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DIFFERENCES IN PERFORMANCE ANXIETY BETWEEN EXPERT AND AMATEUR  
DRESSAGE RIDERS

by

HANNA BENNE

A thesis submitted in partial fulfillment of the requirements  
For the Honors in the Major Program in Psychology  
In the college of sciences  
And in the Burnett Honors College  
At the university of Central Florida  
Orlando, Florida

Spring Term  
2022

Thesis Chair: Valerie Sims, Ph.D.

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## ABSTRACT

Performance anxiety is a challenge most individuals in a sport face. From experts to novices in dressage, various individuals attempt to find harmony between horse and rider. Performance is a large part of dressage sport riding. This thesis will examine the following topics: the differences in expert and amateurs' performance anxiety; the anxiety level of an expert or amateur who has been involved in a sport related injury; if the individual has a neurotic personality, whether more performance anxiety may occur while riding. A Mini IPIP five-factor personality test, Sports anxiety scale, Sports injury anxiety scales, and dressage questionnaires will be used to obtain the data to support or disprove these hypotheses. The results showed significance for hypothesis one, differences between experts and amateurs experiencing performance anxiety. Hypothesis two was not supported for people who had an injury related to dressage; However, hypothesis two did demonstrate that the individuals who have not or had a neutral sport-related injury showed significance in somatic trait anxiety scores, which are the human body's physiological responses to stress. The third hypothesis yielded significance in those with a neurotic personality who experience heightened performance anxiety.

## **ACKNOWLEDGEMENTS**

I would like to acknowledge everyone who was a part of the process of forming and developing this undergraduate honors thesis. This work would not be possible without the mentorship of Dr. Valerie Sims. She has supported me to combine two great passions of mine, horses and psychology. I would also like to thank Dr. James Ellison-Brophy for the guidance and knowledge that he has provided throughout this journey. Dr. Tina Archer was a wonderful help in teaching me new ways of putting my ideas onto paper. Always an enormous thank you to my parents who have not only supported my academic career, but also my horse-riding career. Thank you to my horse Rigadoon Rf who inspired this thesis.

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# **DIFFERENCES IN PERFORMANCE ANXIETY BETWEEN EXPERT AND AMATEUR**

## **DRESSAGE RIDERS**

### **Background and History**

Dressage is a discipline among equestrian sports. Dressage dates to the Greek horsemanship times in 400BC when a military commander, Xenophon, created the first training horses. Dressage continued to be developed and used in the military and through the renaissance times in Europe. A famous training school in Vienna called the Imperial Spanish riding school opened in 1572. Through these eras of development, the sport dressage came into popularity throughout various parts of the world. Dressage was created as an Olympic sport in 1912; only military personnel competed in the dressage Olympics until 1953. Foreign training professionals and military personnel came to form the United States Dressage Federation in 1973. This Federation became a platform for the discipline to flourish and grow. It consists of rules, training guidelines for judges, riders, trainers, uniform standards, and an educational forum for the dressage foundation (USDF Teaching Manual Articles).

Horses and humans have been interacting since ancient times. There is proof that masters in dressage can train horses in a multitude of disciplines in equestrian sports. Horses have served humans in their endeavors to create a dynamic world, perform in vigorous competition, serve in the military, and used for personal entertainment. Horse and human interaction have led to a unique relationship that is multidimensional. In the discipline of dressage, the purpose of the horse and rider is to be in perfect harmony with one another while performing complex movements and steps within that harmony (Loch, 1990). Achieving perfect harmony requires years of building a unique and trusting bond between the animal and the rider.

Both the rider and horse are often pushed to limits in their capabilities with one another. Although the sport takes years to become an expert, many participate in the beginnings of learning dressage in hopes of one day become an accomplished medaled rider (USDF Teaching Manual Articles).

### **Insights into the art of Sport Dressage**

In the sport dressage, horses have been trained to react to specific cues and commands that the rider gives in the pursuit of executing movements and exercises that is the core of dressage test riding. All these exercises come from the natural abilities that the horses utilize in nature. Riders practice specific movements in dressage tests from the beginning level, Intro level test A, through the complexities of the Grand Prix. Grand Prix is the highest level of training in dressage. To train a horse to the Grand Prix level can take 7 to 8 years of full training; full training is 5 to 6 days a week of intensive work. At this level, riders can qualify for the Olympics in dressage.

In the beginning years of learning dressage, the amateur riders need to be trained by an expert. An expert in dressage should have been trained under a master professional rider, have obtained a degree in horse husbandry, or have completed a certification program in dressage. The classification of an expert in dressage can be an individual who seeks to master the horse and rider connection within the sport of dressage. This horse rider connection within the sport can be acknowledged as one who competes at the highest levels in dressage, has undergone concentrated training under a master in dressage, or an individual who has gone through the process of becoming a professional dressage judge (USDF education).

### **Dressage competition and its challenges**

Performance in competition is a crucial part of being a dressage rider putting a rider's skills practiced in training to the test when coming into competition season. Professionals compete throughout for world titles and maximum career success in this profession.

These individuals deal with immense pressure and anxiety when competing and practicing; achieving the perfectionist goals of being a genuinely successful dressage rider (Ford et al., 2017). Amateurs could have potential plans to compete for being a medaled rider or rank in their region or nation. Some Amateurs proceed to the challenges that are faced in "upper-level dressage." Performance in this sport can be seen in competition and everyday training practices. In daily routine, the rider is pushed to climb new and uncomfortable heights within the complexities of each level. Some individuals may handle the pressure of performing better than others. All sports can entail some degree of performance anxiety which varies among age groups (Bäckman & Molander, 1986). Performance anxiety is an obstacle for many riders in this complex sport. Requiring equestrian feel can entail focus, precision, dedication, strength, and complex strategy-qualities each rider must work to become more sharpened (USDF). Riders must deal with the challenges faced when dealing with another non-human, non-verbal partner. The horse is a large animal in size, strength, and athletic abilities. These factors can be very intimidating for amateur riders. They must learn how to handle the unpredictable nature of horses (Jason, 2016). This process can take many years to feel comfortable and at ease.

