Perceptions of Mental Training in Collegiate Athletics

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Abstract

The use of sports psychology, especially mental training within collegiate athletic departments, is a booming field in the United States. This research study examined the perceptions about mental training among athletes, coaches, and medical staff in order to better understand the stigmas around mental training. This study was conducted through the Athletic Department of Colorado State University in the spring of 2013. Subjects that participated were athletes from the football and softball teams, their coaches, and the medical staff. The research methodology implemented was a mixed methods design which utilized a quantitative design analyzing survey results, as well as a qualitative design with embedded survey interview questions. The survey results showed that participants, no matter their gender, age, or role within the athletic department, perceived mental training as valuable. Education was also found to be necessary in order to change the perceptions around mental training. Athletes were more educated about mental training than coaches and the medical staff. This was interesting since coaches are the impetus that incorporates mental training.

Keywords: mental conditioning, mental training, athletics, coaching, perceptions, visual imagery, sports psychology
Perceptions of Mental Training in Collegiate Athletics

Willie Mays said, “What you are thinking, what shape your mind is in, is what makes the biggest difference of all.” Like Mays, athletic programs across the United States understand that the mental agility of athletes make a major difference in overall performance. Their programs, especially ones at the collegiate level, are taking major strides to address the mental element of physical training with athletics.

**Research problem.** Even though the advantages of mental training among athletics are becoming the center of sport and psychological research, the perceptions of mental training among athletes, coaches, and medical staff have not been fully studied. In order to better understand the perceptions, the stigmas around mental training were researched in this study.

The problems addressed in this study are relevant and important because much of the research written in literature delves into the effects of mental practice on physicality and performance rather than on the perceptions of mental training. It is important for athletic departments to understand the perceptions of athletes, coaches, and medical staff. The research study is also important to the field of mental training since it breaks down perceptions into specific demographic groups.

Current research in regard to mental training is deficient in its analysis around athlete, coach, and medical staff perceptions. Research looks at the statistical improvements mental training has to physical performance. The research does little to delve into the perceptions, motivations, and participants’ ‘buy-in’ in order to better understand mental training.

The research study will benefit various areas of athletics, especially at the collegiate level. Since the research examines the perceptions of athletes, coaches, and medical staff of the Colorado State University Athletic Department, sport psychology departments will benefit from
the research. Sport psychologists, specifically those who specialize in mental conditioning, will be able to better understand what areas need to be improved in regard to coaches’ and athletes’ attitudes and perceptions of mental training. They will also be able to use the research in order to understand trends between perceptions and demographics.

**Review of the Literature**

**Introduction**

Yogi Berra said, “Ninety percent of sports are half-mental” (Malinauskas, 2008, 1). Mental training in the United States is a growing field, both in practice and in research. In 2005, American consumers spent $2 million on mental training programs, and in 2008, the worldwide value of brain training industry rose to over $260 million. By 2015, the value of brain training industry is projected to be between $1 billion and $5 billion (Curlik & Shors, 2013). Mental training in the United States is predominately explored within the fields of medicine and athletics - - for the purposes of this research study, we will be focusing on mental training (or mental conditioning) in the context of athletics.

Mental training in athletics is becoming more prevalent as coaches realize that physical conditioning is not enough to run successful programs. The development of mental skills and other aspects of inner development are important for the success of athletics (Boes, Harung, Travis, & Pensgaard, 2012; Li, Zhang, You, Zheng, & Gao, 2012; Mamassis & Doganis, 2010; Thelwell & Greenless, 2003). The research around mental training is centered on the four major areas of definition, effectiveness/impact, the argument for mental training, and the argument against mental training.

