Beyond the Ride: The use of Psychological Skills Training in Equestrian Athletes

by

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ABSTRACT

Psychological skills training has been a proven coaching method used with athletes. The purpose of this study is to investigate the use of psychological skills training with equestrian athletes. We hypothesized that coaches were not broadly using psychological skills training but were using specific related skills in their coaching techniques. An online survey was administered to collect coaching demographics, along with questions of whether they used specific skills, frequency of use, and follow up questions regarding use related to performance improvement, education relative to PST, and limitations of use. 186 respondents completed the survey. There were differences in the type of skills used along with the situations in which they were used: practice, pre-competition, during competition, post competition. No differences were found attributable to coaching demographics or with the age and level of riders. Contrary to our hypothesis, 91% of equestrian coaches were using PST with their riders. We can conclude that equestrian coaches actively seek methods for rider improvement beyond the saddle and more research should be conducted in finding the best PST methods to use with equestrian athletes.

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CHAPTER 1: LITERATURE REVIEW

INTRODUCTION

The transition from the necessity of horses being used for survival in our daily lives to the equestrian sport has not diminished the need for hard work or desire for the pursuit of wealth. Equestrian sports organizations have replaced the traditional ranch hand rivalries with formal competitions and official rules. The desire to win and excel remains, however, the tools we use to prepare to compete are progressing. Competition has evolved from a group of neighbors holding a friendly "whose horse is best" game for ranch bragging rights, to a structured form of competition through breed and discipline organizations.

Equestrian athletes, whether professional or amateur, seek ways to give themselves and their horses a competitive edge. Along with detailed training and exercising programs for the horse, equestrians employ chiropractors, massage therapists, nutritionists, veterinarians, and farriers who specialize in performance enhancement. Each of these industry professionals are selected for the sole purpose of providing a service for the benefit of the horse. Riders, trainers, and horse owners will spend thousands of dollars a year for these specialized services in hopes of assisting the horse in reaching peak performance.

With competition comes the need and desire to win. Gaining the competitive edge to win is one of the factors that have led to the interest of implementing Psychological Skills Training (PST) in equestrian athletes. This application of mental training has become more prevalent in Equestrian sports at the higher competition levels as more riders view themselves as athletes. As riders work to improve their horse's training and ability, they are understanding the importance of focusing on self- improvement to reach maximum efficiency.

PSYCHOLOGICAL SKILLS TRAINING DEFINED

Psychological Skills Training (PST), also referred to as Mental Skills Training, "is the systematic and consistent practice of using mental or psychological skills for the purpose of enhancing performance, increasing enjoyment, or achieving greater sport and physical activity satisfaction" (Weinberg, 2019). While there are many PST systems that have been created for individuals to use the most common methods incorporate at least one or a combination of the following: relaxation, imagery, attentional focus, self-talk, goal setting, routines, and confidence (Wixcey, 2015). With these cognitive and somatic techniques, it is believed that implementing at least one of these skills will improve the performance of athletes. Implementing multiple mental skills can improve the success of the effectiveness of each skill.

Weinberg (2019) states that while there are many ways to create a PST program, having a solid understanding of the athlete's mental skills will lead to a higher success of effectiveness. Athletes participating in an organized PST program, designed by a trained

professional, reported feelings of accomplishment, confidence, and success even when their performance did not improve (Wolframm et al, 2010).

Relaxation

Relaxation is defined as lowering a physiological state of arousal (Weinberg, 2019). Techniques like controlled breathing have been used with athletes to help reduce anxiety prior to and during performances (Edwards and Beale, 2011). Kelling's (2009) study comparing the heart rates of a rider versus their mount's heart rate depicted a positive correlation between rider and horse. It highlighted the importance of being in a relaxed and neutral mood while interacting with the horse, by documenting a correlation between a nervous human's elevated heart rate and a horse's elevated heart rate. (Kelling et al, 2009) Teaching rider relaxation techniques will allow them to communicate with their horses more effectively. A calm, more unified partnership between horse and rider will lead to greater success.

Imagery

Imagery is the mental visualization of activity or performance and adding as much detail and step by step process as possible (Wixcey, 2015). The imagery process is one that is used during practice, immediately before and during competition. Incorporating imagery pre-performance and during competition increases an athlete's success rate (Kanthank et al, 2014). Imagery is also beneficial in promoting increased recovery time after a mistake. The skill, imagery, was used in Wolframm's (2011) study of dressage riders by having each individual write down their desired performance from beginning to end, vividly describing each element.

Riders were then asked to practice visualizing this performance to increase their success in mastering their imagery prior to and during competition. Imagery allowed the riders to maintain a higher level of mental focus by decreasing anxiety and allowing more emotional composure of both horse and rider. (Wolframm and Micklewright, 2011)

Attention Focus

Attention focus, like imagery that is a control of mental visualization, is the mental attention to prevent distractions from impeding performance (Wixcey,2015). The attention focus may be internal or external. Internal focus is the attention to a motor skill that performs movement such as the mechanics of a golf swing. External focus is the mental focus on the conditions surrounding a performance, such as the running path of a cross country course. The effect of external attention focus on the oxygen consumption of endurance runners improved performance in experienced runners; however, internal focus proved to decrease performance success (Schucker et al, 2009).

Researchers believe that the type of attentional focus needed to be successful varies depending on the current skill level of the competitor. For example, a novice equestrian learning to execute a posting trot will need to use internal focus until the muscle memory is achieved, allowing the rider to move freely with the horse. An experienced rider does not need to focus on finding the correct diagonal and position while posting the trot and instead should focus on the track of the jump course.

Self-Talk

Another PST skill that has proven effective in producing desired results in a competition is self-talk. Self-talk can be explained as the inner dialogue of a person's mind. Training an athlete to control their self-talk to be positive and focused on the task at hand can help eliminate the negative thoughts that can occur when an athlete is under stress or faced with the pressures of competition (Wixcey, 2015). Wolframm (2011) suggested that affirmation statements that are motivational and task-specific will eliminate hindering perceptions and facilitate peak performance. His research showed performance improvement with riders who practiced self-talk. The need for precision and application of correct aids for communication with the rider's mount gives merit for the need of attentional focus. By incorporating self-talk and task-related keywords that refocus the rider's mind to the activity at hand there will be a direct effect of improvement in the equestrian's performance. (Wolframm and Micklewright, 2011)

Goal Setting

Fitzhugh Dodson, an American psychologist, said, "Without goals, and plans to reach them, you are like a ship that has set sail with no destination." To reach a goal, one must first set a goal. Goal setting is mapping out a plan to give focus and direction to one's actions. By implementing short term and long-term goals to a training program, the athlete can maintain focus and provide a source of motivation. (Wolframm and Micklewright, 2011)

Routine

Establishing a routine will improve the ability of the athlete to block out external distractions, maintain attentional focus, and decrease debilitative anxiety and stress. Horses and people feel most relaxed when they are in a familiar environment. (Wixcey, 2015) Equestrians know that they are not always able to control the environment in which they will compete. By establishing a routine, they can create a sense of familiarity that could decrease the arousal of the horse and rider (Wolframm, 2011). Completing the same warm-up process before each competition is an example of establishing a routine to promote peak performance. (Wolframm, 2014)

Confidence

One trait all accomplished athletes exhibit is confidence. Instilling confidence in athletes is one of the more complex elements in PST. A guide for sport-confidence was created by Beeby (2015) to demonstrate effective ways to implement steps in creating confidence with athletes. Beeby advises that an effective PST program will be multidimensional. Using multiple skills associated with PST can assist with instilling confidence in athletes. For example, encouraging athletes to set goals while establishing a performance routine will increase their confidence in their abilities as they reach performance goals. Beeby (2015) stresses the importance of understanding each individual's personality to better equip them with the skills they need to be successful. (Beeby, 2015).

Beauchamp (2005) determined as an equestrian feels confident in one's abilities, they become confident in their ability to work with the horse. Using PST to improve self-confidence will positively influence performance. Improved performance results in success and self-efficacy will continue to grow encouraging the rider to reach for larger goals. (Beauchamp and Whinton, 2005)

STUDIES OF PSYCHOLOGICAL SKILLS TRAINING

The advantages of implementing PST among elite athletes is highly recognized among most sports. As more research is published on the psychological demands of each sport, more sports incorporate PST into their everyday training programs. (Birrer et al, 2010) Determining the sport-specific psychological demands assists coaches in deciding which PST skills will be most effective. Runners and swimmers are in what is considered a closed sport. A closed sport means the parameters of each competition generally remain constant with extraordinarily little outside influence. The type of skills best suited for participants in closed sport may be different from football players or basketball players, who play in an open sport. Open sports have many outside influences that could alter the game (Birrer et al, 2010). Equestrians compete in an open sport as the changes in the environment, outside stimuli, and the nature of the horse itself, can alter performance.

Individual Equestrians Sports PST Studies

Einarsson et al (2019) gathered data from 392 athletes from various sports including equestrians. The data consisted of questions identifying sport, age, gender, and whether the participant was interested or participated in PST. The goal of this study was to determine how many used PST, their success, and any correlations between PST

success relevant to gender. Of the 392 participants surveyed 42% claimed to use PST, however, 90% expressed an interest in learning more. Men and older athletes used PST more often than women and younger athletes. The difference depicted with the results based on age could be associated with the lack of training in children involved in sports (Einarsson et al 2019) This was an interesting find and leads to the conclusion that perhaps PST should be taught at a young age. Early exposure would lead to more proficient use of PST especially for athletes who are pursuing sports at the collegiate or professional level. (Einarsson et al, 2019)

Competition can elicit negative arousal states with participants. While researchers agree that some arousal can be performance-enhancing, an excess can be debilitative (Cerin, 2003). Helping competitors find effective ways to combat performance anxiety through PST will assist athletes in finding their optimal arousal level also known as flow. Jackson (1998) describes flow as being the positive psychological state of balance between challenges and an individual's ability to meet those challenges.

