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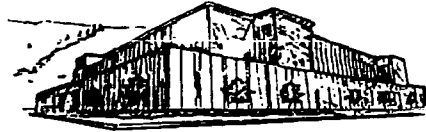
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THE SELF-REPORT FORM OF THE HORSE-RIDER RELATIONSHIP SCALE:
VALIDATION IN AN EQUESTRIAN EVENTING SETTING

by

Brian F. McKernan

B.A. University of Notre Dame, Indiana, 1998

presented in partial fulfillment of the requirements

for the degree of

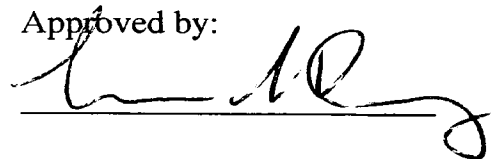
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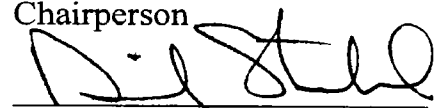
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Self-Report Form of the Horse-Rider Relationship Scale: Validation in an Equestrian Eventing Setting

Director: Lewis A. Curry 

Competitive equestrians have always considered a positive horse-rider relationship to be critical for success. To date, however, no empirical studies on the topic have been published. The researcher, therefore, attempted to develop a scale to measure this relationship. It was hoped that this scale would uncover an empirical link between the horse-rider relationship and success in equestrian competition. Based on existing anecdotal research, the relationship is believed to be a combination of five components: compatibility, mutual respect, communication, trust, and mutual confidence.

After pilot testing, the researcher created a 20-item Likert style scale to use to measure the relationship. The scale contains four items for each component. The data for this study were collected at three equestrian events in Western Montana in 2002. The 60 participants were asked in the scale to reflect on their experiences with the horse they are competing with that day. The researcher also collected the participants' scores at the competition.

Multiple correlation analyses were run using the scale scores as the independent variable, and the competition scores as the dependent variable. These analyses provided no significant results. To adjust for the somewhat subjective nature of the scoring in eventing, the competition scores were standardized, and the analyses rerun. Again, this yielded no significant results. Principal Component Analyses were then run to discover distinct component factors in the scale. A five-factor model had the greatest level of interpretability, and accounted for over 72% of the total variance of the scale.

An in-depth discussion of the possible reasons for the lack of significant results follows, as well as a discussion of the emerging factors yielded by the Principal Component Analyses, as these results differed from the scale's original five-component design. Further development of the scale, including the creation of a supplementary observational analysis form is also discussed.

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Introduction

The sport of competitive equestrian eventing is unique in many ways. First, the sport is somewhat exclusive, as participation is not readily accessible to most people. It is also not a sport that one can typically find at the high school, or in most cases even the college level. Equestrian eventing can also take on many different forms depending on where a competition is being held. But perhaps the largest difference between equestrian eventing and typical sports played in America is the inclusion of a necessary relationship between a human and an animal, the horse. Equestrian sports require a rider and a horse to work together and perform a series of skill tests in competition against other riders and their horses. It is one of the few sports that require a human to interact with an animal in a competitive setting. Other examples include the sled dog races that occur in colder climates, most notably the Iditarod race held every year in Alaska, as well as some forms of animal show competitions.

These notwithstanding, equestrian eventing is a unique, multifaceted sport involving several different types of competitions which test the rider and horse's abilities, as well as the strength of their partnership (Wipper, 2000). The riders who compete in horse shows come from all walks of life and from all ages. And since the sport does not require great amounts of strength and size from its human competitors, it is one of the few in which men and women compete together on a level playing field (DeBenedette, 1989).

To be successful in equestrian eventing, the rider and horse must have many qualities congruent to high levels of achievement. Both must be experienced with the many challenges that an event presents to a competitive team. In line with this, it has

long been thought that to succeed in a competitive setting a horse and its rider also have to have a great amount of experience with each other. In accumulating this experience the horse and rider are getting to know each other: each other's styles, moods, likes, dislikes, and various other idiosyncrasies. Over the course of getting to know each other and gaining experience with each other, the horse and rider are building a relationship. This relationship will likely be a key component in the future competitions they are involved in together. It has long been believed that the strength of the relationship between a horse and rider will have a strong influence on the levels of competitive success that the dyad will (or will not) experience (Wipper, 2000). It is a common belief among competitive equestrians that those riders that have a strong, positive relationship with their horse succeed in competition, and those that have a weak or negative relationship with their horse do not succeed. It is imperative then that riders take the time to build a relationship with their animal, in the hopes that this will help translate into success in the competitive arenas.

Purpose

Though well known to competitive equestrians as a key component to success, the horse-rider relationship has not yet been studied in an empirical setting. The research that has been done in this area is entirely qualitative. The best example of this previous research is a report that was the inspiration for this study. Written by Wipper in 2000, this report is an excellent attempt to explain the relationship from a qualitative standpoint. Based on this study, it is the primary goal of this researcher to attempt to measure the relationship a competitive equestrian shares with his/her horse. The researcher will accomplish this by devising a scale based primarily on existing empirical and anecdotal

reports on the subject from reputable sources in the field of horsemanship. The findings of the scale will be validated by comparing the scores of equestrians on the scale to scores in competition, with the hope of finding a link between the horse-rider relationship and competitive success.

The Horse-Rider Relationship Scale could also be quite helpful to equestrians in gauging the nature of the relationship they have with their mount, and assist them in measuring the progress they may (or may not) be making with a horse with which they are building a relationship. The scale could also assist trainers and coaches in assessing the abilities of their students and judge how well their students are doing in building healthy relationships with their horses.

Limitations

The main limitation of this study was the subjective nature of the questionnaire given to the subjects. The participants were requested to be honest in answering all questions, but the researcher had no control over how honest they were. The participants to be utilized also comprise a convenient sample, in that they are all local riders from the region and will likely have a limited amount of experience in high profile competitions. These limitations will be discussed further in the Discussion section of the validation study.

Delimitations

The researcher delimited the study by using the measure being designed as the only gauge of the nature of the relationship shared by the horse-rider dyad. No other measure of this relationship was taken. Also, the researcher only chose to travel to competitions throughout western Montana. The utilization of this somewhat

homogeneous sample further delimits the generalizability of the study. The study was further delimited by the fact that the participants were only observed at one competition. Again, these issues will be discussed further in the Discussion section of the validation study.

Review of Literature

It is logical to begin with a description of what exactly is meant by equestrian eventing and what sorts of tasks comprise a typical competition. These events had their roots in the training of cavalry horses for the world's armies. They were used to improve the fitness of military horses as well as to test the horse's obedience and the cavalryman's skill. While these tests of military tactics were used for centuries and through World War II, equestrian competition had its civilian beginnings in the latter parts of the 19th Century and became an Olympic event at the Stockholm Games of 1912 (Meyers, Bourgeois, LeUnes, & Murray, 1999; Wipper, 2000). The typical equestrian event is comprised of three competitions. At the elite level (Olympic competitions and those of similar caliber such as the prestigious Rolex Championships), these events occur over a three-day span, which yields the common term, "Three-Day Eventing." These events are comprised of a dressage test, a cross-country competition, and a show jumping competition.

At the highest levels, a dressage test is visually characterized by the dress and appearance of the horse and rider. The horse is typically dressed with great elegance, wearing elaborate bridles, with their manes braided in fancy patterns adorned with flowers and other decorations. The riders are outfitted in equally elegant dress, and tuxedos with tall top hats are commonplace at the elite level. The dressage test requires a very fit horse to perform a series of prescribed movements quietly, accurately, and

gracefully in a variety of gaits, which are steps such as a walk, trot, or canter (Wipper, 2000). These movements are done in a small, enclosed area referred to as an arena. The team is judged on the accuracy of the completion of the course, as well as the rider's command of the horse. A well-performed test will demonstrate precision, elegance, obedience, and suppleness from the horse, as well as great amounts of harmony between the horse and rider (DeBenedette, 1989; Meyers, et al., 1999; Wipper, 2000). Dressage tests can vary from competition to competition, so riders must be prepared to face a variety of possible tasks.

The cross-country event is next. This consists of a long gallop of varying lengths, based on the resources and space available to the competition's organizers. It can be as short as 2 miles or as long as 12-15 miles. The horse and rider move through the long course and must jump over many man-made and natural obstacles. These obstacles typically include ditches, stone walls, hedges, banks, and large pools of water. These objects are fixed in their structure and will not come down when contact is made. Thus an increased level of danger is present in this event, which is a primary reason why this event is often considered the most important of the three (DeBenedette, 1989; Wipper, 2000). The dyad is timed in this event, and attempts to complete the course in an optimal time window, which is predetermined for each class. Penalty points are assessed for not finishing within the window, or for refusals of the horse to complete a jump. Three refusals of the same jump can result in the dyads disqualification from the event, as can finishing outside of the time window, depending of the rules of the particular event.

The third and final event of a typical competition is show jumping. Show jumping, or stadium jumping as it is sometimes called, also takes place in an arena, and

requires the rider to lead the horse over a course consisting of a series of fences. The fences are of varying heights (18 inches to 3 feet and beyond) based on the skill class of the riders that are entered. The fences are set up in the arena and the rider and horse must jump over the fences in a predetermined order. These fences are typically made up of horizontally placed wooded rails that collapse if contact is made by the horse while attempting to cross them. The horse and rider team is timed, and judged on their accuracy in completing the course. The dyad incurs penalty points if any rails are knocked down or if the horse refuses to jump over a fence. Again, three refusals of the same fence result in the pair's disqualification from the event (DeBenedette, 1989).