**Definition**
A significant amount of research is dedicated to defining mental training, which can be used interchangeably with mental conditioning. Mental training is a complex process which involves the use of psychological skills in order to improve focus, attention, or anxiety in order to affect an athlete’s performance, attitude, and responses (Donohue, 2010; Mamassis & Doganis, 2010; Thelwell & Greenless, 2003). The types of psychological skills implemented vary in different athletic departments. Mental training techniques can include mental readiness, attentional focus, strong commitment, clear goals, simulation training, imagery practice, and distraction control (Boes et al., 2012; Mamassis & Doganis, 2010). The psychological skills and techniques incorporated in mental training are related to mindfulness. The mindfulness involved in mental training can be defined as active distinction making in which new stimuli are perceived as having continually emerging meanings (Langer, Djikic, Pirson, Madenci, & Donohune, 2010).

Even though mental training as a field of sports psychology within collegiate athletics is fairly new, it is becoming a prominent element of professional athletic programs. Mental training is a well-established technique in sports science which involves cognitive processes that practice repetition through systematic steps (Langer et al., 2010; Immenroth, Burger, Nagelschmidt, Eberspacher, & Triodl, 2007). In order to push athletes through the repetitious nature of mental training, many athletic programs treat every behavior and attitude as an attempt to attain a payoff (Malinauskas, 2008).

**Mental skills development.** A review of the literature shows that when researchers define mental training, they also tend to discuss the development of mental skills - - definition and development are normally examined together. In order to cultivate mental skills, mental toughness and coping mechanisms for dealing with stress should be developed as well (Boes et al., 2012). If athletes are unable to cope with stress, they are also unable to implement the mental
skills they spend practicing. When defining mental training, some researchers go as far as to include the categories of brain development. Mind-brain development has been categorized into three measures: the score on the Brain Integration Scale, moral reasoning, and peak experiences (Boes et al., 2012). Outside of the definition and development of mental training, the literature also focuses on the effectiveness and impact of mental training techniques.

**Effectiveness/Impact**

**Change in brain structure.** “Research has convincingly shown that mental training [which uses] motor imagery, like physical practice, can produce changes in brain structure and functions that are associated with improved subsequent performance of a motor skill” (Slagter, Davidson, & Lutz, 2011, 2). A transformation in brain structure is a tremendous impact on an athlete’s ability to perform - - an impact that would affect other areas of an athlete’s life. The effects of mental training have been found to transfer from one training context to another.

Studies have shown that additional mental training is more effective than additional practice training or no additional training at all. (Curlik & Shors, 2013; Immenroth et al., 2007; Li et al., 2012). Even though mental training results in transformation and physical improvement, it is not meant to be the only training program in which athletes partake. Mental training is another tool an athlete can use in addition to physical training (Shalaby, 2010; Thelwell & Greenless, 2003). The pairing of mental and physical training can increase the number of new cells that mature into functional neurons in the adult brain (Curlik & Shors, 2013). The development of new brain cells increases the effectiveness of mental training, which is evident in multiple areas.

The implementation of mental training, for example, provides better rates of retention and sustained attention than active or observed training (Ulich, 2013; Zeidan, Johnson, Diamond,
Perceptions of mental training in athletics

Davic, & Goolkasian, 2010). Retention is not the only area which exhibits increased effectiveness. The effects of mental training have also been found to be accompanied by increases in learning, memory, executive function, selective attention, and fluid intelligence (Curlik & Shors, 2013).

**Context & technique.** The effectiveness of mental training varies dependent on the context and technique. Some researchers have found that mental training is most effective in inducing process-specific learning (Slagter et al., 2011). Process-specific learning is impacted the most because of the neural areas of the brain that are affected during mental training. Some studies have found that the neural events which control muscle parameters for performance change according to the level of skill achieved (Ranganathan et al., 2004).

Not only is neural activity affected but as is long-term practice which enhances attentional and visuospatial processes (Slagter, Lutz, Greischar, Francis, Nieuwenhuis, David, & Davidson, 2007; Zeidan et al., 2010). Attention and visuospatial processes are important in athletes, especially during competition. Enhancement in these areas improves physical skills by decreasing the amount of stress and increasing optical spatial perception (Shalaby, 2010).