Dressage riders were tested to see if incorporating PST into their performance routine would elicit peak performance (Wolframm, 2011). Seventeen dressage riders, combined with both novice and advanced riders, participated in a competition show prior to any PST training. After the initial show, they underwent a 6-week psychological skills training course in which they met twice a week and were instructed to practice PST techniques 15-20 minutes each day. After the conclusion of the 6 weeks course, the riders entered another dressage show. The results of the study did not show improvement in performance measured by an increase in rider's dressage scores. There was no significant

improvement depicted in the scores for the novice or advanced groups. The participants, however, completed a questionnaire at the end of the study, and the results were unanimous. All the riders felt they had greatly improved after the 6-week training course. They felt less pre-competition anxiety and reported feeling more relaxed and focused throughout the dressage test. The riders also reported that they felt their horses responded more accurately and willingly (Wolframm, 2011). While the rider's scores did not reflect an increase, the athletes felt their experience was more positive. This positive experience will be motivation for the riders to continue with the sport of dressage (Wolframm, 2011).

While Wolframm did not see an objective improvement in the rider's performances, a reevaluation of the same riders after incorporating the PST in their program for a longer period might result in increased dressage scores. The novice riders tested were still learning to master the skills required while riding. Wolframm also found that athletes that underwent PST training recovered more quickly from mistakes and were able to turn precompetitive anxiety into a performance-enhancing emotion (Wolframm, 2011).

PST Use Outside of Equestrian Sports

The type of sport does not affect the agreement among coaches that the use of PST is beneficial to all athletes. Grobbelaar's (2007) study of South African netball coaches, determined that 89.9% of coaches regard PST as particularly important. Among the 46.4% of coaches who implemented PST programs goal setting, self-confidence and concentration skills were the most frequently implemented skills. Financial limitations,

unavailability of sport psychologists and a lack of knowledge were reported as the most prolific reasons for not implementing PST. A survey of junior tennis coaches also strongly agreed that the use of PST was important and increased player performance. The tennis coaches also reported limitations of psychological skills training to include a lack of time, a lack of player interest, difficulty evaluating mental skills training success, and a lack of models. (Gould et al, 1999) Even with the limitations of PST coaches still believe that PST assists with lessening performance anxiety, building self-confidence and increasing overall performance success.

Psychological skills training has shown a reduction in stress and anxiety in other activities, such as the workplace environment. Traeger's (2013) study incorporated PST for oncology nurses resulting in positive assessments of nurse's emotional states while managing stressful job requirements. Burnout, career changes, and compassion fatigue are the most common outcomes of this emotionally challenging career. An oncology nurse's job consists of consoling and guiding patients and their family members during treatments and end of life preparations.

Data was gathered from a group of nurses through a questionnaire. These questions were related to patient and family encounters, outcomes and coping strategies for difficult interactions, and training needs and preferences. A PST plan was then developed from the questionnaire. By understanding the nurses' needs and challenges Treager was able to develop a PST program specific to the nurse's suggested needs (Treager et al, 2013). After two months of implementing the program nurses filled out a

second questionnaire. Further review of the data supported the theory that PST does help nurses cope with workplace stress and reduce emotional fatigue (Treager et al, 2013).

BENEFITS/IMPLEMENTATION OF PST

An athlete's emotions can negatively affect their performance. States of anger, fear, anxiety, and depression even with low-intensity levels can have debilitative effects (Cerin, 2003). An athlete's mental state and emotional stability can alter depending on the level of competition and their perception of preparedness. This unstable mental climate can interrupt the focus of the athlete (Wolframm et al, 2010). By incorporating PST, athletes are given a tool to combat the lack of focus, self-doubt or pre-competition jitters and help create a more battle-ready mentality as a competitor.

When Wolframm (2010) compared the emotional states of advanced riders versus novice riders, both groups show emotional distress, but for different reasons. Novice riders exhibit more distress concerning self-doubt, confusion, lack of self-confidence. A coach/trainer would need to focus on task-specific skills for these individuals until they master the skills needed to excel as a rider. Incorporating goal setting, positive self-talk, and attentional focus would be effective in helping overcome the emotional unrest (Wolframm et al, 2010).

Advanced riders show more distress due to factors associated with the elite competition they are progressing towards. The communication between horse and rider is crucial towards the success of the ride. Advanced riders are more refined and have less miscommunication associated with the learning curve of novice riders. Creating harmony and a relaxed partnership between horse and rider will decrease errors leading towards

success (Keeling et al, 2009). Improving the concentration and focus of the advanced rider will only strengthen this horse-human partnership. Coaches can incorporate task-specific concentration skills such as self-talk, attentional focus, and imagery to allow the rider to communicate more effectively and accurately to the horse (Wolframm et al, 2010).

CONCLUSION

The aim of this paper was to review the research on the use of PST with equestrians. The studies reviewed here-in evaluated individual competitors with no prior PST training. These studies implemented a brief training period and evaluated the riders prior to and after competition to determine the effects of PST. The studies reviewed were all short in duration and not all reveal a positive correlation with PST and performance based on show success. The participants did all agree they felt as though their performance did improve after PST. The literature supports that the implementation of PST in an athlete's training program will lead to an improvement in performance and self-efficacy (Beauchamp and Whinton, 2005). More research is needed within the equestrian sport to determine the long-term effects of PST and performance related to competition.

CHAPTER II: BEYOND THE RIDE: THE USE OF PYSCHOLOGICAL SKILLS TRAINING WITH EQUESTRIAN ATHLETES

INTRODUCTION

Athlete performance is often the deciding factor in the evaluation of a coach's success. For this reason, coaches across all sporting events continue to hone their coaching skills and strategies to increase their ability in improving athlete performance. Psychological skills training has been a proven method used with all level of athletes regardless of age or experience. The evidence supporting increased mental focus, decreased performance anxiety, and increase in overall athlete performance warrants the inclusion into an equestrian riding routine.

The purpose of this study is to investigate the use of psychological skills training with equestrian athletes. We hypothesized that coaches were not implementing a structured psychological skills training program but were using specific skill types in their coaching techniques.

MATERIALS AND METHODS

In this study, an online survey was developed and administered using Qualtrics, a survey creation software that allows data collection, storage, and analysis. The survey and all methods were approved by the Institutional Review Board at Middle Tennessee State University (Protocol ID# 20-1156; Appendix A). This survey was distributed via social media (Facebook), through email to industry contacts', and distributed by equine industry specific organizations' social media posts, newsletters, and email blasts. The

survey link was made available for respondents to complete beginning April 15, 2020 and closed on May 18, 2020. The information gathered in this survey contained no identity specific questions and all responses were completely anonymous. The complete survey can be found as Appendix B. Briefly, respondents were first asked to answer a serious of consent questions along with confirming they were 18 years of age or older. Respondents were then directed to an elimination question of whether they coached equestrians and all "no" responses were directed to the end of the survey. The "yes" responses were then asked a series of questions including; number of years coaching, coaching roles, age of students, disciplines taught, riders' level and team or individual environment, to determine the demographics of the coaching population being surveyed.

Once the demographics were established respondents were then directed to the question of whether they used specific skills that are identified as psychological skills training. Respondents who selected yes answered a series of 5-pt Likert scale questions regarding specific skills used, frequency of use and areas of performance improvement. Respondents who selected no or not sure were redirected to a series of 5-pt Likert scale questions to determine if they truly did not use PST in their program. The survey then provided the definition of psychological skills training to all respondents with follow up questions regarding use, use related to performance improvement, education of PST, and limitations of use.

Responses were collected for a period of 33 days, at which point, data collection was halted, and the survey link was closed. Before survey evaluation, the criteria for inclusion was established to be respondents who identified themselves as coaching

equestrian students, as determined by responses to Question 5, "Do you coach?"

Respondents who responded "no", were not included in the data analysis. Summary

statistics and frequency counts of the data were completed using the survey software

Qualtrics (SAP Qualtrics XM, Provo, Utah). The remaining data analysis, described as

follows, was completed using SAS Version 9.4 (SAS Institute Inc., Cary, NC).

First, the data were confirmed as fitting a normal distribution. An analysis of

variance using a general linear models procedure was used to examine main effects of

years spent coaching (Question 6), role (Question 7), student age demographic (Question

8), disciplines coached (Question 9), level of rider (Question 10), and individual vs team

environment (Question 11), on all numeric Likert scale responses. These main effects

were also examined using general linear models in the analysis of Question 12, which

addresses use of specific types of PST, after numeric values were assigned to the Yes,

Not Sure, No answers. The data from Question 15, which asked participants to select the

situations (Practice, Pre-Competition, During Competition, and Post-Competition) when

specific types of PST were used, were also transformed to numeric values, where a value

of 1 = "yes," the participant identified use of the PST in the situation, and 0 = "no," the

PST type was identified as not used in the situation. The transformed data from Question

15 were analyzed using a general linear model procedure to examine the effects of the

situation on the choice of PST type, and the interaction effects of situation and PST type

used. Pearson's correlation coefficients were used to measure the agreement between

Likert scale responses to Questions 14 and 16. Statistical significance was designated at P

< 0.05.

