albeit not all, aspects of teaching equestrian sports are different to those of other sports. One major emergent theme of difference suggests that, when teaching, competent equestrian coaches respond and adapt empathetically to the horse's behavior in addition to that of the student. The coaches were perceived as both interpreters of equine behavior or Equus language, and as translators of that language to students, where the coaches' language was perceived as a competency indicator of their interpretation and translation skills. These findings suggest that the education requirements of equestrian coaches include learning about the horse-human bond and, additionally, about observing, interpreting, and translating equine behavior with the appropriate language expressed when teaching students. Professionals who teach with horses and acquire such knowledge and skills may better understand how the triad of a coach, student, and horse communicate and connect in order to collaborate and compete happily in equestrian sports performances.

Keywords: coach; education; connect; communicate; collaborate

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Do you understand me or should I shout louder? Bringing about human behavior change in the equine industry

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ISES was founded in part to bring research into equine behavior and welfare, where it is relates to horse training and use, across to those who ride, train and coach; with the goal of ultimately benefitting their horses. But simply making new knowledge available does not automatically lead to its application into daily practice, leaving much valuable evidence and expertise disappointingly remote from the horses it could benefit. Many in the field of Equitation Science have managed to overcome this hurdle but the 2017 ISES conference is a clear recognition that collectively we need to do more to understand and then share how to translate quality research into the daily usage by those who impact equine welfare the most, the riders, trainers and coaches. Change is difficult, not just for those making a change; but also those trying to facilitate or encourage it. Like Equitation Science, Human Behavior Change is a complex, multifaceted and evolving field. The workshop drew on presentations at conference to give delegates the opportunity to appreciate the complexities, as well as the potential, of using evidenced based approaches to effect changes in how people care for and train horses. If Equitation Science offers the knowledge to benefit horse welfare and the horse-rider relationship, then can evidence based human behavior change practices ensure it does so? In the workshop delegates considered and discussed ending the use of restrictive nosebands by focusing on understanding the human reasons for their use before exploring collaboration and communication to bring about the desired behavior change.

Keywords: human; behavior change; Equitation Science; equine; welfare

POSTERS

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Preliminary investigation into relationships between donkey and horse skull and brain morphology

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Horses and donkeys belong to the genus *Equus* but *Equus caballus* displays distinctive conformational attributes among breeds while *Equus asinus* shows less variation in skull shape. This study compared skull and brain morphology between horses and donkeys. Skulls of *Equus caballus* (N=14 Standardbred) and *Equus asinus* (N=16) were obtained postmortem. Heads were sectioned sagitally along the midline and photographed for measurement of skull structures using Image J software: skull index (SI)=zygomatic width*100/skull length; cranial index (CI)=cranial width*100/cranial length; nasal index (NI)=zygomatic width*100/nasal length; cranial profile index (CPI)=rectangular area bordered by an 80mm line from orbital notch and occiput; nasal profile index (NPI)= rectangular area bordered by 80mm line from orbital notch and tip of nasal bone; olfactory lobe (OL) area; and whorl location (WL) [distance of OL from the level of the forehead whorl]. A GLM determined the main effect of species between the various measurements. There was no species difference in SI, NI or NPI ($P>0.05$), but donkeys tended to have a smaller CI ($F1_{,17}=3.59$, $P<0.08$) and smaller CPI than horses ($F_{1,21}=7.54$, $P<0.05$). Donkeys also had a smaller OL area than horses (1.4±0.3 vs 2.3±1.3cm2 respectively; $F_{1,13}=4.96$, $P<0.05$). The greatest difference was seen in WL, which corresponded to the level of the OL in horses, but was extremely rostral in donkeys ($F_{1,21}=24.29$, $P<0.0001$). These results show clear differentiation in skull morphology between horses and donkeys. Clarifying differences between horses and donkeys is crucial to understanding species-specific behavioral responses and providing appropriate management and training practices.

Keywords: horse; donkey; brain; skull; morphology

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Effects of a light coloured cotton rug use on horse thermoregulation and behavior indicators of stress

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When environmental temperatures exceed 25°C horses are potentially subject to thermal stress and shade is recommended. However this may not always be possible and light cotton rugs may be used instead based on the premise that solar radiation is blocked and heat absorption reduced. Heart rate (HR), respiratory rate (RR), rectal temperature (RT), sweat production and stress-related behavior data were collected for 18 horses. The horses were tied up in an outdoor arena in direct sunlight for two hours. Baseline data (T0) comprising frequency of tail swishing, licking-chewing, pawing, repeated head movements and self-care were recorded using a behavior-sampling method for ten minutes, followed by physiological measures and sweat production (sweat score: 0 none to 5 excessive). Half of the horses were then fitted with a light cotton rug, observed and monitored at 15 minute intervals for two hours. RT and sweat score were lower in non-rugged horses compared to rugged horses (37.4±0.3 vs 37.7±0.3 °C; 0.5±0.8 vs 1.9±1.3, respectively; U=1865.0, U=1409.0; $P<0.001$). However non-rugged horses showed a higher frequency of tail swishing (23.1±25.9 vs 8.7±11.0 n/10min; U=1939.5; $P<0.001$). HR, RR and the occurrence of stress-related behaviors were higher than baseline, suggesting that horses were prone to discomfort. Although light coloured cotton rugs may protect horses from flies as evidenced by reduced tail swishing, an increase in internal temperature and subsequently sweat production, increases the risk of thermal stress and loss of electrolytes impacting welfare negatively.

Keywords: thermoregulation; horse; cotton rug; stress; welfare; behavior