental circumstances and cultural conditioning. Children form the ages of 3-10 often fantasize violent interaction as romantic, ego-enhancing and/or as a source of power and their interest is inspired by imagining themselves as possessors of these qualities. Teaching mental toughness to students of this age involves creating a
dramatic environment that supports their fantasies while at the same time gently introduces them to the concept of discipline. Students aged 10-16 share similar fantasies as their younger cohorts, but may have encountered circumstances that provide a more realistic perspective. They may have been injured in fights or humiliated by teasing. For these students, learning a few effective self-defense techniques can be beneficial by enhancing their self-confidence. This enables them to more easily avoid difficult situations by helping them feeling that avoiding confrontation is honorable and not an act of cowardice; and in last-resort situations, will hopefully provide them with techniques that will enable them to fight back effectively and thereby discourage further attacks. As always, helping instill in the student a sense that problems are solvable, albeit perhaps not immediately, is the precursor to developing “mental toughness.” For students age 17 and up, the teachability of a process-oriented system depends to a great extent on the patience of the instructor, their willingness/ability to modify the curriculum to the individual’s needs, and provide the attention necessary to engage the psyche of each student in a way that introduces them to and inspires them with the ability to recognize the benefits of non-competitive training.

132 Being able to calm ones own mind in the face of catastrophe and to project that calmness to others. [94]

133 N

134 Mushin; being free of thought. [95]

135 The empowerment which comes from understanding that everyone feels fear. Mental toughness is doing what you have to do in the face of fear[96].

136 Persistence. The ability to constantly strive to do better. [97]

137 The core concept of mushin (mental toughness) is to allow the practitioner (or student) to develop his form and focus without being affected by external stimuli, such as pain or other such distractions. Through this development the martial artist can ascend beyond his physical limitations and progress in his/her art.

138 The penalty of not performing, ie losing the game vs losing the battle. Martial arts strip down to the core of the person. There is little social mores or norms. This is what distinguishes martial arts from sports.
Awareness or the ability to see situations before they happen. [98] Control – the ability to neither over or under react to a situation. “Grace under pressure.” [99]

Having self-confidence that is passive and not judgmental of others[100], and also, being able to read your opponent is part of mental toughness. [101]

The ability to let go of fear, not being concerned with defeat even if almost guaranteed; courage. The number 1 most important attribute of CMA.

Knowing that if you lose everything you still have your kata. Even if ill or challenged by injury[102], you can still perform your forms to your best not comparing it to past performances or others. [103]

Within CMA rather than modern sporting martial sports, mental toughness is described as “zanshin” “metzuki” “mushin” all add up to what we know as no mind which is the heart of the matter. [104] “classical martial artists” become the art. Question 1; is it important to train hard at every session without missing any sessions all your life?

A sense of history. A connection to an icon perceived or real. Tradition. [105]

Accepting that there is always potential in inflicting or having inflicted pain or serious injury. [106]

The development through repetition. [107]

Learning to relax the mind and body in all conditions. [108] This is a lifetime art and goal. You can not be taught this. It is within yourself.

To remain calm and relax in a dangerous and fearful situation[109] To yield to force. [110] Transcend the fear of death rather than embrace survival at all
Having the clairvoyance to circumvent unnecessary engagements. [112]
Relying on others for energy and motivation is unacceptable. [113]
Not thinking of either winning or losing nor success or failure, but only perfection. [114]
Restraining from your emotions. [115]
Application of CMMT to everyday life in the face of loss, suffering, diseases, and illness, etc.
Need to have patience with yourself, with others; people move at their own pace and take time. [116]
Motivation: Able to motivate yourself and others to progress and achieve goals. [117]
Flexibility; able to shift your style to teach with others, able to shift gears from kata to kumite, to teaching[118].
The techniques of Karate are refined motor skills, the ability to see success as a mental directed activity. The mind/body relationship is improved and other goals can be set with the new self confidence.
Self worth-a desire to learn martial arts is one of the few sports in which your success is based on your individual abilities and not affected by a team-mate or opposing teams actions.
Control over anger. Emotional control[119]
The mental toughness is the ability to have self-belief that what you learn in the dojo can actually be applied to a real life confrontation. Internalizing techniques so that they are a part of you and instinctive[120].
The state of mind occurring the moment before starting a kata when you attain complete concentration. You become one with the movements and beauty of the kata. [121]
Pain and exertion tolerance; hot day and cold day workouts, show up when you are tired or demoralized. Willingness to confront a formidable opponent despite fear. [122]
Nintai or perseverance. To endure or endurance. [123]

Having a great and cultivated sense of humor. Humor has buoyed me up during incidents way off the charts of physical and emotional demand. [124]

CMA are about training warriors. Not about self-defense or sports. It was about survival. Kill or be Killed. For all the other benefits that the arts bring us, and the difference in focus in training for today’s society the truth is it was about survival. I am a warrior. I may be able to be an artist, a teacher, and expert on security and personal defense and so many other things. But the characteristic of mental toughness not mentioned in the study is about combativeness. Your study’s questions focus on Karate as a sport and about a sport mentality level of mental toughness. Combative toughness is a willingness to sacrifice for results. It is about never quitting despite the odds. It is about eating pain because the mission and the results are more important than your inconvenience. You cannot teach this without a drive from the student and an environment of a school more like boot camp, which is not going to happen. Now is this necessary for today’s school of arts? The answer to that question is no. Combativeness is not needed in today’s schools, however it is a quality I posses that is part of the ancient curriculum of training warriors. The techniques only make since if you take a look at the results the earlier masters were working for long before martial arts became a commercial venture and the training went from one on one to training groups of people for profit. They wanted to train people to live in a society where there is no police, officials were corrupt, and then your only chance of standing up for yourself lay in the hands at the end of your arms[125].

Mental toughness is about clarity of purpose. For that knowing yourself is essential. Without that knowledge your goals become muddied and what you want to accomplish will not be prioritized correctly. You will lack direction. This is about self- discovery. Martial arts offers a path to self discovery, a path to access that knowledge, but to honestly take a walk on that path the practice and study need to be more than a hobby it would need to border a vocation. [126]

When you tap into your inner strength your body seems to become encased in an invisible armor and you feel indestructible as if you could go through a brick wall
knowing you will not feel any pain what so ever, you feel untouchable, no fear in complete focus, its like a like switch you can turn it on or off when need be (not everyone can tap in). [127]

Awareness of importance to survive an attack[128]. In my opinion there are three distinct scenarios of potential combat. 1. surprise attack – you have to prepare to survive as you cannot stop a surprise as it is a surprise. 2. Escalation – you need to have the intuition to see a situation coming and make a decision to proceed or remove yourself. 3. Mutually agreed upon combat.

Attention to detail. [129] Respect for self and others. [130]

Faith in God. Faith in yourself; to not compromise. [131] Replace fear and doubt with knowledge and understanding. [132] Open mind joyful training[133].

My experience in the Okinawan style was a great deal more involved in anatomy and physical, and internal healing such as Qigong. Their masters were men of medicine so they could mend some of their wounded in battle. [134] This knowledge has been passed down as well.

The ability to block out extreme physical pain out of your mind. [135]

Ability to control fear[136].

Most of the above questions focus on competitiveness/performance that associated with sport; how about non-competitive martial arts where the practitioners focus on self-development, personal health/well being and trust[137] [138].

Ego of teacher. Teachers with big ego’s stress importance of mental toughness, but can not teach mental toughness. Master Shinyu Gushi, for example has “zero” ego, but is probably one of the best teachers of mental toughness you can have. [139]

Adaptability and humility are critical in martial arts. Adaptability because it relates to one’s ability to work with one’s environment[140], and humility because without it, there is no learning. [141]

I think your #7 [focus/gate out distractions] and #10 [Be ready to give/test your best performance: set noncompetitive performance goals] are the most important Visualization Techniques[142]

For each one to know their own mental toughness[143]; but yet be willing to expand on them through the teachings of others[144].
CMA are a life long commitment with very few pats on the back or outside recognition for accomplishments. It is about true love for why you do and feel as a result of training your system.

I think that occasionally when learning in a martial arts environment, we are asked to learn and train at a pace far different from what we would prefer. I feel like mental toughness requires the ability to continually return to the basics and learn from them. Many other disciplines write off the building blocks as learning tools, whereas in martial arts, you still use techniques from day 1 in your training in year 20.

Mind; thoughts, focus, and determination. Body; strong, endurance, and working even when fatigued. Spirit; prayer and understanding of a higher purpose.

I am not sure that these are unique to the martial arts but I do believe that ones upbringing and surroundings has a lot to do with ones mental toughness and how one deals with everything he or she is doing. I have been told that I really do not understand Karate as I am not Japanese. Maybe somewhat true…I mean I have not been brought up in this kind of way and do not understand the idiosyncrasies of being Japanese……does this detract from my abilities……not sure but there may be something there as mentioned above about upbringing and surroundings. I believe that how you were brought up and your surroundings has a very big influence as to your mental toughness but the actions or non-actions that you do or don’t do, define your character.

Depending of the period the art comes from, loyalty, a major motivator can be taught in different ways. Similarly, depending very much on the content of the art, and the degree to which the culture has been re-written by modern militaristic teaching methods, (long lines of people punching simultaneously), independent and critical thinking, concentration, and a long attention span can be absorbed from practice. I would venture that most classical arts no longer teach independent thinking and it is often in a very high context format, which is largely untenable (the mentality of small unit tactics or duelists).
I believe that true martial arts requires a person to have the mind set that no matter what I have to do, I will win. Unlike sport Karate, there is no referee in a real encounter. There is no one to call time and there is no stopping if you are hurt. There are no rules on the street. To be successful you have to have the mindset that no matter what, you will never quit or give up. It’s been said that there is no reason in the world to fight; but every reason to know how to. I believe that; and I think its something that you can’t really instill in another, you either have it or you don’t. In my opinion that’s why some of the traditional martial arts masters were very selective in who they would train. Many of the factors in this survey are crucial; yet many cannot be taught to another. They require something buried in the psyche of some individuals; but not everyone. Not everyone has it. What is it that makes some people “fight” and others “freeze?” If you figure that out, let me know!

Inadvertently, CMA, if trained properly, will cause one to evolve in such a way to where the attention is no longer on ourselves. We then come to the realization that we are a part of all that is around us, good or bad. All we can do is provide a home within ourselves for good and offer what we have learned to the bad. I feel that mental toughness can evolve even further from a state of self-protection into a state of charity.

Quiet Mind[154]. Focus on long-term self-improvement. Mushin[155]. Eye of the tiger or see into your opponent[156]. With all due respect, I feel the questionnaire does not fully reflect the true spirit of non-competition martial arts. [157]I would emphasize the non-combative virtues of martial arts. Once Black Belt is reached, the true Bushido spirit begins and we start to learn all over again. [158]

To have an understanding that the self-defense aspects of the classical martial styles do not show up in the beginning. To learn the art and self-defense will come. [159]
I don’t agree with the term mental toughness. I prefer to refer to it as mental awareness striving to be calm and at ease in all situations knowing this can not always be possible.

Remaining aware of ones higher social duty to protect others using classical life protection methods coupled with character; a combination, which produces the Just Warrior. [160]

Physical training builds mental toughness. Example: I am tired, I hurt, yet I get up on the floor and continue to practice kata or hardening exercises. [161]

A commitment to stay on the path to mastery[162].

#1 is the unique quality is the ability to get into the zone/flow and fight instinctively.  
#15 is more about becoming distracted and losing focus.  
#17 Love of practice for its own sake and endless refining is universal among martial artists.  
#18 This is getting back on the horse.  
#21 Mental Focus. All fighting concentrates the mind. IN the words of Dr. Johnson, “depend upon it sir, when a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully.” This applies when a man knows he is about to be hit. Eastern martial artists practice as much! To concentrate the mind and then to forget about concentrating because the body responds naturally, just is. [163]

Simulations of real-life self-defense. For effective self-defense training, the instructor (in a SAFE manner) must simulate as close as possible to a real-life dangerous situation to greatly increase the students chance of success when faced with an unfortunate situation. [164]

Unification and utilization of mind, body, and spirit. [165]
Training under adverse conditions[166].
Training your best when the instructor isn’t giving his/her best[167].

The acceptance of one’s own mortality. In surrendering the hope or desire of survival a profound sense of freedom of thought and action is achieved. “Myself, others all forgotten.” This is the state of mind one tries to achieve in training, and through training in life. The mental constructs and barriers we create for ourselves are the illusions we see as reality. To totally give oneself up to the training shows us a new reality.

Understanding who you are; knowing your strengths and weaknesses[168], being able to rely on your strengths[169] and offering them to the team[170] while trying to develop your weakness. [171]

Toughness equals calm[172], no distraction[173], no ill will, no externally applied value system; empty of rancor, purposeful behavior. [174]

The ability to take correction without taking it personally. Accepting the fact that personal criticism is part of the training. [175]

Fortitude, or guts, including both the courage to face danger as well as sticking it out under pain. [176]
There is a necessary balance between sense of self and ego and sense of sacrifice. While studying CMA one needs self-motivation and is rewarded with pride in achievement[178]. However, CMA are very regimented and structured and to truly succeed, one needs to sacrifice his “individual will” to the structure and discipline of the art.

Note. N= No response
Appendix S
Phase I Categories and Codes from CMMQ

Unique Categories

Anticipation
83. Make predictions
Big picture thinking; understanding and quickly evaluate causes and effects of decisions.
98. Ability to anticipate
Awareness or having the ability to see situations before they happen.
101. Anticipate opponent
being able to read your opponent is part of mental toughness.
112. Foresight to evade danger
Having the clairvoyance to circumvent unnecessary engagements.
128. Nature of attacks
Awareness of importance to survive an attack. In my opinion there are three distinct scenarios of potential combat. 1. Surprise attack – you have to prepare to survive as you cannot stop a surprise as it is a surprise. 2. Escalation – you need to have the intuition to see a situation coming and make a decision to proceed or remove yourself. 3. Mutually agreed upon combat.
156. Understand your opponent
Eye of the tiger or see into your opponent.

Attitude Towards Learning
37. Proper mindset for learning leads to mental toughness
Accepting that a lack of understanding does not equate to being incorrect; often times it is years later that one comes to the realization of the true meaning of the lesson that was being taught. Once one achieves this state of mind it allows them to increase their mental toughness.
21. Obtaining knowledge is ongoing
Never feel as if you know it all, you are always a beginner.
33. Acceptance of criticism
Humility; the ability to be strong enough to accept criticism with grace and a positive attitude.
92. Ongoing learning disposition
Dynamic and life-long process. Open mindedness that provides a continually expanding appreciation of the depth of the material

133. Open-mindedness
Open mind joyful training.

141. Humility facilitates learning
Humility because without it, there is no learning

144. Learning from others
Willing to expand on them [mental toughness attributes] through the teachings of others.

151. Critical thinking
Independent and critical thinking

175. Ability to receive correction
The ability to take correction without taking it personally. Accepting the fact that personal criticism is part of the training.

*Ethics*

29. Respect
Mental toughness directly correlates with ability to respect others.

32. Realization of self-worth
True love of one’s self. I don’t mean vanity but love.

50. Value of time
Understanding and appreciating the passage of time. The value of an hour, day, a year.

52. Respect and Honor
If mental toughness is not something you were born with or something developed over the course of your life then respect and honor

72. Awareness of the importance of respect
Awareness of the greater purpose of life; solemn respect for self and others

73. Respect for tradition
Appreciation for the wisdom the elders can provide.

77. Components of self-discipline; honesty, integrity, respect
Self-discipline (Bushido) such as honesty, integrity, and respect
105. Having a sense of connection to inheritance of tradition.
A sense of history. A connection to an icon perceived or real. Tradition.
116. Patience
Need to have patience with yourself, with others—people move at their own pace and take time.
130. Respect
Respect for self and others.
158. The Martial Arts code
I would emphasize the non-combative virtues of martial arts. Once black belt is reached, the true Bushido spirit begins and we start to learn all over again
160. Awareness of social duty; to protect
Remaining aware of one’s higher social duty to protect others using classical life protection methods coupled with character; a combination which produces the Just Warrior.
170. Make a contribution to your classmates
offering them [your strengths] to the team
174. Lack of ill intentions and behaviors
no ill will, no externally applied value system; empty of rancor, purposeful behavior

Previously Found Categories

Motivation
2. Self-motivation.
I don’t know if this is necessarily something that is a characteristic of “mental toughness” but it is essential, I think, to training CMA, and is implied in many of the questions—that is, being capable of training and pushing yourself with little or no supervision or encouragement. You won’t succeed if you constantly require external motivation and reinforcement.

Repetitive devotion of arduous effort
Being able to devote yourself to demanding effort, day in, and day out
5. Endless effort
with no prospect of the effort ever ending.
10. Persistence
When a non-athletic karateka keeps plowing ahead even though his/her peers forge ahead and leave him/her behind. It will take this one 10 years to achieve what the peers have achieved in
half this time. Yet this karateka keeps inching along and eventually attains knowledge and commensurate rank. Karate is a marathon, once you commit to it, the journey is life long and ranks don’t matter, knowledge matters, mental toughness is an aspect of Karate. CMA proficiency requires perseverance. Patience is critical. CMA require a lot of time and dedication to become proficient on the lowest level.

14. Discipline

Discipline
The ability to regulate your own development without comparing yourself to others.

Personal Discipline; regardless of opponents and strive for ego-less development, a knowledge that on a freeway, there is always a car in front and a care behind.

20. Task goal orientation.
Holding the idea that our greatest competition is ourselves.

Prolonged Persistence
Student needs to demonstrate prolonged persistence. Must be willing to train 3-7 days per week, in and outside of dojo. Must do this constantly. OK, a week or two off on vacation but then right back into routine.

26. Daily training schedule is a priority.
Perseverance; make time to train even in our hectic lifestyles.

28. Prolonged persistence of training.
Consistency and Longevity. Many people can train hard for a few years. It’s rare to find people who do it consistently for more than 20 or 15 years

34. Ability to subvert an ego goal orientation and adopt a task goal orientation.
The ability to not care about performance or how others judge you, but only to compete with oneself. How to train without goals in mind, but only focus on process. How to subvert ego and needs to will of group and teachers to conform, but still perform individually.

36. Patience in learning.
Patience: Unlike sport styles, one may have to practice years before they can test their knowledge and skills using full power and speed to get an appreciation for what they have learned. There is no instantaneous gratification (or defeat).

40. Pursuit of technical excellence.
Perfection or STRIVING for perfection

42. In CMA, you win by overcoming your personally defined weakness.
In non-competitive martial arts the “enemy” or “opponent” is yourself; you are the standard and the benchmark, you are the person both mentally and physically that you have to beat.
Discover mental and physical weakness and strengths.
“You have to find your “demons” and “gods” mentally. You have to find your strengths and weaknesses physically.”

44. Learn to manage strengths and weaknesses.
You have to envelope these traits and learn to will and control them.

47. Focus on performing your best; don’t compare your performance to others.
The desire to perform to the limit of one’s own best, even knowing that best is inferior to others.

51. Self-regulated practice
Only a student motivated by strong internal drive is going to develop mental toughness. That cannot be taught. Encouraged, yes. Taught, no. One indicator of mental toughness is how much study the student takes up outside the dojo. In my experience, few students go beyond what is taught in the dojo, mostly in organized classes. Maybe that’s the American way, but speaking for myself, I’ve always found individual study the most rewarding path to mastering Uechi-ryu karate over nearly 50 years of study and contemplation.

58. Importance in understanding goal achievement.
proper perspective on the true importance of achieving goals.

59. Long-term commitment to training.
Long term commitment is very important. I define a successful mentally tough martial artists as one who has continued to train and improve for 20, 30 may 50 years. This is a much more difficult goal than winning at competition. It takes a special type of mental toughness to keep pushing despite the effects of age.
Continual, long-term body conditioning.
After continual body conditioning the mental toughness will develop. But not until a long period of conditioning.

68. Patient ongoing self-reflection of basics.
The self-reflection born of patience is extremely important; everyone teaches it but not everyone gets it. So I guess it is moderately teachable. It is why the simplest movements/techniques are taught first, because they take the longest to master.