**Motivation.** The effectiveness and impact of mental training is largely dependent on motivation. Motivation is a key factor when determining the intensity of effort and persistence an athlete puts forth -- it is highly critical in order for participants to exert their best efforts (Donohue, 2010; Ranganathan et al., 2004). Emotion is linked to motivation since emotions are an individual’s receptiveness to the pursuit of a goal (Ntoumanis, Edmunds, & Duds, 2009). Part of motivation is education. Research has shown that the use of mental training is linked with education since the use of mental training is more prevalent among college athletes (Nurgerleidar & Golding, 1991).
Influence of coaches. Alongside the research into the motivation of athletes, researchers also devote studies to coaches and their implementation of mental training. The nature and scope of mental training is largely dependent by the coaches’ receptiveness and their willingness to devote a portion of their time to psychological skills training (Leffingwell, Wiechman, Smith, Smott, & Christensen, 2001).

The literature shows that receptiveness is crucial in order to be effective. Coaches, in order to avoid counteracting the progress of mental conditioning, should learn to control their emotions because their actions and emotions rub off on the players (Ortiz, 2012). The reality is that many coaches work within set time frames, usually mandated by the professional organization which oversees them. Without the proper knowledge about mental training, coaches may decide to spend less time emphasizing cognitive techniques.

The Argument for Mental Training

The argument in support of mental training is extensive. In athletes, when physical fitness, strength, and technique are comparable, mental factors decide who comes out victorious in the end (Boes et al., 2012). Mental training is used among Olympic athletes for this reason. When physical fitness is not comparable, mental training can be used in order to equalize the playing field. For example, an athlete will many times use mental training when they are physically mature but not cognitively ready to compete at a certain level (Naylor, 2006).

Mental training is important because the mental disposition of athletes is crucial when preparing for competition (Boguszewski, Boguszewski, Kwapisz, Adamczyk, Urbanska, & Bialoszewski, 2012). An athlete’s mental disposition is affected when the person believes “that successes and failures on the playing field are due to reasons outside of them, [and they] feel little autonomy in their abilities to improve and succeed on the playing field” (Naylor, 2006, 37).
In order to assist athletes in feeling autonomy on the playing field, mental training techniques are practiced. Many times, mental training helps athletes feel a sense of control. Besides gaining a sense of control, coaches will implement mental training in order to balance out the desires of coaches. When coaches strive too passionately toward winning games without taking time for mental training, the player’s development can become inhibited (Naylor, 2006).

Recent research has also confirmed that motor skills can be learned, not only through active training, but also through observation and mental training (Li et al., 2012; Ulich, 2013). Gaining physical skills through mental training helps athletes preserve their energy and physicality. Mental training has also shown to reduce fatigue and anxiety while increasing mindfulness (Zeidan et al, 2010). The reduction of fatigue also preserves an athlete’s energy for the playing field.

The Argument against Mental Training

Even though a substantial amount of research supports mental training, there are researchers who are critical of mental training, or at least elements of mental training. Mental training has been the subject of many studies since the 1930s. The subject of the research has been predominately related to “whether mental practice prior to performing a motor skill will enhance one’s performance. Results have been mixed and conclusions contradictory” (Nungerleider & Golding, 1991, 1007). Even though mental training enhances memory of content, research shows that it does not enhance memory skills themselves (Slagter et al., 2011).

Despite the amount of research in support of mental training, the neurophysical process involved in mental training and the long-term impact of mental training on the brain and cognitive function are largely unknown (Slagter et al., 2011). It is difficult for some athletic
departments to justify building mental training programs without full knowledge of the long-term impacts to cognitive function.

Conclusion

A review of existing literature reveals four major themes among researchers. One of the four major themes is centered on the definition, which is many times grouped with mental skills development. Another theme is the effectiveness/impact of mental training that encompasses a change in brain structure, context and technique, motivation, and the influence of coaches. The third theme is the argument in support of mental training, predominately based on the creation of a competitive edge. The final theme is the argument against mental training.