Components of the Horse-Rider Relationship

As previously stated, the relationship between a horse and rider is a multifaceted one, one that has only been studied through qualitative, anecdotal processes. A prime example of this past research is the work done by Wipperfurth (2000). This comprehensive piece of qualitative research was the inspiration for the formation of the Horse-Rider Relationship Scale. In this article, the author describes the horse-rider relationship in great detail. She breaks the phenomenon into four key components: compatibility, mutual respect, communication, and trust/mutual confidence. The researcher has followed the model set forth by Wipperfurth in the formation of the Horse-Rider Relationship Scale. However, the components of trust and mutual confidence have been divided into two unique constructs, yielding five overall. Each of these components will now be briefly explained using the current existing work done in these areas.

Compatibility

Compatibility is the one facet of this relationship that is fundamental, as compatibility will form the relationship's foundation. This concept can be operationalized as the "fit" between rider and horse on physical, behavioral, and psychological dimensions (Budge, Spicer, Jones, & St. George, 1998). Certain types of horses require certain types of riders, and finding the correct pairing is the first step to relationship building and future success (Wipper, 2000). If the horse and rider are mismatched, it is possible that they will always struggle to bond and rarely experience success. Many riders have wasted years attempting to build a relationship with a horse with which they were incompatible. It becomes a source of serious frustration for both the rider and the horse as the well-intentioned rider attempts in vain to force the animal to conform to her style (Rogers, 1997). If a rider and horse are properly paired, however, this can give the dyad a jump-start to building a strong relationship and experiencing future success. This correct pairing involves careful, objective analysis on the part of the rider and other experienced persons (Budge, Jones, & Spicer, 1997). For example, a light-handed, undemanding rider may be the perfect fit to maximize the potential of one type of horse, but for a more demanding horse, an invitation to counterproductive and objectionable behaviors (Rogers, 1997; Wipper, 2000).

Compatibility is a concept seen across the sporting world as a critical component for athletic success. Coaches and athletes must be paired together well for both to be able to maximize their talents (Horne, 1985). Athletes are also believed to require compatible pairings with their teammates to reduce stress and build a successful partnership (Seggar, Pedersen, Hawkes, & McGown, 1997). This athletic partnership is frequently seen in

team sports, such as doubles tennis or racquetball, where the players' styles must compliment each other to experience the highest levels of competitive success (Wilson, 1983).

Mutual Respect

Mutual respect is one of the most intriguing facets of the horse-rider relationship. This is due to the fact that many competitive equestrians view the construct of mutual respect as a paradox. The paradox goes as follows: for a horse and rider to be successful in competition, the horse must do what the rider wants it to do. However, for the horse to be most successful in completing the competitive tasks, it must be allowed to think the tasks out on its own and make up its own mind as to how to approach the obstacles (Wipper, 2000). Simply put, the horse must be obedient and free-spirited simultaneously. This is one of the greater challenges to the dyad, and is successfully accomplished through strong levels of respect between its members. If the horse respects its rider, it will want to obey her and will not interpret her commands as an affront to its spirit. If the rider respects the horse, she will know that it needs to express this spirit and will give it the freedom to do so, within reason, in the competitive context. Though the rider must always be in control, they must also allow the animal to express its will to maximize the horse's abilities.

By nature, horses are animals that are both kind and easily frightened. They want nothing more than to obey, but they must understand who is in control and who is the appropriate person to obey (Zetl & Baumert, 2001). It is critical that the rider establishes himself as the dominant member of the dyad right from the beginning. If done correctly, the horse will obey and the chance for success will be heightened. If the rider fails to

establish himself as the dominant partner, a horse's natural fear and desire to use its flight instinct may take charge with dangerous consequences (Rogers, 1997). By taking control of the reins and not allowing the animal to act in any inappropriate way, a rider can safely (and humanely) establish himself as the dominant member of the pair. Being a herding animal that naturally establishes and conforms to a "pecking order," the horse will frequently attempt to see what it can get away with at first. This can be manifested through rubbing its head on the rider, pushing, or refusing to obey the rider. The rider must respond by demanding the respect from the animal, and letting it know through a firm resolve that they, the human, are in control (McNair, 1981; Rogers, 1997).

It is critical that this role establishment always be done carefully, however. As stated above, for the dyad to be most successful the horse must be both obedient and free-spirited. Hence, the establishment of the human rider as the alpha member of the dyad must never come at the expense of the horse's spirit. The rider must be careful not to lose respect for the horse and establish dominance by means of fear and intimidation, as this will show in the horse's performance. If a horse is pushed too far, it will become an overly frightened animal and lose its much desired spirit and freedom (Zetl & Baumert, 2001).

Communication

Communication is the third facet of the relationship, and takes several different forms. The most obvious of these forms is that the horse must be able to understand the rider's signals, and obey them when given. This comes through long training sessions with the dyad working together so that each can better understand the signals given in competition. Typically an extensive process, this requires the patience of both the horse

and the rider. Since different people communicate in different ways, it may take some time for the horse to become comfortable with the method of communication used by a particular rider. Horses are generally obedient animals, and want nothing more than to complete the instructions they are given. However, if they do not understand the instructions, their chances for success are greatly diminished (Rogers, 1997; Zettl & Baumert, 2001). These misunderstandings can unfortunately lead to the mislabeling of a well-intentioned horse as being “difficult” or “disobedient” (Zettl & Baumert, 2001). Successful riders have the time and patience to teach the horse their preferred method of communication, and allow the animal to learn at its most comfortable pace (Rogers, 1997).

The less obvious form of communication is demonstrated in the understanding each partner must have of the emotional signals given by the other. A fundamental concept all riders must learn while building a relationship with their horse is that they must listen to the horse and what it is telling them. When a rider is on a horse there is no greater teacher than the horse itself (Hassler, 1994). Horses communicate in several ways. They display their feelings with physical expressions through such appendages as their ears, tails, and eyes (Wipper, 2000). A rider must be able to pick up on these expressions and understand what the horse’s needs are, or where the horse may be experiencing difficulty. For example, a horse that has become sore from being overworked may get tense and start to whip its tail. The rider must understand why the horse is reacting this way, and give it some time off to heal (Zettl & Baumert, 2001). Just as people communicate in unique ways, so to do horses. Riders must be willing to spend

the necessary time with their horse to better understand that particular animal's body language, and be careful to properly interpret the signals of the horse (Rogers, 1997).

Horses are also known as animals that are quite perceptive to the emotions and temperaments of other creatures (Rogers, 1997). They possess an understanding of emotion that would be considered extrasensory by human standards (Berner, 1982). Through a delicate sense of smell they can detect fear, caution, tentativeness, and anxiety in their riders (Wipper, 2000). It is important that a rider understand this fact, and is wary of riding a horse in a competitive setting if the rider is afraid, as this will impede the dyad's chance of success and ultimately increase the risk of serious injury to both the horse and rider (DeBenedette, 1989). Similar to humans, horses also possess the ability to detect one's emotional state by the tone of their voice (McNair, 1981). Riders must learn to use a firm and unwavering voice when communicating with their horses. This succeeds in not only showing the horse that the rider is not afraid, but also that he is in control and demands to be listened to. In the case of a nervous horse, a firm but soft voice can also go a long way to calming its nerves (McNair, 1981; Rogers, 1997).

Trust

Trust is a construct that is critically important from the horse's point of view. A horse's trust is difficult to build and easy to break (Wipper, 2000). This is especially true for timid horses, or horses that may have experienced physical abuse in the past (Rogers, 1997). Trust is also the one construct of the five that is primarily one-sided. Horses are, by their nature, animals that rely more on their flight response, as opposed to their fight response. And while mankind relies more often on intuition, the horse is an animal that lives off of its reflexes (Riding: The Search for Synchrony, 1982). A horse's response to

a situation that it perceives as threatening can itself be dangerous: it can buck (attempting to throw its rider by rearing up on its back legs), kick, flail, or run away. All of these responses can be dangerous for the rider and other people or horses that may be nearby (DeBenedette, 1989). These types of reactions are experienced in a number of situations, including such seemingly simple tasks as attempting to load a horse into a trailer to be transported (Burnett & Fisher, 1996). It is critically important in these situations that the horse trust its rider. With a strong level of trust, a horse will be much less likely to “spook” or become overly concerned at new settings it perceives as being potentially dangerous. A rider must be careful to build a horse’s trust by never over-challenging it, and pushing it into stressful situations before it is ready (Wipper, 2000).

As stated above, trust is built slowly but destroyed quickly. Riders must be careful to build a horse’s trust at a meticulous pace, and not risk breaking it through miscommunication. Riders often lose the trust of a horse by wrongfully punishing it, believing it is misbehaving when it may have simply misunderstood the rider’s commands (Zettl & Baumert, 2001). Also, if a horse and rider are brought into a situation that the dyad is not prepared for, and should the horse suffer some serious “spook” or stressful incident, it may be years before the animal is willing to trust that rider again in a similar setting. This mistrust will manifest itself through an ingrained, almost reflexive response of fear towards the rider in question, and will take a long and careful rehabilitation to remove (Harris, 1985). This construct, more than any other, is extremely delicate and requires a great amount of patience from the rider in its formation.

