



Equine Behaviour & Training Association

working to improve the management and training of equines in the UK and to promote their physical and emotional wellbeing

IMPROVING RECOGNITION OF EQUINE FEAR AND STRESS (A BARRIER TO WELFARE IMPROVEMENT)

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VIDEO 1

INTRODUCTION

A recent report by the University of Bristol (Horseman et al., 2016) identified unresolved stress/pain behaviour to be a key welfare concern: "...behavioural indicators of stress/pain in the horse are not always accurately recognised by equine caregivers due to a lack of education and because signs are not always easy to detect..... they can also be misinterpreted, for example horses exhibiting signs of pain/stress may be thought of as being 'naughty.'"

For some time EBTA has shared this concern. We developed the concept of "The Ladder of Fear" (EBTA, 2012) as an extension of "The Ladder of Aggression", developed by Kendal Shepherd for dogs (Shepherd, 2009). We have extended her work to horses with a view to helping horse owners recognise the small, precursor signs that a horse is unhappy. If horse owners can learn to modify their own behaviour at this stage then they can prevent the horse escalating his/her expressions of fear and stress.

Typical signs of stress include body tension, triangulated or wide eyes, snorting, tail-swishing, ear position, elimination, attempts to flee (McGreevy, 2004; König v. Borstel, 2017; EBTA, 2012). If the early signs are missed or ignored then the horse's behaviour tends to escalate into more dangerous behaviours, such as bucking, rearing, bolting, biting and kicking. Such escalation is problematic for welfare, both because of the distress caused to the horse and because of the potential for punishment from the handler in response to such "unwanted" behaviours.



VIDEO 4



VIDEO 3



VIDEO 5



VIDEO 6

RESULTS

We had 191 responses to the survey, of which 6 were ABTC registered equine behaviourists. 155 participants were from the United Kingdom and the remainder from the USA, Canada, Europe, South Africa and Brazil. All age ranges were represented although nearly 70% of respondents were >36 years. All equestrian disciplines were represented but over half of respondents described themselves as dressage riders or "happy hackers". 72.5% of respondents described themselves as an "experienced horse owner" and, when asked whether they considered themselves able to recognise fear, stress and anxiety in horses, 90% claimed that they could "definitely" or "somewhat" do so.

Key findings from our preliminary analysis:

1. Participants were more likely to recognise stress and anxiety in horses performing in dressage (ridden and in-hand) than in the other videos.
2. The clip showing Natural Horsemanship was most likely to be interpreted as a positive experience for the horse, with only 30.1% of respondents stating that they would not feel happy if their horse was treated in that way.
3. The horse in all clips other than No. 1 (Dressage) was described as "playful" by up to 35.8%.
4. Recognition that a horse was stressed and/or experiencing negative emotions was not always sufficient for participants to say they would feel unhappy if it were their horse being treated in that way.
5. When asked what behavioural signs they would use in order to recognise fear and/or stress in a horse, a large number of participants listed a wide range of accurate examples. Some were more limited (e.g. "ears pinned") and/or looking at more serious indicators (e.g. "bucking", "biting"), suggesting that most of the horse's early warning signs would be missed.

Key findings from our behaviourist responses:

1. The behaviourists were generally in agreement with one another but their answers were not identical.
2. The behaviourists chose one or (typically) more of the following emotions in all cases: angry, anxious, conflicted, fearful, frustrated, relaxed, stressed, submissive, switched off. "Angry" and "relaxed" featured only once each, in conjunction with "conflicted".
3. The behaviourists did not consider any of the horses to be experiencing positive emotions (enjoying it, excited, playful) at any time. Only one behaviourist considered one of the horses to look relaxed at any time.
4. The behaviourists did not consider any of the horses to show stubbornness at any time.
5. When asked whether they would have been happy for their own horse to have been interacted with in the manner shown, all behaviourists selected "No" for videos 1-5. 5 of the 6 behaviourists selected "partially" for video 6, the 6th selected "No".

DISCUSSION

The preliminary findings of our study support the findings of the Bristol report (Horseman et al. 2016), in that equine caregivers do not always recognise the behavioural indicators of stress that are exhibited by horses. This is interesting in the context that many respondents seemed able to list those same indicators theoretically, but failed to recognise them in practice.

We find it interesting that a small but significant number of respondents believed they saw evidence in the videos for horses feeling "playful", "enjoying it" and "excitement". While we acknowledge the subjectivity inherent in a study such as this, none of the authors or ABTC behaviourist respondents concurred with this view. Confusion between behavioural indicators of stress and playfulness is clearly of concern from a welfare perspective and suggests an important role for education programs.