RESULTS AND DISCUSSION

Survey Demographics

In total, 226 respondents started the survey of which 186 answered the inclusion question "Do you coach?". Of the 186 respondents, 133 answered "yes" with 85% being female and 15% male. Survey respondents then answered the question regarding number of years coaching with a diverse range of experience of 31% coaching 0-5 years, 22% coaching 6-10 years, 16% coaching 11-19 years, and 32% coaching 20 plus years.

Regarding the coaching role with equestrians, 7% identified as Intercollegiate Horse Show Association (IHSA) coaches, 4% as National Collegiate Equestrian Association (NCEA) coaches, 3% as other collegiate coaches, 10% as Interscholastic Equestrian Association Coaches (IEA), 27% as professional horse trainers, 9% as seasonal camp riding instructors, 27% as private facility riding instructor, and 14% as other. Among this coaching demographic, when asked disciplines they coached the highest frequency count were western performance; (including western pleasure, western horsemanship, and western riding); at 19% and hunter seat at 17%. Additional disciplines represented were 15% recreational riding, 13% western stock; reining, cutting, cow horse, ranch riding and roping, 9% show jumping, 8% dressage, 6% speed events, 4% other, 3% cross country, 3% driving, 2% saddle seat and less than 1% vaulting.

The student relationship most associated with the coach's position consisted of 34% in an individual environment only, 12% in a team environment only, and 53% in a combination of both individual and team environment. The student age demographics most often coached, showed an even distribution with 17% being elementary age, 20%

middle school age, 20% high school age, 16% college age, 14% young adult 25-29, and 15% with adults 40 and over. When asked to define the level of rider they most often coached, 55% of respondents selected novice level riders with 33% being novice youth and 22% being novice adult, 17% selected beginner youth, 2% beginner adult, 11% experienced youth and 15% experienced adult (Figure 1).

PST Use

Respondents were asked if they implemented any of the following skills while coaching; mental imagery/visualization, goal setting, task relevant routine, relaxation techniques, positive self-talk, confidence building tactics or mental focus. Of the 133 responses, 90% selected "yes", with 8% selecting "not sure", and 2% selecting "no". The "no" and "not sure" respondents were then redirected to "I use" statements that identify with each PST skill using a 5-point Likert scale, along with a follow up question including the definition of PST to determine whether respondents truly did not use PST with their students.

No and Not Sure Responses

Upon reviewing the data of the 9 respondents who selected "no" or "not sure" to PST use (7 "not sure" and 2 "no"), 4 answered "never", 1 answered "sometimes" and 4 answered "most of the time" to statements related to specific psychological skills using a 5-point Likert scale. After respondents were given the definition of PST in the following question 4 changed their answer to "yes", while 2 changed from "not sure" to "no".
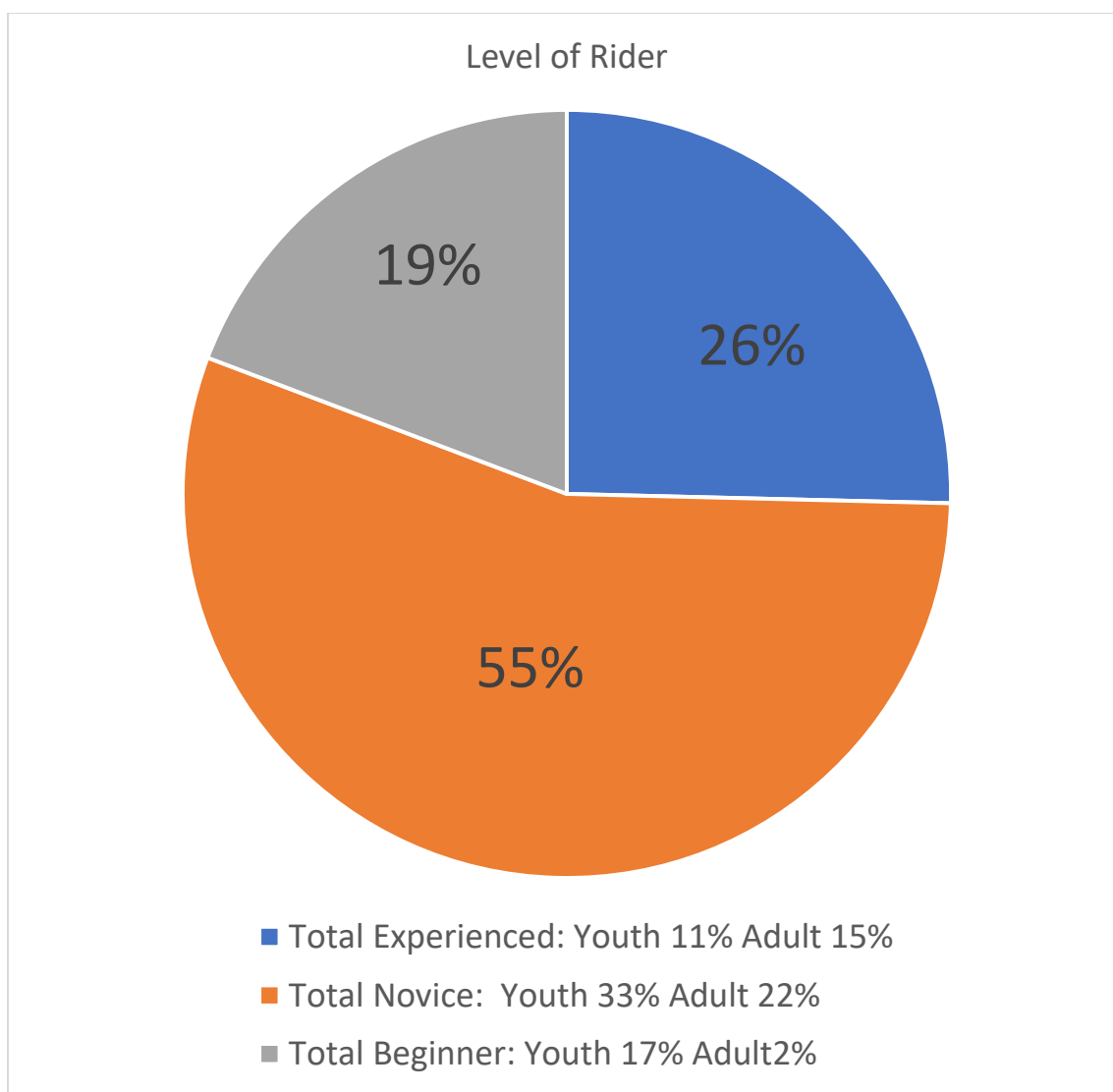
Figure 1. The frequency of level of rider most often coached in a survey investigating the use of psychological skills used with equestrians (N=133). Combination of youth and adult students for each designated riding level experienced, novice, and beginner.

These respondents also responded 91% "yes" they would implement PST into their

programs if they knew it would improve rider performance.

The "no" and "not sure" sample size was very small, however, the inconsistency

to answers to, "Do you use PST?" and the use statements referring to specific skill type

gives merit to our hypothesis that coaches are using PST but may be unaware of it. The

four respondents that changed their answer to "yes" after receiving the definition of PST

provides further evidence in supporting this theory.

Yes Responses

There was no difference among the use of PST related to the role of coaching *(P

= 0.06)*, discipline *(P = 0.38)*, years coaching *(P = 0.08)*, age demographic taught *(P =

0.60)*, or level of rider *(P = 0.34)*. There was a difference in the student relationship as

respondents are more likely to use PST in a team setting than in an individual *(P < 0.020)*

with no difference compared to a combination of individual and team *(P > 0.053)*. There

was no difference between combination of individual and team versus individual *(P >

0.72)* and combination individual and team versus team *(P > 0.05)*. Furthermore, no

difference was seen between the type of skill used and the coach's role in coaching *(P =

0.32)*, discipline *(P = 0.81)*, years coaching *(P = 0.14)*, student relationship *(P = 0.44)*,

age demographic *(P = 0.69)*, or level of rider most often coached *(P = 0.07)*.

Coaches involved in a team setting were more likely to use PST with their riders

than coaches in an individual or combination setting. This could be due to the likelihood

that coaches working in a team setting have collegiate affiliations with access to PST

training or PST professionals.

Evaluation of which skill is used most often among coaches identified a

difference in skill use *(P < 0.044)*. Confidence building and goal setting had no

difference in use with each other *(P = 0.52)* and were used most often compared to other

PST skills *(P = 0.017)*. The next most prevalent skills used, with no difference among

them, were imagery, self-talk, and task relevant routine *(P > 0.16)*. Lastly, relaxation was

defined as the least used *(P = 0.017;* Figure 2).