70. Discipline
discipline
Goal Setting; behavioral goals.
Strategic Thinking; applying a clear picture of the goal to the appropriate execution approach.
82. Continuous pursuit of technical excellence; including attention to details.
Detail Orientation; commitment to perfection for technique and continuous improvement.
Goal setting of a goal to achieve it.
93. Perseverance in training
To conclude, a primary component of mental toughness is the capacity to surmount or ignore the cultural conditioning that promotes immediate gratification.
97. Persistence to improve.
Persistence. The ability to constantly strive to do better.
103. Do your best without comparing your performance to your past or other’s performances. you can still perform your forms to your best not comparing it to past performances or others.
113. Independent drive.
Relying on others for energy and motivation is unacceptable
114. Focus on task/behavior goals, not outcomes.
Not thinking of either winning or losing nor success or failure, but only perfection.
117. Motivation of self and others
Motivation: Able to motivate yourself and others to progress and achieve goals.
123. Perseverance and endurance.
Nintai or perseverance. To endure or endurance.
126. Clarity of purpose.
Mental toughness is about clarity of purpose. For that knowing yourself is essential. Without that knowledge your goals become muddied and what you want to accomplish will not be prioritized correctly. You will lack direction. This is about self- discovery. Martial arts offers a path to self discovery, a path to access that knowledge, but to honestly take a walk on that path the practice and study need to be more than a hobby it would need to border a vocation.
129. Detail Orientation
Attention to detail.
137. Long term focus is on self-improvement as opposed competing with others.
Most of the above questions focus on competitiveness/performance that associated with sport; how about non-competitive martial arts where the practitioners focus on self-development, personal health/well being.
143. Self-evaluation
For each one to know their own mental toughness
145. Long-term commitment
CMA are a life long commitment”
146. Love for what you do/Intrinsic Motivation
very few pats on the back or outside recognition for accomplishments. It is about true love for why you do and feel as a result of training your system.
148. Use of mind, body, and spirit.
Mind; thoughts, focus, and determination. Body; strong, endurance, and working even when fatigued. Spirit; prayer and understanding of a higher purpose.
147. Prolonged learning of the basics.
I think that occasionally when learning in a martial arts environment, we are asked to learn and train at a pace far different from what we would prefer. I feel like mental toughness is the ability to continually return to the basics and learn from them.
150. Faithfulness/steadfastness
Depending of the period the art comes from, loyalty, a major motivator can be taught in different ways.
157. Long term focus is on self-development as opposed to competition with others.
Quiet Mind. Focus on long-term self-improvement. Mushin. Eye of the tiger; see into your opponent. With all due respect, I feel the questionnaire does not fully reflect the true spirit of non-competition martial arts.
159. Training perseverance
To have an understanding that the self defense aspects of the classical martial styles do not show up in the beginning. To learn the art and self-defense will come.
162. Commitment to excellence
A commitment to stay on the path to mastery.

168. Self-reflection
Understanding who you are; knowing your strengths and weaknesses.

167. Intrinsically propelled effort unaffected by teacher’s performance.
Training your best when the instructor isn’t giving his/her best.

172. Develop weaknesses
develop your weakness

176. Staying power; readiness to experience danger.
Fortitude, or guts, including both the courage to face danger as well as sticking it out under pain.

178. Achievement Motivation
While studying CMA one needs self-motivation and is rewarded with pride in achievement.

Belief

41. Confidence in abilities via conditioning
“the need to practice always to achieve the degree of perfection needed to attain the confidence necessary for the mental toughness that is the core of CMA.”

46. Belief that hard work will pay off.
The ability to acknowledge and capitalize on the understanding that even though you are not able to achieve a certain goal (or level of achievement) at the current moment; that with work and fortitude it is possible to improve one’s self to realize the goal at a future point. So instead of giving up continue to work for that currently un-achievable goal.

64. Self-belief that one can survive setbacks.
Almost never believe “I can’t.” Lots of emotional/relationship problems arise unexpectedly. Minds become disrupted; training is disrupted and resuming training is essential (whenever one is able to) it may take years.

100. Non-judgmental/critical self-confidence
Having self-confidence that is passive and not judgmental of others,

102. Confidence in training routines.
Knowing that if you lose everything you still have your kata. Even if ill or challenged by injury.

120. Confidence in skills.
The mental toughness is the ability to have self-belief that what you learn in the dojo can actually be applied to a real life confrontation. Internalizing techniques so that they are a part of you and instinctive

131. Unshakable faith.
Faith in God. Faith in yourself; to not compromise.

139. Confidence in coaching style.
Ego of teacher. Teachers with big ego’s stress importance of mental toughness, but can not teach mental toughness. Master Shinyu Gushi, for example has “zero” ego, but is probably one of the best teachers of mental toughness you can have

169. Confidence in individual strengths.
being able to rely on your strengths

Emotion Management

6. Decrease Fear
Less fearful in other areas of life (more peace).

15. The ability to calm yourself.
Breathing to calm yourself. Mushin; empty mind. Relaxation

35. Anxiety management.
Calm, to control ones emotions in training.

49. Pain management/healing
Coping and managing with pain healing in oneself and others.

54. Control of emotions.
The ability to disengage emotional states

61. Acceptance of future events
accepting whatever comes next

67. Go with the flow/mental flexibility; gentleness.
Learning to flow with situation, acceptance, and gentleness.

75. Anger Management
Having the ability to defuse a heated situation without resorting to violence when violence would be the easier alternative

78. Understanding of physiologic limitations
Pain Tolerance; the ability to differentiate between discomfort and injury. Being able to use stress as a positive by actually learning to listen to your body’s signals.

80. Lack of preoccupation with personal injury.
Overcome fear of personal injury.

86. Indomitable fighting spirit
Fighting Spirit; an indomitable internal driving force that creates a feeling of kill or be killed or you’ll have to kill me to stop me!

91. Attitude of confident security
I believe there is a NO FEAR attitude

94. Facilitate calmness in self and others.
Being able to calm one’s own mind in the face of catastrophe and to project that calmness to others.

96. Understanding that fear is inevitable but one can cope with it.
The empowerment which comes from understanding that everyone feels fear. Mental toughness is doing what you have to do in the face of fear.

99. Maintaining composure under pressure.
Control; the ability to neither over or under react to a situation. Grace under pressure.

106. Coming to terms with the possibility of the consequences of giving or receiving lethal force.
Accepting that there is always potential in inflicting or having inflicted pain or serious injury

108. Relaxation of mind and body regardless of circumstances.
Learning to relax the mind and body in all conditions.

109. Calmness/relaxation during stressful events (respond to stressor).
To remain calm and relax in a dangerous and fearful situation.

110. Yield to force.
To yield to force.

111. Mentally/emotionally, move beyond the fear of death and preoccupation with survival.
Transcend the fear of death rather than embrace survival at all cost.

119. Emotional control.
Control over anger. Emotional control.

123. Ability to tolerate physical and emotional discomfort.
Pain and exertion tolerance; hot day and cold day workouts, show up when you are tired or demoralized. Willingness to confront a formidable opponent despite fear.

124. Having a sense of humor during times of stress

Having a great and cultivated sense of humor. Humor has buoyed me up during incidents way off the charts of physical and emotional demand.

127. The ability to switch on a feeling of Indestructibility.

When you tap into your inner strength your body seems to become encased in an invisible armor and you feel indestructible as if you could go through a brick wall knowing you will not feel any pain what so ever, you feel untouchable, no fear in complete focus, it’s like a like switch you can turn it on or off when need be (not everyone can tap in)

132. Improve psychological weakness via education.

Replace fear and doubt with knowledge and understanding

134. Ability to physically rehabilitate

My experience in the Okinawan style was a great deal more involved in anatomy and physical, and internal healing such as Qigong. Their masters were men of medicine so they could mend some of their wounded in battle.

136. Control Fear

Ability to control fear.

140. Adaptability

Adaptability because it relates to one’s ability to work with one’s environment

154. Mental Calmness

Quiet Mind

172. Calmness

Prolonged Conditioning

7. Optimistic experiences with occasional challenges

Almost insurmountable challenges to train your mental toughness. Not day to day…but once-in-a-while “to chew you up and spit you out’ experiences. Things that let you know you can do it again (or take more) if life dishes it out.

41. Confidence in abilities via conditioning
the need to practice always to achieve the degree of perfection needed to attain the confidence necessary for the mental toughness that is the core of CMA

53. Continuous challenges
continuously challenging the mind and body

56. Mental Conditioning; focus
The meditative qualities of kata and drill, while perhaps not unique, are unusual and typical of CMA. They certainly contribute to mental toughness, focus

57. Emotional coping.
peace of mind in stressful situations

65. Continual, long term body conditioning
After continual body conditioning the mental toughness will develop. But not until a long period of conditioning

89. Physical conditioning
Running; supplemental physical conditioning.

148. Use of mind, body, and spirit.
Mind; thoughts, focus, and determination. Body; strong, endurance, and working even when fatigued. Spirit; prayer and understanding of a higher purpose.

177. Psychological Well-being
Mental Fitness
Focus of Attention

1. Task oriented focus.
Maintaining focus on performance of technique in spite of internal and external distraction (my fear, pain, and adversary), however without a large focus on competition and my ego beating your ego. Rather, the focus is on staying alert, responsive, and on task without a conscious internal dialog

3. Distraction control
One must be willing and able to set aside physical feelings of pain and/or fatigue to allow complete focus on individual technique or on an opponent. Similar to #20 but mental toughness is more about ignoring physical and emotional boundaries rather than pushing them back. The later implies these are in the forefront of ones mind and focus on limitations implies a limitation
and hence a lack of mental toughness. The perfect slogan for mental toughness is Nike’s “just do it” or let go of all notions of limitation.

9. Visualizing the application of technique during kata.
Visualizing an opponent when there isn’t one there. Performing kata at full force, while visualizing what the opponent would be doing.

24. The ability to block out thoughts.
The ability to not think, when appropriate, and just do.

27. Focus of attention
The combination of mind, breath, body = one mind and one heart.

30. The ability to shift between a relaxed internal focus, broad external focus, and narrow external focus.

Lack of Focus. Day dreaming – void if situation is not safe. Situational focus – Be aware of things going on around you. This should be ones focus most of the time. Attack focus – A brief intense focus on target. Attack focus should return to situational focus rapidly.

45. Present centered focus of mind, body, and spirit
You have to bring your mind, body, and spirit together at a precise moment in time for precise movements, techniques, and mental clarity. Extricate self-conscious thoughts. Release the ego.

Decrease thoughts of anticipation. Emptying the mind; not anticipating

63. The ability to focus on a given task while maintaining a broad external focus.
The ability to focus yet maintaining a view taking in all outside factors/events.

74. Lack of self-consciousness during training and learning
You cannot let your ego run the show, or your life. In CMA, the focus must always be on, unless you are asleep (it just is used in different directions). Thriving off of the pressure of performance is not good because it seems like the ego is in control. I’ve taught karate for many years. One of the important things I’ve gleaned from this is that you cannot be a god. When I demonstrate any form, I always make it clear that even a white belt can make a comment if they see something that conflicts with what they expect. Too often I have seen very senior karate masters who have deteriorated in performance. This is universally because they refuse to accept comments on their practice form others. Even a student who has half your experience is still very experienced. And, their eyes are outside your body and can see things you cannot.
79. Not Thinking
Mushin; no mindedness
90. To perform without thought.
To react to the real threat without taking the time to think and analyze (the act whether it is right
or wrong because if you do not react you will lose.
95. Not thinking.
Mushin; being free of thought.
Within CMA rather than modern sporting martial sports, mental toughness is described as
“zanshin” “metzuki” “mushin” all add up to what we know as no mind which is the heart of the
matter.
114. Focus on task/behavior goals.
Not thinking of either winning or losing nor success or failure, but only perfection.
118. Able to shift focus of attention.
Flexibility; able to shift your style to teach with others, able to shift gears from kata to kumite to
teaching.
121. Mindfulness; becoming completely absorbed in the execution of techniques.
The state of mind occurring the moment before starting a kata when you attain complete
concentration. You become one with the movements and beauty of the kata.
135. Block out pain
The ability to block out extreme physical pain out of your mind.
148. Use of mind, body, and spirit.
Mind; thoughts, focus, and determination. Body; strong, endurance, and working even when
fatigued. Spirit; prayer and understanding of a higher purpose.
155. Absence of thoughts
Focus on long term self improvement. Mushin.
152. Focus of attention.
concentration
163. Effortless focus
Eastern martial artists practice as much! to concentrate the mind and then to forget about
concentrating because the body responds naturally, just is.
165. Merging of mind, body, and spirit; mindfulness.
Unification and utilization of mind, body, and spirit
173. Not distracted
   no distraction

*Readiness to Perform*

8. Willingness to prepare for dangerous combat situations,
The willingness to train and discuss techniques that are not “competition legal” and permanently disabling/debilitating, i.e., eye gouge, joint attacks, etc
11. Mental readiness to use lethal force.
The willingness to see techniques for what they are and to be able to hurt another person when it is a must.
The ability to prepare for life threatening altercations.
CMA is life protection. The way of personal preservation within battle and in health. The ability to train for life and death not just performance. This is a natural belief built from proper training, and self-discipline. Do or Die.
17. A combat mindset that is revealed during an actual confrontation where one actually experiences danger.
Real life applications of techniques. Nothing taught in the classroom can compare to what you will experience mentally and physically when you are forced to apply your art in a real-life situation. The mental aspect of training changes dramatically after your concepts and theories are put to the test. A warrior personality trait. I believe that you must have the genetic disposition to be a warrior.
38. Readiness to use an all-inclusive barrage of defensive tactics to persevere in combat.
The CMA deal with actual self-defense, as opposed to tournament settings. Therefore, there must be a willingness to do whatever is necessary to succeed in a real encounter, to not quit.
39. Difficult to apply skills in actual combat scenario.
I am not sure how to describe this, but my sensei has always said that it is easy to teach someone how to fight but almost impossible to teach someone to fight.
48. Familiarization with life and death scenarios
The need to become familiar, have a certain familiarity with, life and death issues on a regular basis, if not a daily basis.
Mental readiness to face life-threatening situations.
Willingness to face life/death situations.

Coming to terms with the possibility of the consequences of giving or receiving lethal force. Accepting that there is always potential in inflicting or having inflicted pain or serious injury.

Warriors mentality
CMA are about training warriors. Not about self-defense or sports. It was about survival. Kill or be killed. For all the other benefits that the arts bring us, and the difference in focus in training for today’s society the truth is it was about survival. I am a warrior. I may be able to be an artist, a teacher, and expert on security and personal defense and so many other things. But the characteristic of mental toughness not mentioned in the study is about combativeness. Your study’s questions focus on Karate as a sport and about a sport mentality level of mental toughness. Combative toughness is a willingness to sacrifice for results. It is about never quitting despite the odds. It is about eating pain because the mission and the results are more important than your inconvenience. You cannot teach this without a drive from the student and an environment of a school more like boot camp, which is not going to happen. Now is this necessary for today’s school of arts? The answer to that question is no. Combativeness is not needed in today’s schools, however it is a quality I posses that is part of the ancient curriculum of training warriors. The techniques only make sense if you take a look at the results the earlier masters were working for long before martial arts became a commercial venture and the training went from one on one to training groups of people for profit. They wanted to train people to live in a society where there is no police, officials were corrupt, and then your only chance of standing up for yourself lay in the hands at the end of your arms.

Win at all costs mindset.
I believe that true martial arts requires people to have the mind set that no matter what I have to do, I will win. Unlike sport Karate, there is no referee in a real encounter. There is no one to call time and there is no stopping if you are hurt. There are no rules on the street. To be successful you have to have the mindset that no matter what, you will never quit or give up.

Realistic simulations of self-defense.
Simulations of real-life self-defense. For effective self-defense training, the instructor (in a SAFE manner) must simulate as close as possible to a real-life dangerous situation to greatly increase the students chance of success when faced with an unfortunate situation.
176. Staying power; readiness to experience danger.

Fortitude, or guts, including both the courage to face danger as well as sticking it out under pain.
Appendix T
Phase II Phone Interview Transcripts and Codes

Case 1: Shihan
7/23/09
9:30 am

Doug: I would like to start by having you focus on the importance of mental toughness from a CMA perspective. What are your impressions about mental toughness in the CMA?
Shihan: It is required to go up in rank, higher in level. [Shihan 1]

Doug: What role (if any) do you think mental toughness plays in the CMA?
Shihan: New students need it to stick it out and progress over the years. [Shihan 2] Especially to overcome the monotony. [Shihan 3]

Doug: What you are telling me is very important. Can you give me an example?
Shihan: Sure. The monotony of doing the basics over and over. [Shihan 4] The true gains come from doing the same movements over and over. [Shihan 5]

Doug: Now I would like to shift our attention to the teachability of mental toughness from a CMA context. What do you think about teaching mental toughness to classical martial artists?
Shihan: They have to have a drive to begin with. We are not in a mandatory environment. People don’t have to show up to practice. They have to have the desire to start with. [Shihan 6]

Doug: Can you provide any examples?
Shihan: There is not much we intentionally do in the dojo to developmental toughness.” Maybe through encouragement to continue training. [Shihan 7]

Doug: At this point I would like to focus on the results of the survey.” “The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about these results?
Shihan: All are important. [Shihan 8]

Doug: What role (if any) do you think these factors play in mental toughness?
Shihan: Dedication and the development of dedication, is created by creating the habit. What I mean is that we become dedicated by developing a habit of training every Thursday. Habits are essential to developing mental toughness. [Shihan 9] Everything else, mental and physical conditioning, the readiness to perform, distraction control, changing focus of attention, depends on developing habit or dedication. [Shihan 10]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these results?

Shihan: While reading the book From Good to Great I was thinking about your topic of mental toughness. These attributes are not just unique to martial arts or activities that require you to be physically tough but also mentally tough, as in business. In this sense they may not be unique. For example, I think they may play a role in business. [Shihan 11] Anticipation is unique to martial arts training in that you know what the opponent is going to do, like Master Fang’s sensitivity training. However, you need to anticipate what your business clients are going to do. We can also do this with beginning white belt students. Sometimes we can know what they do before the actual encounter. [Shihan 12]

Doug: What role (if any) do you think these factors play in mental toughness?

Shihan: I think that ethics is naturally related to mental toughness. [Shihan 13]

Doug: What you are saying is very important. Would you mind to give an example?

Shihan: Whether in business or martial arts it is important not to take the easy way out. The easy way is not always the best way or the most ethical way. You have to be mental tough to resist the easy way. [Shihan 14]

Doug: Is there anything else you would like to add? Is there anything else that you think I should know?

Shihan: No, that’s about it.

Doug: Thanks for taking the time to share your perspectives.

Case 2: David
7/23/09
3:00 am
Doug: “Thank you for fitting in the interview.”
Douglas: It's no problem.

David: I want to take much of your time. The interview will take no more than 15-20 minutes. I will be recording your comments as they are given. The way I hope to do that is by asking you 5-6 open-ended questions. There are no right or wrong answers. The purpose of this phone call is to get a better understanding of the survey results. Did you have any questions about the email attachments? As previously mentioned, data gathered from this interview will remain confidential and your anonymity will be retained. In order to protect your anonymity I will replace your name with a pseudonym. Do you have a name that you would like for me to use?

David: David

Douglas: I would like to start by having you focus on the importance of mental toughness from a CMA perspective. What are your impressions about mental toughness in the CMA?

David: I see two areas that are important. One is competition or the ability to bounce back after a loss. If I lose a match it means that I would be dead on the battlefield. This type of loss is harder to recover from than losses in other sports. It's hard to get back your confidence. [David 1] The second area is has to do with training or having the commitment to continue train. For most martial arts it is a lifelong process. It takes a long time to see the value of some of the techniques, like stances. [David 2] This requires having trust in your teacher.

Douglas: Now I would like to shift our attention to the teachability of mental toughness from a CMA context. What do you think about teaching mental toughness to classical martial artists?

David: A good teacher can teach everything except one area that you mentioned, dedication and commitment. That is 100% up to the individual. Everything else is teachable. [David 3]

Douglas: Regarding the other areas, like determination and conviction, can you provide examples of how mental toughness is taught?

David: You can push people further as a group. As they see themselves go further as a group they realize that they can do more. Then their confidence grows. At which point they are more likely to push themselves more when they practice by themselves. [David 4]

Douglas: At this point I would like to focus on the results of the survey. “The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of
Attention. How do you feel about how these results explaining mental toughness in the martial arts?

David: I agree for the most part with everything, especially factors 1, 2, and 3. These factors are commonly found throughout the sports world and have been stressed by some of my sports coaches.

Doug: What role (if any) do you think any of the other factors [4,5,6] play in mental toughness?

David: Readiness to perform might be unique in that it requires the ability to react at a moments notice. You have to be able to apply what you are learning. You have to be able to react to surprise.

Doug: Can you provide an example of that?

David: It’s like moving from semi free sparring to free sparring. Mentally and physically [technique] you now what to do. However, it is difficult to apply those abilities in free sparring. It’s hard for people to get in the game. [David 6]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these results?

David: Anticipation is not unique. Any athlete [from all sports] will try to anticipate the opponent. [David 7]

Doug: How do you feel about Attitude towards Learning as a component of mental toughness?

David: I feel this is more important in the martial arts where culture influences how it is taught. The martial arts were not developed in a democratic society. It requires a different mindset, adopting cultural values. It requires having an open mind about what you are learning and how it is taught. [David 8]

Doug: Do you feel that Ethics is part of mental toughness?

David: Ethics is part of mental toughness. [David 9]

Doug: Would you mind to elaborate on the importance of ethics in mental toughness?”

David: In the martial arts where individual are trying to hit each other, ethics are very important. Being ethical requires one to be able to control ego. In other situations [during training], it’s not personal if you hit someone you respect. You show respect by pushing the other person. [David 10]

Doug: Is there anything else you would like to add?
David: Yes, more about culture and implications. The learning attitude we were discussing has to do with the ability to step into another culture, free from a democratic style of teaching.

