



NEW ZEALAND ASSOCIATION FOR BEHAVIOUR ANALYSIS 21ST ANNUAL CONFERENCE

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Auckland University of Technology
& The University of Auckland

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Assessment of affective state for horses engaged in therapeutic riding



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Background

New Zealand Riding for the Disabled Association (NZRDA) founded in 1962

49 groups, 400 horses, 3,400 riders, 3,000 volunteers

Primarily volunteer-based organisation

Carries out therapeutic horse riding



Study objective

Identification of the ability of NZRDA volunteers, and the general public to identify a range of behaviours in horses

Method

Respondents were recruited into two cohorts for a cross-sectional study, plus an expert panel

- NZRDA volunteers (n=79)
- General public with horse experience (n=139)

Respondents were shown six video clips from a pool of 13

- Four of these were in a therapeutic riding session
- Two of these were in a non-RDA context



Method

Respondents scored each video using terms from a pre-determined list

Terms described behavioural expressions (Hintze et al., 2017)

No sound included, no additional information



Based on the video, click the buttons that BEST describes this horse's behaviour.



Aggressive/angry

Expectant

Insecure/sceptical

Attentive

Friendly

Interested/focused

Bored/drowsy

Frightened/nervous

Irritated

Content

Impatient

Panicked/stressed

Curious

Indecisive

Relaxed/calm

Enjoying

Values attributed to descriptors (Hintze et al., 2017)

Strong Positive (nominal value +2)	Weak Positive (nominal value +1)	Strong Negative (nominal value -2)	Weak Negative (nominal value -1)
Attentive	Content	Aggressive/angry	Bored/drowsy
Curious	Expectant	Frightened/nervous	Impatient
Enjoying	Friendly	Panicked/stressed	Indecisive
	Interested/focused		Insecure/sceptical
	Relaxed/calm		Irritated

Your turn!



Is the horse on the left:

- Aggressive/angry
- Curious
- Irritated
- Relaxed/calm

Your turn!



Is the horse:

- Aggressive/angry
- Curious
- Irritated
- Relaxed/calm

Results

Agreement within groups

Videos	Group RDA (ICC type 1)	Group GP (ICC type 1)
RDA context	ICC=0.488, CI 95% (poor agreement)	ICC=0.389, CI 95% (poor agreement)
Non-RDA context	ICC=0.549, CI 95% (moderate agreement)	ICC=0.547, CI 95% (moderate agreement)

Results

Agreement between groups by video type

	Group RDA and Group GP	
	Cohen's kappa value	Agreement
All videos	0.826	Near perfect
RDA context	0.686	Substantial
Non-RDA context	0.905	Near perfect

Video 1.6



Video 2.1



Video 1.4



Video 1.9



2.2



2.4





Discussion

- Respondents had difficulty in agreeing
 - Disproves our hypothesis that RDA volunteers would have higher agreement for therapeutic riding videos
- Affective state is important for safety of rider, handler, and welfare status of the animal
- Physical characteristics and continuously changing behaviours need to be monitored – this is challenging



Next steps

- **Work towards improving consistency of horse behaviour assessment by NZRDA members**
- **Development of standard assessment model**



QUESTIONS

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