Of the respondents, 55% selected coaching novice equestrians most often. Since

confidence building and self-talk were the most used skills these findings support

Wolframm et al.'s (2010) study regarding the use of specific skills based on the athlete's

experience level as these skills are most used with athletes learning to master a skill. As

the experience level of the rider changes, so does the combination and frequency of type

of skills used to promote successful performance. (Schucker et al., 2009)

Upon review of the type of PST used and the situation in which they are used,

there were some differences found. The overall use of PST is shown in Figure 3. PST use

was different in every situation, with PST used most during practice, followed by pre-

competition, then during competition and finally post competition *(P < 0.001)*. The type

of PST used is shown in Figure 4. Confidence building and self-talk use did not differ *(P

> 0.95)* and both were used more than goal setting *(P =0 .023)*, imagery *(P = 0.044)*,

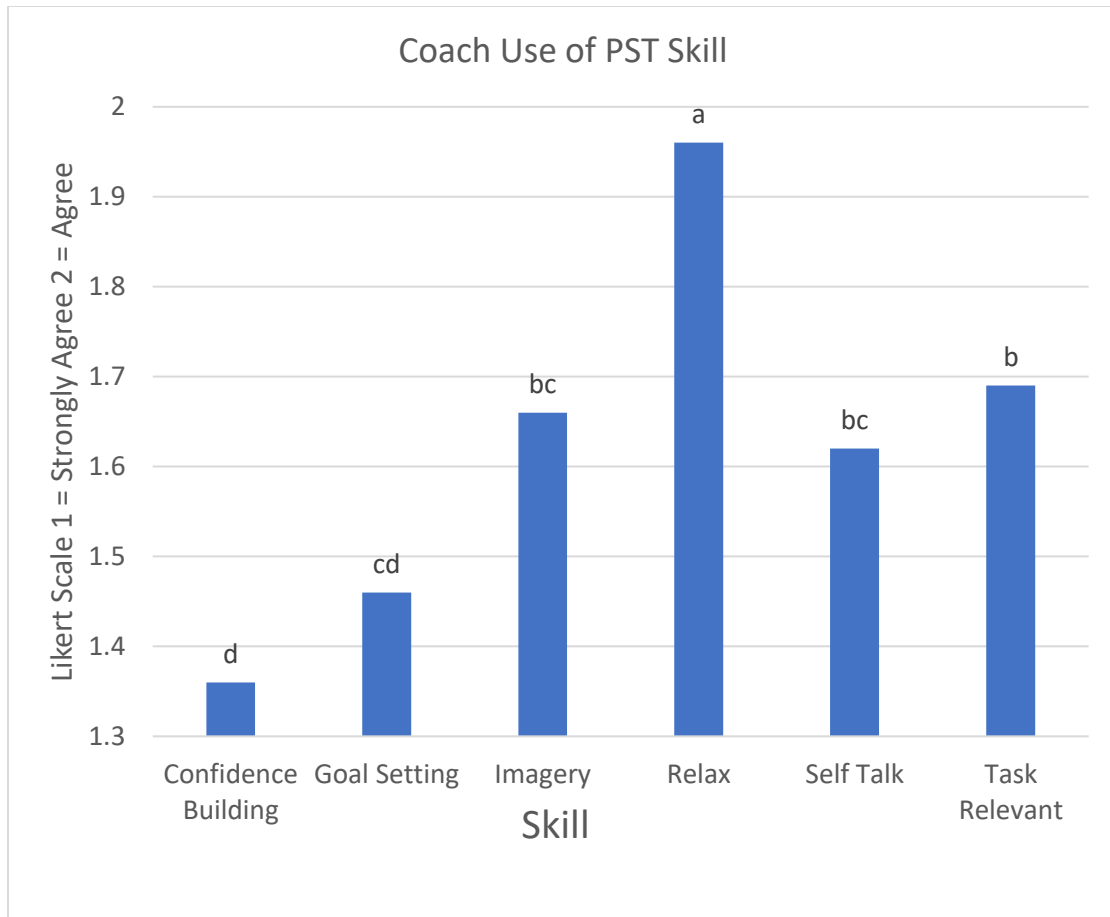relaxation *(P = 0.003)*, and task relevant routine *(P = 0.003)*.

Figure 2. Coach use of PST skill: confidence building, goal setting, imagery, relaxation, self-talk, task relevant, and the correlation of skill use in a survey investigating the use of psychological skills when coaching equestrians (N=133). Skills not sharing a common superscript are different ($P < 0.05$).
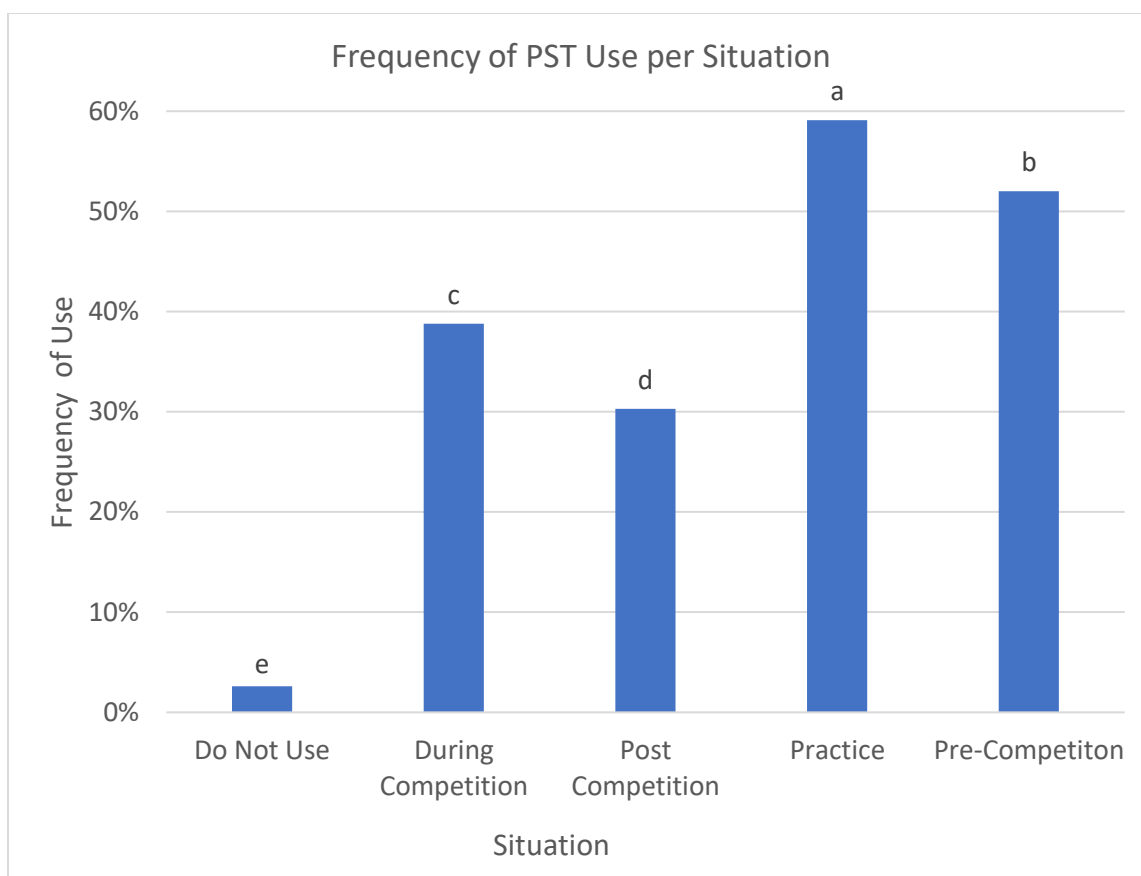
Figure 3. Frequency of PST use in coaching situation: do not use, during competition, post competition, practice, pre-competition in a survey investigating the use of psychological skills when coaching equestrians (N=133). Situations not sharing a common superscript are different (P < 0.05).
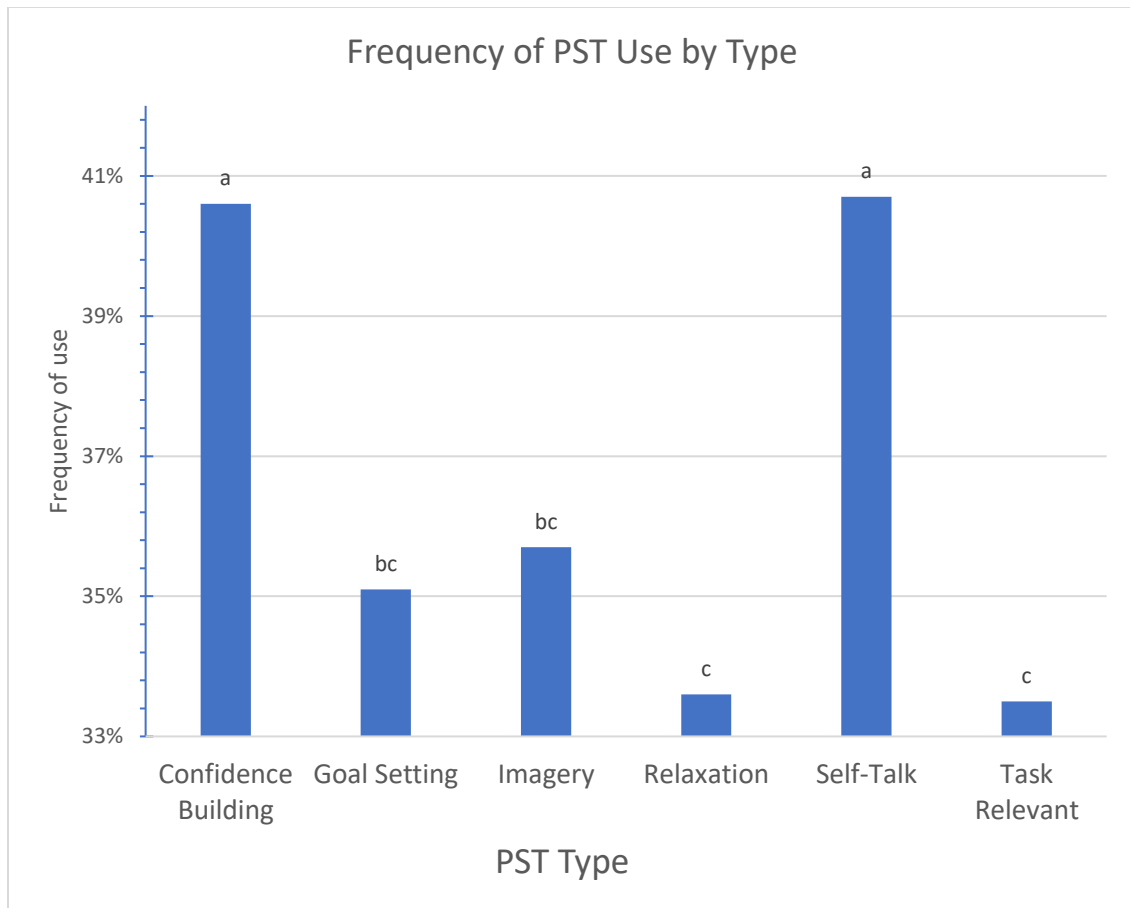
Figure 4. Frequency of PST skill: confidence building, goal setting, imagery, relaxation, self-talk, task relevant, use in coaching situations in a survey investigating the use of psychological skills when coaching equestrians (N=133). Skills not sharing a common superscript are different (P < 0.05).