Mutual Confidence

The final construct of the horse-rider relationship is mutual confidence. Similar to trust, confidence is built slowly over time between the horse and rider (Zettl & Baumert, 2001). Mutual confidence is created through the dyad moving at a slow pace, being sure to master basic skills before progressing to more advanced challenges (Berner, 1982; Zettl & Baumert, 2001). Unlike trust, however, it is critical that both members of the pair share a strong confidence in each other.

The importance of shared confidence between a horse and rider is most clearly seen in the second, and most grueling test of eventing, the cross-country competition. This event consists of the horse and rider jumping over large, fixed obstacles. These are obstacles that the horse has likely never seen before, and may cause a fearful response. It is critical, then, that the horse be confident that it can make it over the obstacle, and believe that its rider would not lead it into danger by jumping the fixture (Wipper, 2000). The rider, on the other hand, has to be familiar with the horse's ability and be confident that the horse can make it safely over the obstacle and that they, as the rider, can safely lead the pair (Wipper, 2000).

This construct is in many ways a combination of communication and trust. The rider must not communicate a tentative or fearful attitude, or this could surely affect the trust, and therefore the confidence, of the horse. Having the trust of the horse also goes a long way to building mutual confidence. Similarly, the rider can build the horse's confidence by speaking in a positive tone and using positive (not hesitating) gestures (McNair, 1981). If a rider is working with a fearful horse, he must be sure to build the

confidence of the animal by always using assured, but non-threatening means of communication (Rogers, 1997).

Recent Developments in Relationship Formation

The formation of a relationship between a competitive equestrian and their horse is something that has undergone a large change and shift in technique over recent years. The traditional form of horse training was one of coercion. A horse is trained to behave in a certain way through negative reinforcement. In other words, it would learn to obey the rider's commands to avoid physical punishment (Miller, 2000). This method was long considered to be the most effective way of training a horse. The horse is, after all, a herding animal, and one of the characteristics of the types of herds that horses form is the establishment of a chain of command or dominance, a "pecking order" as it is often called. Thus it was thought that if the human established themselves as the dominant members of the dyad through physical intimidation, the horse would obey. This was a very masculine form of training endorsed by cowboys and other early horse trainers in this country (Miller, 2000). Though effective for some purposes, a horse that has been bullied into behaving could become fearful and mistrustful of humans, and could lash out in dangerous ways (Harris, 1985). These training methods also display a puzzling relationship humans sometimes form with their companion animals. The individuals in question often care very deeply for their animals, but train them through means of intimidation and physical abuse (Swabe, 2000).

The rise in female participation in equestrian sports, however, has brought about a new form of relationship building. This form is not characterized by corporal punishment and potentially inhumane treatment, but rather by the presence of high levels of

cooperation between the horse and rider (DeHaven, 2000; Miller, 2000). A patient rider can accomplish this cooperation by getting the horse to choose the desired behavior as the best of all options, eschewing strong-arm techniques, and achieving a kind of “relaxed compliance” in the animal (Rogers, 1997). This type of relationship building has been shown to be most effective with horses that are being trained for equestrian competition. A desirable horse in the competitive arena is one that combines obedience with its own unique gracefulness and character. Horses that have been coerced into certain behaviors have become slaves instead of partners and will lose these desirable qualities (Zettl & Baumert, 2001). Cooperative relationship building involves the gradual strengthening of the five components detailed above, and has become increasingly popular over the past decade to build obedient horses that retain their unique personalities.

Pilot Study

A pilot study was conducted by the researcher to test items for possible inclusion in the final version of the self-report form of the Horse-Rider Relationship Scale. What follows is an in-depth explanation of the formation of the pilot scale, as well as the methods used to test the items, the results yielded by these tests, and a brief discussion of the implications of the pilot study.

Development of the Scale

The items used in the pilot testing were derived by the researcher from anecdotal reports that exist on the topic of the horse-rider relationship and its components. These were led by a qualitative research study on the topic of the relationship written by Wipper in 2000. This landmark study led to the determination of the components for the scale, as well as what sorts of questions the scale should contain. Large amounts of additional

anecdotal reports were also studied. These reports were taken primarily from reputable periodicals in the various fields of horsemanship. This included articles written by experts in the field regarding the concept of the horse-rider relationship, as well as its individual components. Much of the information garnered from these sources can be found in the preceding section discussing the components of the horse-rider relationship.

A third source for the items in the scale was a series of discussions with knowledgeable people in the field. These discussions were on both the concept of the horse-rider relationship in general as well as its importance in various equestrian settings. These persons were also integral in cementing which constructs should be included in the scale as well as how each should be measured. Several of these people were also able to review the materials being used in this pilot study directly, and comment on the measure in development.

The pilot scale was assembled using the five constructs listed above as its subscales. Each of these subscales contained six or eight Likert style format questions. The goal for this project was to uncover four items for each component that best reflect the aspects of that particular component. Those items will then comprise the self-report form of the scale to be used for additional data collections.

Methodology (Pilot Study)

Participants

The participants for the pilot study were 73 undergraduate students at The University of Montana. These participants were all enrolled in an introductory psychology class and received research credit for their involvement. The participants had an average age of 20.3 and 73% were female. They were recruited via the Psychology

Department's subject pool. Experience in horseback riding was required for participation. Since the goal of the pilot study was to involve as large a sample as possible, a minimum amount of experience was required. The subjects were only required to have ridden a horse at least once in the last ten years to participate.

Measure

The measure used was the pilot version of the Horse-Rider Relationship Scale: Self-Report Form (see Appendix A for complete copy). The researcher developed this scale based on investigation of the horse-rider relationship and its components. The scale consists of 34 items, scored in a 7 point Likert style format. The instructions of the scale request that the participants reflect on their experiences and circle the number which best approximates those experiences. Since the scale is attempting to measure one's relationship with a specific horse, the participants were instructed to reflect and answer only about the horse they ride most frequently. An example of an item from the scale is, "Rider developed a good rapport with the horse quickly and easily." The scale was adapted somewhat for the purpose of the pilot study. Though the final version of the scale will be used with competitive equestrians, the focus of the pilot scale was on the rider's experiences in general, not on their experiences in competition. This was due to the perceived improbability of finding an adequate sample of competitive equestrians in the population to be utilized. As previously stated, the scale is comprised of five subscales, one for each of the proposed components of the horse-rider relationship, and each subscale contains either six or eight items (see Appendix B for scale key). The scale yields a total of six scores: one for each subscale and a total score.

Procedure

Data collection occurred in five sessions covering a span of approximately one month. The subjects were recruited via the Psychology Department's subject pool, and were screened for horseback riding experience. All data collections occurred in the same room in the building that houses the Psychology Department, and were monitored by the researcher. Participants were gathered in groups of 10-17 (with an average group size of 14.4). They were instructed to read the directions carefully, and be sure to focus only on their experiences with one particular horse. The participants were also instructed to inform the researcher of any questions which they found confusing or which required further clarification. Completing the scale took approximately 15 minutes, after which the researcher was available to answer any questions about the study.

Data Entry

The data were then entered into the SPSS (version 10) data analytical computer program. During this data entry, there were several cases of missing and ambiguous data to be dealt with. In the demographics section, a few participants included a range of years for questions regarding the extent of their experience. For example, for the question, "Total number of years of riding experience" answers such as, "1-2 years" were entered. For the purpose of data entry, the average of the years in the range was entered into the computer. Therefore in the example above, 1.5 years was entered as the amount of years of riding experience. Also, it was apparent that three participants believed the demographic questions regarding their age and gender were referring to the age and gender of the horse they were reflecting on for the scale. Those particular participants' answers to those demographic questions were omitted from the data entry.

Results (Pilot Study)

The means and standard deviation for years of riding experience (\underline{M} =6.981, \underline{SD} =6.254) and years of experience with the horse used for the scale (\underline{M} =3.315, \underline{SD} =3.936) were calculated first. This was followed by the calculation of means and standard deviations for each of the 34 items in the scale (see Table 1). Two-way bivariate correlations were then run between each item in the scale and the two key demographic questions above (total years of riding experience, and total years of experience with the horse used for the scale). The results of these analyses can be found in Table 2.

At this point, the four unique items from each subscale that shared the strongest positive correlation with the demographic question regarding years of experience with the horse used for the scale, as well as a strong positive correlation with the question regarding total years of riding experience were chosen for reliability analysis. These 20 chosen items were as follows (the number given refers to the items' number in the scale): Items 8, 10, 15, 32 (Compatibility), Items 5, 14, 18, 31 (Communication), Items 17, 25, 27, 33 (Respect), Items 9, 11, 20, 30 (Trust), and Items 12, 19, 26, 28 (Confidence). The results of the reliability analyses for the selected items in the five subscales can be found in Table 3. Due to an initially low reliability score ($\alpha = .5662$) for the four items chosen for the Trust subscale, two-way bivariate correlations were run between the four items (see Table 4). Following the identification of Item 9 as having the weakest correlations with the other items of the subscale, an additional reliability analysis was run for the Trust subscale, omitting Item 9 (see Table 3).