### **Fear and horse riding**

The fear of getting in a life-altering accident while riding horses is a reality for every rider. Most riders have experienced the pain and the dangers of falling off a horse. There are strict rules within the dressage federation, making helmets a necessary part of everyday riding because horse riding is a high-risk sport (USDF). Those who have experienced a detrimental fall, and decide to continue the sport, will most likely have a heightened level of anxiety when interacting with a horse. Experiencing a sport-related injury can lead to a change in the individual's physical and mental state.

Increased anxiety in high-stress situations, especially while performing, is a reality, especially for those with sports-related injuries (Brewer & Petitpas, 2005). The study Sport-related anxiety: current insights, by Ford et al., have shown that most individuals in sports experience anxiety. Ford et al., have interviewed Sidney Crossing, a two-time Olympic gold medalist in track, who deals with anxiety throughout performance but has found ways to combat the anxiety and perform rituals to calm her psychological and physiological states. This athlete does not differ from professional dressage riders who must find ways to cope with the pressures and anxieties of competition and performance (Ford et al., 2017).

### **Theories of performance anxiety within the sport**

Expert dressage riders may have better coping strategies when dealing with performance anxiety. Such as the ways Sidney Crossing deals with performance nerves (Ford et al., 2017). Dressage riders have been trained to understand how to handle horses in high-stress situations. Horses show signs when they are in distress, such as ears forward showing alertness, tail swishing in tension, ear back showing anger or irritation (Animal Behavior and Restraint: Equine, 2014). A high-stress situation could be: when in competition; unpredictable surroundings; other horses running; or riders who are in distress. Experts have had to deal with these situations in many more circumstances than amateurs. Experts learn through training and experience how to handle a horse that is going through a high-stress situation. Usually, amateurs deal with many of their personal anxieties and fears by being around and on horses. Learning to perform in sport dressage while dealing with a highly sensitive animal can be a challenge. Horses, having an unpredictable nature because they are flight animals, can increase anxiety in amateur riders (Animal Behavior and Restraint: Equine, 2014).

Moreover, from a trainer's perspective, amateurs usually dismount or stop riding when a high-stress situation is being presented, they do not learn to deal with the anxiety of these encounters. Theories in psychology suggest, anxiety usually increases when an individual does not confront these anxieties. This type of coping with anxiety is referred to as avoidance coping (Gallagher et al., 2007). This study will infer that Performance anxiety in dressage riders will increase if the rider is an amateur or has experienced a sports-related injury relating to horses.

### **How this research can benefit the academic community**

These ideas proposed may lead to a greater understanding of how to help and soothe performance anxiety in dressage riders. Soothing performance anxiety could be an outlet for riders to understand more of why they have the reactions to the stressors involved in sport dressage, considering that horse riding is a high-risk sport. There could be a discussion of coping strategies and calming rituals to help a dressage rider reach maximum riding goals. A dressage rider's most significant obstacle is anxiety. Examples of situations where anxiety can arise are test riding, fear of the animal, injury, and failure.

This research can help the academic community have more extensive knowledge of the sport of dressage. Dressage is a relatively new sport in the United States and will continue to grow and flourish in the future. This work is continuing to expand the knowledge base on this topic. Since there are very few studies done on this topic area and dressage, this study can be an outlet to stimulate other studies on this topic area. The dressage community could also benefit from research in this area because of the prevalence of anxiety in the sport. There have been many individuals from expert to novice who have struggled with performance anxiety and seek to gain confidence and knowledge on coping strategies to help horse and rider communicate better.

Anxiety can hold many riders back from reaching their full potential in the sport. There are ways to confront the worrying thoughts and soothe the mind for an overall better riding experience.

### **Theoretical framework Previous studies on this area**

In previous studies relating to horses, the majority have been focused on therapies for mentally challenged individuals and horse-human connection for better mental health. Specific literature by Schwarzmüller-Erber et al., exemplifies the power of how “recreational horseback riding can have effects on social, physical, and mental wellbeing.” Schwarzmüller-Erber et al., shows the positive benefit horses can have on overall physical and mental wellbeing. Moreover, Inoue et al. writes a compelling study on how sports can bring "positive development in youth and self-determined motivation", continuing to show that sports can bring many intrinsic rewards to people and youth.

There is not an abundance of literature about horse and rider in sport dressage; however, some of the literature presented on dressage connects horse and rider perception of equestrian communication or known in the article as equestrian feel (Blokhuys & Lundgren, 2017). Equestrian communication was described in mostly behavioristic ways, using fifteen amateur dressage riders. Timing of aids was described as equestrian feel. “Timing of aids,” being the moment the rider asks the horse to perform a particular movement or gait. Another study relating to dressage exemplifies rider effects on horses' conflict behaviors, rein tension, physiological measures, and rideability scores. Christensen et al. show how strongly a rider can impact dressage scores with the conflict they cause through rein tension. They also showed how rideability is a subjective matter to dressage riders, meaning that rideability is not a good trait to examine dressage horses and their abilities under the saddle (Christensen et al., 2021).