The interaction of situation and PST type was significant *(P < 0.001)*, indicating that the PST type use varied by situation (Figure 5). Respondents agreed that they all used confidence building, goal setting, task relevant, imagery and self-talk with no difference in use during practice *(P > 0.06)*. Relaxation was the least used *(P = 0.035)* having no difference in use when compared to self-talk *(P = 0.16)*. Pre-competition use of PST skills showed no difference among all six skills *(P > 0.16)*.

During competition there was no difference in the use of confidence building, relaxation, and self-talk *(P > 0.26)*. Confidence building was used more than goal setting and task relevant *(P < 0.049)*. Relaxation was used more than imagery, goal setting and task relevant *(P < 0.049)*, with self-talk only used more than goal setting and task relevant *(P < 0.049)*. Imagery and task relevant showed no difference *(P = 0.06)*, however, imagery was used more than goal setting *(P = 0.017)*. Post competition use showed confidence building, goal setting and self-talk as the most used *(P < 0.024)* with no difference *(P > 0.48)* between the skills. Task relevant, imagery, and self-talk were the least used *(P < 0.049)* with no difference between each skill *(P > 0.06)*.
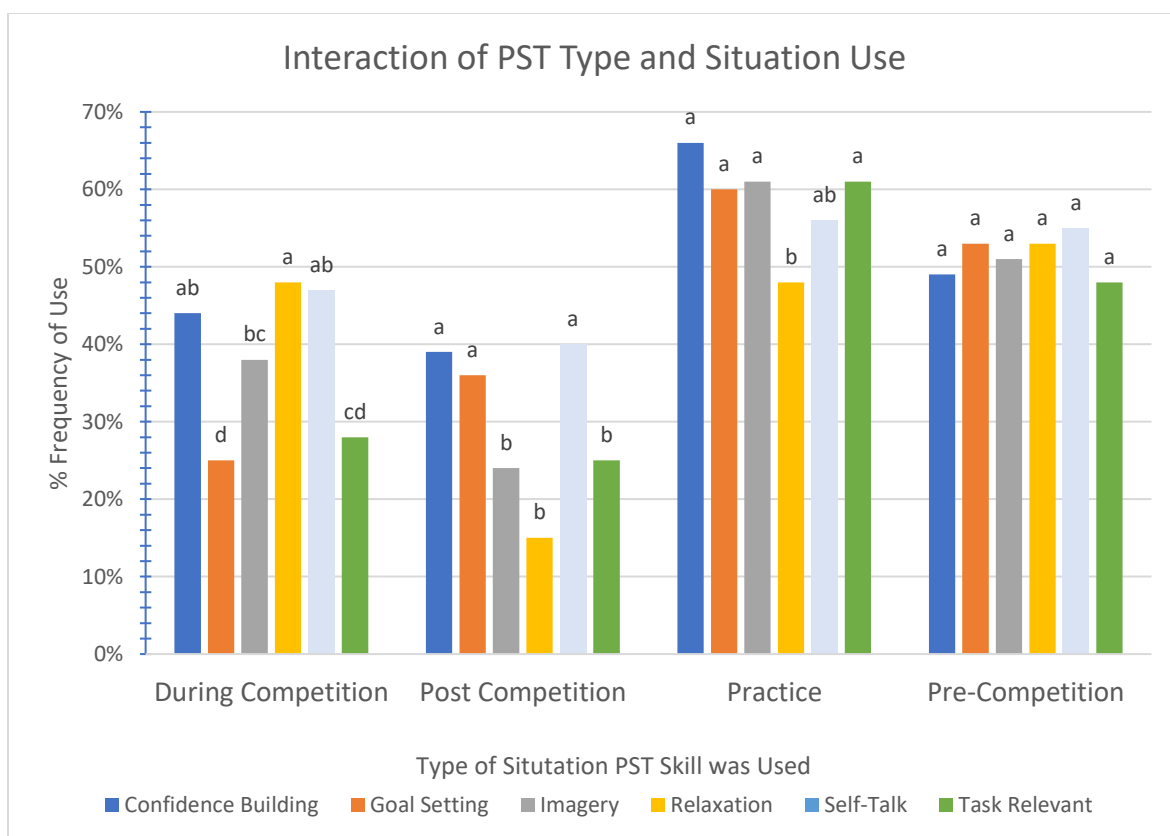
Figure 5. Interaction of PST skills: confidence building, goal setting, imagery, relaxation, self-talk, and task relevant behaviors during specific coaching situations in a survey investigating the use of psychological skills used with equestrians (N=133). Within a situation, skills not sharing a common superscript are different (P < 0.05).

Additionally, differences were detected among skills and its individual use compared to situation type shown in Figure 10. Confidence building was used more in practice compared to during competition *(P < 0.001)* and had no difference in use pre- or post competition *(P > 0.32)*. Goal setting and imagery were most used *(P > 0.12)* in practice and pre-competition followed by during competition and post competition *(P < 0.035)*. There was no difference in the use of relaxation when compared in practice, pre-competition, and during competition *(P > 0.39)*; however, relaxation was used less during post competition compared to practice *(P = 0.0001)* and during competition *(P = 0.0001)*. Self-talk was used most in practice, pre-competition and during competition *(P > 0.92)* and used least during post competition *(P < 0.005)*. Task relevant was used the most during practice *(P < 0.011)*. It was least used during competition and post competition with no difference between the two situations *(P > 0.57)*.

Comparison of the answers from frequency of skill use (Question 14) and performance improvement (Question 16) showed some correlation between the respondents' perceptions of performance improvement and the specific skill used. Coaches ranking of the use of PSTs confidence building, self-talk, relaxation, task relevant routine and goal setting, were positively correlated with performance improvement in increasing self-confidence and lessening anxiety *(R = 0.41, respectively; P < 0.033)*. When asked which skills promoted a positive attitude a positive correlation was found with the PST skills self-talk, relaxation, and task relevant routine *(R = 0.32, respectively; P < 0.006)*.
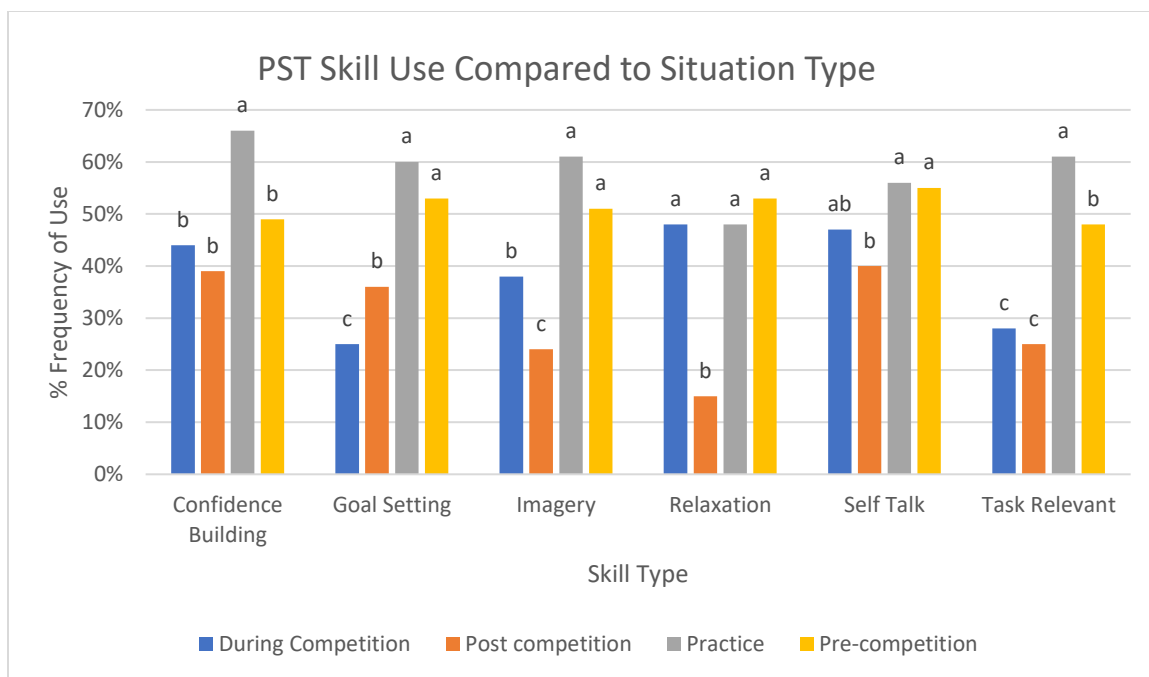
Figure 10. Frequency of interaction of PST skill most used in during competitions, post competitions, in practice and pre-competition in a survey investigating the use of psychological skills used with equestrians (N=133). Within a skill, situations not sharing a common superscript are different (P < 0.05).

