

The Differences in Mental Skills Across McKendree Athletic Teams

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Abstract

In recent years there is a growing importance of sport psychology in both team and individual sports. Leading sport psychologist, Jack Lesyk, suggests that there are nine essential mental skills for optimal performance in athletes (e.g., attitude, motivation, self-talk, people skills, etc.). A research team at McKendree University handed out Jack Lesyk's Nine Mental Skills Surveys to 176 athletes from twelve McKendree athletic teams (e.g., tennis, swimming, soccer, hockey, etc.) to assess the differences in mental skills between McKendree athletic teams. Analyses of the mental skills showed no significant differences between teams, but descriptive statistics can be used as an aid to assist performance development. With the use of this data, coaches and players are able to identify their teams' strengths and weaknesses and target what skills need development.

College athletics are frequently recognized for the physical accomplishments that college athletes achieve. The underlying traits that propels these athletes towards success or failure, is to what capacity athletes can deal with certain critical mental skills. Jack Lesyk, a prominent figure in the sport psychology field, designed a survey that measured nine different essential mental skills that he thought impacted sport performance the most. The nine mental skills Lesyk identified to asses an athlete's current mental state are attitude, motivation, goals and commitment, people skills, self-talk, mental imagery, dealing with anxiety, dealing with emotions, and concentration. An athlete's mental state can have a direct effect on their performance in their sport. The purpose of this study is to examine the mental differences among McKendree athletic teams so that teams can be aware of what mental skills their athletes may be struggling with and how they can improve them. The study was led by Dr. Tami Eggleston and eight other researchers helped to conduct this study: Bryce Bambic, Elia Burbidge, James Ding, Oriana Johnson, Jordan Morton, Sara Kalkenova, & Magdalena Knapp.

Literature Review

College athletics can take a toll on the mental well-being of the participating athletes (Beauchemin, 2014). Student athletes must undergo the pressure of handling a demanding sport schedule consisting of practices, workouts, games, and meetings while simultaneously succeeding in the classroom to the minimal extent of achieving eligibility to participate in their sport. Additional stressors come from the pressure of getting a job, handling a social life, and getting adequate nutrition and sleep. Handling this great amount of stress has such an effect on athletes that 10-15% of college athletes seek out counseling services due to how much stress they are under (Beauchemin, 2014).

To understand an athlete's current mental state, nine different mental skills are measured. These mental skills are attitude, motivation, goals and commitment, people skills, self-talk, mental imagery, dealing with anxiety, dealing with emotions, and concentration. It is important to understand how athletes are coping with all these skills because an athlete's mental skills can have a direct impact on their athletic performance (Hacker, 2000). The concept of an athlete's mental skills attributing to their success is not a new concept as Olympians from the 1996 games voted mental toughness as the number one key to their success (Hacker, 2000). Many studies have been done regarding the nine mental skills to show how they have an effect on an athlete's performance. Bleichrodt, L'Haridon, and Van Ass (2018) concluded in their study of professional field hockey players that when athletes approach their sports competition with an optimistic attitude, they are more likely to achieve success in their sport than athletes with a negative attitude. A study conducted by Fransen et al. (2015) shows that the attitude presented by the leader of a team has an impact on how the rest of the team will perform. When a leader expresses high confidence in the team's success, the team is more likely to achieve that success than if the leader expressed low confidence in the team's abilities. Regarding the mental imagery and self-talk skills, Hanshaw and Sukal (2016) showed in their study that martial artists who used mental imagery and self-talk had response times that were significantly lower than those who used no mental imagery or self-talk. Mental skills can also be researched to not only improve performance but to achieve optimal performance. Smrdu (2015) reported that the two leading factors that contribute to optimal sport performance are reaction to specific changes in the environment, and trustful performance. Examining these mental skills can help behaviors not directly related to a sport as well. Kavussanu, Stanger, and Ring (2015) studied antisocial behaviors in athletes and found that moral judgmental and anticipated guilt were the leading

factors that lead to antisocial behavior in sport. By understanding the factors that lead to antisocial behavior, athletes can be trained and counseled to avoid these traits.

In addition to the nine mental skills that are commonly examined, an athlete's emotional intelligence also impacts their sport performance. Salovey & Mayer suggest that emotional intelligence is the, "ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotion knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (as cited in Wagstaff, Fletcher, & Hanton, 2012, p. 269). With better developed emotional abilities, organizational effectiveness and functioning will increase, not only for athletes but also for coaches, administrators and directors (Wagstaff, et al. 2012). In addition, Dewar and Kavussanu (2012) concluded in their research that task involvement influences an athlete's emotions through their perceived performance. Emotional intelligence is closely tied in with the nine mental skills. Results from a study conducted by Lane, Thelwell, Lowther, and Devonport (2009) showed that those who used more self-talk, were more likely to appraise the emotions of others as well as to regulate their own emotions. There was also a correlation found that there is a relationship between emotional intelligence and mental skills.