The research delves into a wide variety of sports. One major deficiency that exists in the current literature is centered on the perception of athletes. The researchers spent four months researching the literature, collecting roughly 20 sources but were unable to find research on the perception of athletes - obviously, the research done was not exhaustive. It is important for anyone involved in athletics to understand the perceptions of athletes in order to properly begin and realize the outlook of many athletes. If athletes view mental training negatively, athletic personnel would need to begin the mental training process with creating athlete ‘buy-in’.

Recognizing the perceptions of mental training among athletes would assist athletic departments in better serving athletes.

Method

Research Design

The research design implemented was a mixed methods design - specifically a convergent parallel design. The design method used for the qualitative and quantitative research was a survey design in which a sample of individuals were given a series of 16 questions
centered on mental training and their perceptions about mental training (see Appendix A for the survey). The survey also included qualitative, open-ended questions, as well as the opportunity for participants to elaborate on their close-ended responses. The surveys also included six personal questions identifying the participants role within the athletic department, gender, age, grade point average, type of community they in which they were brought up, and geographic region. The survey design the researchers implemented was a cross-sectional survey design which studies the attitudes, beliefs, and opinions of participants.

**Sampling.** The research study involved a homogeneous sampling method. The populations for this research study were athletic, coaching, and medical staff members of collegiate athletic departments. Since the researchers were unable to obtain participants from a variety of athletic departments, the target population comprised of members of the Colorado State University Athletic Department in Fort Collins, Colorado. The sample of participants was randomly selected from the target population.

**Procedure**

The athletic participants were chosen randomly by two of the researchers. Brittany Koehler distributed surveys to all of the women’s softball team at Colorado State University. There was a 100 percent return rate from the softball athletes. Miles Kochevar randomly distributed surveys to the men’s football team at Colorado State University. There was also a 100 percent return rate from the football athletes. The researchers decided not to distribute surveys to all of the football team in order to avoid a disproportionate number of male participants compared to females. The coaches and medical staff were also randomly selected from the Colorado State University Athletic Department.

**Participants**
Age. The participants of the research study were split into four major age groups. Of the 47 participants, 19 individuals were 18 to 20-years-old, 17 individuals were 21 to 23-years-old, two were 24 to 28-years-old, and nine were 29-years-old or older.

Gender. The research study consisted of 23 female participants and 24 male participants.

Role. The roles of the participants were categorized into three groups: athletes (which consisted of 34 individuals), coaches (which consisted of five individuals), and medical staff (which consisted of eight individuals).

Grade point average (GPA). Participants were asked to identify the range of their grade point average. One participant identified their GPA as 1.0-1.5, five identified as 1.5-2.0, five participants marked 2.0-2.5, six as 2.5-3.0, 15 identified at 3.0-3.5, and five at 3.5-4.0. Ten participants chose not to identify their GPA.

Community of upbringing. The survey also asked participants to identify their community of upbringing as urban, suburban, or rural. Ten participants grew-up in urban areas, 27 participants in suburban areas, and 10 in rural areas.

Geographic location. The final category participants were asked to self-identify was their home geographic location. The results were as following: Southeast region (one participant), Great Lakes region (one participant), Plains region (nine participants), Rocky Mountain states (20 participants), Pacific Northwest (two participants), and the Pacific Southwest (12 participants). Three participants chose not to identify their geographic region.

Results

The mental training surveys were distributed on 25 March 2013, and they were all collected by 5 April 2012. The researchers did not determine the effect size mostly due to their lack of statistical knowledge. In order to analyze the results, basic statistics were
implemented since the course was introductory and statistics were not required. Most of the bar charts revealed skewed bell curves which predominately possessed positive perceptions on mental training (refer to Figure 1, Figure 2, and Figure 3). The survey results showed that participants, no matter their gender, age, or role within the athletic department, perceived mental training as valuable. It should be noted though that the medical staff tended to be more conservative in their perspective on mental training.