[David 11]

Doug: Thanks for taking the time to share your perspectives.

Case 3: Marcus
7/27/09
5:00 pm

Doug: Thank you for interviewing with me.

Marcus: It’s no problem.

Doug: I want take much of your time. The interview will take no more than 15-20 minutes. I will be recording your comments as they are given. The way I hope to do that is by asking you 5-6 open-ended questions. There are no right or wrong answers. The purpose of this phone call is to get a better understanding of the survey results. Did you have any questions about the email attachments? As previously mentioned, the data gathered from this interview will remain confidential and your anonymity will be retained. In order to protect your anonymity I will replace your name with a pseudonym. Do you have a name that you would like for me to use?

Marcus: Marcus

Doug: I would like to start by having you focus on the importance of mental toughness from a CMA perspective. What are your impressions about mental toughness in the CMA?

Marcus: Someone needs to set their mind to the point that they want to learn martial arts. [Marcus 1] Once they have that desire then nothing can really stop ya. [Marcus 2] If you truly get your mind fixed to it then you will be able to overcome any obstacles. [Marcus 3]

Doug: Would you mind to give an example?

Marcus: Sure. Consider a technique you want to master, if your having problems mastering that technique you just have to stay at it until you get it. No matter how long it will take you or how hard you have to work, you just have to decide that you are willing to go the extra mile. [Marcus 4]

Doug: Now I would like to shift our attention to the teachability of mental toughness from a CMA context. What do you think about teaching mental toughness to classical martial artists?
Marcus: It is possible because certain teachers have given me a certain mindset for it. Whereas before I would have thought it was up to the individual. That the individual was born a strong minded person. I have learned from my teachers that there are certain things you can do to focus/fix your mind that makes you tough. [Marcus5]

Doug: Would you care to elaborate?

Marcus: For example, discussions with Master Fang [martial arts instructor]. He use to ask the question, what would you do if a bear charges you? He said you don’t have a choice. You have to fight. The bear is your food and you want to enjoy your meal. Killing the bear is enjoying your meal. You have to think you’re going to win no matter what it takes. [Marcus6]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about these results?

Marcus: Each are main components of mental toughness and responsible for achieving success in martial arts. [Marcus7]

Doug: What role (if any) do you think any of these factors play in mental toughness?

Marcus: Dedication stands out more important than any of the others. You must be dedicated to see results. You can be distracted one or two times In the dojo, but you must be dedicated to show up for practice and overcome those problems keeping you from mastering a technique. [Marcus 8]

Doug: “What about the other factors? What role, if any, do you think any of these factors play in mental toughness?”

Marcus: Readiness to perform is extremely important for true fighting. A true fighting situation could happen as a surprise, sucker punch. If you are not ready then you lose. In a dojo you have time to get ready and prepare for fighting. This is not always true with true fighting. You could be in your living room enjoying a TV show with your family then someone breaks in on ya. Ya don’t have time to prepare. [Marcus 9]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these results?
Marcus: Attitude and ethics are components. In true classical dojo, if you have a bad attitude the high level masters want teach you. You have to prove you’re a good person to receive training. [Marcus10] Many of these folks have a good sense of ethics [before starting their training] but training will give you better ethics, how to treat someone, how to conduct yourself. [Marcus 11]

Doug: Can you provide an example?

Marcus: I had ethics first. My mom and dad taught me how to act. My attitude has opened the door to be accepted by high-level masters. These masters taught me more about ethics and instilled mental toughness. [Marcus12]

Doug: What you are telling me is very important. Can you please elaborate a little more?

Marcus: Ethics have lot to do with having pride in yourself, valuing yourself, others. If you value yourself and take pride in your actions, your mind will be open to improving yourself, learning. [Marcus 13]

Doug: How do you feel about Attitude Towards Learning as a component of mental toughness?

Marcus: It is a component [Marcus14]. If someone enjoys martial arts it comes easy, toughness is not needed. But if you don’t have mental toughness, and you are struggling with a technique, you just want to quit. If you have the right attitude about learning you are more likely to continue. [Marcus15]

Doug: Would you mind to give an example?

Marcus: Consider sanchin kata. You could teach someone every move in 1 hour. You train for 20-30 years and still make mistakes. A high level master could pick you apart. It’s frustrating to struggle learning something that seems so easy. However, if you have the right attitude about learning you more or less enjoy the new discoveries [laughing]. [The participant is attempting to put criticism in a positive light]. [Marcus16]

Doug: Is there anything else you would like to add? Is there anything else that you think I should know?

Marcus: I keep going back to what Master Fang says about true love. Your training cant only be about you, not only important to the individual but also because it makes me train harder to protect my family. [Marcus17] It’s a motivator [Marcus18].

Doug: Thanks for taking the time to share your perspectives.
Case 4: Monte

7/28/09

11:00 am

Doug: Thank you for interviewing with me.

Monte: It’s no problem.

Doug: In order to protect your anonymity I will replace your name with a pseudonym. Do you have a name that you would like for me to use?”

Monte: I doesn’t matter. You can pick one.

Doug: How about Monte?

Doug: I would like to start by having you focus on the importance of mental toughness from a CMA perspective. What are your impressions about mental toughness in the CMA?

Monte: I think mental toughness is what gets you through the training. [Monte1]

Doug: Would you mind to give an example?

Monte: OK, when you are physically exhausted or unsure of what you are doing. For example, when learning something new, it [mental toughness] helps you to concentrate. It helps keep your mind in one place. [Monte 2] It helps you to push through when exhausted. [Monte 3]

Doug: Now I would like to shift our attention to the teachability of mental toughness from a CMA context. What do you think about teaching mental toughness to classical martial artists?

Monte: I don’t think you teach it in the traditional sense, you can’t instruct it. You can demonstrate by example. The instructor can provide instances when they struggled but mental toughness helped them to focus and push through. You cant really teach someone how to focus. The student has to do this themselves. [Monte 4]

Doug: Would you care to give me an example?

Monte: My instructors said to avoid getting tripped up over 1 or 2 moves, you move forward, don’t hesitate. You can’t stop in the middle of a bunkai and try to figure out what you did wrong. Don’t second guess yourself; look at the bigger picture. You should know Geikisai Sho very well. But more importantly, you should know what the kata is about. Know the big picture. [Monte 5]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical
Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness?

Monte: I think they are the most applicable. [Monte 6] I think conviction and dedication most appropriately describes factors 1 and 2. Conviction should be used to describe factor 1 and dedication should be used to describe factor 2. Determination and conviction are very similar. Dedication and commitment are very similar. [Monte 7]

Doug: What role (if any) do you think any of these factors play in mental toughness?

Monte: Readiness to perform and distraction control are difficult to me. I think I am ready but the techniques go out the window during a [high stakes] performance. A few years ago, we did a demonstration at a county fair. I felt like I was prepared. However, during the actual performance, anxiety set in and I felt like a beginner. [Monte 8] But, I feel like it is a journey. If I had all 6 areas down then there would be no need for martial arts training. I feel like the training helps me with focus.

Doug: Would you mind to provide examples of training routines that help you with focus?

Monte: Bunkai. Fast Bunkai. Those drills really improve your focus. [Monte 9]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. “How do you feel about these attributes being unique?

Monte: I am not sure about anticipation. [Monte 10] You have to come into training with a good learning attitude. It’s incredibly important. [Monte 11] Ethics is incredibly important as well. They provide guidance on how to use techniques. [Monte 12] Trust and ethics go together. You and your training partners are there not just for themselves but to help others as well. [Monte 13]

Doug: The martial artists responses to anticipation describe it as similar to having a sensitivity. What are your thoughts on anticipation?

Monte: I think it is important for the martial arts. I don’t think it is necessary for mental toughness. [Monte 14]

Doug: Do you feel these attributes are unique?

Monte: No, not unique. They are important in other activities as well. [Monte 15]

Doug: Is there anything that I could be overlooking about mental toughness? Is there anything else that you think I should know?

Monte: Learning attitude, determination, and dedication are most important. [Monte 16]
Doug:  Thanks for taking the time to help with the interview.

Case 5:  Wolfeyes
7/29/09
3:00 pm
Doug I:  Thank you for interviewing with me.
Wolfeyes:  It’s no problem.
Doug:  In order to protect your anonymity I will replace your name with a pseudonym.  Do you have a name that you would like for me to use?
Wolfeyes:  Wolfeyes
Doug:  I would like to start by having you focus on the importance of mental toughness from a CMA perspective.  What are your impressions about mental toughness in the CMA?
Wolfeyes:  If you are going to pursue and accomplish anything of real value you will find you have to have it.  [Wolfeyes1]
Doug:  Would you mind to give an example?
Wolfeyes:  Anytime that your confronted with someone with superior skills that are not necessarily friendly towards you, well you either get better or don’t continue.  Really, the only way is to get better is to work against those kinds of people.  It takes mental toughness to continue working with those kinds of people.  [Wolfeyes2]
Doug:  Now I would like to shift our attention to the teachability of mental toughness from a CMA context.  What do you think about teaching mental toughness to classical martial artists?
Wolfeyes:  It can be difficult.  Some people never get.  I don’t know that you can sit down with someone and verbally instruct them on how to be mentally tough.  It is important to interact with other people as much as possible.  [Wolfeyes3]
Doug:  Would you care to give me an example?
Wolfeyes:  We have many visitors come to our school.  It doesn’t matter if the students like them or not they have to learn to maintain their composure.  In order to learn mental toughness, the student has to experience opportunities that bring out mental toughness.  They might trust me as a teacher.  However, when they interact with folks that they don’t always trust and feel secure about, mental toughness is required to continue training.  [Wolfeyes4]
Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness?

Wolfeyes: You need these to work through the boredom, the rigors of training. You need determination to push you through. The student must be determined to reach beyond the boredom and get something out of the training. You have to get past the boredom and continue to learn.

Doug: Would you mind to provide an example of when you experienced this idea in your training?

Wolfeyes: You have to accept criticism to continue to improve on your techniques. You have to be able to accept ideas that you don’t necessarily agree with and accept what you are told. This is especially important for teachers who have been teaching a particular way. Then they are told to perform the technique a little differently. It’s difficult to return to your class and explain that now we are going to do this technique this way instead.

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. “How do you feel about these attributes being unique?”

Wolfeyes: Anticipation outlines what martial means, its what martial arts are all about. How to fight or not to fight. If I can anticipate that I should not be here or change something then you can avoid loss or being attacked. There are several things you can do to improve your survival ability rate. This can be seen in kata. Why, in the kata, am I being attacked in a certain way? Why do I step forward with my right foot and block? It’s usually because your presenting an opportunity to the opponent which makes him want to attack in a certain way. It’s like baiting the person. You [set them] up so they do what you want them to do. Then you can cut down on the odds of what your opponent can do. He’s punching at my head because I have made that opportunity for him. People lose because they have given the opportunity for a person.
Doug: This is very important information. Would you mind to go a step further and explain how this relates to mental toughness?

Wolfeyes: You have to look beyond what’s right in front of you. In order to do that, you can’t get caught up in emotions, and get tunnel vision. You have to have self-control in order to anticipate your opponent. Not getting caught up in emotions requires mental toughness.

Doug: Do you feel these attributes are unique?

Wolfeyes: I think they are also found in other activities. They are deeper in the martial arts because they get into a whole psychology of mankind. They exist in other things but not as critical. Don’t run as deep. In the martial arts, a teacher may not teach you something if you’re not ethical. Say there is a secret technique that will work 100% of the time. The teacher might want to know how you will use it, what you will do with it before they will teach it to ya.

Doug: Is there anything that I could be overlooking about mental toughness? Is there anything else that you think I should know?

Wolfeyes: Can’t think of anything right off. There has to be a connection to your spirit. You can’t have any apprehensions about what you are going to do. You can’t be wishy washy about your actions. You need to know that in your own belief system, that what you are doing is correct. You need to get rid of the wishy washy attitude and be fixed on what you are doing no matter what. There is an old saying, To know your opponent, you must know yourself.

Doug: Thanks for taking the time to help with the interview.

Case 6: Karateka

7/29/09
8:00 pm

Doug: Thank you for interviewing with me.

Karateka: It’s no problem.

Doug: In order to protect your anonymity I will replace your name with a pseudonym. Do you have a name that you would like for me to use?

Karateka: Karateka
Doug: What are your impressions about mental toughness in the CMA?
Karateka: Martial arts tend to build it up more than sports just from the nature of the way we teach and things we emphasize. [Karateka 1]

Doug: Would you mind to give an example?
Karateka: We like to encourage our students to not give up. For example we have a Japanese motto we repeat in the dojo: Gambate Kudasai, Train Hard Train Often. [Karateka 2] Also, through repetition. [Karateka 3] and the progressive nature of difficulty in subject manner. [Karateka 4]

Doug: Now I would like to shift our attention to the teachability of mental toughness from a CMA context. What do you think about teaching mental toughness to classical martial artists?
Karateka: The idea of teaching is not quite right. Mental Toughness is innate in everybody. [Karateka 5] I can take your survival instinct and draw up on it. Its like an ink spot. I can take a little ink and draw it out to make a larger spot. Everyone has it to a certain degree. [Karateka 6] It has a lot to do with your upbringing, your home situation as you are brought up. [Karateka 7]

Doug: Would you care to give me an example of how mental toughness is drawn out?
Karateka: Part of it is getting over barriers such as being shy. I deal with 7-10 y/o kids. A girl in particular does not want to kiai in class. With practice however, she can do it. [Karateka 8] A boy on the other hand may not have as much difficulty with the kiai, at first. It’s sort of social conditioning. Varies from home to home. [Karateka 9]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness?
Karateka: I think a few of those areas might be one thing. I think they might be derived from survival instinct. For example, determination and readiness to perform comes from basic survival instinct. They may be related to fight or flight. It may have to do with the ability to switch between the angry animal and calm social creature. [Karateka 10] Bunkai and various exercises help to evoke the fight or flight. [Karateka 11]
Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. “How do you feel about these attributes being unique?

Karateka: I can see anticipation as being a unique factor. [Karateka 12] The more I experience how my body works in a certain way, the more I can anticipate how someone else’s body will act. [Karateka 13]

Doug: How about attitude towards learning and ethics? What role do they play?

Karateka: Attitude towards learning, not a lot of people have the right attitude, they get it when they come to the dojo or sort of fall away. [Karateka 14] Ethics, when should you be in a confrontation. That sort of becomes your toughness, that you uphold the ethics. [Karateka 15]

Doug: Is there anything that I could be overlooking about mental toughness? Is there anything else that you think I should know?

Karateka: Could probably look into the psychological roots [of these attributes] but you basically have it covered.

Doug: Thanks for taking the time to help with the interview.

Case 7: Kuraku
7/30/09
5:00 pm

Doug: Thank you for interviewing with me.

KURAKU: No problem. Glad to do it.

Doug: In order to protect your anonymity I will replace your name with a pseudonym. Do you have a name that you would like for me to use?”

KURAKU: Kuraku

Doug: What are your impressions about mental toughness in the CMA?

KURAKU: Driven, Determined, the ability to focus, and block out distraction. [Kuraku 1] The ability to keep going even if you’re hurt. [Kuraku 2]

Doug: Would you mind to give an example?

KURAKU: Different videos of cops being shot but able to fight through it. If you don’t die from major blood loss. You can survive. You can fight through it. [Kuraku 3] Like when Kurata
was punched in the face but he said it’s not the end of the world. Helps you not to be afraid. It’s the Warrior mindset. You can push through. [Kuraku 4]

Doug: Now I would like to shift our attention to the teachability of mental toughness from a CMA context. What do you think about teaching mental toughness to classical martial artists?

KURAKU: The first two components, determination and drive, you can’t teach. You have them or you don’t. Block out distractions yeah you can teach. [Kuraku 5] Can’t teach the drive. They have to have it or find it for themselves. You can’t coach desire. [Kuraku 6]

Doug: Would you care to give me an example of how the other attributes are taught?

KURAKU: Mental and Physical Conditioning is easier to teach. [Kuraku 7] When your heart rate increases you lose fine motor skills and people panic and freeze. A person like Kurata or another fighter, use to bar fights, don’t get as nervous. But if you’re in the situation a lot, you get use to it. I saw a documentary of a police officer that taught his daughter how to respond to assaults. For example, if someone grabbed her backpack, how should she react? Someone actually grabbed her backpack one time, she did as she had been trained and she survived. [Kuraku 8] If you have prepared to deal with a scenario, you’re not as apt to freeze up and do nothing. Put people in those situations and let them get use to it. [Kuraku 9] [Kuraku 10] [Kuraku 11]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness?

KURAKU: Those 6 are right on. [Kuraku 12] Those are the six I would have picked. [Kuraku discussed these 6 in the first question.]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?

KURAKU: Ethics, respect. It means something. It’s not just about kicking butt. It has to mean something. I love the saying, with great power comes great responsibility. You have to be selective on who you teach and pass that knowledge on to. With that kind of training it [respect] has to go along. The judgment of when to use it is important. There are no reasons to have to
fight. But there is every reason to know how to fight. You have all of this knowledge and power, what do you do with it? [Kuraku 13] It means more than the some of its parts. It’s really about protection, protecting those in need. [Kuraku 14]

Doug: How about anticipation as a unique attribute?

KURAKU: Anticipation may be similar to the ability to adapt to change, etc. It’s about changing your focus to fit the environment. [Kuraku 15]

Doug: Thank you. Our time is about up. Before we stop, is there anything you would like to add?

KURAKU: I can’t think of anything.

Doug: Thanks for taking the time to help with the interview.

Case 8: Chuck
7/30/09
8:00 pm

Doug: Thank you for interviewing with me.

Chuck: Sure.

Doug: In order to protect your anonymity I will replace your name with a pseudonym. Do you have a name that you would like for me to use?

Chuck: Chuck

Doug: What are your impressions about mental toughness in the CMA?

Chuck: Good physical health and mental toughness are benefits of training. [Chuck 1]

Doug: Would you mind to give an example?

Chuck: The physical training develops a certain amount. But also emphasis is on awareness. At a certain level we teach students to have awareness. [Chuck 2] We also spend lots of time about awareness outside of dojo.

Doug: What are your impressions about teaching mental toughness in the CMA?

Chuck: In my experience in CMA mental toughness was taught from the first minute of class. The guiding principle of respect and humility. These have inter-flowed throughout my training. [Chuck 3] After years of this I realized that it takes a strong person to be truly humble. A weak mind and spirit will use anger and violence. A strong mind and spirit uses skill, knowledge, and always uses respect and humility. These key aspects been more beneficial to me than other parts
of training. [Chuck 4] In my instructors dojo, we have Japanese writing that says, Hito no michi wa nintai nare. To endure. Nintai. Enduring the training makes you a better human being, builds your mental toughness. Before you get what’s good you will be molded and shaped to appreciate that goodness. [Chuck 5]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness?

Chuck: We have been taught from day one when you bow you leave your problems behind. [Chuck 6] That transfers to everyday life.

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?

Chuck: Anticipation may be similar to the ability to adapt change, etc. [Chuck 7] Respect. Self respect cultivated with physical training. If I am teaching, my classes are a little different. Shut the AC off and put everyone through hard training with kata. After an hour you develop a sense of accomplishment, you made it through. I had a sense of accomplishment. Increase value and self-worth. [Chuck 8]

Doug: Can you think of anything I could be missing?

Chuck: Having true love for what you do. Having that true love attitude about what you are doing. If you don’t have that you don’t survive very long in it. [Chuck 9] That feeling in your heart develops mental toughness. If you have that attitude about anything you have fortitude, stubbornness. [Chuck 10] True Love is nothing but how hard you are willing to try. [Chuck 11] That true love determination is the true foundation of mental toughness. [Chuck 12] I hope this helps and if I can do anything for you let me know.

Doug: Thanks for taking the time to help with the interview.
Doug: Thank you for interviewing with me.
Pioneer: Its no problem.
Doug: In order to protect your anonymity I will replace your name with a pseudonym. Do you have a name that you would like for me to use?”
Pioneer: Pioneer
Doug: What are your impressions about mental toughness in the CMA?
Pioneer: Anyone who sticks with something has it. In the ma less than 5% will last more that 6 months; about a 50% drop out rate. There is even a greater drop out rate as you progress in the ranks. Its tough to stick with anything. [Pioneer 1]
It is difficult to explain the significance of mental toughness because its something each person defines differently. [Pioneer 2]
Doug: What are your impressions on teaching mental toughness? Is it teachable?
Pioneer: Yes, if you can get someone to stick to the program. We can encourage one to stick to the program. Its stick-to-it-ness that we can teach. [Pioneer 3] However, just because they stick to a program doesn’t mean they will be able to defend themselves. I don’t think that mental toughness necessarily coincides with her ability to defend herself. On the other hand, a lady might be able to reach deep down inside, during another crisis and rescue her child. It is highly specific. [Pioneer 4] I don’t know that you can teach the lady to rescue her child. Its something she already has. [Pioneer 5]
Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. I would like to focus on the first 3 factors at this time. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning. How do you feel about using these factors to explain mental toughness? What role do you think they play?
Pioneer: I can see that those three [conviction, commitment, conditioning] are components. [Pioneer 6] Commitment is related to the second question. That is if I am going to learn Uechi Ryu or anything else, stick- to- it-iveness is needed. Commitment is important. [Pioneer 7] Conditioning empowers me to be able to commit to a program. Make sure you train safely when you’re younger so you can stick to it when you’re older. I can train now because I am in as good as shape when I was 20. Commitment can work together with conditioning. [Pioneer 8]
Conviction is the belief that this program is something you want to obtain. You have to believe in the program. [Pioneer 9] However, you could have a bad teacher and that program, that belief, can work against you. For example, if you have a bad teacher that trains you incorrectly and you injure yourself, it is harder to be committed, your conditioning is affected. I believe that you can inspire these virtues. We probably possess all of these traits to some degree.