Furthermore, a positive correlation was also found with the use of imagery, self-talk and relaxation compared to assisting students in learning a new skill, while only the use of imagery and relaxation positively correlated with recovering from a mistake *(R = 0.32, P = 0.009).* Relaxation was the most positively correlated skill when compared to use and student performance improvement *(R = 0.41, respectively; P < 0.17).*

The reported data reflecting the use of multiple PST skills based on each situation type supports the finding on the importance of developing effective PST programs found in Wixcey's (2015) study. Wixcey stated the more skills used together, the more effective the PST program. Coaches are implementing most skills during practice, all skills pre-competition and only implementing certain skills during competition and post competition. This data suggests that coaches are targeting the skills needed to warrant the best results for their riders and adapting to the situational needs. However, when comparing the frequency of skill use (Question 14) and the perceptions of enhancing performance (Question 16), coaches indicated that relaxation was the most used in all areas of enhancing student performance. This contradicts with the findings of relaxation being the least used when coaches were asked to identify which situation (practice, pre-competition, during competition, post competition) did they use a specific skill the most (Question 15). The variation in these answers could indicate the need for additional research into what techniques and skills are being implemented in each situation type. This information would also assist coaches in developing a PST program that is effective in enhancing student performance and with creating a progressive program that adapts as the students riding mastery increases.

Coach's Perceptions and Training with PST

Most respondents 91%, agreed that if PST would improve rider's performance, they would implement it in their programs. Additionally, 68% of coaches would like additional information (Figure 6) and 75% of respondents stated they would encourage students to use PST if it was available from another source (Figure 7).

Lack of training, at 31%, was the largest limiting factor of PST implementation followed by lack of knowledge of PST (15%), lack of resources (15%), no desire (12%), lack of time (12%) and cost (11%; Figure 8). Only 2% selected "other" and less than 1% felt PST was not effective. The respondents indicated 52% of coaches are self-taught, 20% have no training, 10% have some training or hold a degree with an emphasis on coaching or psychology, and only 6% work alongside a professional in the field (Figure 9).

The limiting factors to PST implementation are concurrent with other sport professionals' opinions from previous findings (Gould et al, 1999). This information shows the desire for more research and training opportunities for equestrian coaches. The results indicate there is interest in understanding which PST skills are most effective for equestrians and how PST programs should be developed to allow for accelerated mastery of skills and increased growth of the rider.
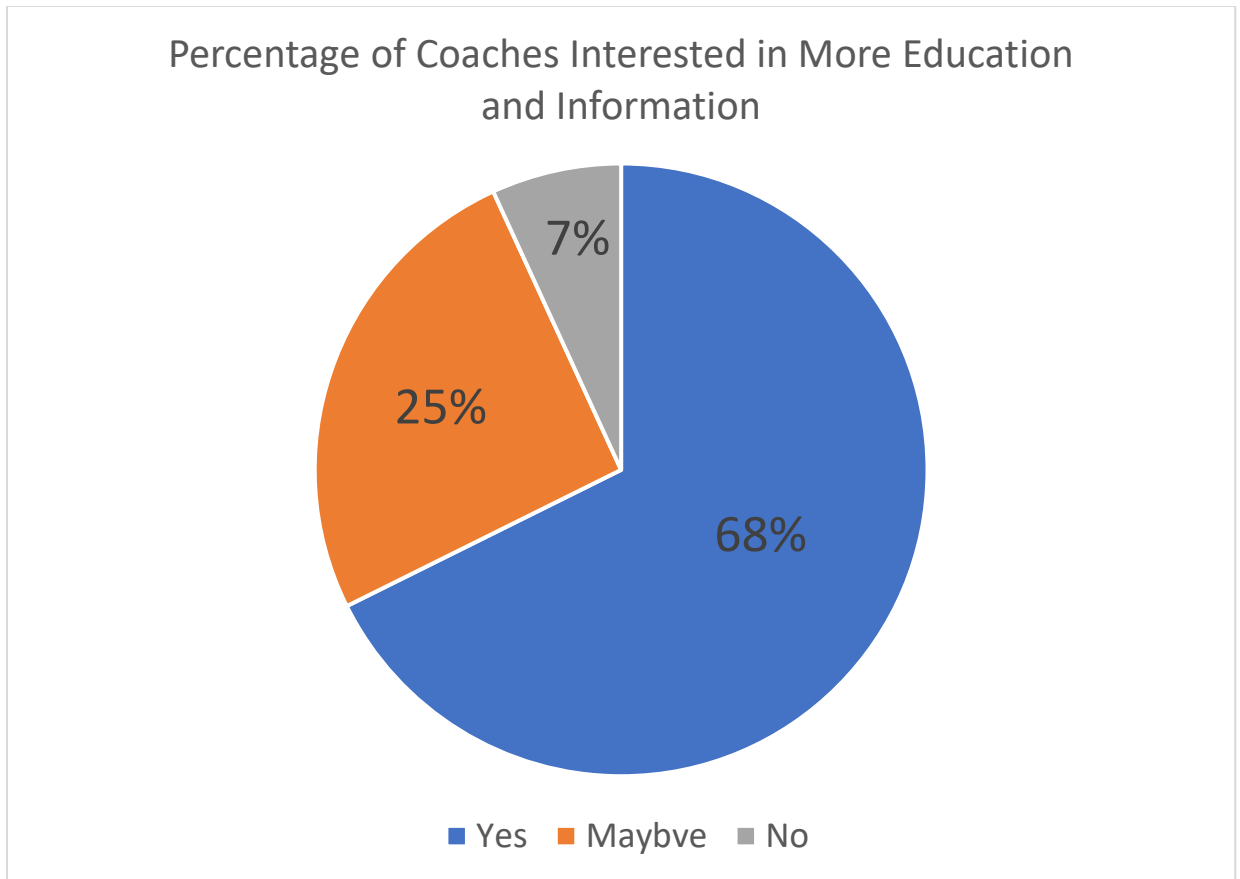
Figure 6. Percentage of coaches interested in more education and information regarding PST in a survey investigating the use of psychological skills used with equestrians (N=133).
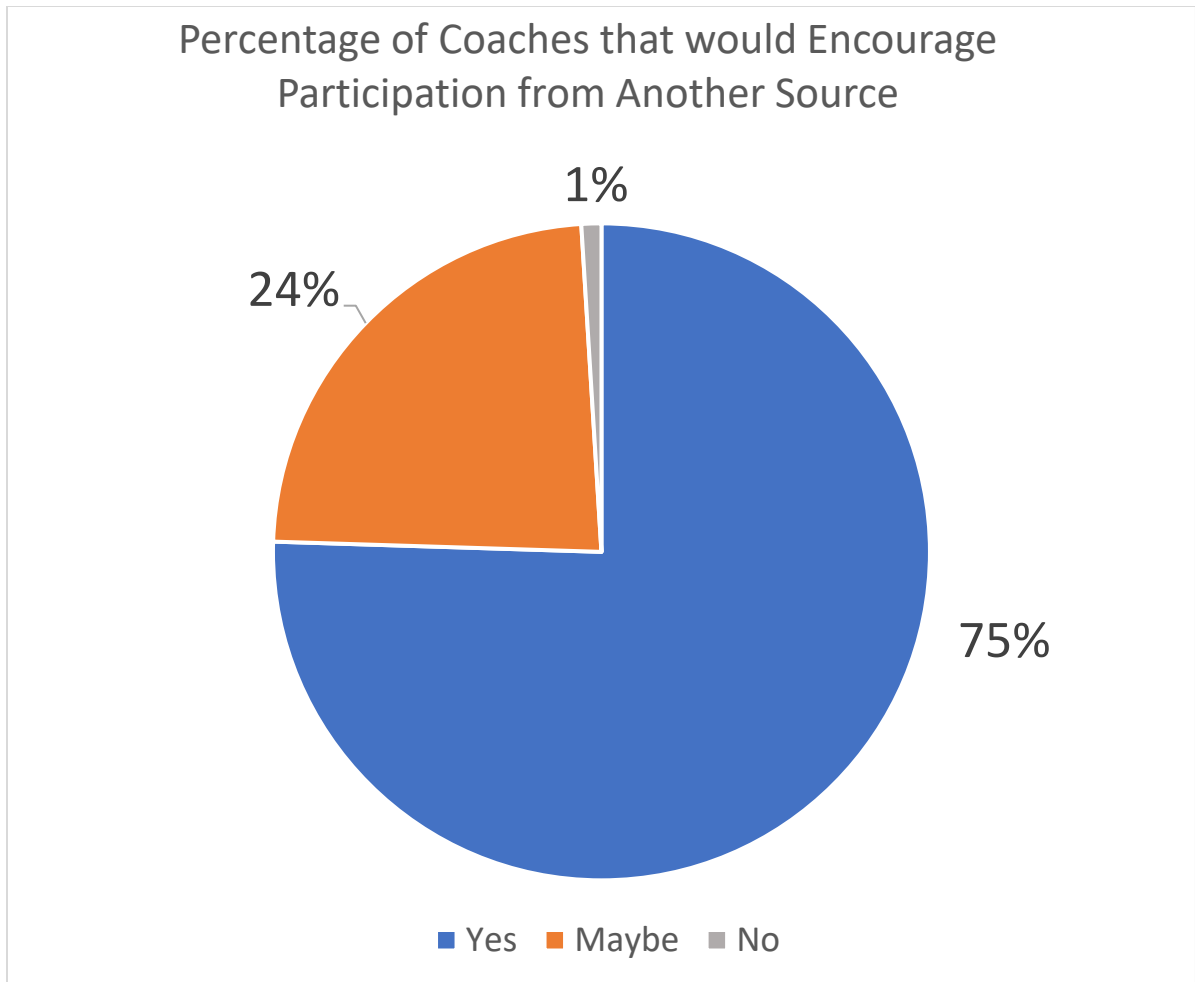
Figure 7. Percentage of coaches that would encourage participation in PST if students had access to PST training from another source in a survey investigating the use of psychological skills used with equestrians (N=133).