The study, "Horse–Rider Interaction in Dressage Riding," shows how professionals and amateurs have a difference in their kinesiology with a horse. Trainees have different riding positions than professionals. Professionals can make a difference in dressage horses' gait compared to amateurs. This shows that expertise affects horses and how they act within the sport dressage (Münz et al. 2014). Through research, there is evidence that horses do feel comfortable around humans; however, there is not significant evidence for comfort with one particular human, which means that horses have developed to find sanction in the company of humans. Training style can affect the relationship horses have with humans in general (Lundberg et al., 2020). There was a research article examining how mental skills interventions six weeks before competition effect performance anxiety by Wolframm et al. The study showed that performance anxiety was decreased in nonelite dressage riders, through mental skills intervention training. This includes goal setting, relaxation training, self-talk, concentration training, and imagery. These techniques are used in other sports to relax performance anxiety (Wolframm & Micklewright, 2011).

In this thesis paper, the subtopic will explore accidents involving horses, which leads to increased anxiety in sport dressage and performance. Brewer & Petitpas's study "Returning to Self: The Anxieties of Coming Back After Injury" showing the difficulties that can be involved for an individual with a sport-related injury and deciding to return to the dangers of the sport. In this article, Brewer & Petitpas show how anxiety heightens when an accident victim is submerged back into the accident environment. This can lead to PTSD, which needs to be treated with clinical therapies. The study "Sports-Related Anxiety: Current Insights by Ford et al., exemplifies that anxiety is a part of performing in sports. Professional athletes deal with anxiety in competition and training. This study shows that professionals find rituals and ways to cope with the anxiety in the sporting environment (Ford et al., 2014).



## **Previous studies have not explored**

Previous studies have not explored the differences between experts and amateurs in dealing with performance anxiety in dressage. There have not been any studies connecting how an expert may deal with the anxiety of performing in dressage, compared with strategies of amateurs in the dressage sport. Studies show how athletes may perform rituals or find coping strategies in performance (Ford et al, 2014). However, there has been no study on the difference between amateur and expert performance anxiety levels and differences in these levels because of knowledge or education. There is evidence that anxiety can increase after a sport-related accident (Brewer & Petitpas, 2005). However, no study has been done on dressage sport-related injury and elevated performance anxiety.

Research has not connected personality types that may cause interference with the kind of anxiety a professional or amateur can experience while performing dressage. I infer that there will be increased anxiety for most amateurs with or without a horse-related accident or injury. There will be more performance anxiety in those whose personality types are more neurotic. Previous studies have not examined the cause of experts having less performance anxiety and why this could be true. They also have not related performance anxiety with dressage riders. Therefore, much of this thesis utilizes research based on other sporting disciplines and information on experts and amateurs in different sporting areas. One can develop the theory that when in performance with a horse, experts could have less performance anxiety due to experience leading to a better dressage ride.

## **PURPOSE STATEMENT**

The purpose of this study is: to examine the differences in performance anxiety in expert and amateur dressage riders; explore the effects of a sport related injury pertaining to dressage performance; and how neurotic personality types may interfere with performance anxiety. Future studies could be done based on this research that may lead to helping riders learn how to cope better with the stresses that come with high-risk competition sports. Dressage is a challenge for all who attempt to find harmony between horse and rider. One can only hope there may be strategies to be explored to help all riders find ease in the performance anxiety that comes along with dressage and other disciplines in this sport. This research may be a gateway into exploring the vast world of equestrian psychology and be a beginning for more research on coping methods to come.

## HYPOTHESES

**Hypothesis 1)** There is a significant difference between experts and amateurs in dealing with performance anxiety.

**Hypothesis 2)** Being involved in an accident that is dressage sport-related will lead to increased performance anxiety.

**Hypothesis 3)** Those with a more neurotic personality will have more performance anxiety in sport dressage.

## METHODS

### Participants

The participants in this study were anonymous subjects, male or female, must be 18 years or older and a dressage rider. Some subjects were personal contacts obtained through years of competition and dressage camaraderie; the participants were sent the survey through email. Subjects were also collected through social media outlets such as Facebook and Instagram. There was no identifiable data used in this study.

### Materials

The materials for the psychological tests included the Mini IPIP- Five Factor Personality test (Goldberg, 1999). This test is a 20-item short form of the 50-item long form IPIP-FFM. The Mini IPIP measures five aspects of personality. The five-factor domains include Conscientiousness, Extraversion, Agreeableness, Intellect/ Imagination, and Neuroticism. The Sport Anxiety Scale-2 is the next measurement in this study (Smith, 2006). This scale uses a four-point Likert scale for responses, ranging from (not at all) to (very much) worry scores by adding questions: 3, 5, 9, 10, 13, 16, 18, Concentration disruption scores: 2, 6, 7, 14, 20, and Somatic Trait Anxiety scores 1, 4, 8, 11, 12, 15, 17, 19, 21. SAS-2 represents cognitive and somatic sports anxiety. The Sports Injury

and Anxiety Scale (SIA) (Rex et al., 2016) is the next scale used in this study. This scale is used to assess an individual's anxiety and its relationship to sports-related injury. The scale measured factors involved with sports injury and anxiety. These factors included:

1. Loss of athleticism.
2. Being perceived as weak.
3. Experiencing pain.
4. Loss of social support.
5. Letting down important others.
6. Reinjury.
7. Having an impaired self-image.

They were measured using a Likert scale. A dressage questionnaire is administered to each participant relating to their experience with dressage and equestrian activities. The questionnaire was designed to test the hypotheses.

