

The effects of early experience on the behaviour and subsequent welfare of horses

By Elizabeth Wallace

Introduction

The term "early experience" refers to training sessions that involve desensitisation, socialisation and habituation (Williams et al., 2003), this training is most effective in a "sensitive" period (Waring, 1983). Early experience is thought to result in decreased reactivity and fearfulness and increased manageability (Lansade et al., 2004). It is argued this may decrease accidents that occur due to horses' natural response to aversive stimuli, thereby increasing welfare (Spier et al., 2004).

Discussion

Williams et al. (2003) examined the effects of neonatal handling of foals and whether one particular training session had a greater impact than others. Foals were divided into groups: 1: no treatment (n=22), 2: treatment for one session conducted at birth (n=19), 3: to 6: treatment at 12 (n=18), 24 (n=19), 48 (n=17) or 72 (n=18) hours after birth and 7: treatment at birth, 12, 24, and 48 hours after birth (n=20). In each group, sex was equally represented. All foals received basic care.

Training was carried out by experienced handlers and involved rubbing the foal's entire body with hands and a plastic bag, picking up the feet, moving the tail, spraying fly spray near the nose, spraying the foal's back with water, putting on a halter, pushing the foal until it moved away from the pressure and teaching the foal to lead and stand still.

At 6 months, foals were assessed by handlers, who were unaware of each foal's treatment group. Testing involved rubbing the foal's entire body, picking up the feet, spraying fly spray near the nose and along the foal's back and leading the foal. The time taken to complete each task and the foal's maximum heart rate for each stimulus was recorded. Each foal was also exposed to the sudden opening of an umbrella and the peak heart rate was recorded.

This study found that there were no significant differences between trained and untrained foals. That is, reactivity of handled foals was not lower than unhandled foals. Also, it was not found that any one training session had more of an impact than another.

Spier et al. (2004) studied whether neonatal handling resulted in decreased flight responses. Foals were randomly divided into groups. Group A (8 males and 11 females) were handled at birth and 24 hours later and group B (7 males and 14 females) were not handled, other than routine handling, such as feeding and watering.

Handling was carried out by the same experienced veterinarian and involved restraint and towel drying of the foal at birth and rubbing the entire body with hands and a plastic bag. This procedure was repeated 24 hours later.

At three months of age, all foals were tested for acceptance of restraint, haltering, physical examination, acceptance of a rebreathing bag, touching the whole body, intramuscular injection, intranasal vaccination and deworming. This was performed by an experienced equine veterinarian, unaware to which group each foal belonged. Foals were scored according to their level of resistance to each stimulus.

This study found that there was a significant difference in the ease of handling the limbs and picking up the feet of conditioned foals compared with non-conditioned foals. There was therefore some evidence that early experience is retained for some period of time. Novel stimuli introduced in the testing period, such as the dewormer, were accepted without

resistance from 93% of both groups. Spier et al. (2004) suggested that problems owners report with giving dewormers could be a learned behaviour, triggered by repeated poor handling.

Lansade et al. (2004) examined whether the weaning period is a 'sensitive' period for horses and also assessed the long term effects of early experience. Foals were divided into groups, with males and females divided equally. Group 1 (n=8) were handled from 12 hours to 12 days after weaning, group 2 (n=8) were handled from 21 to 33 days after weaning and group 3 (n=8) were not handled aside from routine management. An experienced handler worked with groups 1 and 2. Handling involved fitting a halter, stroking the entire body, picking up the legs and leading the foal. Time taken to complete each individual task was recorded.

Testing by experienced handlers, unaware of the foals group status, took place 2 days and 4, 7, 10 and 18 months after the completion of handling. A different handler was used for each test period. Time to catch and fit a halter, pick up all feet and lead each foal was assessed. Other tests studied each foal's response to isolation, presence of a human and the sudden introduction of a novel object.

Handled foals were more manageable than non-handled foals. However, as time progressed, there was some decrease in these differences. Lansade et al. (2004) concluded that handling at weaning is effective in enhancing manageability and the effects are relatively persistent. Foals handled at the time of weaning were less reactive during testing when compared with late-handled foals. This supports the hypothesis that the period immediately following weaning is a 'sensitive' period for horses.

Conclusion

The most important limitation of these studies is the small number of animals used, affecting the power of the results. In each study, foals were excluded from testing if they received any handling outside that initially proposed, further reducing numbers. Another limitation was that each testing session represented an experience for non-handled foals. In the study by Williams et al. (2003) testing was carried out by handlers with varying experience, which may have affected the foals' responses.

Even if we conclude that early experience reduces reactivity, disadvantages include the effect of neonatal handling on the mare-foal bond and the possibility of introducing disease into the ears, nose and mouth during handling. Also, foals may struggle during handling and injure themselves. Therefore, there may still be an overall decrease in welfare (Lansade et al., 2004; Spier et al., 2004).

The most significant results were achieved by Lansade et al. (2004) which may indicate that the period immediately post-weaning is a "sensitive" period, resulting in horses with decreased reactivity and hence, increased welfare. All three studies noted some level of extinction, thus it is important to continue reinforcing desired behaviour.

References

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