The data were then subjected to a transformation that created scores for the five subscales as well as a total scale score. The subscale scores simply consisted of the addition of the responses for each of the chosen items in the subscale. The total score for the scale was calculated by adding the five subscale scores. Only the items chosen for the reliability analyses were included in this transformation. Item 9, having been omitted from an additional reliability analysis for the Trust subscale, was also omitted from the data transformation. Following the data transformation, two-way bivariate intercorrelations were run between each of the five subscales, as well as the total scale score. The results of these analyses can be found in Table 5.

Discussion (Pilot Study)

The pilot study served the purpose of item selection for a scale measuring the horse-rider relationship in an equestrian setting. Though the sample that was used for this pilot study was indeed a convenient one (students enrolled in an introductory psychology class), the researcher believes it was also an adequate one. This is displayed in that the mean number of years of riding experience for the sample was 6.98, which exceeded the expectations of the researcher. The mean number of years of experience with the horse used for the questionnaire was 3.32, again exceeding the researcher's expectations. This amount of experience allowed for a good deal of interpretability for the findings of the pilot study.

As for the actual item selection process, the analyses run on the data seemed to yield desirable results. The goal of the pilot study was to find four items for each of the components of the scale for inclusion in the final self-report form. This was achieved for all but one of the components (Trust). The other components yielded the four selected

items quite clearly, following the initial investigation of correlations shared between the items and the demographic question of years of experience with the horse. The selected items had means that were close to the middle value on the scale (four). These items also had adequate standard deviations, showing that there was good variability in the responses. As for the component of Trust, three items were clearly identified. It is believed, however, that the fourth item may be better served with a larger data collection with a more experienced population, which is one of the goals of the next step of this research.

These results also seem to back up some of the more basic theoretical beliefs of the horse-rider relationship: that it is built over time, and should strengthen with an increase in years of experience with a particular horse. The significant positive correlations between the items of the scale and the aforementioned demographic question reinforce this point. It was therefore believed that the condensed version of the scale this study has produced should yield interesting results when given to a more experienced population. The strong reliability scores for this population also lends to the belief that this scale would be useful with additional populations.

The scale was modified slightly in its final version to make it easier to understand. For example, it was suggested that if the items were written in the first person, they would be somewhat clearer. To illustrate, the item phrased, “Rider developed a good rapport with the horse quickly and easily.” was rephrased, “I developed a good rapport with my horse quickly and easily.” and so on. The instructions of the scale and the wording of several items were also adapted to be used with a population of equestrians participating in an eventing competition.

Methodology (Validation Study)

Participants

The participants for the validation study were 60 horse-rider dyads who competed in one of three equestrian eventing competitions throughout Western Montana in the spring and summer of 2002. Out of the 60 total human participants, 57 were female (95.0%). The participants had a mean age of 27.562, with a standard deviation of 13.512.

Measure

The measure used in these data collections was the final version of the Horse-Rider Relationship Scale: Self-Report Form (see Appendix C for complete copy and Pilot Study Methodology for details on the scale's development). This version contained a 20-item scale, with four items for each of the five scale components. Similar to the Pilot Scale, all items are in a 7-point Likert format. This version of the scale was also adapted for use with a population of competitive eventing equestrians. This adaptation did not change the nature of the questions, simply some subtle wordings. Before completing the scale, the participants were informed to focus only on the relationship they share with the horse they would be riding in the competition. The scale yields a total of six scores: one for each subscale and a total score. (see Appendix D for scale key)

Procedure

The participants for the validation study were approached early in the day of the competition. The researcher attempted to get every eligible competitor to complete the scale, and was largely successful in this endeavor. The researcher explained the purpose of the study and presented each competitor with a questionnaire, if they desired to participate. An Informed Consent explaining the purpose of the study and containing

contact information for the primary researcher preceded the questionnaire. The competitors completed the questionnaires and returned them to the researcher as soon as possible during the day of competition. Each participant under the age of 18 was also required to provide the signature of a parent/guardian before returning the scale.

Throughout the competition, the researcher was present to answer any questions the participants may have regarding the questionnaire, or the study in general. Following the competition, the researcher gathered the competitive scores for each of the participants for each of the three phases of the competition (dressage, cross country, and show jumping). The data analysis was run using each participant's scale score as well as his or her scores from competition.

Results (Validation Study)

The means and standard deviations for each of the demographic questions were calculated first. These included the total years of riding experience of each participant ($M=18.708$, $SD=12.984$), years of competitive experience for each participant ($M=9.621$, $SD=9.384$), and years of eventing experience for each participant ($M=3.713$, $SD=5.810$). Means and standard deviations were also calculated for the demographic items related to the horse-rider dyad. These included years of experience the dyad has together ($M=2.989$, $SD=3.526$), years of competitive experience the dyad has together ($M=1.653$, $SD=2.531$), and years of eventing experience the dyad has together ($M=.709$, $SD=.952$). For a complete listing of means and standard deviations for the demographic items, see Table 6. Means and standard deviations were also calculated for each of the 20 Likert style questions in the scale, and can be found in Table 7.

The data were then subjected to a series of transformations to calculate the component scores. The scores for each participant on the four items corresponding to each component (Compatibility, Respect, Communication, Trust, and Confidence) were added together to yield a score for each component. The total for all 20 questions on the scale was also calculated to yield a total scale score. As for the competition scores, in the cross-country event, the jump penalty score was added to the time penalty score to yield a total score for that event. That total was then added to the scores for the other two events (dressage and show jumping) to yield a total competitive score. Means and standard deviations for the scale components and total scale score, as well as for the competition scores can be found in Tables 8 and 9, respectively.

Once the component scores had been calculated, reliability analyses were conducted on each of the five components of the scale, as well as for the total scale score. The results of the reliability analyses were as follows: total scale $\alpha=.9219$, compatibility $\alpha=.7571$, respect $\alpha=.7679$, communication $\alpha=.6608$, trust $\alpha=.7712$, and confidence $\alpha=.7071$.

Bivariate two-way Pearson correlations were then calculated. The correlation between the total scale score and the total competition score was calculated first, and was found to be non-significant ($r=.138$ $p>.05$). The correlation between the scale total and each of the three events of the competition were calculated next and were also non-significant ($r=.041$, $p>.05$, $r=.152$, $p>.05$, and $r=.026$, $p>.05$ for the dressage, cross country and show jumping scores, respectively). Correlations were also run between the participants' scores on the components of the scale and the competition scores for each

event and the total competition score. These analyses were also found to be non-significant.

Since the initial correlations between the scale's component scores and total scores did not yield significant results, and due to the subjective nature of the judging of the events, the scores for the competition were subjected to a z-score transformation. This transformation would standardize the scores and assist in accounting for any discrepancies between the three competitions used in the data collection process. The correlations above were re-calculated, using the z-score of the participants' competition result. This resulting transformation did not yield significant results, however.

Next, correlations were run between each of the individual scale items, and the competition scores, as well as between the scale items and the competition z-scores. These analyses yielded few significant results. The significant results included the correlation between Item 16 (Confidence) and the unstandardized dressage score ($r=.263$, $p<.05$) though this result is significant in the opposite direction of that which was expected. Other significant results included the correlation between Item 15 (Respect) and the standardized dressage z-score ($r=-.321$, $p<.05$), and between Item 16 (Confidence) and the standardized z-scores for dressage, cross-country, and total event score ($r=.318$, $p<.05$, $r=.276$, $p<.05$, and $r=.331$, $p<.05$, respectively). Though once again, the results for Item 16 were significant in the opposite direction of that which was expected. Finally, the correlation between item 18 (Communication) and the standardized dressage z-score was also significant ($r=-.286$, $p<.05$).

Next, correlation analyses were run between the demographic questions and each of the individual scale items. This yielded several significant results. These significant

results included the correlation between the riders' years of riding experience and Item 1 (Communication) ($r=.344, p<.01$), as well as the riders' years of competitive experience and Item 1 (Communication) ($r=.385, p<.01$). The years of experience the rider's had in eventing were significantly correlated with Item 9 (Respect) ($r=-.329, p<.05$), Item 13 (Respect) ($r=-.257, p<.05$), Item 18 (Communication) ($r=-.379, p<.01$), and Item 19 (Compatibility) ($r=-.284, p<.05$). Though these correlations were significant in the opposite direction of that which was expected. The age of the horse was significantly correlated with Item 7 (Communication) ($r=.300, p<.05$). The years of experience the horse had being ridden were significantly correlated with Item 7 (Communication) ($r=.319, p<.05$), Item 11 (Confidence) ($r=.294, p<.05$), Item 19 (Compatibility) ($r=.270, p<.05$), and Item 20 (Respect) ($r=.310, p<.05$). Finally, the horse's years of eventing experience were significantly correlated with Item 19 (Compatibility) ($r=.269, p<.05$).