### **Procedure**

This study was published online on social media platforms such as Facebook and Instagram. There was postings on the authors page and equestrian groups on Facebook. The post stated, “Any Dressage riders ages 18 years and older interested in completing an online survey on performance anxiety in expert and amateur dressage riders.” There was personal emails sent out with the link to the study. These emails went to barns the author has acquired contacts with from years of competitive camaraderie. The emails stated, “Any Dressage riders ages 18 years and older interested in completing an online survey on performance anxiety in expert and amateur dressage riders. I am contacting you and have your email address because you are a personal contact who is part of my network of dressage riders and barns.” The participants read a consent form before

they began the survey portion. The participants answered the questionnaire first pertaining to dressage. After they answered the dressage questionnaire, they proceeded to complete three psychological surveys, which included: The Mini IPIP- Five Factor Personality test (Goldberg, 1999), The Sports Injury and Anxiety Scale (SIA) (Rex et al., 2016), and the Sport Anxiety Scale-2 (Smith, 2006). After the participants finished answering these questions, they completed the study.

### **Research Design**

The following research resources were utilized in the literature search for this thesis: APA PsycINFO (EBSCO host) and APA PsycArticles (EBSCO host). As a result of the literature review, psychological tests were selected, and a questionnaire was developed to survey the individual subjects in this study. The questionnaire was correlated with the psychological tests. The research compared: the differences in performance anxiety levels between experts and amateurs; the relationship of being involved in an accident that is dressage sport-related to increased performance anxiety; and neurotic personality types relating to performance anxiety in sport dressage.

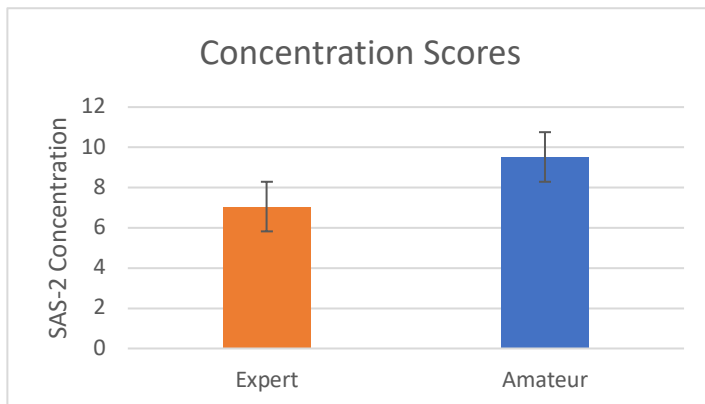
### **Ethical Considerations**

For the ethical considerations for this thesis, there was an International Review Board submission. This study was on an online platform where no identifiable data was be available to the public. The study was approved by the IRB in January of 2022.

## RESULTS

To address hypothesis one, an in-depth independent samples T-test was performed to analyze if there is a significant difference between experts and amateurs in dealing with performance anxiety. To test hypothesis one, the question from the dressage survey asking whether participants were an expert or amateurs was used compared to the respondents' answers on the Sport Anxiety scale-2 (Smith, 2006). The independent variable in this hypothesis was being an expert or amateur, and the dependent variable was performance anxiety. This yielded a Significant effect,  $T(62) = 2.481, P=.016$  on concentration scores, which were questions 4, 9, 11, 14, 17, 19, 20, 21 (appendix D). In this case, those who were experts ( $M=7.056, SD = 2.508$ ) showed less trouble with concentration than amateurs ( $M=9.522, SD= 3.903$ ). Concentration scores include having more self-doubt, possibly not doing as well in competition as expected, thoughts of doing poorly affecting the performance, not being able to reach goals, and performing poorly in front of peers. The concentration score had a 0.016 significance score. The results are shown below in the independent Samples T-Test, and bar graph. The bar graph signifies that experts had lower anxiety with concentration than amateurs (figure 1). The independent samples T-Test shows the P-value for total concentration scores and the significance within individual concentration scores.

**Figure 1**



**Table 1**

Independent Samples T-Test

	t	df	p
anxiety	1.503	64	0.138 <sup>a</sup>
Worry	-1.437	62	0.156
concentration	-2.481	62	0.016 <sup>a</sup>
SAS_1	0.286	63	0.776
SAS_2	-0.922	63	0.360
SAS_3	-1.200	63	0.234
SAS_4	-2.324	63	0.023
SAS_5	-1.808	63	0.075
SAS_6	-2.036	63	0.046 <sup>a</sup>
SAS_7	-0.850	63	0.398
SAS_8	-1.763	63	0.083 <sup>a</sup>
SAS_9	-2.059	63	0.044
SAS_10	-0.708	62	0.481
SAS_11	-2.422	63	0.018 <sup>a</sup>
SAS_12	-1.832	63	0.072
SAS_13	-1.695	63	0.095
SAS_14	-2.594	63	0.012
SAS_15	-1.947	63	0.056 <sup>a</sup>
SAS_16	-0.616	63	0.540
SAS_17	-3.007	63	0.004 <sup>a</sup>
SAS_18	-0.403	63	0.689
SAS_19	-2.023	63	0.047 <sup>a</sup>
SAS_20	-2.569	62	0.013 <sup>a</sup>
SAS_21	-2.294	63	0.025 <sup>a</sup>

The participants who experienced a sports injury related to dressage did not have significance for somatic trait anxiety, worry, or concentration scores. The sports anxiety scale-2 was used to assess this hypothesis (Smith, 2006). The individuals with no injury and neutral injury showed heightened anxiety for these STAS questions. These questions were all related to bodily responses to stress. Questions 1, 4, 8, 11, 12, 15, 17, 19, 21 were added to calculate these scores. There was a one-way ANOVA test to calculate the data for this hypothesis. The question “Have you had a bad injury on a horse?” had three choices 1) Injury, 2) neutral, 3) no injury. The independent variable for this question was being involved in a dressage sport-related injury, and the dependent was performance anxiety being heightened for those individuals. In this case, the people with a sport-related injury did not show significance. The people without an injury and individuals who answered neutrally showed significance (P=0.008). In this case, those with an

injury had (M=17.579, SD=6.025), those with a neutral response to injury (M=24.667, SD=7.763), and those with no injury (M=22.476, SD=7.639). The mean for neutral status and no injury had higher means than those with an injury status. The individuals who had no injury and neutral injury seem to have physiological responses to performance anxiety in dressage. Especially relating to feeling nervous, body tension, having an upset stomach, heart racing, stomach sinking, trembling before the event, and the body feeling tight. In table 2, the P-value for injury can be found. In table 3, the means for 1) injury 2) neutral 3) no injury can be found. Figure 2 exemplifies the STAS scores by injury status. Showing neutral individuals with highest mean, no injury second highest, and those with injury having the lowest mean in comparison to somatic trait anxiety scores.