Doug: How do you feel about 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention” describing mental toughness in the CMA?

Pioneer: They [readiness to perform, distraction control, ability to change focus] are just part of the program. You work on drills, mindset, and the tools of your style. In the process you achieve a certain amount of skill in those areas. They are a natural outflow of program. These things come with training not necessarily something that is before. [Pioneer 10]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?

Pioneer: The way we train students puts a lot of importance on those attributes. We talk about those in class. They are unique because we are able to teach these in a way that maybe school cant. [Pioneer 11] For example, we can have students perform push-ups for misbehaving. They can’t do that in school; they will get sued. But in karate, this makes them feel like they are doing something unique, different, and special. Discipline (ethics) causes them to feel unique. The student feels good about achieving these traits in class. [Pioneer 12]

Anticipation; as we spar we are always aware of movement. For example, we notice the subtle shifting of weight. [Pioneer 13]

As far as attitude towards learning, I could join a baseball program. The coach could ask me to do drills and I can go along with them. Someone else could say, these drills are not good and I am no longer open to the training. However, I could join a program that I don’t know anything about. I could go along with the program even thought the drills, etc, are no good. I am open to learning because I don’t know much about the program. The degree to which I am open to learning, open the program is based on previous experience. This could be good or bad. [Pioneer 14]

Doug: From your long history of martial arts expertise can you think of any important components of mental toughness that I am missing?
Pioneer: I think that everyone has mental toughness. The question is how you bring it out. It is specific to the area applied. [Pioneer 15] For example, do I see martial arts training as an art or a form of self-defense? Will I continue training for an extensive time just so that I can defend myself once or perhaps never need to defend myself. The motive is not there to continue training. [Pioneer 16] My mental toughness depends on my motives, my purpose. [Pioneer 17] Doug: Thanks for taking the time to help with the interview.

Case 10: Bilb
8/4/09
7:00 pm
Doug: What are your impressions about mental toughness in the CMA?
Bilb: I think that being a traditionalist that it takes years of training before it becomes a part of your life, a lifestyle. When you go beyond black belt you begin to train the mental part of it. [Bilb 1] For example, timid people over a period of time gain confidence. People learn the basics but don’t stay in it to develop the mental toughness. You have to be mentally tough to protect yourself. Street fighters have it. Martial artists need it as well. [Bilb 2] The ability to walk away is also mental toughness. If you have to then you can defend. [Bilb 3]
Doug: What are your thoughts on teaching mental toughness?
Bilb: Comes along with the type of training that you have. Its not the style of martial arts that matters, it’s the teacher and how they teach. I do not believe that you can go into a karate school and not have contact. Traditional martial arts are not for everybody because some people do not want any contact. When I began karate, it took 6 months of not sparring to build a base. By that time I was anxious to spar. Then sparring began. When we went anywhere we were respected because we were tough in the head and body. This is because we were taught in a tough and hard way. This way served to build confidence/toughness. There is as look in your eyes that says you don’t want to mess with this guy. [Bilb 4]
Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. The first three factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning. How do you feel about using these factors to explain mental toughness? What role do you think they play?
Bilb: I was married to it when I saw it. If you commit yourself you want to contribute. A lot of people are selfish but a true martial artist is not just in it for himself. He helps teach others. [Bilb 5] I was committed to karate from day one. I knew from the beginning that this is something I wanted to do, commit to long term. The reason being, because I saw something in karate that I really liked and believed in. [Bilb 6]

Doug: How do you feel about 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention describing mental toughness in the CMA?

Bilb: Readiness to perform. Over a period of time you develop a sense of danger. Over years of training your readiness to perform improves. You have to be careful that you don’t hurt someone. For example, one of my friends suddenly grabbed me, I reacted and hurt him. You are very sharp when something like that’s happens. If you walk down a dark alley. Its like being in a dark room, you can feel it. If you are working out with candles in a dark room with advanced martial artists you can feel it. I am not into the spirituality of martial arts. Some people that I know in the martial arts have had spiritual experiences. Its not that, its an awareness of whats going on around you. There is an awareness, an ability to anticipate. Another example is the You Move I Move exercise. You watch for subtle movements in your partner. You are on your toes, constantly reading your surroundings. [Bilb 7]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?

Bilb: Attitude and respect has to do with mental toughness. [Bilb 8] You automatically have my respect. If you lose it you will not get it back. I respect everyone, regardless. True martial arts do not disrespect others. Respect is everything. It’s an honorable pursuit. It’s seen in the bow. It’s seen as deep camaraderie. We have all been through tough training together. Tough training builds camaraderie much like the camaraderie found between servicemen. [Bilb 9]

Doug: From your long history of martial arts expertise can you think of any important components of mental toughness that I could be missing?

Bilb: With martial arts training, bullies become better people or they quit because they can’t take it. It is easy to straighten them out. Many of them change with training. I have one student who was like that but has changed and now has his on karate school. If they don’t change the easy way, with training, you give them the hard way. You give them a little pain. For example, if
they do a front kick, you can throw a good leg block on them that causes some discomfort. If they can’t learn easy way, or hard way, then you send them on their way. [Bilb 10] Respect for the karate school is important. [Bilb 11] One way to disrespect the school, the tradition, is to start a fight. You are a part of the school. You represent the school; you cannot disrespect people. [Bilb 12]

Doug: Thanks for taking the time to help with the interview.

Case 11: Grizzly
8/8/09
1:00 pm
Doug: What are your impressions about mental toughness in the CMA?
GRIZZLY: Very important. To be a way of life you have to have mental toughness to be effective. Without mental toughness we would not have it today. Without mental toughness the art would have died out. [Grizzly 1]

Doug: What do you think about teaching mental toughness in the martial arts?
GRIZZLY: We teach mental toughness during the times when you train and push yourself past what your body can take. [Grizzly 2] When you push through that barrier. When you are forced to go past what your physical endurance is, you continue so mental toughness has to take over.

Doug: Would you care to give me an example of how mental toughness is drawn out?
GRIZZLY: A marathon runner hits the wall. In order for him to go past the wall he has to have mental toughness. [Grizzly 3]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning. How do you feel about using these factors to explain mental toughness? What role do you think they play?
GRIZZLY: The body follows the mind. If your heads not there your behaviors will not follow. Your behavior follows your conviction. [Grizzly 4]

Dedication and Commitment – Again, it starts with the mind. If you want to be successful at something you have to commit to it. You have to have discipline, sacrifice and structure. [Grizzly 5]
Conditioning – Physical conditioning is important. If you want to meet a goal, progress, you have to have to be constantly challenged. Physical overload is required to progress. If you want to be conditioned you have to mentally struggle. Physical conditioning is increasing mental toughness. [Grizzly 6]

Doug: How do you feel about 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention describing mental toughness in the CMA?

GRIZZLY: Readiness to perform; it’s everything. It’s a thought process knowing you’re always ready for action. It’s a discipline. As a police officer you have stages of awareness. You make a decision; if I need to I will use lethal force. That is a discipline. It is a learning process to think things through and mentally prepare, how will you react, hopefully automatic. How do you train to meet that need? Part of getting ready is repetition. How you would train so that you can react automatically. [Grizzly 7] Your fine motor skills go when your stressed. Your ability to process info goes. For example, during an actual confrontation, I responded with lethal force. I was not consciously aware of how I responded. Others informed me as to the extent of my response, which was not at all what I had experienced. [Grizzly 8] You have to react automatically. That requires training, dedication, and commitment. You mentally prepare but you don’t follow through with training you have nothing. [Grizzly 9]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?

GRIZZLY: Anticipation does not have to be related to mental toughness. It may be mental awareness, be aware of the environment. Your training and experience helps you read certain ways. [Grizzly 10] Attitude towards learning; anything you do towards learning is a discipline, it goes back to your mindset, having to sacrifice, requires mental toughness. Discipline requires a structured thought process. [Grizzly 11]

Doug: How about ethics? What role does it play?

GRIZZLY: Ethics is not a component of mental toughness for everybody. For example, some individual were raised in church to be polite and respectful. Later, that person could begin studying martial arts, which requires respect. Ethics for that person may not be difficult, not require self-restraint. It’s specific to the person, the individual. To another person, politeness
may not come so easy. [Grizzly 12] It comes back to developing discipline, self-control. It’s behavior modification. [Grizzly 13]

Doug: From your long history of martial arts expertise can you think of any important components of mental toughness that I could be missing?

GRIZZLY: The conditioning. A strong body and mind is essential. Looking at the condition in a holistic manner. [Grizzly 14] In order to progress, to grow physically, you have to present a challenge, something difficult. [Grizzly 15] Mental toughness is required to meet the challenge. [Grizzly 16] You need a conditioned, strong body and mind to meet the challenge. [Grizzly 17] You also need the process of conditioning to make a strong body and mind.

Doug: Thanks for taking the time to help with the interview.

Case 12: Kame
8/8/09
4:00 pm

Doug: How do you feel about mental toughness in the CMA?

Kame: It’s important. It’s the ability to overcome ones physical abilities and limitations. It’s the ability to continue training, despite your physical limitations. Its overcoming our on personal struggles on the inside whatever they are. [Kame 1]

Doug: How do you feel about teaching mental toughness to classical martial artists?

Kame: Yes, I feel you can teach it. But you probably would not be able to tell it. [Kame 2] Like other parts of the martial arts, progression is often very slow (you can’t detect an improvement). Plus it’s different from person to person (the characteristics varies from person to person).

[Kame 3]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness? What role do you think they play?

Kame: Those are all important. [Kame 4] They can all be explained in 1 word, patience. Think about the meaning of patience then look at the 6 factors. Now consider those factors while
looking at the book of Job. [Kame 5] With Readiness to perform; you might feel anxious but knowing that you are able to cope and go through with it [the performance] is mental toughness. Think about church. Church often prompts us to think about life and death and make decisions. Those in the back don’t want to be in the limelight or to be called upon. Those in the front, they kind of want it. They want to take part in everything. They want to take part in those kinds of decisions. [Kame 6]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?

Kame: Anticipation comes with training. It shares a very small amount with mental toughness. [Kame 7] It’s more about being aware of surroundings. You become more aware. If you’re not aware, it’s like walking straight ahead with blinders on. A mentally tough person is a person who can focus, pay attention. [Kame 8]

Doug: How about attitude towards learning and ethics? What role do they play?

Kame: A lot of people are under the assumption they know everything. Especially the mental part of knowing; how things should be done and how you react. I want to be able to expand on an instructors teaching on mental abilities like meditation, the finer points of kata. The finer points of kata have to do with how to concentrate. The biomechanics, what to feel. Some say my way is the only way but there are other ways. Take what we already know and build. [Kame 9] You work on kata over and over and perfect details. At times you can’t see the difference. But over a period of time you can see, someone else can see the improvement. Knowledge does not happen over night. If you don’t build upon teachings and carrying out things [practice/homework] you become stagnant and lose most of what you learned. [Kame 10] Now I am having medical problems. As long as I can build on what the doctors tell me I can improve. If I don’t, I don’t improve or I die. Mental toughness is part of all of that. But, it depends on the individual person, what they believe. None of this means anything if you don’t have a faith. Faith is the center of everything. Our faith gives us life. Faith, our convictions often determine what we can learn and our behaviors. Without my belief, my convictions, I would not feel the need to listen to my doctors and do what they say. [Kame 11] It really depends on one’s definition of tough learning attitude. My definition of a mentally tough learning attitude is being
able to go along with everyone else [the instructor] and take the knowledge to a different level. 
If you see something you like you can carry it to another level.  [Kame 12]
Doug: Is there anything else you would like to add? Anything you feel I am missing about mental toughness.
Kame: No. I think you have it covered.
Doug: Thanks for taking the time to help with the interview.

Case 13: Sid
8/8/09
4:00 pm
Doug: What are your impressions about mental toughness in the CMA?
Sid: Extremely important. It is a fighting art. You are probably going to get hit in a fight so you must condition the body to deal with punishment. [Sid 1] To condition your body you must condition the mind or have a certain level of conditioning already. [Sid 2]
Doug: What are your thoughts on the teachability of mental toughness?
Sid: Mental toughness as described above, I don’t think it can be taught. You can give people the concept of mental toughness. [Sid 3] It is up to the individual to condition their own mind. It is going to be more difficult for a person not raised on the wrong side of the tracks. [Sid 4] You must be able to deny yourself the convenience of pleasure. Sacrifice of some kind is important. [Sid 5]
Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness? What role do you think they play?
Sid: I agree with all the factors. With mental and physical conditioning I would say its more on the mental. If you have someone that is not afraid then they don’t have to be that good of a martialartists. [Sid 6]
Conviction: I agree. A person needs a slight explanation. Not a guilty feeling for putting your all in to it. More along the lines of having a conviction to pursuit something. It’s a driving
force. [Sid 7] Commitment: I agree. With readiness to perform a conditioned mind never sleeps. A conditioned body does rest. If the mind is conditioned, everything else is automatically ready to go. It’s like an aircraft carrier on standby for war. The planes, soldiers are at rest. But the brains of the outfit, the radar, and guards on watch are monitoring and ready. If an enemy ship is spotted, an alarm is sounded. Everyone has been trained and knows what to do. They don’t have to think. They respond. [Sid 8] Distraction control has everything to do with mental toughness. It can take the form of worries, heartaches, and personal emotion. We fight our own demons, get our own forts cleaned out. We must make our fort a safe place, a designated place to put our focus. Distractions are not welcome there. [Sid 9] Mental conditioning involves mental discipline. You have to make that place of focus your home. Your safe place. A place where you feel strong and optimistic. A warrior’s mind is unified into a strong, single, whole. [Sid 10] A warrior needs nothing for his safe place. He is already at home because his mind is conditioned, where it needs to be. He doesn’t have to go looking anywhere in particular for a given focus. A conditioned mind is who he is. [Sid 11] With changing focus of attention, a mentally tough person, if they move their focus, mental toughness is our route. Mental toughness is innate. [Sid 12] There is always a challenge between staying in our element and focusing on something we shouldn’t. [Sid 13]

Doug: I would like to go back and revisit a very important idea that you had. You mentioned that conditioning involves discipline. Would you care to tell me more about that?

Sid: The original mechanism God put in us is survival. [Sid 14] Discipline is about making a choice to follow a certain way, the way of survival, focus. It’s natural to take the easy way. We have to work to be able to shake off disappointment. Not really being angered about things you don’t have control over. [Sid 15]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique components?

Sid: There is nothing more passionate than mental toughness. Attitude towards learning puts a passion into your mental toughness. The ability to learn reflects in a person that they are humble enough to listen and committed enough to learn beyond their present level. That within itself is discipline. [Sid 16] You need mental toughness just to want to learn. [Sid 17]
Ethics exists when there is an agreement with something else. There is a personal ethics but has to be compared to something else to appreciate its value. [Sid 18]

Anticipation is important, there is no set of rules on how it is carried out. [Sid 19] Your looking for something that’s out of place. If everything is out of place, what do you do? Could mean that one has his guard up. Having an awareness. [Sid 20]

Doug: Is there anything else you would like to add? Anything you feel I am missing about mental toughness.

Sid: I think that just about covers it.

Doug: Thanks for taking the time to help with the interview.

Case 14: MHH
8/10/09
3:00 pm

Doug: What are your thoughts on the teachability of the martial arts?

MHH: I used to think it was up to the teacher, the patience of the teacher. I thought it was about the teacher bringing to the student the art and conveying the information. However, I was talking about this to one of my classmates and he indicated that it is the match between the student and the teacher that determines if mental toughness characteristics are teachable. You don’t always get that individual approach. Some students would rather have a group oriented approach rather than an individual patient approach. [MHH 1]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?

MHH: Ethics. Realization of self worth. Value of time. Could be internalizations or externalizations of other peoples time or ones on perception of self worth or time. For example, I received a lengthy email responding to a request I had made previously. The person apologized for its lengthy nature, assuming that it was an issue for me. You valued time, either mine (externally) or yours (internally). [MHH 2] However, I indicated that complex questions may require complex answers. These types of things require time to explain and understand. [MHH 3] I think this value of time is really about attitude for learning. If you understand the value of
time in learning, you don’t have a problem taking the time to help someone. One of the things that I appreciate about my instructor is that he appreciates my arguing. [MHH 4]

If you have a sense of self-worth you are a confident learner. You will be a better learner. Attitude to learn and ethics could interact with each other in this way. [MHH 5]

Subsequently, for attitude of learning we should leave it to the student to discover how to interpret something. Don’t make it a black and white thing. Encourage them to find answers themselves. [MHH 6] The attitude for learning could be influenced by culture. A text called Geography of Thought explores the difference between Asian and Western thought. Western response to attitude to learning and anticipation is linear and goal oriented. [MHH 7] The Asian learning mindset and anticipation is contextual. This contextual approach is a process-oriented attitude. The process-oriented attitude is that you wait to see what is coming. You don’t ruminate on what is going to happen. You are mindfully absorbed in the present. It’s mindfulness. [MHH 8] Native American children can mimic exceptionally well. People with talent-can grasp the application and apply that in minutes. What is the difference between the average student and Olympic quality? How much deep learning does a person with skill use

Doug: Is there anything else you would like to add? Anything you feel I am missing about mental toughness.

MHH: That’s about it.

Doug: Thanks for taking the time to help with the interview.

Case 15: Wheyshin

8/10/09

9:00 pm

Doug: What are your impressions about mental toughness in the CMA?

Wheyshin: [In order to illustrate her answer, Wheyshin told stories about how God had used martial arts in their students’ and their lives. She indicated that martial arts training helped her and students cope with tough situations]. [Wheyshin 1] A karate student and I were standing in front of the dojo where his car was smashed by another vehicle. If I had delayed leaving the area where the accident occurred, I and another student would have been injured. I really believe that God protected us. The person who smashed into the car was intoxicated. By the way, the car that was smashed was a new and expensive vehicle. Following the accident, however, my
student and I were completely unscathed. My student maintained his composure, physically, mentally, and emotionally. His comment was, it’s an inanimate object. [Wheyshin 2] [She attributed this ability to maintain composure in daily life as stemming from martial arts training.] For us it’s about life, it’s a way of life, its about survival, life, and death. [Wheyshin 3]

Doug: What are your impressions about teaching mental toughness?

Wheyshin: With sports, you’re going to have a person for the length of a season. With the martial arts, you can have the same student for an extended period of time. For example, I had a student who began to study with us at an early age, around 5 years old. She trained with us until she 22. [Wheyshin 4] Now that student is a pharmacist and attributes her success in life to martial arts training. With martial arts training, you can affect a life. As a martial arts teacher, you become part of their lives and vice versa. The students are family; we go to their weddings. We had another student who trained with us for several years, up to Ikkyu [the rank just below black belt]. During this time [teenage years], his mom had a boyfriend who was on crack cocaine. The child’s home life was horrible. After he graduated from high school, he went to the navy then became an air traffic controller. Now, whenever he is in the area he stops by. He is like a son to us. This student [along with many of her students] became like our children. This student [and others like him] literally grew up in the dojo and become family. [Wheyshin 5] We were able to influence the children in a positive way through martial arts training. Many of our students attribute their ability to resist negative influences, and move in a positive direction, to their martial arts training. [Wheyshin 6]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness? What role do you think they play?

Wheyshin: I would like to talk about ready for performance on the street. I would like to tell a story that relates to the topic. I had been teaching karate and self-defense at a university. I retired from the university. My husband had been working for a car dealership and we never saw him. We decided to go full time with karate. We opened a dojo full time. Training and teaching martial arts became a major part of our family’s life [that is Wheyshin, her husband, and
children]. [Wheyshin 7] [Wheyshin 8] Later, I had an automobile accident and was in the hospital for several days. The doctors did not think I would fully recover and would more than likely lose crucial mental functions. [Wheyshin 9] We had to practice what we taught. That this is a life art, and would sustain you through tough times. We wanted to prove what we were teaching. [Wheyshin 10] While in the hospital I had a desire to get up and do an internal energy kata. I felt like this is what I needed to do to help me recover. At first the nurses would not let me get out of bed but eventually the Doctor agreed to let me up. It took four years to be able to function again. [Wheyshin 11] One day, my son asked me to do Kigihowa (sticky hands exercise). I did sticky hands. I felt unstable but the muscle memory was there. My body just took over, from deep inside beyond conscious thought and awareness. [Wheyshin 12] It’s a matter of life and death. I depend on it to survive. Its like something switched on and the healing began. The karate moves came out and my body began to function. [Wheyshin 13] I also do a form with fans [steel fans used as weapons]. On one part of the form I have to do a forward roll. But after the injury, I became disoriented during the following few moves, after the roll. When I came out of the roll, I was off mentally but my body took over and I moved unconsciously. It just happened. [Wheyshin 14] Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?