Bivariate Pearson correlations were also calculated between the standardized competition scores and the demographic questions. Several significant results were yielded by these analyses. First, the standardized z-score for the dressage event was significantly correlated with the years of experience the horse-rider dyad had in competition ($r=-.309, p<.05$), the years of experience the dyad had in eventing ($r=-.324, p<.05$), the horses' age ($r=-.296, p<.05$), the horses' years of experience being ridden ($r=-.323, p<.05$), the horses' years of competitive experience ($r=-.429, p<.01$), and the horses' years of eventing experience ($r=-.333, p<.05$). Next, the standardized z-score for the cross-country event was significantly correlated with the riders' years of eventing experience ($r=.375, p<.01$), though this was significant in the opposite direction of that which was expected. Finally, the standardized z-score for the total event score was

significantly correlated with the years of eventing experience of the horse-rider dyad ($r = -.355$, $p < .05$), the years of competitive experience of the horse ($r = -.326$, $p < .05$), and the years of eventing experience of the horse ($r = -.357$, $p < .05$).

Principal Component Analyses were run on the items of the scale to investigate the emergence of distinct factors. After running several models using a Varimax rotation, the five factor model emerged as one with the greatest level of interpretability. This model accounted for 72.020% of the total variance of the scale. For individual factor loadings and percentage of variance explained by each, see Table 10. For the component matrix for the Principal Component Analyses (independent of the original scale components) for each of the 20 scale items, see Table 11.

Discussion (Validation Study)

The population used in the validation study was found to be adequate in most respects, with regard to the demographic information collected. With a mean total riding experience of 18.708 years, with 3.713 years of experience in eventing, the riders seemed to have a reasonable amount of familiarity in these areas for the study. With rather large standard deviations (12.984 for total years of riding experience and 5.810 for eventing experience), it also appears as if the riders covered a large range, from those with decades of riding and eventing experience to those who were new to both riding and eventing.

A troublesome area in the demographic questions, however, was found in the amount of experience the horse-rider dyads had with each other. The mean for total years of experience together was quite low (2.989), as was total years of competitive experience together (1.653). The most problematic, though, was the apparent lack of experience across the dyads in eventing. With a mean of only 0.709 years, and a standard

deviation of 0.952 years, it is apparent that the population did not contain very many dyads with a large amount of eventing experience together. In fact, the maximum amount of experience any dyad had in eventing was only 4 years. This number was lower than what was both expected and hoped for by the researcher. It is possible that this lack of eventing experience together nearly across the board by the dyads in the study may have accounted considerably for the large amount of non-significant results.

Another area that likely accounted for the largely unexpected results may have been the population size. Though the total population size of 60 was not necessarily inadequate, a larger number of participants would certainly have been desirable. Also, due to the nature of equestrian eventing, not all 60 participants completed the competition. According to the rules of most eventing competitions, if a dyad commits a certain number of penalties in the second of the three events (cross-country), then the dyad is disqualified from the competition, receives no score for cross-country, and does not participate in the third phase of the event, show jumping. Because of this there were 60 participants with scores for the Dressage (Phase One), and only 52 and 54 for Phases Two and Three (cross-country and show jumping, respectively). The total number of participants with scores in all three phases, therefore, was 52. The reason for there being two more participants in show jumping than cross-country was due to a slightly different system which was used at one of the events in the study. This event allowed the riders to continue competing after being eliminated, though they would no longer be eligible for prizes. It was not thought that the inclusion of these competitors in the analysis would compromise the integrity of the data in any way. Meanwhile, since the highest number of

participants for any event was 60, the likelihood of discovering significant results was decreased.

Focusing on the significant results that were discovered, some interesting observations should be noted. First, in the correlation analyses between the individual scale items and the competition scores, Items 15 (in the Respect component) and 18 (in the Communication component) were significantly correlated with the standardized score for the dressage event. It was expected that Item 18 be significantly correlated with the dressage event. This item relates to the rider's understanding of the horse's "body language" and knowing to appropriately respond. Dressage, being an event that requires quick and precise communication between the dyad, would seem to require an understanding of the signals that the animal's "body language" sets forth. Somewhat surprising though, was the significance of Item 15. This item relates to allowing the horse an appropriate amount of freedom while competing in the event. Again, since the dressage event requires such accurate and timely communication between the members of the dyad, and a complete understanding by both parties of what movements they are required to make, it is somewhat surprising to see that a question relating to the allowance of a certain amount of freedom for the horse give forth a significant result.

Similarly, another unexpected significant result was seen in Item 16. This item was significantly correlated with the unstandardized dressage score, and the standardized dressage score, cross-country score, and total competition score. It was significant, however, in the unexpected direction. This item relates to the amount of confidence one has in them when entering new or unfamiliar competitive situations. It was expected that those who state that they enter new competitive situations with high amounts of

confidence in themselves would experience success in the competition. This was not the case, though, as demonstrated by the correlation's significance in the opposite direction. It is possible to explain this in that the question referred to "new or unfamiliar" competitive situations, and not necessarily competitive situations in general. It is possible that these riders have found a way to overcome their initial lack of confidence to become successful in the competitions for which the data was collected. This does seem somewhat unlikely, though, since many of the rider's in these competitions had a limited amount of experience in eventing. This makes it harder to believe that they have overcome any initial lack of confidence. Though it is certainly difficult to believe that confidence in oneself may not be a necessary trait for success in equestrian eventing, the initial data displayed here seems to open up that possibility.

In the next set of correlations, those calculated between the scale items and the demographic questions, other interesting significant results were found. As far as expected significant results, the relationship between Item 1 and the amount of years of riding experience and competition experience for the rider's being significant was certainly expected. Item 1, in the Communication component, relates to the rider's cautiousness not to send negative emotional signals to the horse in competition. This stems from the notion that the horse will perceive these emotions, and this will have a negative impact on the dyad's performance. It was expected, then, that experienced riders would take extra concern in making sure that they never send such signals to the horse while competing. It was quite surprising, however, that this was the only significant, positive correlation between the scale items and the demographic questions. It was also expected that experienced riders would display high scores in many of the

scale items, and inexperienced riders would display lower scores in many areas. This was not the case, though.

As for the scale items that were significant in the opposite direction of what was expected, this is also somewhat puzzling. A possible explanation for this is the notion that several inexperienced riders may have overestimated the nature of the relationship they share with their horse. It was believed that this would certainly be possible, which is the main reason why the researcher will propose a supplemental observational form of the scale to coincide with the self-report form. It is believed by many in the horse community that the overestimation of one's skills is a chronic problem for many riders, and this study may have seen a manifestation of such a problem. It could be possible that riders with more experience have learned of their weaknesses and were more honest in expressing them, whereas the inexperienced riders may have yet to have their shortcomings exposed to them. Beyond this theory, however, it also appears as if there could have been a general overestimation by the riders of their relationships across the board when the means for the scale items are observed (see Table 7). The mean for every scale item was well above and average score of 4, and most were quite close to 6. This leads the researcher to believe that a general inflation of the participants' ratings may have occurred. This, again, is another reason the researcher will propose the addition of an observational form to be completed by a trained observer.

As for the correlations between the scale items and the demographic questions relating to the experience level of the horse, there were several items that were found to be significant. Though this was not intended to be a focal point of this project, these results will be briefly discussed. Item 7 (Communication) relates to the horse's

understanding of the signals given to it in competition. It was expected, then that the greater the amount of experience the horse has, the higher the score would be on this item. It is not surprising, then, that the age and amount of experience the horse had being ridden were significantly correlated with this item. Items 11, 19, and 20 (Confidence, Compatibility, and Respect, respectively) were also significantly correlated with the amount of experience the horse had being ridden, and Item 19 was also significantly correlated with the horse's years of eventing experience. Again, these responses were expected. What is more surprising, however, is that more of the scale items were not significantly correlated with the horse's level of experience. Though it is true that it was the riders' responsibility to "answer for the horse," and the answers will be in large part an expression of the riders' perception of how the horse feels, it was still thought there would be more significant correlations in this area.

The final sets of correlations were run between the standardized competition scores and the demographic questions. Again, since the scale was the focal point of the study, these results were not considered crucial. They do, however, display many of the expected attributes of the competitors and their performances. For the most part, the more years of experience the dyad had, the better they did in competition. The one interesting result that is worthy of discussion is that the years of eventing experience the rider's had was significantly correlated with the standardized score in the cross-country phase of the event, but in the opposite direction of what would be intuitively expected. This is similar to the significance of Item 16 in the opposite direction with competition scores. Again, one would think that the more experienced the rider is in eventing, the

better she would do in each phase. The opposite was found to be the case with this population, however.

A possible explanation is that these more experienced riders may have had a false sense of security or overconfidence in their experience levels, which caused them to be less vigilant with their responsibilities in the competition. Meanwhile, the more inexperienced riders who may have had fewer expectations for the competition demonstrated a more relaxed and careful attitude, in this the most grueling portion of the event. Though this is entirely speculative, it has already been discussed that many believe that rider's tend to overestimate their skill levels in equestrian circles. And although the previous example was speculating that inexperienced riders overestimated the nature of the relationship they share with their horses, one could see how it may be possible for an experienced rider to fall into a similar trap. Feeling overconfident with their own abilities based on their amount of experience, they find themselves somewhat unprepared for a competition's most demanding phase, especially if they lack a large amount of competitive experience with the horse they are riding.

Regarding the Principal Component Analyses, after considering several models, the five-factor model seemed to yield the most interpretable results. To place the individual items into component factors, the items with factor loadings of greater than .500 for a particular factor were grouped together. If an item had a factor loading of greater than .500 for more than one factor, it was placed with the factor that had the higher loading. This yielded five distinct factors with very little difficulty. For a listing of the scale items, grouped in their factor components, see Appendix E. The one item that was not easily grouped was Item 20. This item, found within the Respect component

of the original scale, had a loading of .559 in Factor 1, and .543 in Factor 2. Though this item's loading was slightly greater in Factor 1, it made more sense, intuitively, to include this item in Factor 2. It was therefore placed in this factor. As is seen in Table 11, no other item required such further investigation.