**Table 2**

ANOVA – STAS

Cases	Sum of Squares	df	Mean Square	F	p
injury	479.950	2	239.975	5.291	0.008
Residuals	2811.835	62	45.352		

*Note.* Type III Sum of Squares

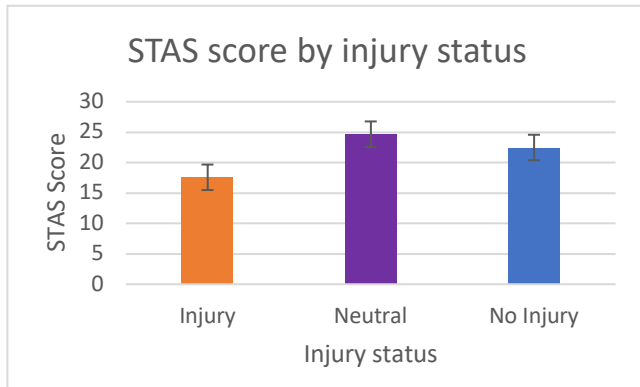
**Table 3**

Descriptives – STAS

injury	Mean	SD	N
1	17.579	6.025	38
2	24.667	7.763	6
3	22.476	7.639	21



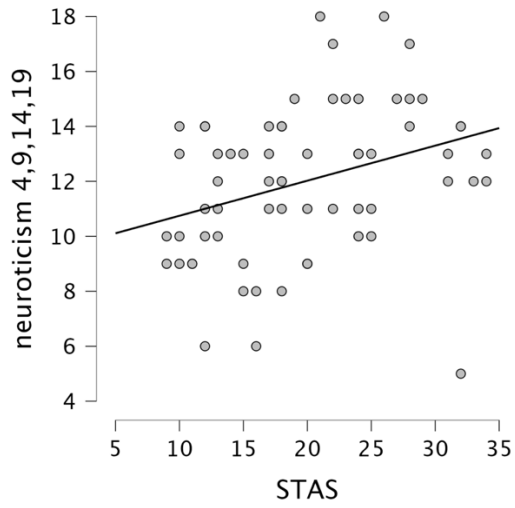
**Figure 2**



Hypothesis three showed significant effectiveness in correlating a neurotic personality and experiencing heightened performance anxiety. There were correlation tests done with the independent variable being a neurotic personality and the dependent variable being performance anxiety. The mini IPIP 5 five-factor personality test and sports anxiety scale- 2 were used to measure the data. The somatic trait anxiety scores correlated to a neurotic personality type had a significance with a (P-value =.008), and a Pearson r correlation of 0.329. The worry scores connected to neuroticism had a high significance score with a (P-value = .001) and a Pearson r correlation of 0.456. Finally, the concentration scores had a low significance (P-value = 0.029) and a Pearson r correlation score of 0.273. Individual's with a neurotic personality type were likely to experience performance anxiety manifesting as worry, concentration, and somatic trait anxiety, less so in somatic trait anxiety. Figure 3 shows the positive relationship between STAS and neuroticism (P=.008). Figure 4 display the worry vs. neuroticism scores, and figure 5 displays concentration scores vs. neuroticism. In figure 5, the results show the data being skewed to the left. Showing very low correlation for this concentration and neuroticism.