Wheyshin: Martial arts bind people together; it promotes respect in various ways. There was a martial arts gathering where many of the participants did the form Happoren together. The kata was done as a prayer for my daughter, and other US service men and women who died in combat. Now, my karate dojo provides academic scholarships, in the name of my daughter. Through such events, the memory of my daughter is prolonged. It prolongs the true spirit. We live karate. Karate is our life. We teach it six days per week. We offer something that everyone needs. I can give them a gift that they can walk away with. Its about survival for us, physically, mentally, spiritually. [Wheyshin 15] [Wheyshin 16] Doug: We are about to run out of time. Before we concluded, is there anything else you would like to add? Anything you feel I am missing about mental toughness.

Wheyshin: Not that I can think of.

Doug: Thanks for taking the time to help with the interview.
Case 16: Chantien  
8/8/09  
4:00 pm  
Doug: What are your impressions about mental toughness in the CMA?  
Chantien: It’s a critical element of the arts. If you look at the severity of the training. The way the old masters trained was brutal. Mental toughness is very important. It is needed to manage the training. [Chantien 1]  
Doug: What are your impressions about teaching mental toughness in the CMA?  
Chantien: We develop it by contact. We test on that. Our students have to spar for each test. For black belt the contact is more severe. During black belt sparing a student can get knocked down our hurt. The student has to have the mental toughness to get back up. [Chantien 2]  
Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness? What role do you think they play?  
Chantien: Readiness to perform. In life you don’t get a second chance. You don’t have time to warm up. You have to turn it on immediately. Readiness to perform is not just about having the physical skills and ability. It’s the mental ability needed to employ the skills at a moments notice upon demand. [Chantien 3]  
Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these attributes being unique?  
Chantien: Anticipation in the sense of awareness is a component. [Chantien 4] It’s the ability to recognize and avoid potential situations. Your on-guard because you have realized that problems can happen. If a homeless guy gets in your space you were not aware. [Chantien 5] Attitude towards learning is something that students must conquer in themselves. [Chantien 6]  
Doug: Our time is about up. Is there anything else you would like to add before we conclude? Anything you feel I am missing about mental toughness.
Chantien: The one thing that we have not seen is emotional strength; part of mental toughness.
[Chantien 7] You can control what you do with thoughts. When they come into your head. You can allow those things to defeat you or not. You need emotional toughness to get over those thoughts. [Chantien 8]

Doug: Thanks for taking the time to help with the interview.

Case 17: TJ
8/11/09
12:30 pm

Doug: What are your impressions about mental toughness in the CMA?
TJ: Its [mental toughness] about desire and passion. My thoughts have to do with respect for tradition, falling in love with the process. The respect and love comes along with the hunger for the process. [TJ1] The process is void of time concerns. In modern society, human beings are geared to a “push button” mindset. We want instantaneous results. We are a divided mentally/physically. We go to the office for the mental, then go to the gym for physical. [TJ2] Desire/hunger causes us to follow through with the behavior. [TJ3] Human beings are the only people that try to be something that we are not. The desire comes from finding something that you truly want to do. You find your deep purpose. [TJ4] As a result you have the joy of doing, feeling the snap in the punch, a great kia, is the compensator. [TJ5]

Example: Mental toughness in martial arts is like mental toughness in life. I was in Spain performing and my boots broke, I was broke. I needed my shoes soon. The cobbler would not jump on the assignment. He said come back at 5 (the Spaniards take long lunches. He would not compromise his life rhythm). I went to get the shoes fixed at 5. He fixed the shoes and handed me my shoes with pride, as if he was Michael Angelo and created a masterpiece. [TJ6] If you can do what you want in life, you’re lucky. You have to be willing to follow your dream and find your purpose. However, this is a scary process. It’s hard to be an individual and be the first to do something unique to the self. For example, I personally would not wear an earring. However, I respect the first man that wore one. He went against the norm to follow desire. The ones that jumped on the bandwagon and followed, I am not so concerned with. It’s easy for everyone else to jump in and follow the crowd. Finding who you are and pursuing that dream is difficult. [TJ7]
Doug: What are your thoughts on the teachability of the martial arts?

TJ: It is about doing the best that I can do within my own capacity. The more you survive the negatives and push through your training, the more mental toughness you will have. [TJ8] Your body respects tough training. It likes tough training by adaptation. [TJ9] For example, I was held up by gunpoint in Costa Rica. Guys jammed their car in front of mind, got out with masks and semi-automatics. They surrounded me and made me get on my knees. I did not go along with them in that I did not show fear. I just clammed up. One man had the gun jammed into my head. I could feel and sense his anxiety. He was shaking. I had the confidence that I could have taken out one but knew the other guys would have shot me in the process. I just accepted it without emotion or fear. It was because of mental toughness that I could accept the outcomes. I think my lack emotion saved me. [TJ10] Another example is that my wife and I did a dance workshop. During our demo, my wife dropped dead in front in me. She had a massive MI. That day I lost my wife, my business. Surviving this is mental toughness. How do you deal with tough times? That’s mental toughness. [TJ11]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention”. How do you feel about using these factors to explain mental toughness? What role do you think they play?

TJ: Conviction is related to desire. You commit yourself. [TJ12] How do you maintain your conviction, your desire? It’s going back to all of that stuff discussed on the first question. It’s about finding your thing. [TJ13] Years ago I was training in the dojo. One of the guys I trained with performed a throwing technique. [TJ14] I fell and broke my wrist. I went back and trained with one-armed push-ups. It is a conviction for commitment. [TJ15]

Doug: We are out of time. Before we conclude is there anything else you would like to add? Anything you feel I am missing about mental toughness.

TJ: That about it.

Doug: Thanks for taking the time to help with the interview.
Case 18: Aldeshi
August 12, 2009 @ 11:00
Doug: How do you feel about mental toughness in the CMA?
Aldeshi: It is important to be ready for combat. It’s simply facing combat, blanking out the mind, and going into your training mode. You are willing to give lethal force to the other person. I come to terms with what I need to do to take people out. You have to perform very quickly. So you need to operate from muscle memory. [Aldeshi 1] You have to come to terms with your intentions and make a decision before the life or death situation ever occurs. You also come to the point that this is what you want to do, you want to prove yourself. [Aldeshi 2] It happens much like the punch of no effort, you don’t feel anything, it’s a flow. [Aldeshi 3] But that (this flow) is beyond toughness.
The idea of readiness in sport is peak performance. In sport, the object is to get yourself to operate at the level, your peak. You don’t have to struggle, however with killing someone. [Aldeshi 4] We see this with kids. In a drill of multiple attackers, they are unwilling to attack the other person simultaneously, as in real life. They can’t see themselves as gangsters. Instead they attack one at a time. This happens for a reason, its animal instinct to help each other to a point. For example, I live in the country. I saw two possums crossing my back yard. One was injured. The other one appeared to help the injured one. It is a deeply rooted genetic trait for people to help and not harm each other. [Aldeshi 5] In order to develop a willingness to hurt another person, one has to go against barriers in our basic genetic make-ups. This requires mental toughness. [Aldeshi 6]
There have been examples of military personal hired to torture people for information. Leadership got the troupes drunk and stoned to torture people. [Aldeshi 7] In the country of Coperosity, the military got the soldiers drunk and stoned in order to take out a particular sect of countrymen. [Aldeshi 8] Part of overcoming the instinct to not harm is toughness. [Aldeshi 9] You train hard to kick the gut, but not the throat. If we teach to kill we get rid of our students. [Aldeshi 10] The art we train in is designed for a certain level of performance. Once we put the arts in the school in 1902 we changed the nature of the art. [Aldeshi 11] You don’t learn the actual art into you are 2nd or 3rd degree. [Aldeshi 12] The system of teaching is focused on school level. We also have the sport emphasis. Its like the Olympic sport of throwing the javeline. It keeps you sharp to a certain degree. When there is no war, they threw for distance and not at
each other. You stop playing war and start playing games. [Aldeshi 13] Also, the teacher is responsible for the student he produces. The teacher has a certain responsibility. Combat toughness can only be taught to the right person. [Aldeshi 14] 

Doug: What are your thoughts about conviction as a mental toughness component?

Aldeshi: It’s a trans-logical process. It’s a component that you need to cross that barrier. It’s a deep core belief. [Aldeshi 15]

Doug: How about ethics. What role do you see it playing in mental toughness?

Aldeshi: Dojo etiquette was partially intended to convey mores of martial arts. In the dojo, you have a variety of backgrounds that come together. There is a need to get the folks all on the same page and provide common ground to work with. Rules help to constrain people (guide for using lethal force) and unite people on a common ground. [Aldeshi 16] [Aldeshi 17]

Doug: Thank you Sensei. Sorry that we went over on the time. Would you like to add anything else before we conclude? Is there anything missing.

Aldeshi: I think we have covered it.

Case 19: Doca

8/11/09 @ 2:30 pm

Doug: What are your impressions about mental toughness in the CMA?

Doca: Its important. Its not an easy thing. CMA do not have a lot of competitiveness or sparring. So, rewards are not always out in front of you. You don’t have that type of encouragement to motivate you. Determination is important. [Doca 1] You have to stick with it. You have to have a big picture outlook.

Doug: Would you mind to give an example?

Doca: I began training 20 years ago. This early training was the foundation. If you want to defend yourself you have to have mastery. You have to look at the long term. There are short term goals but the main thing to focus on the big picture, mastery of skill and self defense. [Doca 2] The nice thing about Kodokan is that it is set up to be structured.

Doug: Now I would like to shift our attention to the teachability of mental toughness from a CMA context. What do you think about teaching mental toughness to classical martial artists?

Doca: It can be taught to some extent. It depends on ones personality type. Some people have that innately. With others, it involves hand holding, we have to show them everything. [Doca 3]
Confidence is a big part of martial arts. When you begin martial arts you react to a bigger person by walking away from the fight. Based on physical strength you probably should. You feel controlled. I reached a point that I wasn’t afraid anymore. If I wanted to fight I could. But, with that confidence I can walk away from the fight, but that is a choice. [Doca 4]

Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention. How do you feel about using these factors to explain mental toughness?

Doca: Not much of a difference between factor 1 and 2. [Doca 5] Determination (stick to it ness) is general perseverance. [Doca 6] Dedication is working to a goal. With that said, I would also put item 3 [Having an unshakable self-belief in your ability to achieve your performance goals] in group 2. [Doca 7] I would also put item 16 [Have passion for what you do. Love what you do] in factor 1. [Doca 8]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics (respect for tradition). How do you feel about these attributes being unique?

Doca: Anticipation seems to be what martial arts kind of things looks like along the lines of mental toughness. [Doca 9] Attitude towards learning is not unique. It is important to academics. [Doca 10] My big issue is with the ethics, respect for tradition aspects. Submission of what you want to do to the art your studying. [Doca 11] Being strong enough to be weak. I will do this because I trust the teacher and the style. [Doca 12] Commitment. I had a student who was training several different styles. It was hard to get him to commit to one style. [Doca 13] It is hard to make a distinction between conviction and commitment. [Doca 14] Conviction is more of a personality trait. [Doca 15] Versus sticking to a particular style is more about ethics is more about commitment. [Doca 16] I am committed to some specific course of action.

Doug: Thank you. Our time is about up. Before we stop, is there anything you would like to add?

Doca: What could I be missing? I don’t see any gaping holes.

Doug: Thanks for taking the time to help with the interview.”
Case 20:  Al
8/12/09
6:30 pm
Doug: I would like to start by having you focus on the importance of mental toughness from a CMA perspective. What are your impressions about mental toughness in the CMA?
Al: From early on [in your martial arts career] you have components that are emphasized. It is like a tool that allows you to maintain focus. As you go up in rank it helps you to perform better under pressure. [Al 1]
Doug: What role (if any) do you think mental toughness plays in the CMA?
Al: During continuous sequences you can get hit, knocked off balance and you want to hesitate but you block it out and keep going. Could even be during basics and you keep going. Block out distractions, pain and etc. [Al 2]
Doug: Now I would like to shift our attention to the teachability of mental toughness from a CMA context. What do you think about teaching mental toughness to classical martial artists?
Al: Some of its teachable. Some people have it or get it easier than other. It’s hard to teach but there are ways to draw it out. There are ways to enhance it. [Al 3]
Doug: Can you provide any examples?
Al: We do lots of basics in groups. The social component helps you ignore pain and fatigue and conform to social pressure and continue with training. Certain teachers can push you to do things you can’t normally do. Mental toughness causes you to rise to levels above your limits. You can push limits. [Al 4]
Doug: At this point I would like to focus on the results of the survey. The results indicated that mental toughness is best explained by a combination of 6 factors. These factors are; 1) Determination and Conviction, 2) Dedication and Commitment, 3) Mental and Physical Conditioning, 4) Readiness to Perform, 5) Distraction Control, and 6) Changing Focus of Attention.” How do you feel about these results?
Al: The word conviction. When I think about conviction I think about ego. Seems like ego is involved. There is belief with conviction. [Al 5] Dedication/commitment seems to fall in line for me. The importance is to put your time in. [Al 6] Readiness to perform is to set aside a mental place. A place where you are ready and not affected by other circumstances. Weather you nervous, can you block that out and pay attention to what’s going on? Get the tunnel vision.
You could be distracted by your fear but you can’t focus on all the things that could happen to you. Everything goes back to your training. [Al 7]

Doug: Now I would like to focus on unique attributes, which martial artists indicated should be added to the survey. The unique attributes are; 1) Anticipation, 2) Attitude towards Learning, and 3) Ethics. How do you feel about these results?

Al: With regards to anticipation, you narrow in and focused on what you’re doing. Then you are able to respond before you realize it. It’s not exactly anticipation. It’s more of a sensitivity. Your subconscious mind is taking over. It’s kind of related to focusing in. [Al 8] It is related to mental toughness in terms of staying focused on task. [Al 9]

With ethics, I would not directly relate it to martial arts. You would have to stretch that to make it. You can be mentally tough but not ethical. [Al 10]

Doug: Is there anything else you would like to add? Is there anything else that you think I should know?

Al: It seems like your headed in the right direction.

Doug: “Thanks for taking the time to share your perspectives."
Appendix U
Phase II Phone Interview Codes and Categories

*Question One: Importance of Mental toughness*

*Motivation*

Shihan 2 Progress requires time and persistence.
New students need it to stick it out and progress over the years.

Shihan 4 Coping with monotony.
The monotony of doing the basics over and over.

David 2 Time needed for progress; understand significance of technique.
The second area is has to do with training or having the commitment to continue train. For most martial arts it is a lifelong process. It takes a long time to see the value of some of the techniques, like stances.

Marcus 1 Determination to learn.
Someone needs to set their mind to the point that they want to learn martial arts.

Marcus 2 Desire produces determination.
Once they have that desire then nothing can really stop ya.

Marcus 3 Determination needed to overcomes obstacles
If you truly get your mind fixed to it then you will be able to overcome any obstacles.

Marcus 4 Persistence
Consider a technique you want to master, if your having problems mastering that technique you just have to stay at it until you get it.

Marcus 5 Determination
No matter how long it will take you or how hard you have to work, you just have to decide that you are willing to go the extra mile.

Marcus 16 Learning attitude is a Mental Toughness component.
It is a component.

Marcus 17 Correct learning attitude facilitates adherence.
If someone enjoys martial arts it comes easy, toughness is not needed. But if you don’t have mental toughness, and you are struggling with a technique, you just want to quit. If you have the right attitude about learning you are more likely to continue.

Marcus 18 Correct learning attitude is characterized by enjoyment.
Consider sanchin kata. You could teach someone every move in 1 hour. You train for 20-30 years and still make mistakes. A high level master could pick you apart. It’s frustrating to struggle learning something that seems so easy. However, if you have the right attitude about learning you more or less enjoy the new discoveries [laughing].

Marcus 19 The purpose for training is about your love for individual interests and for others.
I keep going back to what Master Fang says about true love. Your training can’t only be about you, not only important to the individual but also because it makes me train harder to protect my family.

Marcus 20 The purpose for training is about your love for individual interests and for others.
It’s a motivator.

Chuck 9 True love for practice/trainings/cma promotes perseverance.
Having true love for what you do. Having that true love attitude about what you are doing. If you don’t have that you don’t survive very long in it.

Chuck 10 True love promotes fortitude, stubbornness
That feeling in your heart develops mental toughness. If you have that attitude about anything you have fortitude, stubbornness.

Chuck 11 True love is your motivation.
True Love is nothing but how hard you are willing to try.

Chuck 12 Determination is the foundation of mental toughness.
That true love determination is the true foundation of mental toughness.

Doca 1 Determination required for offsetting lack of rewards.
CMA do not have a lot of competitiveness or sparring. So, rewards are not always out in front of you. You don’t have that type of encouragement to motivate you. Determination is important.

Doca 2 Motivation needed for long term goals.
You have to stick with it. You have to have a big picture outlook. I began training 20 years ago. This early training was the foundation. If you want to defend yourself you have to have mastery.
You have to look at the long term. There are short term goals but the main thing to focus on the big picture, mastery of skill and self defense.

**TJ 1 Mental toughness is about having a passion for the process.**

It’s about desire and passion. My thoughts have to do with respect for tradition, falling in love with the process. The respect and love comes along with the hunger for the process.

**TJ 2 The process includes mindfulness and a present centered focus on the activity**

The process is void of time concerns. In modern society, human beings are geared to a push button mindset. We want instantaneous results. We are a divided mentally/physically. We go to the office for the mental, then go to the gym for physical.

**TJ 3 Passion produced persistence**

Desire/hunger causes us to follow through with the behavior.

**TJ 4 Purpose driven activities are enjoyable.**

The desire comes from finding something that you truly want to do. You find your deep purpose.

**TJ 5 Purpose driven activities are enjoyable.**

You find your deep purpose. As a result you have the joy of doing, feeling the snap in the punch, a great kiai, is the compensator.

**TJ 6 Cobbler’s example of intrinsic motivation**

Mental toughness in martial arts is like mental toughness in life. I was in Spain performing and my boots broke, I was broke. I needed my shoes soon. The cobbler would not jump on the assignment. He said come back at 5 (the Spaniards take long lunches. He would not compromise his life rhythm). I went to get the shoes fixed at 5. He fixed the shoes and handed me my shoes with pride…as if he was Michelangelo and created a masterpiece.

**TJ 7 Pursuing purpose and passion is difficult**

If you can do what you want in life, you’re lucky. You have to be willing to follow your dream and find your purpose. However, this is a scary process. It’s hard to be an individual and be the first to do something unique to the self. For example, I respect the first man that wore one [an ear ring]. He went against the norm to follow desire. The ones that jumped on the bandwagon and followed, I’m not so concerned with. It’s easy for everyone else to jump in and follow the crowd. Finding who you are and pursuing that dream is difficult.
Progress

Shihan 1 Progress in rank
It is required to go up in rank, higher in level.

Shihan 2 Progress requires time and persistence.
New students need it to stick it out and progress over the years.

Shihan 3 Overcome monotony
Especially to overcome the monotony.

Shihan 4 Basics are monotonous.
The monotony of doing the basics over and over.

Shihan 5 Progress requires repetition of basics.
The true gains come from doing the same movements over and over.

David 2 Time needed for progress; understand significance of technique.
The second area is has to do with training or having the commitment to continue train. For most martial arts it is a lifelong process. It takes a long time to see the value of some of the techniques, like stances.

Marcus 1 Determination to learn.
Someone needs to set their mind to the point that they want to learn martial arts.

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Consider a technique you want to master, if you’re having problems mastering that technique you just have to stay at it until you get it.

Marcus 5 Determination
No matter how long it will take you or how hard you have to work, you just have to decide that you are willing to go the extra mile.

Wolfeyes 1 Progress requires mental toughness.
If you are going to pursue and accomplish anything of real value you will find you have to have it.

Wolfeyes 2 Training with skillful/aggressive individuals requires mental toughness.
Anytime that your confronted with someone with superior skills that are not necessarily friendly towards you, well, you either get better or don’t continue. Really, the only way to get better is to work against those kinds of people. It takes mental toughness to continue working with those kinds of people.

**Pioneer 1 Long term adherence requires mental toughness.**
Anyone who sticks with something has it. In the ma less than 5% will last more than 6 months; about a 50% drop out rate. There is even a greater dropout rate as you progress in the ranks. It’s tough to stick with anything.

