Natural horsemanship:
Round-pen training of horses

A thesis presented in partial fulfilment of the requirements for the degree of

Masters of Science
in
Physiology

At Massey University, Palmerston North,
New Zealand

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2003
Abstract

The effect of round-pen training on the behaviour and physiological response (plasma cortisol concentration and heart rate) of 24 horses was examined using a stocks restraint stress test before, after and 3 weeks after round-pen training was carried out. Horses were allocated to treatment groups according to their ease of handling. Three treatment groups were formed, Control, Round-Pen Easy and Round-Pen Difficult (RP-D).

Before the treatment (round-pen training or control) there were no significant differences between the three treatment groups for plasma cortisol concentration and heart rate. Restraint in the stocks caused an elevation in plasma cortisol concentrations in all horses. The increase in plasma cortisol concentration was greater in the RP-D horses. A single round-pen training session was used as a treatment for the RP treated horses (Easy or difficult). Post-treatment most horses had a significant decrease in the time to enter the stocks, however, treatment had no significant effect on the plasma cortisol response, heart rate or behaviour of horses in each of the three treatment groups.

Round-pen training sessions were observed to see if the ease of round pen training was affected by either dominance rank or the behaviours observed during round-pen training. Despite the individual variation between horses, all horses followed a similar pattern of behaviour during round-pen training. There was no significant effect of social status on the ease of round-pen training.

The effect of dominance rank on the ease of handling, behaviours observed in the stocks and the plasma cortisol concentration during the pre-treatment stocks tests were examined. Horses that occupied the lower ranks were less easy to handle during the pre-treatment stocks test. The occurrence of some agitation and rest behaviours differed between horses of high and low dominance ranks. Dominance rank had no significant effect on the resting plasma cortisol concentration before treatment. Further research may clarify relationships between certain behaviours (head turning, head held up and defecation) and changes in plasma cortisol concentration during restraint, that could be used as non-invasive indicators of the onset of stress in the restrained horse.
Acknowledgements

To Associate Professor Kevin Stafford, guiding me through my Masters thesis, getting stuck in (literally) on my research project and making my postgraduate experience a fun and memorable task.

My second supervisor, Professor David Mellor for providing us all with a unique perspective and giving us the academic footing on which all animal welfare science students stand.

Tamara Diesch, for providing a wonderful research assistant even under the dustiest conditions, and for making the best behavioural observation notes I could ever hope to ask for.

Neil Ward and Phil Pearce for providing equipment, lab analysis and facilities for carrying out the research project.

To Robin Whitson for the use of the horses and facilities at the VLATU

Nicolas Lopez-Villalobos and Duncan Hederly for statistical consultation and assistance.

The IVABS Postgraduate research fund for providing the funding for my research project.

Sheila and Murray, for giving me guidance when I needed it and always being there to support me, and for assisting on the grammar side of my thesis writing.

Jayney, for being a good friend and providing me with creative energy; Graham for the use of his camera and offering to help with my stats stuff.

Ben and Leanne, a definitive source of time-out, fun, laughter and encouragement.

To Rissy, Jackson and Felix for posing in some of the photos.
Martine and her lovely horses for the photographs on chapters 4 and 5.

My sister, Heidi, for the competition and challenge you have provided me, throughout my life, and encouraging me to do what I do best.

My lovely flatmate Liz, for providing a source of rest and recreation.

Sharon, for being a good buddy and showing me that there is always two ways to do a thesis.

Kate Littin, Shauna Sylvester, Naigo Beausoleil, and the rest of the Animal Welfare Science and Bioethics group, for offering a sounding board and feedback the whole way through my thesis.

Chris, Caitlin and Ashleigh Hall, for helping with a bit of time out, a friendly ear, and reminding me that I am not really old yet.

Aunty Sandra, for offering encouraging words of wisdom, encouragement and support from a far.

Dad and Miranda, for supporting me and helping motivate me throughout the work on my masters degree.

To Dave for taking care of mum so I don’t need to or when I can’t be there.

This thesis is dedicated to my Mum, Lynne, for making me the lover of horses that I am, making sure that I always know what to do, giving me the drive and determination to do whatever I set out to do, and shaping the person I am today.

And finally and most importantly, to Holly, Cheetah, Nugget and Kinder: the four brightest stars in my world that have taught me all I ever needed to know....

My horses...my teachers, my life, my love, my obsession and my inspiration.
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