Once the items were broken into their component factors, some clear patterns emerged. The items in Factor 1 come from the scale components of Compatibility, Respect, and Confidence, and this is the only factor whose items come from more than two scale components. As for the items themselves, they all seem to relate to the aspects of control and safety. This factor includes both items that relate to the riders sense of the horse's ability to keep that pair safe (Items 11 and 14, respectively), as well as the rider's perception of their own level of control over the horse (Item 13). This factor also includes the compatibility item that relates to the amount of difficulty the horse experienced in becoming comfortable with the rider (Item 19). These items, when seen from the perspective of control and safety, seem to belong together. It is certainly true that a rider's belief in her ability to control her horse would be communicated to the animal in a way which could likely influence her perception of the horse's ability to keep the dyad safe. Also, these ideas could be further enhanced (or damaged) by the struggles (or lack thereof) that the horse experienced in becoming comfortable with the rider in the early stages of their relationship building.

In Factor 2, the items come from the scale components of Respect and Communication. These items all seem to share the theme of emotion, and the awareness and response of each member of the dyad to the emotions of the other. For example, it includes Item 9, from the Respect component, which relates to the rider's level of

allowance for the horse to “feel” the course during competition, as well as Item 15. also from the Respect component, relating to the amount of decision making the horse is allowed to do during competition. Item 20 is included from the Respect component as well, relating to the amount of freedom the horse is given during competition. From the Communication component, Items 10 and 18 are in this factor. This pair of items relate to the rider’s understanding of the horse’s “body language” and responses to its environment. It is quite clear how all of these items are related. For a rider to allow the horse a certain level of freedom, she must first have a keen understanding of the language of the animal and its response to stimuli. If she does not possess this understanding, it can be potentially dangerous to allow the horse such liberties. With understanding, however, comes the increased opportunity for the horse to safely use its own instinct and “feel” when the two are riding.

Factor 3, composed of three items, is the smallest of the five factors. However, with all three items having loadings of no less than .726, it appears to be the strongest of the five component factors. The items of this factor come from the scale components of Compatibility and Trust. Items 5 and 12, from the Trust component, relate to the horse’s response to new and unfamiliar competitive situations. Item 8, from the Compatibility component, relate to level of difficulty experienced by the rider in becoming comfortable with the horse. The common ground between the closely related items of Trust and the Compatibility item seems to be that of the coping abilities of the members of the dyad to deal with strange, unfamiliar, and potentially stressful situations. It follows that if a rider experienced very little difficulty in becoming comfortable with his horse, he would likely be more comfortable leading the animal into unfamiliar territory than one who

experienced great difficulties in gaining this level of comfort. If difficulty were experienced right from the start within the dyad, it would be expected that such difficulties might again manifest themselves when the pair find themselves in new, and potentially stressful situations. Such situations can be as minute as an unfamiliar competition format, and as critical as a large water-based cross-country jump, which could cause an unsafe reaction from the animal. When seen from this perspective, the link between compatibility and trust becomes much clearer.

This link is strengthened when one observes the fourth factor, which, like Factor 3, contains items from the scale components of Compatibility and Trust. The Compatibility items, Items 2 and 4, relate to how well paired the dyad is, and how complimentary their styles are, respectively. The Trust items, Items 3 and 17, relate to the rider's efforts to ensure the horse feels comfortable with its surroundings, and the level of safety the horse appears to feel with the rider, respectively. These items all seem to relate to the "goodness of fit" that the members of the dyad share with each other. For example, if a horse and rider are well matched, then they likely will have complimentary styles. Also, if the rider works hard to be sure that the horse is comfortable with its surroundings, it follows that the horse will likely give the appearance of feeling safe with the rider. To draw the items even closer together, it makes sense that if a rider and a horse get along well and share complimentary styles, then the rider would likely know how to make her horse feel comfortable, thus leading to the horse displaying signs of safety and security with this rider. Like Factor 3, this grouping shows the emergence of an apparent strong link between the notions of Compatibility and Trust.

Finally, Factor 5 contains items found within the scale components of Communication and Confidence. Items 1 and 7, in the Communication area, relate to a rider's ability not to send negative emotional signals to the horse, and his ability to ensure that his commands are clear and easily understood by the animal. Items 6 and 16, in the Confidence area, relate to the riders belief in his own ability to safely complete the tasks of competition, as well as the confidence he has in himself in new or unknown situations. The link between these items seems to be that they all relate to levels of communication and confidence within the rider himself that are then passed along to the horse. Previously, it was discussed that it is critical that a rider communicate properly with the horse, and always exude a high level of confidence with the animal, because the emotions and responses of the horse are frequently related to what it perceives are the emotions and responses of its rider. This factor seems to demonstrate this relationship. A confident rider will likely be clear in her commands to her horse, and will not send negative emotional signals to the animal. In fact, this grouping of four items seems to demonstrate some of the qualities of a strong (or weak, as the case may be) rider. An excellent rider will excel these areas, while a lesser ride will struggle with these concepts.

The researcher would now like to propose some further directions of study for this project. First, it is believed that one of the main reasons for the lack of significant results in this study is related to the study's somewhat small sample size. With 60 participants, the study had a certain level of interpretability, but it would surely have benefited from a participant base closer to 100. Though every effort was made to ensure that the highest number of participants was used for the validation, an increase in this number may have led to a greater number of significant results, and a higher overall level of interpretability

to these results. The researcher therefore suggests the addition of several more data collections of unique horse-rider dyads, which would succeed in bringing the total number in the participant pool to well over 100.

It is also hoped that in increasing the number of participants used in the study, the researcher would observe the influx of a more experienced body of subjects. The demographic of the current group that was most disheartening was the apparent lack of experience the dyads had together as a whole. The dyads averaged just less than 3 years of experience in riding together and only 1.7 years of experience in competition together. Even an uninitiated observer can tell that those numbers are quiet low. The worst figure, however, was the one that was most important. The dyads had only 0.709 years of experience on average in eventing together, with the maximum amount of experience of any one dyad being 4 years. It is hard to believe the traits of truly experienced eventing dyads would be present in less than one year, or even 4 years for that matter. The researcher was hoping for a group of participants that had a wide range of experience, but this group seemed to be skewed much closer to the inexperienced end of the spectrum.

It is suggested, therefore, that in adding participants to the study, certain efforts be made to involve those with greater levels of experience in eventing. This can be achieved by targeting events that attract a higher caliber of competitors, which is uncommon for this region. By doing this, the researcher believes the participant pool will see a greater introduction of more experienced dyads, possibly leading to more significant results across the board. This would also lead to a greater level of generalizability of the findings of the study, as the current form seems to only generalize to riders with a modicum of experience living only in this region.

Another suggestion to increase the levels of significance and interpretability of the results would be to gather competition scores for the group from several events over the course of a single competitive season. The goal would hopefully be getting scores from three events for each dyad. It is somewhat naïve to think that the results of one performance will demonstrate the expression of the complex skills and relationship of a horse-rider dyad. The fact of the matter is that many different variables, both within and outside the dyad can affect performance. Anything from a nagging injury to weather conditions can lead to a different level of performance, and these factors are not properly addressed by observing the pairs on only one day.

A perfect example of this was seen in the data collections. When observing Table 9, one can see a very large difference in the average score of the cross-country phase when comparing competition A with competitions B and C. This was due to one particular jump that gave most of the riders trouble on that day. It can be theorized, then, that this one competition was not an adequate reflection of these riders' abilities in cross-country. On a larger note, this could also be responsible for some of the results being significant in the unexpected direction for the cross-country phase. This same observation could also be made about the difference in the show jumping scores. In this case, the scores for competition C were much higher than A and B. Though the researcher does not have an explanation for this, it is again clear that these riders should be tracked at more than one competition. With scores from three events over a season, any anomalous results similar to these would likely be balanced out, and a more accurate representation of the skills of the dyads would be collected.

With the prior suggestions taken under consideration, it is recommended that the analyses that follow the addition of more experienced participants over several events continue to focus not only on the ideas stated prior to the collection of the data for the project, but also the interesting results found in the analysis of that data. For example, the emergence of trends in the correlation analyses that were counterintuitive to what one would have expected to see. It is true that these results may reverse their significance with the addition of more experienced participants, but it would still be something worth investigating closely. Also, the Principal Component Analyses displayed five somewhat clear component factors for the items of the scale. The next stage of analyses should attempt to discover if these distinct factors remain intact. These analyses should also focus closely on the emerging relationship between the components of Compatibility and Trust, and investigate the possible reorganization of the scale to pay proper attention to this potentially strong link. Since the reliability analyses for the validation study yielded strong results, an overhauling of the scale is not recommended at this time, but appropriate consideration of the above discoveries should certainly be made.