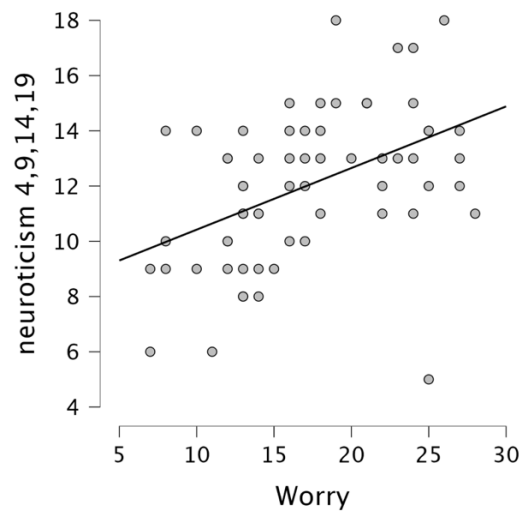
**Figure 3**

**STAS vs. neuroticism 4,9,14,19**



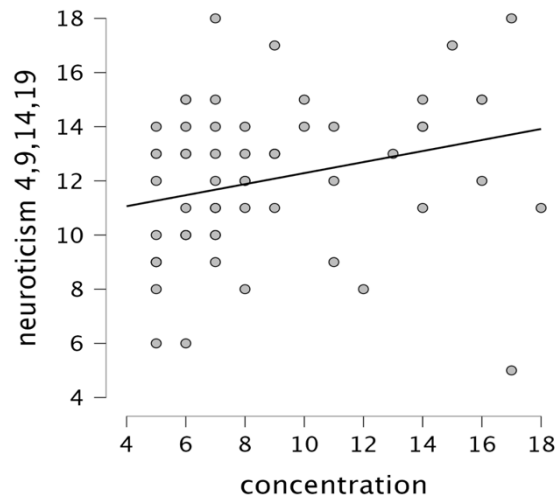
**Figure 4**

**Worry vs. neuroticism 4,9,14,19**



**Figure 5**

**concentration vs. neuroticism 4,9,14,19**



## DISCUSSION

In the discussion for this thesis, the introduction has highlighted most of the results. The second hypothesis was not congruent with the literature review or the study results. This will be further explored due to other research in this area exemplifying that sports-related injury usually creates more performance anxiety, not less. In this study, expertise has been shown to affect concentration scores while performing. It was theorized from studies by Wolframm & Micklewright, that expertise affected performance anxiety. Wolframm & Micklewright showed that performance anxiety was decreased in nonelite dressage riders through mental skills intervention training (Wolframm & Micklewright, 2011). The third hypothesis depicted that those high on the neuroticism scale had elevated sports anxiety levels. The study by Sosnowska et al. shows a relationship between neuroticism and performance; however, not related to performance anxiety (Sosnowska et al., 2020). Therefore, the results from hypothesis three were new findings in dressage sports anxiety and personality.

The sports anxiety scale was used to measure the first hypothesis. In which amateurs were proven to have more anxiety than experts regarding concentration. Concentration scores are calculated by having more self-doubt, possibly not doing as well in competition as expected, thoughts of doing poorly affecting the performance, not being able to reach goals, and performing poorly in front of peers. These are the areas where amateurs experience elevated anxiety compared with experts. Theories can be developed that amateurs have less experience pertaining to dressage and performance, therefore, struggle with concentration before a dressage performance. Practicing self-talk and imagery could help these individuals (Wolframm & Micklewright).

Regarding the participants who experienced a sports injury, they interestingly did not show a significance with somatic trait anxiety scores. The data showed that the participants with no

injury or neutral injury struggled with feeling nervous, body tension, upset stomach, heart racing, stomach sinking, trembling before the event, and the body feeling tight. The results directly go against hypothesis two. The mean for no injury and neutral injury was higher than those with injury. The results do not directly explain why this phenomenon occurred. However, it can be theorized that these individuals who have not experienced a sport related injury have more anticipation anxiety when riding and are therefore more careful and avoid injury more often. While those with less anxiety, engage in more high-risk activity with a horse. The individuals who have had a dressage injury may have already overcome their injury related anxieties. The individuals with neutral injury with the highest mean may have had a bad experience and now fear the possibilities of an even worse injury. The no injury and neutral injury group may benefit from relaxation training methods before riding or competing. As mentioned in the article by Wolframm and Micklewright, mental skills training could decrease these anxiety symptoms (Wolframm & Micklewright).

The participants with a more neurotic personality type seem to correlate with heightened performance anxiety in sports dressage positively. A correlations analysis was run on the SAS-2 and the Mini IPIP five-factor personality test to analyze hypothesis three. The tests showed significance for worry, concentration, and somatic trait anxiety scores. There is an effective relationship between neuroticism and dressage sports anxiety. The independent variable is neurotic personality, and the dependent variable is performance anxiety. The results showed somatic trait anxiety scores in correlation to a neuroticism personality type had a practical significance with a P-value of .008 with a Pearson r correlation of 0.329. The worry scores correlated to neuroticism had a high significance score with a P-value of .001 with a Pearson r correlation of 0.456. Finally, the concentration scores had low significance with a P-value of 0.029 and a Pearson r correlation

score of 0.273. There were three scatter plot graphs (figures 3,4,5). In figure 5, the results show the data being skewed to the left, showing low correlation for this concentration and neuroticism.

This study has not yielded adequate data for all three hypotheses. Experts and amateurs have differences in performance anxiety, dressage sport-related injury did not affect performance anxiety, and neurotic personality types correlated with performance anxiety. This study may be a precursor to developing coping mechanisms for individuals who have a neurotic personality type and are inexperienced dressage riders. The study has established more research on dressage and performance anxiety. This growing sport can benefit from the research presented and may help determine which target group of individuals in sports dressage need awareness on these matters. The theoretical framework of this study showed substantial starting grounds for this research and led to positive outcomes for two of the hypotheses. The investigation was begun with the author's expert experience in sports dressage and her careful observation of individuals' troubled areas in this sport.

## LIMITATIONS

The limitations to this study include that there was no recording of individuals Zip code to make this study cross culturally valid. Through personal contact email the study was sent to participants in Germany, who took part in this study. However, this cannot be known to the general population due to no collection of this information in the survey. This limitation will be noted for the future direction of this study to include perspectives cross culturally. Part of the data from this study had to be removed because of unfinished data by the respondents. Out of 117 participants 48 were removed due to unfinished responses. For future direction, it will be made a requirement through Qualtrics to answer all questions from the survey. The question used to assess if an individual experienced a dressage sport related injury included a neutral answer choice. This complicated some of the findings considering the neutral answer choice was not clear in meaning. The study was collecting data for only a month before the process of analyses was necessary. Time restraints did not allow for a longer data collection period, making the sample not as large as possible. Due to the length of time the IRB took to approve this study, the data had to be collected in a shorter period than anticipated. The study did not have very much background information relating to dressage and performance anxiety. Much of this study was based off the authors expert opinion through experience in the sport. The study would be more supported if the topic of discussion was explored more by the academic community. The study is based mostly on inferences, and real-life experience in these matters. Ideally, the study should have more comparable research to support the theoretic design in this study. This study can, therefore, be a precursor to future studies possibly relating to this topic area.