**Grizzly 1 Mental Toughness is needed to prolong the tradition.**
To be a way of life you have to have mental toughness to be effective. Without mental toughness we would not have it [CMA] today. Without mental toughness the art would have died out.

**Kame 1 Mental Toughness is needed to overcome obstacles and limitations.**
It’s important. It’s the ability to overcome ones physical abilities and limitations. The ability to continue training despite your physical limitations. It’s overcoming our personal struggles on the inside whatever they are.

**Doca 2 Motivation needed for long term goals.**
You have to stick with it. You have to have a big picture outlook. I began training 20 years ago. This early training was the foundation. If you want to defend yourself you have to have mastery. You have to look at the long term. There are short term goals but the main thing to focus on the big picture, mastery of skill and self defense.

**Coping**

**David 1 Needed to mentally recover after defeat.**
One is competition or the ability to bounce back after a loss. If I lose a match it means that I would be dead on the battlefield. This type of loss is harder to recover from than losses in other sports. It’s hard to get back your confidence.

**Chantien 1 Important to endure the rigors of training.**
It’s a critical element of the arts. If you look at the severity of the training. The way the old masters trained was brutal. Mental toughness is very important. It is needed to manage the training.

**Wheyshin 1 Mental Toughness important for coping.**
[In order to illustrate her answer, Wheyshin told stories about how God had used martial arts in their students’ and their lives. She indicated that martial arts training helped her and students cope with tough situations].

Wheyshin 2 Coping via positive self-talk.
A karate student and I were standing in front of the dojo where his car was smashed by another vehicle. If I had delayed leaving the area where the accident occurred, I and another student would have been injured. I really believe that God protected us. The person who smashed into the car was intoxicated. By the way, the car that was smashed was a new and expensive vehicle. Following the accident, however, my student and I were completely unscathed. My student maintained his composure, physically, mentally, and emotionally. His comment was, it’s an inanimate object.

Chantien 7 Emotional strength is mental toughness.
The one thing that we have not seen is emotional strength; part of mental toughness.

Chantien 8 Emotional toughness/strength needed to overcome negative thoughts
You can control what you do with thoughts. When they come into your head. You can allow those things to defeat you or not. You need emotional toughness to get over those thoughts.

Wheyshin 3 Martial arts toughness helps coping in life events.
[She attributed this ability to maintain composure in daily life as stemming from martial arts training.] For us it’s about life, it’s a way of life, it’s about survival, life, and death.

TJ 10 Example of adaptation; life threatening circumstance met with acceptance, lack of fear.
For example, I was held up by gunpoint in Costa Rica. Guys jammed their car in front of mind, got out with masks and semi-automatics. They surrounded me and made me get on my knees. I did not go along with them in that I did not show fear. I just clammed up. One man had the gun jammed into my head. I could feel and sense his anxiety. He was shaking. I had the confidence that I could have taken out one but knew the other guys would have shot me in the process. I just accepted it without emotion or fear. It was because of mental toughness that I could accept the outcomes. I think my lack emotion saved me.

TJ 11 Mental Toughness is surviving devastating circumstances.
Another example is that my wife and I did a dance workshop. During our demo, my wife dropped dead in front in me. She had a massive MI. That day I lost my wife, my business.
Surviving this is mental toughness. How do you deal with tough times? That’s mental toughness.

**Conditioning**

**Grizzly 14** Conditioning is holistic.
Looking at the condition in a holistic manner.

**Grizzly 15** Progression (physical conditioning) requires challenge.
In order to progress, to grow physically, you have to present a challenge, something difficult.

**Grizzly 16** Mental toughness needed to meet challenges.
Mental toughness is required to meet the challenge.

**Grizzly 17** Strong body and mind is needed to meet challenge, conditioning requires conditioning.
You need a conditioned, strong body and mind to meet the challenge

**Sid 1** Mental Toughness needed to cope with physical punishment.
Extremely important. It is a fighting art. You are probably going to get hit in a fight so you must condition the body to deal with punishment.

**Sid 2** Mental conditioning is a prerequisite.
To condition your body you must condition the mind or have a certain level of conditioning already.

**Concentration**

**Monte 1** Perseverence in training.
I think mental toughness is what gets you through the training.

**Monte 2** Mental toughness stabilizes your focus; when learning something new.
OK, when you are physically exhausted or unsure of what you are doing. For example, when learning something new, it [mental toughness] helps you to concentrate. It helps keep your mind in one place.

**Monte 3** Mental Toughness provides endurance.
It helps you to push through when exhausted.

**Kuraku 3** Survival despite major injuries
Different videos of cops being shot but able to fight through it. If you don’t die from major blood loss. You can survive. You can fight through it.

Kuraku 4 Exposure to pain builds confidence; that you can survive
Like when Kurata was punched in the face but he said it’s not the end of the world. Helps you not to be afraid. It’s the Warrior mindset. You can push through.

Kuraku 1 Determination and single-mindedness.
Driven, Determined, the ability to focus, and block out distraction.

Kuraku 2 Perseverance despite pain.
“The ability to keep going even if you’re hurt.”

Al 1 Helps you maintain focus and perform under pressure (context of importance).
It is like a tool that allows you to maintain focus. As you go up in rank it helps you to perform better under pressure.

Al 2 MT is needed for distraction control; block out pain, mistakes, etc.
During continuous sequences you can get hit, knocked off balance and you want to hesitate but you block it out and keep going. Could even be during basics and you keep going. Block out distractions, pain and etc.

Question Two. Teachability of Mental toughness
Rate of Progress

Bilb 1 Mental Toughness requires extensive training.
I think that being a traditionalist that it takes years of training before it becomes a part of your life, a lifestyle. When you go beyond black belt you begin to train the mental part of it.

Bilb 2 Example of Mental Toughness required for self defense; confidence.
For example, timid people over a period of time gain confidence. People learn the basics but don’t stay in it to develop the mental toughness. You have to be mentally tough to protect yourself. Streetfighters have it. Martial artists need it as well.

Bilb 3 Avoiding fights requires Mental Toughness.
The ability to walk away is also mental toughness. If you have to then you can defend.

Kame 2 Mental Toughness progress is difficult to measure.
Yes, I feel you can teach it. But you probably would not be able to tell it.
Kame 3 Mental Toughness is difficult to detect; development is slow, its characteristics are individualized.
Like other parts of the martial arts, progression is often very slow (you can’t detect an improvement). Plus it’s different from person to person (the characteristics varies from person to person).

**Individual Differences**

Shihan 7 Mental Toughness taught via encouragement to persist.
There is not much we intentionally do in the dojo to developmental toughness. Maybe through encouragement to continue training.

Karateka 3 Repetition of technique builds mental toughness
Also, through repetition.

Karateka 4 Progressively challenging subject manner builds mental toughness
Progressive nature of difficulty in subject matter.

Karateka 5 Mental Toughness is innate.
The idea of teaching is not quite right. Mental Toughness is innate in everybody.

Karateka 6 Mental toughness can be developed but not taught.
I can take your survival instinct and draw up on it. It’s like an ink spot. I can take a little ink and draw it out to make a larger spot. Everyone has it to a certain degree.

Karateka 8 Mental Toughness taught by practicing overcoming barriers.
Part of it is getting over barriers such as being shy. I deal with 7-10 y/o kids. A girl in particular does not want to kiai in class. With practice however, she can do it.

Karateka 11 Sparring exercises evoke survival instinct.
Bunkai and various exercises help to evoke the fight or flight.

Chuck 2 Mental toughness is naturally developed via physical and awareness training.
The physical training develops a certain amount. But also emphasis is on awareness. At a certain level we teach students to have awareness.

Pioneer 4 Teachability is highly specific.
However, just because they stick to a program doesn’t mean they will be able to defend themselves. I don’t think that mental toughness necessarily coincides with her ability to defend
herself. On the other hand, a lady might be able to reach deep down inside, during another crisis and rescue her child. It is highly specific.

**Pioneer 5 Some aspects are not teachable.**

I don’t know that you can teach the lady to rescue her child. Its something she already has.

**Pioneer 15 Specificity of Mental Toughness Development**

The question is how you bring it out. It is specific to the area applied.

**Pioneer 16 Example of Specificity**

For example, do I see martial arts training as an art or a form of self-defense? Will I continue training for an extensive time just so that I can defend myself once or perhaps never need to defend myself. The motive is not there to continue training.

**Pioneer 17 The direction of our dedication/commitment/effort is specific to motives.**

My mental toughness depends on my motives, my purpose.

**Bilb 4 Aspects of MT taught by tough training/contact sparring; confidence.**

Comes along with the type of training that you have. Its not the style of martial arts that matters, it’s the teacher and how they teach. I do not believe that you can go into a karate school and not have contact. Traditional martial arts are not for everybody because some people do not want any contact. When I began karate, it took 6 months of not sparring to build a base. By that time I was anxious to spar. Then sparring began. When we went anywhere we were respected because we were tough in the head and body. This is because we were taught in a tough and hard way. This way served to build confidence/toughness. There is as look in your eyes that say you don’t want to mess with this guy.

**Grizzly 2 Mental Toughness is taught by pushing the body to do more than capable.**

We teach mental toughness during the times when you train and push yourself past what your body can take.

**Grizzly 3 Example of teaching Mental Toughness: Hitting the wall**

A marathon runner hits the wall. In order for him to go past the wall he has to have mental toughness.

**Kame 11 Learning attitude is influenced by convictions.**

Now I am having medical problems. As long as I can build on what the doctors tell me I can improve. If I don’t, I don’t improve or I die. Mental toughness is part of all of that. But, it depends on the individual person, what they believe. None of this means anything if you don’t
have a faith. Faith is the center of everything. Our faith gives us life. Faith, our convictions often determine what we can learn and our behaviors. Without my belief, my convictions, I would not feel the need to listen to my doctors and do what they say.

**MHH 1 Teachability is influenced by students learning style.**

I used to think it was up to the teacher, the patience of the teacher. I thought it was about the teacher bringing to the student the art and conveying the information. However, I was talking about this to one of my classmates and he indicated that it is the match between the student and the teacher that determines if mental toughness characteristics are teachable. You don’t always get that individual approach. Some students would rather have a group oriented approach rather than an individual patient approach.

**Chantien 2 Contact sparring develops Mental Toughness**

We develop it by contact. We test on that. Our students have to spar for each test. For black belt the contact is more severe. During black belt sparring a student can get knocked down our hurt. The student has to have the mental toughness to get back up.

**Wheyshin 4 CMA training involves lengthy time periods.**

With sports, your going to have a person for the length of a season. With the martial arts, you can have the same student for an extended period of time. For example, I had a student who began to study with us at an early age, around 5 years old. She trained with us until she 22.

**Wheyshin 5 Close relationships between student and teacher.**

Now that student is a pharmacist. Whey Shin indicated that the student attributes her success in life to martial arts training. With martial arts training, you can affect a life. She indicated that as a martial arts teacher, you become part of their lives and vice versa. She stated, they are family, we go to their weddings. “We had another student who trained with us for several years, up to Ikkyu [the rank just below black belt]. During this time [teenage years], his mom had a boyfriend who was on crack cocaine. She explained that this child’s home life was horrible. After he graduated from high school, he went to the navy then became an air traffic controller. Now, whenever he is in the area he stops by. He is like a son to us. She stated that this student [along with many of her students] became like her child. This student [and others like him] literally grew up in the dojo and become family.

**TJ 8 Persistance during trials increases Mental Toughness**
The more you survive the negatives and push through your training, the more mental toughness you will have.

**TJ 9 Mental Toughness increases via adapting to rigorous training.**

Your body respects tough training. It likes tough training by adaptation.

**Doca 3 Teachability depends on personality type.**

It can be taught to some extent. It depends on ones personality type. Some people have that innately. With others, it involves hand holding, we have to show them everything.

**Doca 4 Confidence helps deal with confrontations**

Confidence is a big part of martial arts. When you begin martial arts you react to a bigger person by walking away from the fight. Based on physical strength you probably should. You feel controlled. I reached a point that I wasn’t afraid anymore. If I wanted to fight I could. But, with that confidence I can walk away from the fight, but that is a choice

**Al 3 Mental Toughness is partly teachable.**

Some of its teachable. Some people have it or get it easier than other. Its hard to teach but there are ways to draw it out. There are ways to enhance it.

**Environmental Influences**

**Karateka 7 Mental toughness is related to childhood upbringing.**

It has a lot to do with your upbringing, your home situation as you are brought up.

**Karateka 9 Mental Toughness teachability influenced by social conditioning.**

A boy on the other hand may not have as much difficulty with the kiai, at first. Its sort of social conditioning. Varies from home to home.

**Sid 4 Tough environments influence decision for mental conditioning.**

It is up to the individual to condition their own mind. It is going to be more difficult for a person not raised on the wrong side of the tracks.

**Commitment**

**Shihan 9 Consistent adherence promotes dedication.**

Dedication and the development of dedication, is created by creating the habit. What I mean is that we become dedicated by developing a habit of training every Thursday. Habits are essential to developing mental toughness.
David 4 Commitment is not teachable.
A good teacher can teach everything except one area that you mentioned, dedication and commitment. That is 100% up to the individual.

Pioneer 8 Conditioning enhances commitment.
Conditioning empowers me to be able to commit to a program. Make sure you train safely when you’re younger so you can stick to it when you’re older. I can train now because I am in as good as shape when I was 20. Commitment can work together with conditioning.

Drive
Shihan 6 Drive is a prerequisite for commitment
They have to have a drive to begin with. We are not in a mandatory environment. People don’t have to show up to practice. They have to have the desire to start with.

David 5 Group training teaches confidence and drive.
You can push people further as a group. As they see themselves go further as a group they realize that they can do more. Then their confidence grows. At which point they are more likely to push themselves more when they practice by themselves.

Karateka 1 The intrinsic nature of martial arts training develops mental toughness.
MA tends to build it up more than sports just from the nature of the way we teach and things we emphasize.

Karateka 2 Traditional mottos encourage mental toughness
We like to encourage our students to not give up. For example we have a Japanese motto we repeat in the dojo: Gambate Kudasai, Train Hard Train Often.

Wolfeyes 3 Mental Toughness developed via interactions.
It can be difficult. Some people never get it. I don’t know that you can sit down with someone and verbally instruct them on how to be mentally tough. It is important to interact with other people as much as possible.

Wolfeyes 4 Mental Toughness developed by interacting with aggressive individuals.
We have many visitors come to our school. It doesn’t matter if the students like them or not they have to learn to maintain their composure. In order to learn mental toughness, the student has to experience opportunities that bring out mental toughness. They might trust me as a teacher.
However, when they interact with folks that they don’t always trust and feel secure about, mental toughness is required to continue training.

**Kuraku 4 Exposure to pain builds confidence; that you can survive**

Like when Kurata was punched in the face but he said it’s not the end of the world. Helps you not to be afraid. It’s the Warrior mindset. You can push through.

**Kuraku 5 Distraction control is teachable; determination is not.**

The first two components, determination and drive, you can’t teach. You have them or you don’t. Block out distractions yeah you can teach.

**Kuraku 6 Determination and drive are not teachable.**

Can’t teach the drive. They have to have it or find it for themselves. You can’t coach desire.

**Pioneer 3 Program adherence/persistence can be taught.**

Yes, if you can get someone to stick to the program. We can encourage one to stick to the program. It’s stick-to-it-ness that we can teach.

**TJ 8 Mental Toughness increases with tough training and trying situations**

The more you survive the negatives and push through your training, the more mental toughness you will have.

**TJ 9 Mental Toughness increases via adapting to rigorous training.**

Your body respects tough training. It likes tough training by adaptation.

**TJ 10 Example of adaptation; life threatening circumstance met with acceptance, lack of fear.**

For example, I was held up by gunpoint in Costa Rica. Guys jammed their car in front of mind, got out with masks and semi-automatics. They surrounded me and made me get on my knees. I did not go along with them in that I did not show fear. I just clammed up. One man had the gun jammed into my head. I could feel and sense his anxiety. He was shaking. I had the confidence that I could have taken out one but knew the other guys would have shot me in the process. I just accepted it without emotion or fear. It was because of mental toughness that I could accept the outcomes. I think my lack emotion saved me.

**TJ 11 Mental Toughness is surviving devastating circumstances.**

Another example is that my wife and I did a dance workshop. During our demo, my wife dropped dead in front in me. She had a massive MI. That day I lost my wife, my business. Surviving this is mental toughness. How do you deal with tough times? That’s mental toughness.
Group training can stretch individual limitations.
We do lots of basics in groups. The social component helps you ignore pain and fatigue and conform to social pressure and continue with training. Certain teachers can push you to do things you can’t normally do. Mental toughness causes you to rise to levels above your limits. You can push limits.

**Conditioning**

Shihan 10 Commitment is a prerequisite.
Everything else, mental and physical conditioning, the readiness to perform, distraction control, changing focus of attention, depends on developing habit or dedication.

Kuraku 7 Conditioning is teachable.
Mental and Physical Conditioning is easier to teach.

Kuraku 8 Example of teaching mental/physical conditioning.
When your heart rate increases you lose fine motor skills and people panic and freeze. A person like Kurata or another fighter, used to bar fights, don’t get as nervous. But if you’re in the situation a lot, you get used to it. I saw a documentary of a police officer who taught his daughter how to respond to assaults. For example, if someone grabbed her backpack, how should she react? Someone actually grabbed her backpack one time, she did as she had been trained and she survived.

Kuraku 9 Simulation training used to teach mental/physical conditioning.
If you have prepared to deal with a scenario, you’re not as apt to freeze up and do nothing. Put people in those situations and let them get used to it.

Kuraku 10 Example of the outcome conditioning.
If you have prepared to deal with a scenario, you’re not as apt to freeze up and do nothing. Put people in those situations and let them get used to it.

Chuck 1 Martial arts training builds Mental Toughness
Good physical health and mental toughness are benefits of training.

Sid 2 Mental conditioning is a prerequisite.
To condition your body [deal with physical punishment] you must condition the mind or have a certain level of conditioning already [he implies that mental conditioning is mental toughness].

Sid 3 Mental Toughness can’t be taught
Mental toughness as described above, I don’t think it can be taught. You can give people the concept of mental toughness.

Sid 4 Tough environments influence decision for mental conditioning. It is up to the individual to condition their own mind. It is going to be more difficult for a person not raised on the wrong side of the tracks.

Sid 5 Mental conditioning requires self-restraint. You must be able to deny yourself the convenience of pleasure. Sacrifice of some kind is important.

Grizzly 6 Experiencing overload/challenges increases mental toughness. Physical conditioning is important. If you want to meet a goal, progress, you have to have to be constantly challenged. Physical overload is required to progress. If you want to be conditioned you have to mentally struggle. Physical conditioning is increasing mental toughness.

Concentration/Focus

Shihan 10 Commitment is a prerequisite. Everything else, mental and physical conditioning, the readiness to perform, distraction control, changing focus of attention, depends on developing habit or dedication.

Marcus 6 Learning to focus increases Mental Toughness. I have learned from my teachers that there are certain things you can do to focus/fix your mind that makes you tough.

Marcus 7 Teaching example: focus. For example, discussions with Master Fang [martial arts instructor]. He use to ask the question, what would you do if a bear charges you? He said you don’t have a choice. You have to fight. The bear is your food and you want to enjoy your meal. Killing the bear is enjoying your meal. You have to think your going to win no matter what it takes.

Monte 4 Mental Toughness taught by example. I don’t think you teach it in the traditional sense, you can’t instruct it. You can demonstrate by example. The instructor can provide instances when they struggled but mental toughness helped them to focus and push through. You can’t really teach someone how to focus. The student has to do this themselves.

Monte 5 Example of teaching
My instructors said to avoid getting tripped up over 1 or 2 moves, you move forward, don’t hesitate. You can’t stop in the middle of a bunkai and try to figure out what you did wrong. Don’t second guess yourself; look at the bigger picture. You should know Geikisai Sho very well. But more importantly, you should know what the kata is about. Know the big picture. **Monte 9 Prearrange sparring helps with focus.**

I feel like the training helps me with focus. Bunkai. Fast Bunkai. Those drills really improve your focus. **Kuraku 6 Determination and drive are not teachable.**

The first two components, determination and drive, you can’t teach. You have them or you don’t. Block out distractions yeah you can teach. Can’t teach the drive. They have to have it or find it for themselves. You can’t coach desire. **Sid 12 A mentally tough focus is innate.**

With, changing focus of attention, a mentally tough person, if they move their focus, mental toughness is our route. Mental toughness is innate. Mental Toughness is innate.