**Quantitative Results**

**Categories.** The quantitative questions were grouped into six major categories: the perceptions on mental training techniques (questions 1, 9, and 10), the views on mental training as being preventative (questions 7 and 13), the views on mental training as being reactionary (questions 5 and 14), the perceptions on the global qualities of mental training (questions 6, 11 and 12), the motivation for participating in mental training (questions 4 and 15), and the perceptions on the value of mental training (questions 2 and 3). Refer to Appendix A to see the mental training survey questions. The data was analyzed by investigating the comparisons between athletes, coaches, and medical staff (refer to Figure 1); age groups broken down into the three major groups of 18-20-years-old, 21-23-years-old, and 24-28-years-old (refer to Figure 2); and gender (refer to Figure 3).

**Comparisons between athletes, coaches, and medical staff.** Refer to Figure 1 to view the bar charts for the comparisons between the six categories. When examining the perceptions on mental training techniques, athletes and coaches predominately strongly agreed, agreed, or felt neutral while the medical staff agreed, were neutral, or disagreed. For the views on mental training as being preventative, the main response for athletes was agree, coaches strongly agreed and agreed, and the medical staff were distributed between agreed, neutral, and disagree. The
views on mental training as being reactionary showed that athletes and coaches were evenly distributed through all of the categories except strongly agreed, which had the fewest responses. The medical staff mostly answered neutral. When sorting the data for the perceptions on the global qualities of mental training, all three groups predominately agreed. The motivation for participating in mental training elicited responses that strongly agreed, agreed, or felt neutral from athletes and coaches, while the medical staff mostly felt neutral or disagreed. Finally the perceptions on the value of mental training showed that athletes agreed but were fairly evenly distributed across all of the responses. The coaches strongly agreed, agreed, or strongly disagreed, and the medical staff was distributed across all of the responses except for strongly agreed.

**Comparisons between age groups (18-20-years-old, 21-23-years-old, and 24-28-years-old).** Refer to Figure 2 to view the bar charts for the comparisons between the six categories. The perceptions on mental training techniques were answered strongly agreed or agreed through all of the age groups. All three age groups also answered agreed for the views on mental training as being preventative. The views on mental training as being reactionary showed that 18-20-year-old agreed while the other age groups disagreed or strongly disagreed. The age groups all agree about the global qualities of mental training, as well as the motivation for participating in mental training. The final category on the perceptions on the value of mental training was marked as mostly agreed.

**Comparisons between males and females.** Refer to Figure 3 to view the bar charts for the comparisons between the six categories. The results showed that both genders answered predominately the same for all of the categories. The perceptions on mental training techniques and the value of mental training both bell curved with the peak at agreed. The views on mental
training as being preventative was answered as agree. The views on mental training as being reactionary were evenly distributed but more males were neutral or disagreed while females strongly disagreed. The global qualities of mental training were answered as agreed but the female responses were more evenly distributed. Finally, males agreed and females strongly agreed on the motivation for participating in mental training.

**Qualitative Results**

The qualitative results for the mental training survey were derived from the elaborations the participants provided for each question, as well as from questions 8 and 16 of the survey. The results were found by searching for common themes and responses among participants.

**Positive perception of mental training.** If participants positively viewed mental training, they found that it assists them in staying in control, while also causing physical and mental improvement due to increased focus. Participant motivation was linked to the desire to see improvement in order to become a more complete player that can cope with everyday crisis. Some participants connected mental training with teamwork in that an individual on a team is only as good as the weakest link. Those who implemented mental training techniques predominately found visualization and self-talk the most helpful. Other techniques that participants were accustomed to were imagery, awareness, positivity, focalization, and focusing on the present moment. Those who viewed mental training positively felt that mindset and prior experience helped with confidence to utilize techniques.