Finally, as has been stated earlier in this discussion, the researcher proposes to augment the self-report form used in this study with an observational form. A trained observer who would watch the dyads in action, and rate them on the same components that exist in the self-report form, would complete this new scale. The researcher would optimize the items, of course, for those aspects easily observable by an outside viewer. The addition of this form would address several of the fundamental flaws of the current self-report form. First, the self-report form requires an honest level of introspection by the rider on the nature of the relationship they share with their horse. Though it is not

believed that any of the participants were intentionally misleading in their responses, it is clear that the possibility of an overestimation (or underestimation) of one's abilities is quite probable given the self-report format of the scale. This is especially true when the means for the scale items are observed (Table 7). This table displays an apparent skewing of the riders' responses towards the higher end of the scale. The observational form would likely balance these issues.

The observational form would also be helpful in getting another perspective of the dyad's relationship. Since the relationship is a two-way experience that is only currently assessed by one member, this new form could aid in filling in some of the unclear areas that the rider does not have the perspective to see. It is easy to imagine a circumstance in which the rider believes she is executing a skill with the proper form, or treating the horse in a certain way, but a trained observer looking from the outside may see otherwise. The addition of this form, which would be a balanced supplement to the current form, would only increase the interpretability of the results of further studies.

With the inclusion of the suggestions noted above, the researcher believes this project would continue to develop a productive and effective tool for use with the competitive equestrian community.

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Table 1

Means and Standard Deviations for Each Scale Item in Pilot Study

Item Number (Grouped by Component)	<u>M</u>	<u>SD</u>
3. (Compatibility)	4.801	1.371
8. (Compatibility)	4.753	1.412
10. (Compatibility)	5.041	1.359
15. (Compatibility)	4.795	1.481
21. (Compatibility)	4.329	1.733
32. (Compatibility)	5.123	1.384
1. (Communication)	3.904	1.701
5. (Communication)	5.466	1.292
6. (Communication)	4.603	1.402
13. (Communication)	5.493	.945
14. (Communication)	5.288	1.136
18. (Communication)	5.370	1.264
24. (Communication)	5.178	1.059
31. (Communication)	5.384	1.138
7. (Respect)	4.986	1.488
16. (Respect)	5.164	1.528
17. (Respect)	5.082	1.299

Table 1 (continued)

22. (Respect)	5.452	1.055
25. (Respect)	4.861	1.476
27. (Respect)	4.877	1.235
29. (Respect)	4.329	1.573
33. (Respect)	5.247	1.115
2. (Trust)	4.685	1.666
9. (Trust)	5.466	1.334
11. (Trust)	4.425	1.545
20. (Trust)	4.658	1.227
30. (Trust)	5.658	1.193
34. (Trust)	5.575	1.189
4. (Confidence)	5.041	1.559
12. (Confidence)	5.096	1.445
19. (Confidence)	4.753	1.470
23. (Confidence)	4.611	1.262
26. (Confidence)	5.548	1.167
28. (Confidence)	4.918	1.372

Table 2

Two-way Bivariate Correlations Between Each Item in the Scale and the “Total Years of Riding Experience” and “Total Years of Experience with the Horse Used for the Scale”
Demographic Questions (Pilot Study)

Item Number (Grouped by Component)	Years Riding	Years w/Horse
3. (Compatibility)	.222	.148
8. (Compatibility)	.308**	.367**
10. (Compatibility)	.279*	.270*
15. (Compatibility)	.323**	.277*
21. (Compatibility)	.124	.068
32. (Compatibility)	.253*	.278*
1. (Communication)	.197	.097
5. (Communication)	.247*	.240
6. (Communication)	.083	.184
13. (Communication)	.058	.307*
14. (Communication)	.200	.313*
18. (Communication)	.360**	.337**
24. (Communication)	.137	.097
31. (Communication)	.446**	.378**

Table 2 (continued)

7. (Respect)	.167	.263*
16. (Respect)	.125	.149
17. (Respect)	.010	.262*
22. (Respect)	.299*	.206
25. (Respect)	.327**	.298*
27. (Respect)	.117	.360**
29. (Respect)	.039	.016
33. (Respect)	.259*	.266*
2. (Trust)	.223	.051
9. (Trust)	.064	.250*
11. (Trust)	.329**	.249*
20. (Trust)	.204	.331**
30. (Trust)	.267*	.310*
34. (Trust)	.028	.112
4. (Confidence)	.383**	.226
12. (Confidence)	.477**	.349**
19. (Confidence)	.238*	.276*
23. (Confidence)	.028	.114
26. (Confidence)	.204	.409**
28. (Confidence)	.425**	.437**

* $p < .05$ ** $p < .01$

Table 3

Reliability for the Five Subscales and the Total Scale (Pilot Study)

Subscale	α
Compatibility	.7986
Communication	.7408
Respect	.6705
Trust ^a	.5662
Confidence	.7596
Total Scale	.9044

^aNote. Value shown above includes Item 9. With Item 9 omitted, reliability increases to .6681 for Trust subscale.

Table 4

Intercorrelations for Each of the Chosen Items in the Trust Subscale (Pilot Study)

Item Number	1	2	3	4
1. Item 9	--	.091	.073	.110
2. Item 11		--	.437***	.389**
3. Item 20			--	.403***
4. Item 30				--

** $p < .01$ *** $p < .001$

Table 5

Intercorrelations Between Subscales and Total Scale Score (Pilot Study)

Subscale	1	2	3	4	5	6
1. Compatibility	--	.514***	.543***	.475***	.592***	.817***
2. Communication		--	.429***	.391***	.637***	.749***
3. Respect			--	.583***	.651***	.797***
4. Trust				--	.591***	.743***
5. Confidence					--	.883***
6. Total Score						--

*** $p < .001$

Table 6

Means and Standard Deviations for Demographic Questions, in Years (Validation Study)

Demographic	<u>M</u>	<u>SD</u>
Rider's total riding experience	18.708	12.984
Rider's competitive experience	9.621	9.384
Rider's eventing experience	3.713	5.810
Dyad's total experience together	2.989	3.526
Dyad's competitive experience	1.653	2.531
Dyad's eventing experience	0.709	0.952
Rider's age	27.526	13.511
Horse's age	9.367	4.088
Horse's total experience being ridden	6.000	4.032
Horse's total experience in competition	2.894	3.168
Horse's total experience in eventing	1.155	1.517

Table 7

Means and Standard Deviation for Scale Items (Validation Study)

Item (Grouped by component)	<u>M</u>	<u>SD</u>
2. (Compatibility)	5.983	1.075
4. (Compatibility)	6.000	1.130
8. (Compatibility)	5.839	1.201
19. (Compatibility)	5.700	1.453
9. (Respect)	5.233	1.325
13. (Respect)	5.627	1.363
15. (Respect)	5.491	1.318
20. (Respect)	5.533	1.308
1. (Communication)	5.931	1.122
7. (Communication)	5.568	1.011
10. (Communication)	6.301	0.895
18. (Communication)	5.817	1.000
3. (Trust)	6.458	0.857
5. (Trust)	5.364	1.423
12. (Trust)	4.966	1.761
17. (Trust)	5.617	1.474
6. (Confidence)	5.992	1.212
11. (Confidence)	5.771	1.492

Table 7 (continued)

14. (Confidence)	5.898	1.296
16. (Confidence)	5.467	1.408

Table 8

Means and Standard Deviations for the Scale Components and Total Scale Score(Validation Study)

Component	<u>M</u>	<u>SD</u>
Compatibility	23.440	3.737
Respect	22.237	3.782
Communication	23.623	2.870
Trust	22.388	4.382
Confidence	23.241	3.926
Total Scale Score	115.273	15.533

Table 9

Means and Standard Deviations of Competition Scores (Validation Study)

Event	All Competitions	Competition: A	B	C
	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>
Dressage	44.650 (4.989)	48.100 (4.109)	41.476 (4.191)	44.526 (4.389)
Cross Country	9.648 (15.190)	20.001 (15.645)	2.141 (6.078)	6.956 (15.993)
Show Jumping	3.056 (6.098)	0.882 (1.965)	1.579 (4.730)	6.667 (8.225)
Total Event Score	57.167 (19.825)	68.712 (18.850)	44.671 (8.164)	58.067 (22.173)

Table 10

Rotation Sums of Squared Loadings Total and Percent of Variance Explained by Four Factor Model (Validation Study)

Component	Rotated Sums of Squared Loadings Total	Percent of Variance	Cumulative Percentage
1	3.430	17.151	17.151
2	2.904	14.518	31.669
3	2.800	14.000	45.669
4	2.718	13.592	59.260
5	2.552	12.760	72.020

Table 11

Varimax Rotation Component Matrix for Individual Scale Items (Validation Study)

Item	Component				
	1	2	3	4	5
1	7.276E-02	.122	-.231	8.095E-02	.824
2	.187	.154	.440	.678	5.614E-02
3	5.291E-02	.449	.112	.683	.198
4	.363	-2.835E-02	.141	.764	.265
5	.146	.193	.752	.181	5.023E-02
6	.228	.155	.320	2.914E-02	.737
7	.281	.114	8.498E-02	.517	.635
8	.302	.155	.739	-7.068E-02	.139
9	.223	.694	.258	-1.550E-02	.258
10	6.756E-02	.759	.159	.158	.143
11	.806	.200	.211	-1.681E-02	3.388E-02
12	.430	8.480E-02	.726	.312	1.451E-02
13	.632	.113	.240	.246	.324
14	.785	.194	.166	.230	.141
15	.373	.810	1.851E-02	7.639E-02	2.840E-02
16	-.124	.210	.321	.305	.690
17	.488	.225	.375	.522	.196
18	4.780E-02	.573	.416	.262	.254

Table 11 (continued)

19	.633	.187	.361	.370	-7.000E-03
20	.559	.543	6.601E-02	.285	-1.167E-02

Appendix A

Horse-Rider Relationship Scale: Pilot Self-Report Form

Please take a few moments to reflect on your relationship and experiences with the horse you ride most frequently. Consider only this particular horse for the purposes of this survey. The survey will attempt to measure some of the aspects of the relationship you share with this animal. This study will also be used to choose items for possible inclusion in another scale looking at the relationships people have with their horses.