*Ethics*

**Marcus 12 Training develops ethics.**

Many of these folks have a good sense of ethics [before starting their training] but training will give you better ethics, how to treat someone, how to conduct yourself. **Marcus 14 Ethics and Mental Toughness developed through training.**

These masters taught me more about ethics and instilled mental toughness. **Chuck 3 Mental Toughness is taught in the form of respect/humility.**

In my experience in CMA mental toughness was taught from the first minute of class. The guiding principle of respect and humility. These have inter-flowed throughout my training. **Chuck 5 Experiencing endurance (discipline) builds mental toughness.**

In my instructor’s dojo, we have Japanese writing that says, Hito no michi wa nintai nare. To endure. Nintai. Enduring the training makes you a better human being, builds your mental toughness. Before you get what’s good you will be molded and shaped to appreciate that goodness. **Pioneer 12 Discipline is viewed as auspicious in the martial arts.**
For example, we can have students perform push-ups for misbehaving. They can’t do that in school, they will get sued. But in karate, this makes them feel like they are doing something unique, different, and special. Discipline (ethics) causes them to feel unique. The student feels good about achieving these traits in class.

**Bilb 10 Training develops respect/ethics**

With martial arts training, bullies become better people or they quit because they can’t take it. It is easy to straighten them out. Many of them change with training. I have one student who was like that but has changed and now has his on karate school. If they don’t change the easy way, with training, you give them the hard way. You give them a little pain. For example, if they do a front kick, you can throw a good leg block on them that causes some discomfort. If they can’t learn easy way, or hard way, then you send them on their way.

**Wheyshin 6 CMA teaches ethics.**

We were able to influence the children in a positive way through martial arts training. Many of our students attribute their ability to resist negative influences, and move in a positive direction, to their martial arts training.

**Learning Attitude**

**Karateka 14 Attitude towards learning could be developed.**

Attitude towards learning, not a lot of people have the right attitude, they get it when they come to the dojo or sort of fall away.

**Chantien 6 Self-regulation of learning.**

Attitude towards learning is something [an obstacle] that students must conquer in themselves.

**Question 3a: Perceived Importance of Six Factor Model**

**Shihan 8 All six factors are important.**

All are important.

**David 5 Agree with factor descriptions for 1-3.**

I agree for the most part with everything, especially factors 1, 2, and 3.

**Marcus 8 All 6 factors are components of Mental Toughness.**

Each are main components of mental toughness and responsible for achieving success in martial arts.
Monte 6 Factors 1-6 are important to Mental Toughness.
I think they are the most applicable.

Wolfeyes 5 Six factors are needed to manage training.
You need these to work through the boredom, the rigors of training.

Kuraku 12 Participant agrees with the 6 factor solution.
Those 6 are right on. Those are the six I would have picked.

Pioneer 6 Factors 1-3 are components.
I can see that those three (Conviction, Commitment, Conditioning) are components.

Pioneer 10 Factors 4-6 developed from training in the program.
They are just part of the program. You work on drills, mindset, the tools of your style. In the process you achieve a certain amount of skill in those areas (readiness to perform, distraction control, ability to change focus). They are a natural outflow of program. These things come with training not necessarily something that is before.

Kame 4 All six factors are important.
Those are all important.

Sid 6 All are components; mental conditioning is more relevant than physical.
I agree with all the factors. With mental and physical conditioning I would say it’s more on the mental. If you have someone that is not afraid then they don’t have to be that good of a martial artists.

TJ 1 Mental toughness is about having a passion for the process.
It’s about desire and passion. My thoughts have to do with respect for tradition, falling in love with the process. The respect and love comes along with the hunger for the process.

TJ 12 Conviction is motivation to commit.
Conviction is related to desire. You commit yourself.

Aldeshi 15 Conviction; process of reflecting on core beliefs for the purpose of modifying basic instincts.
It’s a trans-logical process. It’s a component that you need to cross that barrier. It’s a deep core belief.

Aldeshi 6 Motivation to hurt someone requires overcoming basic instinct to help.
In order to develop a willingness to hurt another person, one has to go against barriers in our basic genetic make-ups. This requires mental toughness.
Dedication/commitment seems to fall in line for me. The importance is to put your time in.

**Question 3b: Participant Views of Factors**

**Factor 1: Conviction**

**Wolfeyes 6 Determination needed to learn boring information**
You need determination to push you through. The student must be determined to reach beyond the boredom and get something out of the training. You have to get past the boredom and continue to learn.

**Wolfeyes 7 Accepting correction requires determination.**
You have to accept criticism to continue to improve on your techniques. You have to be able to accept ideas that you don’t necessarily agree with and accept what you are told. This is especially important for teachers who have been teaching a particular way. Then they are told to perform the technique a little differently. It’s difficult to return to your class and explain that now we are going to do this technique this way instead.

**Wolfeyes 14 Single-minded actions void of doubt.**
There has to be a connection to your spirit. You can’t have any apprehensions about what you are going to do. You can’t be wishy washy about your actions. You need to know that in your own belief system, that what you are doing is correct. You need to get rid of the wishy washy attitude and be fixed on what you are doing no matter what.

**Karateka 10 Conviction (determination) and readiness are the same.**
I think a few of those areas might be one thing. I think they might be derived from survival instinct. For example, determination and readiness to perform comes from basic survival instinct. They may be related to fight or flight. It may have to do with the ability to switch between the angry animal and calm social creature.

**Pioneer 9 Conviction is trust/belief in what you are doing**
Conviction is the belief that this program is something you want to obtain. You have to believe in the program.

**Grizzly 4 Behavior follows conviction.**
The body follows the mind. If your heads not there your behaviors will not follow. Your behavior follows your conviction.
Kame 5 Patience is a unifying theme for the six factors
They can all be explained in 1 word, patience. Think about the meaning of patience then look at the 6 factors. Now consider those factors while looking at the book of Job.

Sid 7 Conviction; a driving force.
I agree. A person needs a slight explanation. Not a guilty feeling for putting your all in to it. More along the lines of having a conviction to pursue something. It’s a driving force.

TJ 12 Conviction is motivation to commit.
Conviction is related to desire. You commit yourself.

TJ 13 Conviction is maintained by finding purpose.
How do you maintain your conviction, your desire? It’s going back to all of that stuff discussed on the first question. It’s about finding your thing.

TJ 14 Example of conviction.
Years ago I was training in the dojo. One of the guys I trained with performed a throwing technique.

TJ 15 Drive to continue training.
I fell and broke my wrist. I went back and trained with one-armed push-ups. It is a conviction for commitment.

Aldeshi 15 Conviction; process of reflecting on core beliefs for the purpose of modifying basic instincts.
It’s a trans-logical process. It’s a component that you need to cross that barrier. It’s a deep core belief.

Doca 5 Determination and dedication are similar.
Not much of a difference between factor 1 and 2.

Doca 6 Determination is perseverance.
Determination (stick to it ness) is general perseverance.

Doca 8 Passion is related to conviction.
I would also put [passion for what you do. Love what you do] in factor one.

Doca 14 Conviction and commitment are similar.
It is hard to make a distinction between conviction and commitment.

**Doca 17 Conviction; a personality trait.**

Conviction is more of a personality trait.

**Al 5 Conviction is related to ego and belief.**

The word conviction. When I think about conviction I think about ego. Seems like ego is involved. There is belief with conviction.

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**Factor 2: Commitment**

**Monte 7 Factor 1 should be coded as Conviction and factor 2 as Dedication**

I think conviction and dedication most appropriately describes factors 1 and 2. Conviction should be used to describe factor 1 and dedication should be used to describe factor 2.

**Determination and conviction are very similar. Dedication and commitment are very similar.**

**Marcus 9 Dedication needed for program adherence and results.**

Dedication stands out more important than any of the others. You must be dedicated to see results. You can be distracted one or two times in the dojo, but you must be dedicated to show up for practice and overcome those problems keeping you from mastering a technique.

**Pioneer 7 Commitment is adherence.**

Commitment is related to the second question. That is if I am going to learn Uechi Ryu or anything else, stick-to-it-iveness is needed. Commitment is important.

**Bilb 5 Commitment involves helping others.**

I was married to it (CMA) when I saw it. If you commit yourself you want to contribute. A lot of people are selfish but a true martial artist is not just in it for himself. He helps teach others.

**Bilb 6 Desire and belief increases drive and commitment.**

I was committed to karate from day one. I knew from the beginning that this is something I wanted to do, commit to long term. The reason being, because I saw something in karate that I really liked and believed in.

**Grizzly 5 Commitment is related to self-regulation/discipline.**

Dedication and commitment. Again, it starts with the mind. If you want to be successful at something you have to commit to it. You have to have discipline, sacrifice and structure.

**Doca 5 Determination and dedication are similar.**

Not much of a difference between factor 1 and 2.
Doca 7 The achievement of performance goals is dedication.
Dedication is working to a goal. With that said, I would also put item 3 (Having an unshakable self-belief in your ability to achieve your performance goals) in group two.

Doca 16 Sticking with something is commitment.
Versus sticking to a particular style is more about ethics is more about commitment.

Doca 13 Example of commitment.
Commitment. I had a student who was training several different styles. It was hard to get him to commit to one style.

Al 6 Dedication is adherence.
Dedication/commitment seems to fall in line for me. The importance is to put your time in.

Factor 3: Conditioning

Grizzly 6 Conditioning requires overload/challenges; mental and physical struggles.
If you want to meet a goal, progress, you have to have to be constantly challenged. Physical overload is required to progress. If you want to be conditioned you have to physically and mentally struggle.

Kame 5 Patience is a unifying theme for the six factors
They can all be explained in 1 word, patience. Think about the meaning of patience then look at the 6 factors. Now consider those factors while looking at the book of Job.

Sid 10 Mental conditioning requires discipline.
Mental conditioning involves mental discipline. You have to make that place of focus your home. Your safe place. A place where you feel strong and optimistic. A warrior’s mind is unified into a strong, single, whole.

Sid 11 An optimistic, single-minded focus is the outcome of mental conditioning
A warrior needs nothing for his safe place. He is already at home because his mind is conditioned, where it needs to be. He doesn’t have to go looking anywhere in particular for a given focus. A conditioned mind is who he is.

Sid 15 Conditioning requires discipline.
Discipline is about making a choice to follow a certain way, the way of survival, focus. It’s natural to take the easy way. We have to work to be able to shake off disappointment. Not really being angered about things you don’t have control over.
**Factor 4: Readiness to Perform (defined by performance context)**

David 6 Readiness; automaticity of closed loop skills.

Readiness to perform might be unique in that it requires the ability to react at a moment’s notice. You have to be able to apply what you are learning. You have to be able to react to surprise. It’s like moving from semi free sparring to free sparring. Mentally and physically [technique] you know what to do. However, it is difficult to apply those abilities in free sparring. It’s hard for people to get in the game.

Marcus 10 Readiness; the ability to respond without prior notice.

Readiness to perform is extremely important for true fighting. A true fighting situation could happen as a surprise, sucker punch. If you are not ready then you lose. In a dojo you have time to get ready and prepare for fighting. This is not always true with true fighting. You could be in your living room enjoying a TV show with your family then someone breaks in on ya. Ya don’t have time to prepare.

Monte 8 Lack of readiness; poor transfer of learning to high stakes environment.

I think I am ready but the techniques go out the window during a [high stakes] performance. A few years ago, we did a demonstration at a county fair. I felt like I was prepared. However, during the actual performance, anxiety set in and I felt like a beginner.

Kuraku 11 Example of readiness to perform.

If you have prepared to deal with a scenario, you’re not as apt to freeze up and do nothing. Put people in those situations and let them get use to it.

Grizzley 8 Effects of stress on performance.

Your fine motor skills go when your stressed. Your ability to process info goes. For example, during an actual confrontation, I responded with lethal force. I was not consciously aware of how I responded. Others informed me as to the extent of my response, which was not at all what I had experienced.

Kame 6 Motivation to participate in stressful event.

With Readiness to perform, you might feel anxious but knowing that you are able to cope and go through with it [the performance] is mental toughness. Think about church. Church often prompts us to think about life and death and make decisions. Those sitting in the back don’t want to be in the limelight or to be called upon. Those in the front, they kind of want it. They want to take part in everything. They want to take part in those kinds of decisions.
**Factor 4: Readiness to Perform (characteristics of readiness)**

Karateka 10 Conviction (determination) and Readiness are the same. I think a few of those areas might be one thing. I think they might be derived from survival instinct. For example, determination and readiness to perform comes from basic survival instinct. They may be related to fight or flight. It may have to do with the ability to switch between the angry animal and calm social creature.

Pioneer 10 Factors 4-6 developed from training in the program. They [readiness to perform, distraction control, ability to change focus] are just part of the program. You work on drills, mindset, the tools of your style. In the process you achieve a certain amount of skill in those areas. They are a natural outflow of program. These things come with training not necessarily something that is before.

**Bilb 1 Mental Toughness Requires Extensive Training**

I think that being a traditionalist that it takes years of training before it becomes a part of your life, a lifestyle. When you go beyond black belt you begin to train the mental part of it.

**Bilb 7 Readiness; the ability to sense danger and react**

Readiness to perform. Over a period of time you develop a sense of danger. Over years of training your readiness to perform improves. You have to be careful that you don’t hurt someone. For example, one of my friends suddenly grabbed me, I reacted and hurt him. You are very sharp when something like that’s happens. If you walk down a dark alley. It’s like being in a dark room, you can feel it. If you are working out with candles in a dark room with advanced martial artists you can feel it. I am not into the spirituality of martial arts. Some people that I know in the martial arts have had spiritual experiences. Its not that, its an awareness of what’s going on around you. There is an awareness, an ability to anticipate. Another example is the You Move I Move exercise. You watch for subtle movements in your partner. You are on your toes, constantly reading your surroundings.

**Grizzly 7 Readiness; automaticity of skills**

Readiness to perform; it’s everything. It’s a thought process knowing you’re always ready for action. It’s a discipline. As a police officer you have stages of awareness. You make a decision; if I need to I will use lethal force. That is a discipline. It is a learning process to think things though and mentally prepare, how will you react, hopefully automatic.
How do you train to meet that need? Part of getting ready is repetition. How you would train so that you can react automatically.

*Grizzly 9* Readiness requires automaticity of skills in open/stressful environment.

You have to react automatically. That requires training, dedication, and commitment. You mentally prepare but you don’t follow through with training you have nothing.

*Kame 5* Patience is a unifying theme for the six factors

They can all be explained in 1 word, patience. Think about the meaning of patience then look at the 6 factors. Now consider those factors while looking at the book of Job.

*Sid 8* Readiness; a mind that has been conditioned to automatically respond.

With readiness to perform a conditioned mind never sleeps. A conditioned body does rest. If the mind is conditioned, everything else is automatically ready to go. It’s like an aircraft carrier on standby for war. The planes, soldiers are at rest. But the brains of the outfit, the radar, guards on watch are monitoring and ready. If an enemy ship is spotted, an alarm is sounded. Everyone has been trained and knows what to do. They don’t have to think. They respond.

*Sid 14* Survival mindset is God given

The original mechanism God put in us is survival.

*Chantien 3* Readiness; ability to use skills without prior notification.

Readiness to perform. In life you don’t get a second chance. You don’t have time to warm up. You have to turn it [techniques/mental focus] on immediately. Readiness to perform is not just about having the physical skills and ability. It’s the mental ability needed to employ the skills at a moments notice upon demand.

*Wheyshin 7* Martial arts was full time/a way of life.

*Wheyshin 8* Wheyshin’s “Ready for Performance” illustrations.

I would like to talk about ready for performance on the street. I would like to tell a story that relates to the topic. I had been teaching karate and self-defense at a university. I retired from the university. My husband had been working for a car dealership and we never saw him. We decided to go full time with karate. We opened a dojo full time. Training and teaching martial arts became a major part of our family’s life [that is Wheyshin, her husband, and children]

*Wheyshin 9* Accident impaired Wheyshin’s cognitive functions

The doctors did not think I would fully recover and would more than likely lose crucial mental functions.
Wheyshin 10 Demonstrated that karate is a life art; would help with life struggles.
We had to practice what we taught. That this is a life art, and would sustain you through tough
times. We wanted to prove what we were teaching

Wheyshin 11 Wheyshin depended on karate for recovery.
I felt like this is what I needed to do to help me recover. At first the nurses would not let me get
out of bed but eventually the Doctor agreed to let me up. It took four years to be able to function
again

Wheyshin12 Subconscious learning took over movements
One day, my son asked me to do Kigihowa (sticky hands exercise). I did sticky hands. I felt
unstable but the muscle memory was there. My body just took over, from deep inside beyond
conscious thought and awareness.

Wheyshin 13 Muscle memory prompted healing; restoration of normal body functions.
It’s a matter of life and death. I depend on it to survive. Its like something switched on and the
healing began. The karate moves came out and my body began to function

Wheyshin 14 Disorientation compensated by muscle memory
When I came out of the roll, I was off mentally but my body took over and I moved
unconsciously. It just happened.

Aldeshi 1 Definition of readiness to perform.
It’s simply facing combat, blanking out the mind, and going into your training mode.
You are willing to give lethal force to the other person. I come to terms with what I need to do
to take people out. You have to perform very quickly. So you need to operate from muscle
memory.

Aldeshi 2 Proactive informed decision based on personal desires and purpose.
You have to have to come to terms with your intentions and make a decision before the life or
death situation ever occurs. You also come to the point that this is what you want to do, you
want to prove yourself.

Aldeshi 3 Effortless effort.
It happens much like the punch of no effort, you don’t feel anything, it’s a flow.

Aldeshi 4 Readiness, difference between CMA and sports.
The idea of readiness in sport is peak performance. In sport, the object is to get yourself to
operate at the level, your peak. You don’t have to struggle, however, with killing someone.
**Aldeshi 5 Natural instinct; to help not harm.**

We see this with kids. In a drill of multiple attackers, they are unwilling to attack the other person simultaneously, as in real life. They can't see themselves as gangsters. Instead they attack one at a time. This happens for a reason, its animal instinct to help each other to a point. For example, I live in the country. I saw two possums crossing my back yard. One was injured. The other one appeared to help the injured one. It is a deeply rooted genetic trait for people to help and not harm each other.

**Aldeshi 6 Motivation to hurt someone requires overcoming basic instinct to help.**

In order to develop a willingness to hurt another person, one has to go against barriers in our basic genetic make-ups. This requires mental toughness.

**Aldeshi 7 Example of how to overcome basic instinct to help.**

There have been examples of military personal hired to torture people for information. Leadership got the troupes drunk and stoned to torture people.

**Aldeshi 8 Example of how to overcome basic instinct to help.**

In the country of Coperosity, the military got the soldiers drunk and stoned in order to take out a particular sect of countrymen.

**Aldeshi 9 Mental toughness is needed to overcome helping instinct.**

Part of overcoming the instinct to not harm is toughness.

**Aldeshi 10 Contemporary martial arts techniques are designed not to disable.**

You train hard to kick the gut, but not the throat. If we teach to kill we get rid of our students.

**Aldeshi 11 The art most of us train in is modified for safety; to teach children.**

The art we train in is designed for a certain level of performance. Once we put the arts in the school in 1902 we changed the nature of the art.

**Aldeshi 12 Lethal training does not happen until 2\textsuperscript{nd} or 3\textsuperscript{rd} degree black belt.**

You don’t learn the actual art into you are 2\textsuperscript{nd} or 3\textsuperscript{rd} degree.

**Aldeshi 13 Sport emphasis; readiness is on peak performance as opposed to killing.**

The system of teaching is focused on school level. We also have the sport emphasis. Its like the Olympic sport of throwing the javelin. It keeps you sharp to a certain degree. When there was no war, they threw for distance and not at each other. You stop playing war and start playing games.

**Aldeshi 14 Teacher responsibility; combat toughness can not be taught to everyone.**
Also, the teacher is responsible for the student he produces. The teacher has a certain responsibility. Combat toughness can only be taught to the right person.

**Al 7 Readiness; the ability to block out stressful situations.**
Readiness to perform is to set aside a mental place. A place where you are ready and not affected by other circumstances. Weather your nervous, can you block that out and pay attention to what’s going on? Get the tunnel vision. You could be distracted by your fear but you can’t focus on all the things that could happen to you. Everything goes back to your training.

**Factor 5: Distraction Control**

Sid 9 Distraction control is finding a single-minded focus.
Distraction Control has everything to do with mental toughness. It can take the form of worries, heartaches, personal emotion. We fight our own demons, get our own forts cleaned out. We must make our fort a safe place, a designated place to put our focus. Distractions are not welcome there.

**Factor 6: Switching a Performance Focus on and off**

Chuck 6 Changing focus of attention.
We have been taught from day one when you bow you leave your problems behind.

Sid 12 Mental Toughness is Innate.
With changing focus of attention, a mentally tough person, if they move their focus, mental toughness is our route. Mental toughness is innate.

Sid 13 The difficulty of shifting focus.
There is always a challenge between staying in our element and focusing on something we shouldn’t.

**Question 4: Unique Attributes**

*Anticipation (importance of anticipation)*

Wolfeyes 8 Anticipation helps avoid attacks
Anticipation outlines what martial means, its what martial arts are all about. How to fight or not to fight. If I can anticipate that I should not be here or change something then you can avoid loss or being attacked.
Wolfeyes 9 Set ups decrease the odds of what an attacker will do; affords anticipation and survival rate.