**Negative perception of mental training.** If participants negatively perceived mental training, they tended to find mental training valuable and helpful, but it does not always help. Some participants did not understand mental training, or they found it a waste of time. One concern participants expressed about mental training was the inability to control every situation.
Some participants did not believe in mental training for this reason. Another reason they did not believe in mental training is that they felt athletes could perform without being mentally prepared. The flip side was that participants felt that over thinking situations was counter-productive. There were participants did find that mental training can assist in bad situations by providing coping tools.

**Discussion**

The results of the mental training survey found that the perceptions of mental training among athletes, coaches, and medical staff were positive.

**Implications.** The major implication of the research study is that it adds awareness to the field of mental training. The awareness comes from the addition of knowledge about the perceptions of mental training. The analysis shows that increased education about mental training is beneficial in creating a positive perception on mental training. Negative views mental training was mainly derived from ignorance.

**Inferences & Conclusions.** One conclusion that can be drawn from the research study is that in order to change the perceptions around mental training, education needs to take place, especially about the usefulness of mental training. Another conclusion is that athletes are more educated about mental training than coaches and the medical staff. This is interesting since coaches are the impetus that incorporates mental training.

**Limitations.** One limitation to the research study is that the sample is limited to one population - - the Colorado State University Athletic Department. The research would be less biased if multiple athletic departments were surveyed. Another limitation is that the study only surveys two sports - - football and softball. Also, the survey should have incorporated more coaches and medical staff since there is a highly disproportionate number of athletes. A final
limitation to the research study is that the researchers were unable to complete more in-depth and comprehensive analyses.

**Validity.** There are no noticeable threats to internal validity. In regard to the threats to external validity, there is a potential threat of selection and treatment since there are fewer numbers of coaches and medical staff. This makes it difficult for researchers to generalize their findings. Another potential threat is to the interaction of setting and treatment. Since the research was focused on football and softball within one collegiate athletic department, there could be difficulties in generalizing the findings to other settings. A final potential threat to external validity is to history and treatment. The surveys were only distributed once. Also, the researchers did know that the participants possessed some prior knowledge about mental training.

**Alternative explanations of results.** One potential explanation of the results could be that the participants knew what the answer should be even if they did not necessarily agree. Another potential explanation is that even though participants were verbally informed that the answers would remain anonymous, there could have been some apprehension that the coaches were expecting a certain answer.

**Sustainability.** The research study contributes to an enduring, deeper understanding by increasing the personal and professional success and satisfaction of participants of mental condition. Based on the review of the literature, mental training could help individuals increase their brain function and capabilities. The research study also connects with aspects of general society, the environment, and the economy. A considerate amount of money is put into mental training. This means that there are more opportunities for work within the field of mental training. The field of mental training improves general society since it expands beyond athletics.
when applied properly. Athletes will eventually leave sports and athletics, meaning that they will apply the concepts to other fields.
References


Comparisons between Athletes, Coaches, & Medical Staff

**Perceptions on Mental Training Techniques**

- **Strongly Agree**
- **Agree**
- **Neutral**
- **Disagree**
- **Strongly Disagree**

- **Views on Mental Training as being Preventative**

- **Agree**
- **Neutral**
- **Disagree**
- **Strongly Disagree**

- **Motivation for Participating in Mental Training**

- **Perceptions on the Global Qualities of Mental Training**

- **Perceptions on the Value of Mental Training**
Figure 2

Comparisons between Age Groups (18-20-years-old, 21-23-years-old, & 24-28-years-old)