This study will examine the following hypotheses:

1. The McKendree swimming team will score highest in the goals and commitment skill.
2. The McKendree women's hockey team will score lowest in the dealing with emotions skill.
3. The McKendree tennis team will score highest in the mental imagery skill.
4. The McKendree swimming team will score highest in the concentration skill.
5. The McKendree volleyball team will score highest in the self-talk skill.

Method

Participants

The participants in this study were student athletes attending McKendree University in the spring of 2019. 176 student athletes were surveyed in this study with more male participants (n= 94) than female participants (n= 82). The average age the participant started playing their sport was 7 years old and the participants had played a sport at McKendree University for an average of 2 years. The athletic teams that these students were selected from were men's tennis, women's tennis, men's volleyball, men's basketball, women's basketball, men's hockey, women's hockey, men's swimming and diving, women's swimming and diving, women's lacrosse, men's soccer, and marching band. Teams were selected to get a diverse range of teams that would represent the athletic student body at McKendree University. The teams selected included team sports, individual sports, indoor sports, outdoor sports, and sports played in different environments (e.g., water sports, field sports, ice sports, etc.). The teams were also selected due to their convenience to the researchers as the researchers were members of many of the teams. No researchers participated in the study.

Materials

The Nine Mental Skills of Successful Athletes survey was used in this study to assess the mental skills of McKendree athletes. This survey is a self-assessment that consists of 30 different questions to assess nine different mental skills. The mental skills that are measured by this survey are attitude, motivation, goals and commitments, people skills, self-talk, mental imagery, dealing with anxiety, dealing with emotions, and concentration. The answers to these questions are measured by a Likert Scale ranging from 0-10 with 0 representing 'not at all similar' and 10

representing 'very similar'. Included in the study is also a Think to Win survey which measures demographics of the athletes to get a better understanding of the sample population. The Think to Win portion of the survey includes 15 questions about the athlete's opinion of their sport and how it relates to their life. The questions on this portion are measured by a Likert Scale ranging from 1-5 with 1 representing 'strongly disagree' and 5 representing 'strongly agree'. The surveys were handed out to the athletic teams after receiving informed consent from the athletes. The surveys will be kept anonymous and they will later be shredded or destroyed after the study is complete to ensure confidentiality.

Procedure

The study was done on the McKendree University campus or McKendree athletic facilities. The location that the athletic teams completed the surveys was based on convenient meeting places for the athletic team. Participants were asked to voluntarily fill out a 5-10-minute survey that was a part in a research project studying the difference in mental skills across McKendree athletic teams. The study was a research project being done by an applied sport psychology class at McKendree University. Preparation for the study began at the began in January 2019 and full data entry was completed by March 2019. The study used SPSS to analyze 50 different variables of data gathered by the surveys. A variety of different aspects were looked at and analyzed. The difference of mental skills between sports teams was examined as well as the difference in mental skills between genders, years at McKendree University, age the athlete started playing their sport, and how many years they have been playing at McKendree. After the data had been analyzed, handouts were created for each athletic team with descriptive data from their teams scores as well as advice on how to develop their lowest scoring skill.

Results

The hypotheses of this study were tested using one-way ANOVA tests in SPSS. Data from 176 surveys was entered into SPSS and 50 different variables were measured to compare differences across the McKendree athletic teams. These variables included the questions from the surveys, as well as demographic questions about the participants. Team averages of the scores from each mental skill were calculated to better compare the teams (See Table 1). Results were hypothesized due to the researcher's prior knowledge and observations of the McKendree athletic teams.

One hypothesis predicted that the McKendree Swimming team will score the highest, of all surveyed McKendree athletic teams, in having the strongest concentration skills. A one-way ANOVA was used to compare the swimming team ($n = 32$) to the other athletic teams. Results of the test showed there was no significant difference between the concentration skills of the swimming team ($M = 7.84$, $SD = 1.14$) and the other athletic teams, $F(11, 163) = 1.46$, $p = .153$. The second hypothesis predicted that the women's hockey team ($n = 19$) would have the lowest average score in the dealing with emotions skill. A one-way ANOVA showed that there was no significant difference between the dealing with emotions skill of the women's hockey team ($M = 8.63$, $SD = 1.28$) and the other athletic teams, $F(11, 163) = 1.24$, $p = .262$. Dealing with emotions was the mental skill that the women's hockey team scored the highest on of the 9 mental skills. Another hypothesis predicted that the tennis team ($n = 13$) would score the highest in the mental imagery skill. A one-way ANOVA showed that there was no significant difference between the mental imagery skill of the tennis team ($M = 7.67$, $SD = 1.93$) and the other athletic teams, $F(11, 163) = .73$, $p = .710$. A fourth hypothesis predicted that the swimming team would score highest in the goals and commitment skill. A one-way ANOVA showed that there was no significant difference between the goals and commitment skill of the swimming team team ($M = 7.55$, $SD =$