## **FUTURE DIRECTION**

In the future, this study can be continued as a master's dissertation, taking the approach of how to help find fundamental coping mechanisms and solutions to dressage performance anxiety. This study was a steppingstone in the beginning to understand the truths of dressage performance anxiety, seeking more data on preventive methods to help educate the dressage population on the issue of dealing with anxiety while on and off the horse. Dressage sport injuries and anxiety will also be further examined to find healthy coping mechanisms for riders to have a smooth transition back into the sport after a traumatic injury or experience. Dressage and equine sports are high risk, meaning that several involved participants will most likely have an experience that leads to anxiety on or off the horse—showing the purpose of researching the solutions for this likelihood in this sport. This information can be used not only in the psychological community as new research but also be published in dressage journals and articles to reach many equestrians who may find this research helpful. The analysis can help any equine sport psychologist understand the dressage performance anxiety issue in a quantifiable aspect. If this research is further studied, there may be exciting aspects of equine-related performance anxiety that have not been analyzed for the benefit of the equine community to help trainers and clients—leading to more knowledgeable trainers in the field who seek to help their clients learn how to cope with performance anxiety while riding. This study is intended to spread awareness of how many individuals deal with performance anxiety, injuries, and personalities that may have a more difficult time in their riding endeavors. Through education of these matters, one can hope to advance the human-horse interactive experience further.

## **APPENDIX A: HORSE RIDER RELATIONSHIP QUESTIONNAIRE**



1) Do you feel like you and your horse have a strong connection?

Strongly disagree | disagree | neutral | agree | Strongly Agree

2) Do you feel like you have control over your horse?

Strongly disagree | disagree | neutral | agree | Strongly Agree

3) Would you consider yourself an expert or amateur?

Expert | Amateur

4) Do you feel like you have a strong locus on control on the horse? (you are in control of what happens on a horse)

Strongly disagree | disagree | neutral | agree | Strongly Agree

5) Have you had a bad injury on a horse?

Yes | neutral | no

6) Do you fear horses?

Strongly disagree | disagree | neutral | agree | Strongly Agree

7) How long have you been involved with horses?

2-5 years | 5-10 years | 10-15 years | 15 + years

8) Do you feel like you have a good equestrian feel?

Strongly disagree | disagree | neutral | agree | Strongly Agree

9) Are you a competitive rider?

Strongly disagree | disagree | neutral | agree | Strongly Agree

10) Do you feel like your horse is better when ridden by a professional?

Strongly disagree | disagree | neutral | agree | Strongly Agree

11) How often do you ride?

1-2 days a week | 3-4 days | everyday | depends on the week

12) Do you think you are a better rider under pressure?

Strongly disagree | disagree | neutral | agree | Strongly Agree

13) Do you view riding as a sport or hobby or both?

Sport | Hobby | Both

14) Do you feel confident on the horse?

Strongly disagree | disagree | neutral | agree | Strongly Agree

15) How do you enjoy the time with your horse?

Riding | walking | Hand-walking | grazing

16) Do you spend many hours outside of ride time building a relationship with your horse?

Strongly disagree | disagree | neutral | agree | Strongly Agree

17) How would you rate the relationship with your professional trainer?

1 2 3 4 5 6 7 8 9 10 ---- 1 being the lowest- 10 being the highest

18) Do you find yourself compatible with your horse?

Strongly disagree | disagree | neutral | agree | Strongly Agree

19) Do you find yourself compatible with your trainer?

Strongly disagree | disagree | neutral | agree | Strongly Agree

20) Are you a take charge kind of rider?

Strongly disagree | disagree | neutral | agree | Strongly Agree

21) Do you find yourself to be more passive as a rider or more aggressive?

Passive | neutral | aggressive

22) Do you believe that when training a horse, a more harsh and aggressive approach works best?

Strongly disagree | disagree | neutral | agree | Strongly Agree

23) Do you believe when training a horse, a kind yet strategic approach works best?

Strongly disagree | disagree | neutral | agree | Strongly Agree

24) Do you mostly ride your horse without a trainer's help?

Yes or no

25) Do you find yourself becoming more calm or anxious when your horse is finding difficulty with an exercise?

Calm | neutral | anxious

26) Do you think it's difficult to control your horse when the horse is showing tension, disobedience, or shying?

Strongly disagree | disagree | neutral | agree | Strongly Agree

27) Have you been involved in a traumatic experience with a horse?

Yes | no

Part A) If yes, how many traumatic experiences?

Part B) Was your traumatic experience physical or more psychological?

Physical | psychological | both

Part C) Did your traumatic experience occur on the ground, while mounting the horse, or while riding?

Ground | Mounting | Riding

Part D) How many years ago did the accident occur? \_\_\_\_\_

28) When your horse is showing signs of difficulty within an exercise, are you more likely to continue working through the exercise until difficulty is corrected? Or give up on exercise in fear of a bad reaction?

Work through exercise | give up

29) Do you have more anxiety if you go to a horse competition?

Strongly disagree | disagree | neutral | agree | Strongly Agree

30) Do you feel like you perform well under pressure in horse shows?

Strongly disagree | disagree | neutral | agree | Strongly Agree

31) At the stables, do you have a strong support group that encourages you in your endeavors in the sport?

Strongly disagree | disagree | neutral | agree | Strongly Agree

32) Do you feel like the environment around horses and the barn is peaceful?

Strongly disagree | disagree | neutral | agree | Strongly Agree

33) Do you view the stables as a place of therapy, relaxation, and ease?

Strongly disagree | disagree | neutral | agree | Strongly Agree

34) Do you find yourself “in your element” on a horse, or out of your comfort zone?

In my element | out of my comfort zone

35) Do you prefer your horse warmed up for you, or warm up the horse yourself?

