Some people have little to no experience of horses in their lifetime. The only contact most people will come to having with horses will be on the television screen. Other individuals can have several opportunities to have hands on experience with horses, but have a natural fear of them. They involuntary emit fear or distress signals when they around the horses. It is very important for the safety of both horses and humans that others understand how to interpret the horses’ response to the messages they are receiving around them.

Horses are prey animals, so they react to their environment honestly and quickly. A crowd that contains nervous, inexperienced people can create a potentially dangerous situation. Horses have these types of senses because it reads as potential danger from predators. It is an important survival tactic. This ability enables horses to react to human emotions and behaviors on a moment-to-moment basis. (Drinkhouse et al., 2012) An increased heart rate is the strongest physiological indicators of stress from anxiety, nervousness, or fear in humans. (Bergeron et al., 2014)

Another side that helps with heart rate is human-animal interactions. A different study proposed that the activation of the oxytocin system plays a key roll in the majority of psychological and physiological effects. Interaction with animals causes a higher release of oxytocin throughout the human’s body. Oxytocin tends to help with decrease stress. When people don’t have a normal interaction with certain animals they become nervous and tend to have a higher heart rate around them. (Beetz et al., 2012)

Horses that are in discomfort show either aggressive behaviors towards humans or an increase in heart rate. Nervousness can be transmitted from humans to their horses under multiple ways like handling and riding, but also can be indicated without visible changes like increased walking speed or change in their posture. (Bergeron et al., 2014) This goes to show that being in a calm mental state can decrease stress on both sides.

A study was conducted to decide if psychological and physiological stress in humans do or don’t have an effect on a horse’s heart rate and behavior. A set of 10 horses that were the between the ages of 4 and 19 years were used in this study. Each horse would be exposed to all 4 of the treatments. Also participating were 16 humans. None of them had prior contact to the horses being used for the purpose of the research and had limited to no previous horse experience. Before being placed into a category, they all ranked themselves based on the level of comfort they felt around horses.

The 4 treatments each horse received were as following: 1) Calm: exposure to a calm human, neither afraid of horses nor physically stressed, 2) Physiological: exposure to a human who wasn’t afraid of horses, but physically stressed with a heart rate at 70% maximum, 3) Psychological: exposure to a psychological stressed human because of their fear of horses, 4) Control: no human was present. (Bergeron et al., 2014)

To begin the trial a human was placed in the middle of the arena blindfolded. A horse was then led and released into the arena. The human remained still for 5 minutes once the horse was inside. Each human was monitored by researches seated 20 meters away, so they
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were available to intervene if their safety was in jeopardy. All of the trials were conducted in the same way to ensure the same results. Figure 1, featured above, shows where the person would be standing (number 1), 3 meter radius away from the human (number 2), 6 meter radius away from the human (number 3), and where the camera is situated 20 meters from the outside radius (number 4).

They collected two other types of data, which included behavioral and physiological data. Behaviors included head position, gait, body position of the horse compared to the human, and the distance between the two. The physiological data was both humans and horses being equipped with a heart rate monitor before each treatment. The data was collected in 5-second intervals for the duration of each test.

The results of the 4 treatments are shown in the chart shown below. It concluded that during the physiological state the horse heart rate was significantly lower than during any of the other treatments. (Bergeron et al., 2014) The higher the human ranked himself or herself fearful around horses, the lower the heart rate of the horse ended up being. It indicated that psychologically stressed humans do not physiologically influence horses. This goes to show that negative horse reactions can’t be solely placed on the nervoussness of humans around the horses. It should also be placed on the horse trainers and handlers to be more aware, so they can prevent the conflict.

Another part of the data showed the horses move slower and carry their heads lower when they are around physically or psychologically stressed humans. This means they are comfortable with their surroundings and are able to explore by smelling the ground. The gait of a horse was faster during the control and slower with the psychological treatment. The distance the horse put between the human depended on the gait. If it was moving fast the horse was farther away from the center than if it was walking. Horses feel stressed when they are alone because of their herd instinct. When the horse was near the human they moved slower and carrier their head at wither height facing the human. This is suggesting that the horse felt more comfortable with the human there than when alone. Humans and animals are often more relatable than most people think. A result of multiple studies showed that the presences of friendly animals, familiar and unfamiliar, could effectively reduce the heart rate. (Beetz et al., 2012)

As seen by this study horses are subjected to all different types of behaviors subjected by humans. Some of these behaviors can lead to safety concerns between both animals and humans. The purpose of this study was to see if there were any influences of psychological and physiological stress in humans on horse heart rate and behavior. The outcome was that they had lower heart rates in the presence of physically stressed humans than the calm, psychological, or the control. They also moved at a slower pace and rested their head lower in the presence of physically or psychologically stressed humans. This is an act to show that they are comfortable with their surroundings and willingly able to discover what is around them. This goes to say that when humans are in either or both states they don’t pose an additional risk when interacting with horses.
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Works Cited