There are several things you can do to improve your survival ability rate. This can be seen in kata. Why, in the kata, am I being attacked in a certain way? Why do I step forward with my right foot and block? It’s usually because your presenting an opportunity to the opponent, which makes him want to attack in a certain way. It’s like baiting the person. You [set them] up so they do what you want them to do. Then you can cut down on the odds of what your opponent can do. He’s punching at my head because I have made that opportunity for him. People lose because they have given the opportunity for a person.

Karateka 13 Martial Arts Schema development makes anticipation unique.
The more I experience how my body works in a certain way, the more I can anticipate how someone else’s body will act.

Kuraku 15 Anticipation similar to shifting focus.
Anticipation may be similar to the ability to adapt to change, etc. It’s about changing your focus to fit the environment.

Chuck 7 Anticipation is the ability to adapt to change
Anticipation may be similar to the ability to adapt change, etc.

Pioneer 13 Anticipation is founding in fighting.
Anticipation. As we spar we are always aware of movement. For example, we notice the subtle shifting of weight.

Kame 8 Anticipation is awareness and paying attention
It’s more about being aware of surroundings. You become more aware. If you’re not aware, it’s like walking straight ahead with blinders on. A mentally tough person is a person who can focus, pay attention.

Sid 20 Anticipation; awareness of abnormalities in environment.
You’re looking for something that’s out of place. If everything is out of place, what do you do? Could mean that one has his guard up. Having an awareness.”

Chantien 5 Anticipation is awareness.
It’s the ability to recognize and avoid potential situations. You’re on-guard because you have realized that problems can happen. If a homeless guy gets in your space you were not aware.

Al 18 Situation Awareness
With regards to anticipation, you narrow in and focused on what you’re doing. Then you are able to respond before you realize it. It’s not exactly anticipation. It’s more of a sensitivity. Your subconscious mind is taking over. It’s kind of related to focusing in. *Anticipation*

*Anticipation (uniqueness)*

Shihan 12 Application of anticipation to martial arts.
Anticipation is unique to martial arts training in that you know what the opponent is going to do, like Master Fang’s sensitivity training. However, you need to anticipate what your business clients are going to do. We can also do this with beginning white belt students. Sometimes we can know what they do before the actual encounter.

Karateka 13 Anticipation is a unique attribute.
I can see anticipation as being a unique factor.

Pioneer 11 Factors are unique because our approach to teaching them is unique.
The way we train students puts a lot of importance on those attributes. We talk about those in class. They are unique because we are able to teach these in a way that maybe school can’t.”

David 7 Anticipation is not a unique attribute.
Anticipation is not unique. Any athlete [from all sports] will try to anticipate the opponent.

Monte 10 Anticipation may not be a unique mental toughness attribute.
I am not sure about anticipation.

Monte 15 Anticipation, ethics, and learning attitude are not unique to the martial arts.
No, not unique. They are important in other activities as well.

Wolfeyes 11 Anticipation, attitude towards learning, and ethics are not unique to the martial arts.
I think they are also found in other activities.

Wolfeyes 12 Anticipation, attitude towards learning, and ethics are more important to the martial arts.
They are deeper in the martial arts because they get into a whole psychology of mankind.

*Anticipation (as a significant component of mental toughness)*

Karateka 13 Anticipation is a unique attribute.
I can see anticipation as being a unique factor.

Pioneer 11 Factors are unique because our approach to teaching them is unique.
The way we train students puts a lot of importance on those attributes. We talk about those in class. They are unique because we are able to teach these in a way that maybe school can't.

Sid 19 Anticipation important for mental toughness.
Anticipation is important, there is no set of rules on how it is carried out.

Chantien 4 Anticipation via awareness is a component.
Anticipation in the sense of awareness is a component.

Doca 9 Anticipation related to Mental Toughness.
Anticipation seems to be what martial arts kind of things looks like along the lines of mental toughness.

Al 19 Anticipation is related to an unwavering focus.
It is related to mental toughness in terms of staying focused on task.

Grizzly 10 Anticipation is related to awareness; not necessarily mental toughness.
Anticipation does not have to be related to mental toughness. It may be mental awareness, be aware of the environment. Your training and experience helps you read certain ways.

Kame 7 Anticipation is not a component of mental toughness.
Anticipation comes with training. It shares a very small amount with mental toughness.

Monte14 Anticipation is important but not for mental toughness.
I think it is important for the martial arts. I don’t think it is necessary for mental toughness.

Wolfeyes 10 Anticipation requires anxiety management.
You have to look beyond what’s right in front of you. In order to do that, you can’t get caught up in emotions, and get tunnel vision. You have to have self-control in order to anticipate your opponent. Not getting caught up in emotions requires mental toughness.

**Ethics (importance as guiding principles to practice)**

David 10 Ethics are an important component of training.
In the martial arts where individual are trying to hit each other, ethics are very important. Being ethical requires one to be able to control ego. In other situations [during training], it’s not personal if you hit someone you respect. You show respect by pushing the other person.

Marcus 13 Ethics facilitates learning opportunity.
I had ethics first. My mom and dad taught me how to act. My attitude has opened the door to be accepted by high-level masters.
Marcus 15 Value for self and others facilitates learning.
Ethics have lot to do with having pride in yourself, valuing yourself, others. If you value yourself and take pride in your actions, your mind will be open to improving yourself, learning.

Marcus 19 The purpose for training is about your love for individual interests and for others.
I keep going back to what Master Fang says about true love. Your training cant only be about you, not only important to the individual but also because it makes me train harder to protect my family.

Marcus 20 The purpose for training is about your love for individual interests and for others.
It’s a motivator.

Monte 12 Ethics are guiding principles.
Ethics is incredibly important as well. They provide guidance on how to use techniques.

Monte 13 Ethics is about helping others.
Trust and ethics go together. You and your training partners are there not just for yourselves but to help others as well.

Wolfeyes 13 Ethics are a prerequisite to learning.
In the martial arts, a teacher may not teach you something if you’re not ethical. Say there is a secret technique that will work 100% of the time. The teacher might want to know how you will use it, what you will do with it before they will teach it to ya.

Kuraku 13 Ethics provides guidance for martial arts practice.
Ethics, respect. It means something. It’s not just about kicking butt. It has to mean something. I love the saying, with great power comes great responsibility. You have to be selective on who you teach and pass that knowledge on to. With that kind of training it [respect] has to go along.
The judgment of when to use it is important. There are no reasons to have to fight. But there is every reason to know how to fight. You have all of this knowledge and power, what do you do with it?

Kuraku 14 Ethics gives meaning and purpose to the martial arts.
It means more than the sum of its parts. It’s really about protection, protecting those in need.

Chuck 8 Respect is a sense of self-worth; accomplishment.
Respect. Self respect cultivated with physical training. If I am teaching, my classes are a little different. Shut the AC off and put everyone through hard training with kata. After an hour you
develop a sense of accomplishment, you made it through. I had a sense of accomplishment. Increase value and self-worth.

Bilb 9 *Respect is a form of camaraderie and reciprocated sense of honor.*

You automatically have my respect. If you lose it you will not get it back. I respect everyone, regardless. True martial arts do not disrespect others. Respect is everything. It’s an honorable pursuit. It’s seen in the bow. It’s seen as deep camaraderie. We have all been through tough training together. Tough training builds camaraderie much like the camaraderie found between servicemen.

*Bilb 11 Respect for karate school.*

Respect for the karate school is important.

*Bilb 12 Disrespecting others is disrespecting the school.*

One way to disrespect the school, the tradition, is to start a fight. You are a part of the school. You represent the school; you cannot disrespect people.

Grizzly 12 *Ethics is not a component for everyone.*

Ethics is not a component of mental toughness for everybody. For example, some individual were raised in church to be polite and respectful. Later, that person could begin studying martial arts, which requires respect. Ethics for that person may not be difficult, not require self-restraint. It’s specific to the person, the individual. To another person, politeness may not come so easy.

Grizzly 13 *Ethics requires self-control.*

It comes back to developing discipline, self-control. It’s behavior modification.”

Sid 18 *Ethics requires a standard*

Ethics exists when there is an agreement with something else. There is a personal ethics but has to be compared to something else to appreciate its value.

MHH 2 *Respect for individuals time.*

Ethics. Realization of self worth. Value of time. Could be internalizations or externalizations of other peoples time or ones on perception of self worth or time. For example, I received a lengthy email responding to a request I had made previously. The person apologized for its lengthy nature, assuming that it was an issue for me. You valued time, either mine (externally) or yours (internally).

MHH 4 *Learning attitude influences ethical practices.*
I think this value of time is really about attitude for learning. If you understand the value of time in learning, you don’t have a problem taking the time to help someone. One of the things that I appreciate about my instructor is that he appreciates my arguing.

Wheyshin 15 Respect/mutual support expressed by teaching karate.

Wheyshin 16 Respect is mutual support.

Martial arts bind people together; it promotes respect in various ways. There was a martial arts gathering where many of the participants did the form Happoren together. The kata was done as a prayer for my daughter, and other US service men and women who died in combat. Now, my karate dojo provides academic scholarships, in the name of my daughter. Through such events, the memory of my daughter is prolonged. It prolongs the true spirit. We live karate. Karate is our life. We teach it six days per week. We offer something that everyone needs. I can give them a gift that they can walk away with. It’s about survival for us, physically, mentally, spiritually.

Doca 11 Compliance with the tradition is respect.

My big issue is with the ethics, respect for tradition aspects. Submission of what you want to do to the art you’re studying.

Doca 12 Respect expressed as trust.

Being strong enough to be weak. I will do this because I trust the teacher and the style.

Doca 13 Example of commitment.

Commitment. I had a student who was training several different styles. It was hard to get him to commit to one style.

Aldeshi 14 Teacher responsibility; combat toughness can not be taught to everyone.

Also, the teacher is responsible for the student he produces. The teacher has a certain responsibility. Combat toughness can only be taught to the right person.

Aldeshi 17 Etiquette; guidelines intended to unite people.

Aldeshi 16 Etiquette, guidelines for using lethal force.

Dojo etiquette was partially intended to convey mores of martial arts. In the dojo, you have a variety of backgrounds that come together. There is a need to get the folks all on the same page and provide common ground to work with. Rules help to constrain people, provide a guide for using lethal force, and unite people on a common ground.
**Ethics (uniqueness)**

Pioneer 11 Factors are unique because our approach to teaching them is unique. The way we train students puts a lot of importance on those attributes. We talk about those in class. They are unique because we are able to teach these in a way that maybe school can’t.

Pioneer 12 Discipline is viewed as auspicious in the martial arts. For example, we can have students perform push-ups for misbehaving. They can’t do that in school, they will get sued. But in karate, this makes them feel like they are doing something unique, different, and special. Discipline (ethics) causes them to feel unique. The student feels good about achieving these traits in class.

Shihan 11 Anticipation, learning attitude, and ethics; general mental toughness attributes. While reading the book From Good to Great I was thinking about your topic of mental toughness. These attributes are not just unique to martial arts or activities that require you to be physically tough but also mentally tough, as in business. In this sense they may not be unique. For example, I think they may play a role in business.

Shihan 13 Ethics is related to mental toughness.

I think that ethics is naturally related to mental toughness.

Shihan 14 Ethics: resisting the easy way when applicable.

Whether in business or martial arts it is important not to take the easy way out. The easy way is not always the best way or the most ethical way. You have to be mental tough to resist the easy way.

Monte 15 Ethics and learning attitude are not unique to the martial arts.

No, not unique. They are important in other activities as well.

Wolfeyes 11 Anticipation, attitude towards learning, and ethics are not unique to the martial arts. I think they are also found in other activities.

Wolfeyes 12 Anticipation, attitude towards learning, and ethics are more important to the martial arts.

They are deeper in the martial arts because they get into a whole psychology of mankind.

**Ethics (as a significant component of mental toughness)**

Shihan 13 Ethics is related to mental toughness.

I think that ethics is naturally related to mental toughness.
David 9 Ethics; component of mental toughness.
Ethics is part of mental toughness.

Marcus 11 Good ethics is a proper learning attitude.
Attitude and ethics are components. In true classical dojo, if you have a bad attitude the high level masters want teach you. You have to prove you’re a good person to receive training.

Karateka 15 Ethics; a guiding principle for defense.
Ethics, when should you be in a confrontation? That sort of becomes your toughness, that you uphold the ethics.

Chuck 4 Mental Toughness requires respect/humility.
After years of this I realized that it takes a strong person to be truly humble. A weak mind and spirit will use anger and violence. A strong mind and spirit uses skill, knowledge, and always uses respect and humility. These key aspects been more beneficial to me than other parts of training.

Pioneer 11 Factors are unique because our approach to teaching them is unique.
The way we train students puts a lot of importance on those attributes. We talk about those in class. They are unique because we are able to teach these in a way that maybe school cant.

Bilb 8 Attitude and respect are related to mental toughness.
Attitude and respect has to do with mental toughness.

Doca 11 Compliance with the tradition is respect.
My big issue is with the ethics, respect for tradition aspects. Submission of what you want to do to the art your studying.

Doca 12 Respect expressed as trust.
Being strong enough to be weak. I will do this because I trust the teacher and the style.

Doca 13 Example of commitment.
Commitment. I had a student who was training several different styles. It was hard to get him to commit to one style.

Grizzly 12 Ethnics is not a component for everyone.
Ethics is not a component of mental toughness for everybody. For example, some individual were raised in church to be polite and respectful. Later, that person could begin studying martial arts, which requires respect. Ethics for that person may not be difficult, not require self-restraint. It’s specific to the person, the individual. To another person, politeness may not come so easy.
Al 10 Ethics are not necessarily related to mental toughness.
With ethics, I would not directly relate it to martial arts. You would have to stretch that to make it. You can be ethical but not mentally tough.

*Attitude towards Learning (definition)*
Monte 11 Learning attitude is important.
You have to come into training with a good learning attitude. It’s incredibly important.
Pioneer 14 Belief influences learning attitude.
As far as attitude towards learning, I could join a baseball program. The coach could ask me to do drills and I can go along with them. Someone else could say, these drills are not good and I am no longer open to the training. However, I could join a program that I don’t know anything about. I could go along with the program even thought the drills, etc, are no good. I am open to learning because I don’t know much about the program. The degree to which I am open to learning, open the program is based on previous experience. This could be good or bad.
Kame 10 A learning attitude promotes long-term improvement; prevents learning plateau.
You work on kata over and over and perfect details. At times you can’t see the difference. But over a period of time you can see, someone else can see the improvement. Knowledge does not happen overnight. If you don’t build upon teachings and carrying out things [practice/homework] you become stagnant and lose most of what you learned.
MHH 3 Time requirements for learning.
However, I indicated that complex questions may require complex answers. These types of things require time to explain and understand.

*Characteristics of an Effective Learner.*
David 8 Culture differences in instruction requires an open mind.
I feel this is more important in the martial arts where culture influences how it is taught. The martial arts were not developed in a democratic society. It requires a different mindset, adopting cultural values. It requires having an open mind about what you are learning and how it is taught.
David 11 Adopting a mentally tough learning attitude involves adopting different cultural views.
The learning attitude we were discussing has to do with the ability to step into another culture, free from a democratic style of teaching.

**Grizzly 11 Learning requires a disciplined mindset.**

Attitude towards learning; anything you do towards learning is a discipline, it goes back to your mindset, having to sacrifice, requires mental toughness. Discipline requires a structured thought process.”

**Kame 9 A learning attitude expands knowledge, improves skill.**

A lot of people are under the assumption they know everything. Especially the mental part of knowing; how things should be done and how you react. I want to be able to expand on an instructors teaching on mental abilities like meditation, the finer points of kata. The finer points of kata have to do with how to concentrate. The biomechanics, what to feel. Some say my way is the only way but there are other ways. Take what we already know and build.

**Sid 16 Learning attitude reflects humility, discipline, and drive.**

There is nothing more passionate than mental toughness. Attitude towards learning puts a passion into your mental toughness. The ability to learn reflects in a person that they are humble enough to listen and committed enough to learn beyond their present level. That within itself discipline.

**MHH 5 Ethics influences attitude for learning via self-worth; confidence in learning.**

If you have a sense of self-worth you are a confident learner. You will be a better learner. Attitude to learn and ethics could interact with each other in this way.

**MHH 6 Expectations for learning placed on student.**

Subsequently, for attitude of learning we should leave it to the student to discover how to interpret something. Don’t make it a black and white thing. Encourage them to find answers themselves.

**MHH 7 Outcome based learning.**

The attitude for learning could be influenced by culture. A text called Geography of Thought explores the difference between Asian and Western thought. Western response to attitude to learning and anticipation is linear and goal oriented.

**MHH 8 Asian approach to learning; mindfulness**

The Asian learning mindset and anticipation is contextual. This contextual approach is a process-oriented attitude. The process-oriented attitude is that you wait to see what is coming.
You don’t ruminate on what is going to happen. You are mindfully absorbed in the present. It’s mindfulness.

**Learning Attitude (uniqueness)**

**Pioneer 11** Factors are unique because our approach to teaching them is unique. The way we train students puts a lot of importance on those attributes. We talk about those in class. They are unique because we are able to teach these in a way that maybe school can’t.

**Shihan 11** Anticipation, learning attitude, and ethics; general mental toughness attributes. While reading the book From Good to Great I was thinking about your topic of mental toughness. These attributes are not just unique to martial arts or activities that require you to be physically tough but also mentally tough, as in business. In this sense they may not be unique. For example, I think they may play a role in business.

**Monte 15** Ethics and learning attitude are not unique to the martial arts. No, not unique. They are important in other [activities] as well.

**Wolfeyes 11** Anticipation, attitude towards learning, and ethics are not unique to the martial arts. I think they are also found in other activities.

**Doca 10** Learning attitude is not unique. Attitude towards learning is not unique. It is important to academics.

**Learning Attitude (as a significant component of mental toughness)**

**David 8** Culture differences in instruction requires an open mind. I feel this is more important in the martial arts where culture influences how it is taught. The martial arts were not developed in a democratic society. It requires a different mindset, adopting cultural values. It requires having an open mind about what you are learning and how it is taught.

**David 11** Adopting a mentally tough learning attitude has to do with adopting a different cultural view. The learning attitude we were discussing has to do with the ability to step into another culture, free from a democratic style of teaching.

**Marcus 16** Learning attitude is a Mental Toughness component. It is a component.
Marcus 17 Correct learning attitude facilitates adherence.
If someone enjoys martial arts it comes easy, toughness is not needed. But if you don’t have
mental toughness, and you are struggling with a technique, you just want to quit. If you have the
right attitude about learning you are more likely to continue.

Marcus 18 Correct learning attitude is characterized by enjoyment.
Consider sanchin kata. You could teach someone every move in 1 hour. You train for 20-30
years and still make mistakes. A high level master could pick you apart. It’s frustrating to
struggle learning something that seems so easy. However, if you have the right attitude about
learning you more or less enjoy the new discoveries [laughing].

Monte 16 Learning attitude, determination, and dedication are important components.
Learning attitude, determination, and dedication are most important.

Grizzly 11 Learning requires a disciplined mindset.
Attitude towards learning. Anything you do towards learning is a discipline, it goes back to your
mindset, having to sacrifice, requires mental toughness. Discipline requires a structured thought
process.

Kame 11 Learning attitude is influenced by convictions.
Now I am having medical problems. As long as I can build on what the doctors tell me I can
improve. If I don’t, I don’t improve or I die. Mental toughness is part of all of that. But, it
depends on the individual person, what they believe. None of this means anything if you don’t
have a faith. Faith is the center of everything. Our faith gives us life. Faith, our convictions
often determine what we can learn and our behaviors. Without my belief, my convictions, I
would not feel the need to listen to my doctors and do what they say.

Kame 12 Tough learning attitude defined as meaningful learning.
It really depends on one’s definition of tough learning attitude. My definition of a mentally
tough learning attitude is being able to go along with everyone else [the instructor] and take the
knowledge to a different level. If you see something you like you can carry it to another level.

Sid 16 Learning attitude reflects humility, discipline, and drive.
There is nothing more passionate than mental toughness. Attitude towards learning puts a
passion into your mental toughness. The ability to learn reflects in a person that they are humble
enough to listen and committed enough to learn beyond their present level. That within itself
discipline.
Sid 17 Attitude towards learning requires mental toughness.
You need mental toughness just to want to learn.

Participants who implied that learning attitude is a component

Wolfe 6 Accepting correction requires determination.
You have to accept criticism to continue to improve on your techniques. You have to be able to accept ideas that you don’t necessarily agree with and accept what you are told. This is especially important for teachers who have been teaching a particular way. Then they are told to perform the technique a little differently. It’s difficult to return to your class and explain that now we are going to do this technique this way instead.

Wolfe 12 Anticipation, attitude towards learning, and ethics are more important to the martial arts.
They are deeper in the martial arts because they get into a whole psychology of mankind.
Pioneer 11 Factors are unique because our approach to teaching them is unique.
The way we train students puts a lot of importance on those attributes. We talk about those in class. They are unique because we are able to teach these in a way that maybe school can’t.