Warmed up for me | warm up myself

36) Have you spent time educating yourself about the sport of dressage?

Strongly disagree | disagree | neutral | agree | Strongly Agree

37) Do you think the logical behind dressage of what each movement entails gives you a stronger sense of control during your training sessions?

Strongly disagree | disagree | neutral | agree | Strongly Agree

38) What level have you competed through in dressage

Intro level | First level | second level | third level | fourth level | Prix St. George |

Intermediate 1 | Intermediate 2 | Grand Prix

39) What medals have you received in Dressage?

Bronze Medal | Silver Medal | Gold Medal

40) How many years have you been training dressage?

Fill in the blank \_\_\_\_\_

41) How long has your horse been training dressage

Fill in the blank \_\_\_\_\_

42) Did you start riding as a child and continue through adulthood?

Yes | no

43) Did you start riding in childhood, take several years off, then continue the sport later in life?

Yes | No

44) If yes, when did you quit riding, and when did you start riding again?

I quit riding at age \_\_\_\_, I started again at age \_\_\_\_ .

45) Did you receive any formal education in dressage?

Yes | no

46) If yes, please write the training you received.

Formal training or licensing:

47) Have you competed in international competition?

Yes | no

48) Have you competed in national competition?

Yes | no

49) Have you been trained to be a judge in dressage?

Yes | no

If yes, write what level you are qualified to judge In dressage.

\_\_\_\_\_ -

50) Have you done a certification program, or an apprenticeship under a master in dressage to be a qualified trainer and rider?

Yes | No.

**APPENDIX B: MINI IPIP- FIVE FACTOR PERSONAITY TEST (Goldberg, 1999)**

Item	Factor	Text
1	E	I am the life of the party
2	A	I sympathise with others' feelings
3	C	I get chores done right away
4	N	I have frequent mood swings
5	O	I have a vivid imagination
6	E	I don't talk a lot (R)
7	A	I am not interested in other peoples' problems (R)
8	C	I often forget to put things back in their proper place (R)
9	N	I am relaxed most of the time (R)
10	O	I am not interested in abstract ideas (R)
11	E	I talk to a lot of different people at parties
12	A	I feel others' emotions
13	C	I like order
14	N	I get upset easily
15	O	I have difficulty understanding abstract ideas (R)
16	E	I keep in the background (R)
17	A	I am not really interested in others (R)
18	C	I make a mess of things (R)
19	N	I seldom feel blue (R)
20	O	I do not have a good imagination (R)

*E* extraversion; *A* agreeableness; *C* conscientiousness; *N* neuroticism; *O* openness (sometimes also referred to as intellect/imagination); *(R)* reverse scored item



**APPENDIX C: SPORTS INJURY AND ANXIETY SCALE (SIA) (Rex et al., 2016).**

Strongly Disagree (SD) | Disagree (D) | Neutral (N) | Agree (A) | Strongly Agree (SA)

Anxiety related to LA (loss of Athleticism)

2. When I am injured, I am losing athletic potential.

10. When I am injured, I am losing athletic ability.

14. When I am injured, I lose some of my athletic skill.

Anxiety related to BPW (being perceived as weak)

5. When I am injured, some people think I am just being a baby.

8. When I am injured, some people think I am just being lazy.

13. When I am injured, some people think I am faking it.

Anxiety related to PAIN

11. When I am injured, I am in a lot of pain.

16. When I am injured, I hurt a lot.

20. When I am injured, I experience throbbing pain.

Anxiety related to LDIO

6. When I am injured, I am letting my teammates down.

18. When I am injured, I am letting my coaches down.

19. When I am injured, I am letting my friends down.

Anxiety related to RI (Re-Injury)

9. When I am injured, I worry that the same injury will happen again.

12. When I am injured, I think I am more likely to get injured again when I return.

15. When I am injured, I believe that I will get injured more easily in the future.

Anxiety related to losing social support

1. When I am injured, some people turn away from me.

3. When I am injured, some people stop calling me.

7. When I am injured, I lose some social support.

Anxiety related to ISI (impaired self-Image)

4. When I am injured, I feel anxious about how my body looks.

17. When I am injured, I worry about getting fat.

21. When I am injured, I lose self-esteem.

**APPENDIX D: ANXIETY SCALE-2 (Smith, 2006).**

<b>Q.</b>	<b>Not At All</b>	<b>Somewhat</b>	<b>Moderately So</b>	<b>Very Much So</b>
1 I feel nervous	1	2	3	4
2 During competition, I find myself thinking about unrelated things	1	2	3	4
3 I have self-doubts	1	2	3	4
4 My body feels tense	1	2	3	4
5 I am concerned that I may not do as well in competition as I could	1	2	3	4
6 My mind wanders during sport competition	1	2	3	4
7 While performing, I often do not pay attention to what's going on	1	2	3	4
8 I feel tense in my stomach	1	2	3	4
9 Thoughts of doing poorly interfere with my concentration during	1	2	3	4

10	I'm concerned about choking under pressure	1	2	3	4
11	My heart races	1	2	3	4
12	I feel my stomach sinking	1	2	3	4
13	I'm concerned about performing poorly	1	2	3	4
14	I have lapses of concentration during competition because of nervousness	1	2	3	4
15	I sometimes find myself trembling before or during a competitive event	1	2	3	4
16	I'm worried about reaching my goal	1	2	3	4
17	My body feels tight	1	2	3	4
18	I'm concerned that others will be disappointed in my performance	1	2	3	4
19	My stomach gets upset before or during a competitive event	1	2	3	4

20	I'm concerned I won't be able to concentrate	1	2	3	4
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21	My heart pounds before competition	1	2	3	4
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