Your answers are completely anonymous, and there will be no way for the researchers to identify you based on your responses. With this in mind we ask that you be as honest as possible in answering these questions.

Though some questions may seem similar to others in the survey, please consider each item carefully, and circle the number that most appropriately describes your relationship with this horse. For all questions in the survey, you are the “rider.”

Do you have experience riding horses? (circle one) **YES** **NO**

Years of experience riding horses: _____

Years of experience with horse considered for this questionnaire: _____

Age: _____ **Gender: (circle one)** **Male** **Female**

1. Rider does not send any signals to the horse that are confusing or misinterpreted.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree
7

2. Horse is comfortable with the rider at all times.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree
7

3. Rider developed a good rapport with the horse quickly and easily.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree
7

4. Rider exudes high level of confidence in self while riding.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

5. Rider is cautious not to send negative emotional signals to horse.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

6. Horse responds appropriately to all signals given by rider.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

7. Rider maintains control while allowing horse the freedom to ride in its own way.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

8. Rider and horse are well matched, and have always gotten along well.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

9. Rider works hard to make sure horse feels comfortable with its surroundings while riding.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

10. Rider and horse have complimentary styles.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

11. Horse allows rider to lead it into unfamiliar situations without adverse reactions.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

12. Rider believes in his/her own ability to safely complete tasks while riding.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

13. Horse understands the commands given by the rider.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

14. Rider gives clear signals or commands that are easily understood by the horse.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

15. The rider experienced little difficulty in becoming comfortable with the horse.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

16. Horse is given the freedom to ride as it chooses, when appropriate.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

17. Horse is allowed to “feel” the course in front of it and ride how it decides is most comfortable.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

18. Rider understands horse’s responses to its environment.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

19. Rider believes the horse can safely navigate through any terrain the pair might encounter.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

20. Horse reacts well to new or unfamiliar situations.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

21. Horse was chosen as a riding partner because of the level of compatibility shared with the rider.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

22. Horse will yield to rider's commands when given.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

23. Horse approaches any obstacles, known or unknown, in a confident manner.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

24. Horse responds correctly to rider's commands when given.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

25. Rider is in control of the horse at all times while riding.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

26. Rider believes in horse's ability to safely complete tasks.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

27. Horse is given the appropriate opportunity to make its own decisions.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

28. Rider approaches new or unknown situations while riding with confidence in self.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

29. Rider does not allow the horse to decide how it will be ridden.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

30. Horse gives the appearance of feeling safe with rider (no unnecessary spooking, bucking, etc.).

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

31. Rider understands horse's "body language" and responds appropriately.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

32. Horse experienced little difficulty in becoming comfortable with the rider.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

33. Rider allows the horse to have a reasonable amount of freedom while riding.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

34. Rider eases the horse into new situations slowly and carefully.

Strongly Disagree 1 2 3 4 5 6 Strongly Agree 7

Appendix B

Horse-Rider Relationship Scale: Pilot Self-Report Key

Compatibility

- 3. Rider developed a good rapport with the horse quickly and easily.
- 8. Rider and horse are well matched, and have always gotten along well.
- 10. Rider and horse have complimentary styles.
- 15. The rider experienced little difficulty in becoming comfortable with the horse.
- 21. Horse was chosen as a riding partner because of the level of compatibility shared with the rider.
- 32. Horse experienced little difficulty in becoming comfortable with the rider.

Communication

- 1. Rider does not send any signals to the horse that are confusing or misinterpreted.
- 5. Rider is cautious not to send negative emotional signals to horse.
- 6. Horse responds appropriately to all signals given by rider.
- 13. Horse understands the commands given by the rider.
- 14. Rider gives clear signals or commands that are easily understood by the horse.
- 18. Rider understands horse's responses to its environment.
- 24. Horse responds correctly to rider's commands when given.
- 31. Rider understands horse's "body language" and responds appropriately.

Respect

7. Rider maintains control while allowing horse the freedom to ride in its own way.
16. Horse is given the freedom to ride as it chooses, when appropriate.
17. Horse is allowed to “feel” the course in front of it and ride how it decides is most comfortable.
22. Horse will yield to rider’s commands when given.
25. Rider is in control of the horse at all times while riding.
27. Horse is given the appropriate opportunity to make its own decisions.
29. Rider does not allow the horse to decide how it will be ridden.
33. Rider allows the horse to have a reasonable amount of freedom while riding.

Trust

2. Horse is comfortable with the rider at all times.
9. Rider works hard to make sure horse feels comfortable with its surroundings while riding.
11. Horse allows rider to lead it into unfamiliar situations without adverse reactions.
20. Horse reacts well to new or unfamiliar situations.
30. Horse gives the appearance of feeling safe with rider (no unnecessary spooking, bucking, etc.).
34. Rider eases the horse into new situations slowly and carefully.

Confidence

- 4. Rider exudes high level of confidence in self while riding.
- 12. Rider believes in his/her own ability to safely complete tasks while riding.
- 19. Rider believes the horse can safely navigate through any terrain the pair might encounter.
- 23. Horse approaches any obstacles, known or unknown, in a confident manner.
- 26. Rider believes in horse's ability to safely complete tasks.
- 28. Rider approaches new or unknown situations while riding with confidence in self.

Appendix D

Horse Rider Relationship Scale: Validation Key

Compatibility

- 2. My horse and I are well matched, and have always gotten along well.
- 4. My horse and I have complimentary styles.
- 8. I experienced little difficulty in becoming comfortable with my horse.
- 19. My horse experienced little difficulty in becoming comfortable with me.

Communication

- 1. I am is cautious not to send negative emotional signals my horse in competition.
- 7. I give clear signals or commands that are easily understood by my horse in competition.
- 10. I understand my horse's responses to its environment.
- 18. I understand my horse's "body language" in competition and respond appropriately.

Respect

- 9. My horse is allowed to "feel" the course in front of it and ride how it decides is most comfortable.
- 13. I am in control of my horse at all times while riding.
- 15. My horse is given the appropriate opportunity to make its own decisions in competition.
- 20. I allow my horse to have a reasonable amount of freedom while riding in competition.

Trust

- 3. I work hard to make sure my horse feels comfortable with its surroundings while riding.
- 5. My horse allows me to lead it into unfamiliar competitive situations without adverse reactions.
- 12. My horse reacts well to new or unfamiliar competitive situations.
- 17. My horse gives the appearance of feeling safe with me (no unnecessary spooking, bucking, etc.).

Confidence

- 6. I believe in my ability to safely complete competitive tasks while riding.
- 11. I believe my horse can safely navigate through any terrain we might encounter in competition.
- 14. I believe in my horse's ability to safely complete competitive tasks.
- 16. I approach new or unknown competitive situations with confidence in myself.

Appendix E

Scale Items Grouped By Component Factors (Scale Component in Parenthesis)

Component Factor 1:

- 11. (Confidence) I believe my horse can safely navigate through any terrain we might encounter in competition.
- 13. (Respect) I am in control of my horse at all times while riding.
- 14. (Confidence) I believe in my horse's ability to safely complete competitive tasks.
- 19. (Compatibility) My horse experienced little difficulty in becoming comfortable with me.

Component Factor 2

- 9. (Respect) My horse is allowed to "feel" the course in front of it and ride how it decides is most comfortable, within reason.
- 10. (Communication) I understand my horse's responses to its environment.
- 15. (Respect) My horse is given the appropriate opportunity to make its own decisions in competition.
- 18. (Communication) I understand my horse's "body language" in competition and respond appropriately.
- 20. (Respect) I allow my horse to have a reasonable amount of freedom while riding in competition.

Component Factor 3:

- 5. (Trust) My horse allows me to lead it into unfamiliar competitive situations without adverse reactions.
- 8. (Compatibility) I experienced little difficulty in becoming comfortable with my horse.
- 12. (Trust) My horse reacts well to new or unfamiliar competitive situations.

Component Factor 4:

- 2. (Compatibility) My horse and I well matched, and have always gotten along well.
- 3. (Trust) I work hard to make sure my horse feels comfortable with its surroundings while riding.
- 4. (Compatibility) My horse and I have complimentarily styles.
- 17. (Trust) My horse gives the appearance of feeling safe with me (no unnecessary spooking, bucking, etc.).

Component Factor 5:

- 1. (Communication) I am cautious not to send negative emotional signals to my horse in competition.
- 6. (Confidence) I believe in my ability to safely complete competitive tasks while riding.
- 7. (Communication) I give clear signals or commands that are easily understood by my horse in competition.
- 16. (Confidence) I approach new or unknown competitive situations with confidence in myself.