Perceptions on Mental Training Techniques

Views on Mental Training as being Preventative

Views on Mental Training as being Reactionary

Perceptions on the Global Qualities of Mental Training

Motivation for Participating in Mental Training

Perceptions on the Value of Mental Training
Figure 3

Comparison between Males & Females

Perceptions on Mental Training Techniques

Views on Mental Training as being Preventative

Views on Mental Training as being Reactionary

Perceptions on the Global Qualities of Mental Training

Motivation for Participating in Mental Training

Perceptions on the Value of Mental Training
Appendix A

*Mental Training Survey*

Mental Training in Athletics

The following questions assess your attitudes toward mental training and your previous experiences with mental training. Please indicate your agreement with each item as it applies to you personally. If you find any questions not applicable, please write N/A in the elaborate portion of the question. If you need additional space, please write on the back of the last sheet.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</thead>
<tbody>
<tr>
<td>1. Even though mental conditioning may help my performance, I do not really find the techniques valuable.</td>
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<td>Explain:</td>
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<td>2. It is worth my time to improve my mental skills/abilities.</td>
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<td>Explain:</td>
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<td>3. It is worth my time to assist others to improve their mind set.</td>
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<td>4</td>
<td>5</td>
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<td>Explain:</td>
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<td>4. I am motivated to use mental conditioning.</td>
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<td>Explain:</td>
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<td>5. I would rather try to cope with my mental limitations rather than try to change or improve them.</td>
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<td>Explain:</td>
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<td>6. I practice mental conditioning techniques to improve my overall performance.</td>
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<td>Explain:</td>
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<td>7. Mental training can help me prevent the need for crisis management.</td>
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<td>Explain:</td>
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<td>8. Based on your experience, what is mental conditioning?</td>
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*Survey prepared for EDRM 600 as a pilot study.*
The Role of the Mind in Athletics

The following questions assess your attitudes toward mental training and your previous experiences with mental training. Please indicate your agreement with each item as it applies to you personally. If you find any questions not applicable, please write N/A in the elaborate portion of the question. If you need additional space, please write on the back of the last sheet.

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>9. Positive visualization (imagining success) helps my performance</td>
<td>1</td>
<td>2</td>
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<td>Explain:</td>
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<td>10. Focalization activities (activities that assist in increasing focus) help me to achieve my goals.</td>
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<td>Explain:</td>
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<td>11. My mind set, on and off the field, are reflected in my performance.</td>
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<td>Explain:</td>
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<td>12. I consider myself mentally prepared for each situation I encounter, on and off the field.</td>
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<td>Explain:</td>
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<td>13. Mental conditioning is preventative, i.e. mental conditioning tries to prevent future problems.</td>
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<td>5</td>
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<tr>
<td>Explain:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Mental conditioning is reactionary, i.e. mental conditioning fixes problems as they occur.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Explain:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I am influenced by self-determination more than the influence of my coaches, medical staff, and athletes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Explain:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>16. What is the relevance of thinking during the preparation for athletic performance?</td>
<td></td>
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</tr>
</tbody>
</table>

*Survey prepared for EDRM 600 as a pilot study.*
Personal Information

Please answer the following questions about yourself.
Check the one that best describes your position:
_____ Athlete
_____ Coach
_____ Medical Staff

Check the option in which you identify:
_____ Male
_____ Female

Indicate your age range:
_____ 18-20-years
_____ 21-23-years
_____ 24-28-years
_____ 29-32-years
_____ 33+

If you are a student, please indicate your GPA range:
_____ 1.0-1.5
_____ 1.5-2.0
_____ 2.0-2.5
_____ 2.5-3.0
_____ 3.0-3.5
_____ 3.5-4.0

Indicate the type of community that best describes your upbringing:
_____ Urban
_____ Suburban
_____ Rural

Indicate the geographic region in which you were raised:
_____ Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont)
_____ Mid-Atlantic (Delaware, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia)
_____ Southeast (Florida, Georgia, South Carolina)
_____ Great Lakes Region (Illinois, Indiana, Michigan, Ohio, Wisconsin)
_____ Mississippi Valley (Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Missouri, Tennessee)
_____ Plains States (Iowa, Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, South Dakota, Texas)
_____ Rocky Mountain States (Colorado, Idaho, Montana, Utah, Wyoming)
_____ Pacific Northwest (Oregon, Washington)
_____ Pacific Southwest (Arizona, California, Nevada, New Mexico)