Figure 8. Perception of limitations in implementing PST in riding programs in a survey investigating the use of psychological skills used in coaching equestrians (N=133).

Figure 9. Education/training among coaches who implement PST in their coaching strategies in a survey investigating the use of psychological skills used with equestrians (N=133).

CONCLUSION

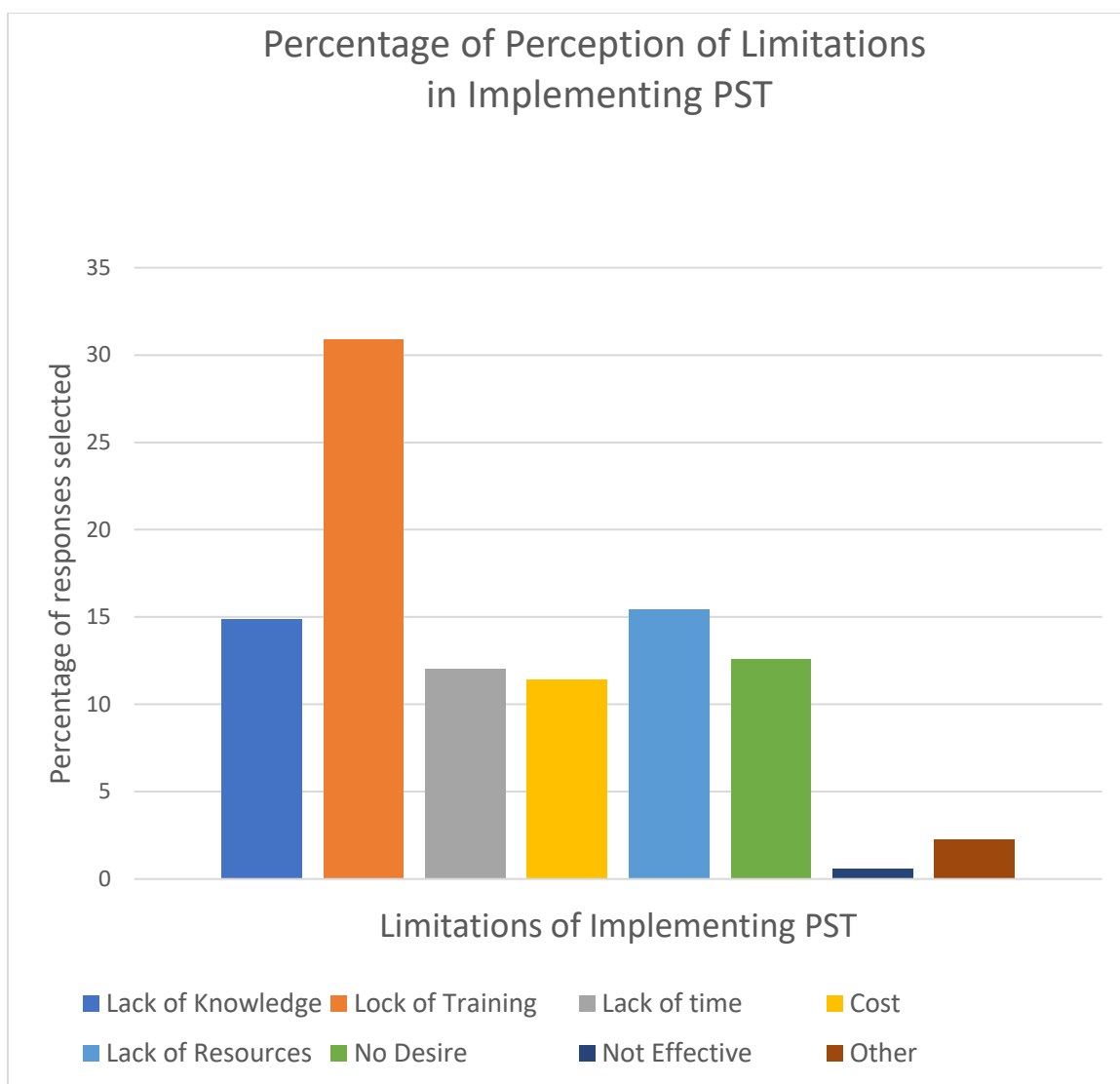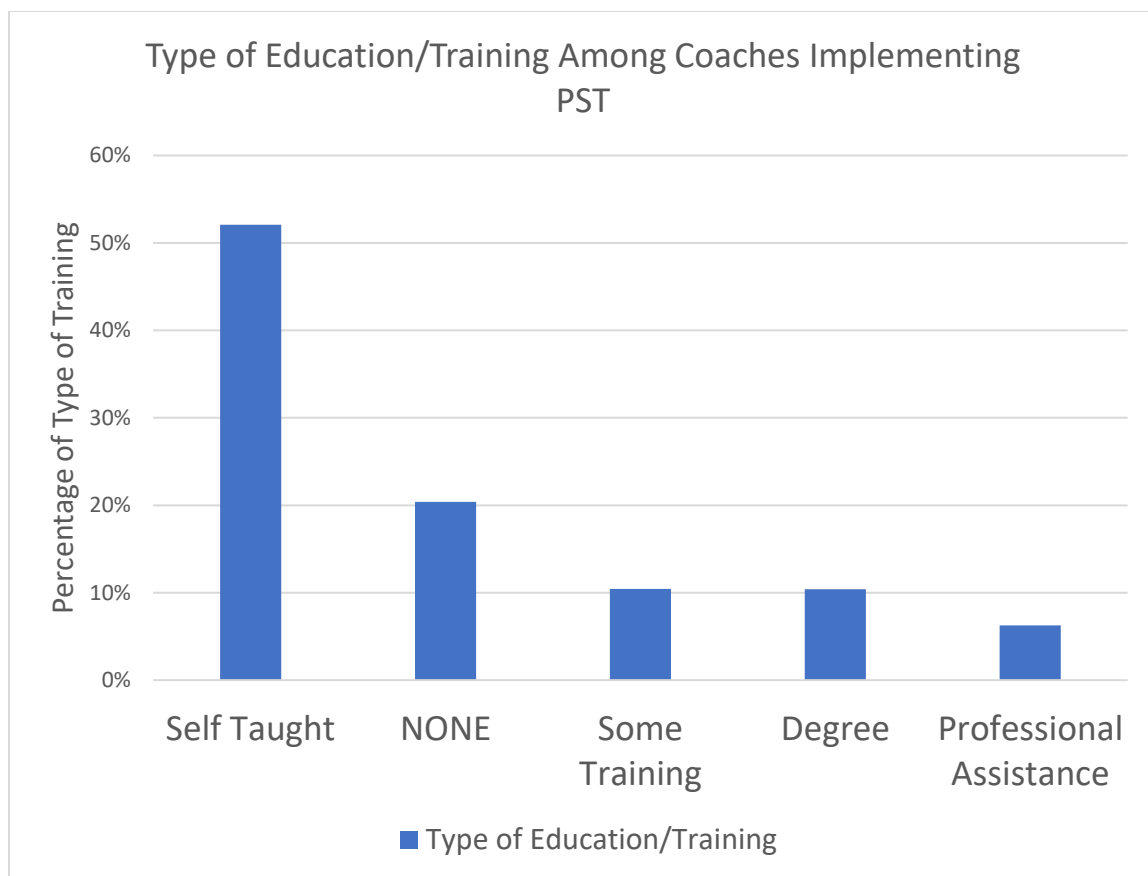In conclusion, there is no difference in the use of PST related to the demographics of coaches. Coaches from all disciplines with varied levels of riders are implementing PST into their programs. The coach's implementation in skill use related to situation type and perception of enhancing performance are consistent with previous studies (Beeby, 2015; Kanthank et al, 2014; Wolframm, 2011). Whether the coach is using PST or not, the majority are interested in learning more about PST, especially if research shows rider improvement. The leading limitations to PST use are lack of knowledge, training and resources giving merit to the need of research with equestrians to allow for more education opportunities with coaches.

This study has shown that coaches are implementing PST into their programs. There is an interest and need for more education in the equine industry in the field of sports psychology. The pressure to produce successful equestrians in the arena creates an absolute necessity for proven performance enhancing techniques for coaches.

Not all previous studies have found a positive correlation to PST use and rider performance; however, most found an increase in perception of success in rider performance (Wolframm and Micklewright, 2011). The feeling or perception of success fuels motivation. Motivation fuels interest and desire. Increasing an equestrian's opportunity to positively experience riding and competing increases the likelihood of prolonged involvement in the sport. With prolonged individual involvement and participation comes longer sustainability and growth within the equine industry. PST implementation decreases negative performance arousal, increases attentional focus and

builds self-confidence thru skills such as goal setting, positive self-talk, imagery,

relaxation and task relevant routine. Securing the future of equine sport thru positive

experiences among its participants adds to the performance enhancing benefits of PST

use with equestrians.