2.14) and the other athletic teams, $F(11, 163) = .93, p = .513$. The final hypothesis predicted that the men's volleyball team ($n = 9$) would score the highest in the self-talk skill. A one-way ANOVA showed that there was no significant difference between the self-talk skill of the men's volleyball team ($M = 7.19, SD = 1.72$) and the other athletic teams, $F(11, 163) = 1.08, p = .379$.

Table 1. Mean scores (out of 10) of surveyed mental skills across McKendree athletic teams.

Team	Attitude	Motivation	Goals and Commitment	People Skills	Self-Talk	Mental Imagery	Dealing with Anxiety	Dealing with Emotions	Concentration
Tennis	8.39	7.90	7.96	7.48	7.25	7.67	7.06	7.82	7.30
M Volleyball	8.26	7.63	7.37	8.00	7.19	7.04	6.85	8.11	8.03
Basketball	8.67	8.21	8.14	8.73	7.52	7.54	7.58	8.35	8.26
Hockey	8.26	8.31	7.55	9.02	6.55	7.32	7.15	8.66	8.47
Marching Band	8.12	9.40	7.45	8.20	6.54	8.53	7.57	8.43	8.14
Swimming	8.50	8.38	7.55	8.03	6.15	8.33	7.48	8.09	7.84
W Lacrosse	8.33	8.70	8.06	8.76	6.64	7.36	6.61	7.82	8.20
M Soccer	8.53	8.78	8.59	8.26	7.81	8.19	8.48	8.75	8.67

Discussion

Results of this study did not show statistically significant differences in the mental skills between McKendree athletic teams. However, the mean scores of each mental skill for individual athletic teams can be helpful to coaches and players so they know what skills they are strong at and what skills they need to work on improving. This information should be taken into consideration if coaches wish to improve team performance as Hacker (2000) concluded that an athlete's quality of mental skills has a direct effect on their performance. By examining the mean scores, it can be determined what teams scored the highest in certain skills while other teams scored very low. Mental skills among individual teams can also be examined to determine what skills have the highest and lowest scores. Coaches and players can take this information to form a plan on how to assist the team to develop their low scoring skills.

Limitations to this study were that not all sports teams were surveyed in the same environment or at the same time. Some teams were surveyed very early in the morning, while

others were at varying times throughout the day meaning that fatigue could have impacted the data. Some teams were interviewed before practice while others were interviewed after practice. This may have impacted the data as a bad practice might cause an athlete to answer questions in different way than they might have before practice. Athletes were also interviewed in groups with their teammates. The pressure of being in the presence of their other teammates may have influenced the participants to answer in ways that were socially accepted by their teammates. Further limitations were that some teams were in season when surveyed and other teams were already in their off season. These differences could have caused participants to answer the questions in different ways as athletes often have different mindsets when in season and in off season. Athletes in season are often more susceptible to burnout, frustration and fatigue while athletes who are out of season are often not as stressed. A final limitation to the study was that only 12 of the 34 McKendree athletic teams were surveyed for the study.

Further studies could have made adjustments to make sure these factors were controlled for. Only teams that are all in season or all in off season should be surveyed. Teams should also be surveyed at the same time of day, and either entirely before or after practice. These adjustments would help to eliminate any differences that might occur in how participants answered questions. Using a larger sample size in a future study would also account for a more accurate representation of the study body at McKendree University. A follow up study with modified questions could be used to examine what factors influenced the different mental skills, rather than a comparison across teams. Questions could be asked such as, have you taken courses in sport psychology before? What is your attitude towards your coaches? What is your attitude towards your teammates? Have you ever experienced a mental coaching session? Did your parents ever stress mental training for your sport? The data from this study could also be used to

examine different factors that might influence mental skills such as the gender of the participant or their year in school.

Conclusion

Despite the lack of statistical significance in the results of this study, the data provided can still be very helpful to assist the athletic teams participating in the study. If coaches choose to examine the data pertaining to their team and take action to develop the mental skills that they may be lacking, performance for their team may improve. This study shows the importance of sport psychology and how an athlete's mentality may affect the team's performance. Teams can relate the skills they are not scoring well in to their teams' performance and determine how changing and developing that skill may lead to improved team performance. This study presents data that can be used to help improve a team's performance through their development of mental skills, as long as the team and coaches choose to be active in the development of these areas.

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