Despite our attempts to avoid bias by advertising our survey in Facebook groups that were most representative of the wider equine industry, we suspect that respondents to a behaviour-related survey are most likely to be behaviourally-minded. Therefore we suspect that our results are relatively optimistic and that the true situation is more concerning than that represented in these results.

ON-GOING AND FUTURE ANALYSIS

- Limit the analysis to UK responses only in order to obtain a full picture of the UK situation
- Extend the survey with wider participation, aiming to reduce the bias towards behaviourally-minded participants
- Link to education providers in order to promote the importance of horse-owners' ability to recognise, and act upon, the early warning signs of stress, for the sake of equine welfare
- We agree with the conclusion of Horseman et al. (2016) that more research is required for unambiguous identification of early behavioural signs of stress

ABSTRACT

One of the key welfare challenges, as identified by equine industry professionals by the University of Bristol partnering with World Horse Welfare, is that people fail to recognise, and consequently fail to resolve, stress and pain in horses. This in turn prevents advances in improving the welfare of horses across the UK.

This study explores the perceived lack of recognition of some negative welfare states in horses. We will use the results to inform an educational outreach programme to address this barrier to improvements in welfare.

The preliminary study considered whether a selection of horse owners could correctly identify signs of anxiety in the horse in a series of video clips. The clips covered a variety of contexts where negative emotional states in horses were visible including during dressage, liberty work and general handling 'life skills'. Horse owners were asked to comment on the horses' demeanour and responses were clustered. For comparison the clips have also been assessed by equine behaviour professionals from a variety of backgrounds and accreditations and were found to be interpreted consistently with one another.

The results will be used to inform our 'Ladder of Fear' project; we will focus on the signs that owners tend to most frequently miss or misinterpret including triangulation of the eye, tension in the mouth and swishing the tail. Ignoring the subtle signs and behaviours of anxiety in horses is likely to lead to more overt behaviours, such as biting and rearing, which can be dangerous when handling them. Welfare is compromised as a result of both the unrecognised sources of pain and stress, and the punishment that is commonly applied in the misguided belief that the horse is incontinent.

METHOD

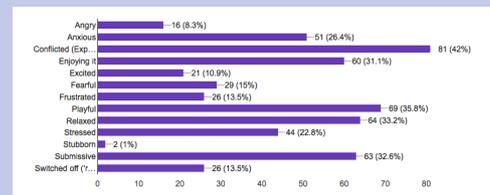
We compiled a questionnaire and used Facebook to reach as wide a sample of "representative" horse owners as possible. We posted our request for participants in Facebook groups that were large (>1000 members) and that were not biased towards being unusually knowledgeable about equine behaviour. Our survey collected basic demographic information about the participant's age, country of residence and experience with horses. We then showed a series of 6 video clips filmed by EPONA.tv and featuring horses being handled (1. dressage, 2. Natural Horsemanship, 3. in-hand dressage, 4. bridlesless/barback riding, 5. Western reining, 6. handling in clinic environment) and asked participants to select possible emotions that reflected the experience each participant believed the horse to be having.

It was the opinion of the authors that the horse shown in each of the video clips was experiencing a stressful situation. In order to be as objective as possible, we also asked Equine Behaviourists registered with the Animal Behaviour and Training Council (ABTC) to complete the survey. Equine behaviourists in the UK are not required by law to be registered; however, this register is highly regarded and its members are both experienced and trained via a range of different backgrounds, thus reducing bias towards a single source of training. The ABTC respondents formed a "comparison group" with which to compare the main survey responses.

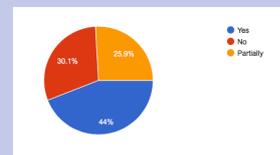
Example set of results: Video 2, Natural Horsemanship



When watching this video which of the words below do you feel best describes the horse at any time in the clip (select as many as you feel relevant)



If you were the owner of the horse in the clip would you feel comfortable with watching them being interacted with in this way?



The Equine Behaviour and Training Association is a voluntary, cooperative group of equine behaviourists, scientists and horse-owners. Further information can be found at <http://www.ebta.co.uk>

In particular EBTA aims to:

- Improve public knowledge and understanding of the physical and psychological well-being of equines
- Promote awareness of human behaviour and its impact on equine behaviour
- Bridge the gap between academic research and its practical application
- Protect equine welfare whilst maintaining safety and achieving equestrian goals

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