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APPENDICES

APPENDIX A: IRB Approval Letter

IRB
INSTITUTIONAL REVIEW BOARD
Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129

MIDDLE TENNESSEE STATE UNIVERSITY

IRBN007 – EXEMPTION DETERMINATION NOTICE

Friday, April 03, 2020

Principal Investigator	**Holly Spooner** (Faculty)
Faculty Advisor	**NONE**
Co-Investigators	**Courtney Smith**
Investigator Email(s)	*holly.spooner@mtsu.edu; crs4b@mtmail.mtsu.edu*
Department	**Agriculture**

Protocol Title	***Beyond the Ride: Investigating the use of Sports Psychology Techniques in Teaching Riding***
Protocol ID	**20-1156**

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category *(2) Educational Tests* A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:

IRB Action	**EXEMPT from furhter IRB review*****	Date	4/3/20
Date of Expiration	8/31/2021		
Sample Size	250 (TWO HUNDRED AND FIFTY)		
Participant Pool	**General Adults (18 years or older): Horse Riding Coaches**		
Exceptions	Online consent followed by online survey via Qualtrics (weblink on file) is permitted		
Mandatory Restrictions	1. Participants must be 18 years or older 2. Informed consent must be obtained from the participants 3. Identifying information must not be collected		
Restrictions	1. All restrictions for exemption apply. 2. Mandatory active informed consent with age-verification. 3. NOT approved for in person data collection.		
Approved IRB Templates	IRB Templates: Free Format Online Informed Consent (F024) Non-IRB Templates: Recruitment script(s)		
Funding	**NONE**		
Comments	Refer to Post-Approval action section for important COVID-19 instructions		

***Although this exemption determination allows above defined protocol from further IRB review, such as continuing review, MTSU IRB will continue to give regulatory oversight to ensure compliance.

APPENDIX B: SURVEY

Beyond the Ride: Understanding the use of sports psychology techniques in equestrian coaching

 Information and Disclosure Section
Purpose: This project is designed to aid in our understanding of coaching methods used with equestrian athletes. You will be presented with information relevant to our study and asked to answer some questions about it. No identifying information will be collected. Your anonymous responses will be used by equine industry organizations (breed and discipline groups), extension programs, and universities to better understand the use, experience, and implementation of specific coaching methods with equestrian athletes.

Description: There are several parts to this project. First participants must answer questions consenting to participating in this project and verify age. By continuing to the study survey, you are agreeing to participate in an online survey for coaches and trainers regarding coaching methods used with riders. This survey is designed to gather information regarding your participation, knowledge, benefits, and opinions of specific methods used through a series of questions.

Duration: The whole activity should take about 6   minutes. The participants will not be compensated. The subjects must take at least 3   minutes to complete the study.   Here are your rights as a participant: Your participation in this research is voluntary. You may skip any item that you do not want to answer, and you may stop the experiment at any time (but see the note below) If you leave an item blank by either not clicking or entering a response, you may be warned that you missed one, just in case it was an accident. But you can continue the study without entering a response that you did not want to answer any questions. Some may require a response to accurately present the survey.

Risks & Discomforts: There are no expected discomforts or risks as a result of your participation in this survey.

Benefits: The compiled results of this survey may be shared with university personnel, extension programs, breed and industry groups to guide further coach's teaching and efforts. Further, results may be used to develop educational programming for equine professionals and riders.

 Identifiable Information: You will NOT be asked to provide identifiable personal information.

Compensation: There is no compensation for participating in this study.

Confidentiality. All efforts, within reason, will be made to keep your personal

information private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.

Contact Information. *If you should have any questions about this research study or possibly injury, please feel free to contact the Principal Investigator in the study to discuss this research, please e-mail Dr. Holly Spooner at holly.spooner@mtsu.edu or 615-494-8849 You can also contact the MTSU Office of compliance via telephone (615 494 8918) or by email (compliance@mtsu.edu). This contact information will be presented again at the end of the experiment.*

Q22 The research procedures to be conducted are clear to me
- Yes
- NO

Q23 I confirm that I am 18 years or older
- Yes
- NO

Q24 I am aware of the potential risks of the study.
- Yes
- No

Q25 I have read this informed consent document pertaining to the above identified research.
- Yes
- No

Q26 By clicking below, I affirm that I freely and voluntarily choose to participate in this study. I understand I can withdraw from this study at any time without facing any consequences.
- Yes I consent
- No I do not consent

Q5 Do you coach?
- Yes
- No

All "No" respondents were directed to the end of the survey.

Q6 How many years have you been coaching?
- 0-5 years
- 6-10 years
- 11-19 years
- 20+ years

Q7 What is your role with equestrians? Select all that apply.
- IHSA Coach
- NCEA Coach
- Other Collegiate Coach
- Interscholastic Equestrian Association Coach
- Professional Horse Trainer
- Seasonal Camp Riding Instructor
- Private Facility Riding Instructor
- Other

Q8 What is the age demographic of the equestrian students' you coach? Select all that apply.
- Elementary Age
- Middle School Age
- High School Age
- College Age
- Young Adult 25-39
- Adult 40+

Q9 What disciplines do you coach? Select all that apply.
- Recreational Riding
- Hunter Seat
- Show Jumping
- Dressage
- Cross Country
- Western Performance (Western Pleasure, Western Horsemanship, Western Riding)
- Western Stock Horse (Reining, Cutting, Cowhorse Ranch Riding, Roping)
- Speed Events (Barrel Racing, Pole Bending)
- Driving
- Vaulting
- Endurance Riding
- Saddle Seat
- Other

Q10 What level of rider do you coach most often?
- Experienced Adult
- Experienced Youth
- Novice Adult
- Novice Youth
- Beginner Adult (less than 1-year riding)
- Beginner Youth (less than 1-year riding)

Q11 Please select the following student relationship most often associated with your coaching position.
- Individual only environment
- Team environment
- Combination of Individual and Team environment

Q12 Do you use any of the following in your coaching?
Mental Imagery/Visualization, Goal Setting, Task Relevant Routine, Relaxation Techniques, Positive Self-Talk, Confidence Building Tactics, Mental Focus
- Yes
- Not Sure
- No

All "No" and "Not Sure" respondents were directed to question 18. All "Yes" respondents were directed to question 14-17 and redirected back to question 19.

Q18 Please answer the following statements using the scale provided.
Never, Sometimes, About Half the Time, Most of the time, Always

- I encourage my students to develop short- or long-term goals regarding their riding.
- I encourage my students to visualize a task/skill while teaching before performing or while they are riding.
- I use a specific warm-up program or routine with my students during practice and/or at competitions.
- I use phrases such as "remember to breathe, take a deep breath, stay relaxed or loosen up" while coaching my students.
- When I am encouraging or motivating my students, I give them phrases to say to themselves such as " I can do this. This is easy. My horse is the best."
-

Q19 Sports psychologist Robert Weinberg defines Psychological Skills Training (PST), also referred to as Mental Skills Training as the systematic and consistent practice of using mental or psychological skills for the purpose of enhancing

performance, increasing enjoyment or achieving greater sport and physical activity satisfaction.

While there are many PST systems that have been created for individuals to use the most common methods incorporate at least one or a combination of the following: relaxation, imagery, attentional focus, self-talk, goal setting, routines, and confidence.

Based on this definition, do you implement Psychological Skills Training in your coaching
program?
- Yes
- Maybe
- No

Q20 If you knew the use of PST would improve rider performance would you implement PST in your riding program?
- Yes
- Maybe
- No

Q22 Would you like to have more education or information regarding PST?
- Yes
- Maybe
- No

Q21 If PST was available to your students thru another source would you encourage them to participate in PST?
- Yes, I would encourage this in addition to the training I do
- Maybe
- No

Q23 Which of the following do you perceive to limit your implementation PST in your riding program?

- Lack of knowledge of PST
- Lack of training in implementing PST with athlete
- Lack of time
- Cost
- Lack of resource
- No desire from student or parent
- Do not think PST is effective
- Other _____

Q4 For the purpose of this survey the term "coach" will refer to an equestrians professional who instructs rides, in either a team or individual setting, with he purpose of teaching riding philosophy and advancing the rider's horsemanship skills. Please select one of the following.

- o Male
- o Female

Q14 Sports psychologist Robert Weinberg defines Psychological Skills Training (PST), also referred to as Mental Skills Training as the systematic and consistent practice of using mental of psychological skills for the purpose of enhancing performance, increasing enjoyment or achieving greater spot and physical activity satisfaction. While there are many PST systems that have been created for individuals to use the most common methods incorporate at least one or a combination of he following: relaxation, imagery, attentional focus, self-talk, goal setting, routines, and confidence.

Please rate the statement "I use _____ when coaching my students" using he scale provided.

Strongly Agree, Agree, Not Sure/Neutral, Disagree, Strongly Disagree

Imagery, Goal Setting, Positive Self-talk, Relaxation techniques, Task relevant routines, Confidence building tactics

Q15 When do you use the following techniques when coaching students?
Please select any of the following using the scales provided.
Practice, Pre-Competition, During Competition, Post Competition, I do not use

- Imagery
- Goal Setting
- Positive Self-Talk
- Relaxation Techniques
- Task Relevant Routines
- Confidence Building Tactics

Q16 Please rate the following statements using the scale provided.
Strongly Agree, Agree, Not Sure/Neutral, Disagree, Strongly Disagree

- I believe PST increases an athlete's ability to recover from a mistake during practice and competition
- I believe PST increases the ability to learn and master a new skill.
- I believe PST results in a more positive attitude regarding riding performance.
- I believe PST lessens student anxiety.
- I believe PST increases student self-confidence.

Q17 Please select one of the following options regarding your education/training in implementing Psychological Skills Training

- None, I just do what I think is appropriate/what works for me.
- Self-Taught: I have read a few articles, watched videos and have learned from watching others.
- Some Training: I have attended a PST workshop/training and follow up with new research and activities.
- Degree: I hold a degree with an emphasis on Coaching/Psychology/related field
- Professional Assistance: I work side by side with a sports psychologists or similar industry professional who oversees my implementation of PST with my students.