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# **Decoding Equine Behavior for Wellbeing Management**

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# Webinar Agenda

- Introductions
- Explore terminology around equine emotions and behaviors
- Highlight behavioral indicators of positive and negative experiences
- Discuss ways to optimize horse success through empathy and responsiveness to their behaviors



# Presenter Introduction

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**IOWA**



**Human-Animal Interaction**  
APA Division 17, Section 13

# How is this horse experiencing the session?



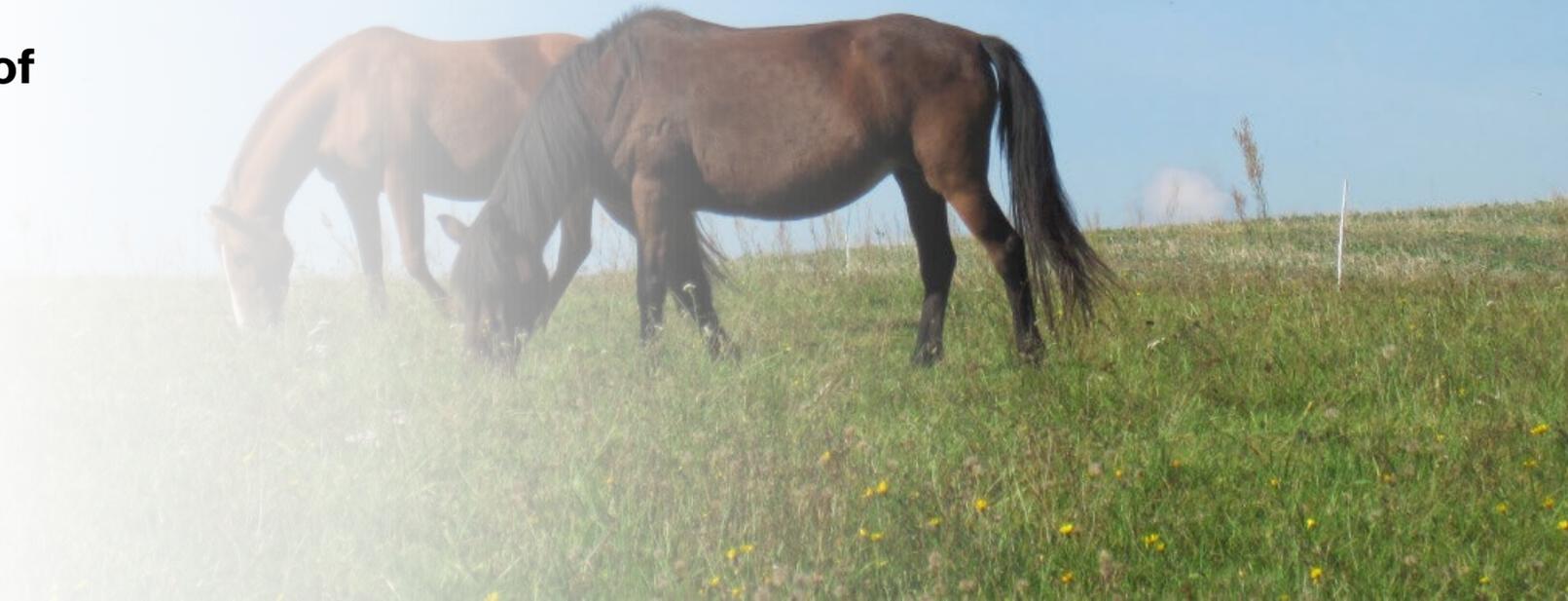


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# Positive Welfare

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**An aspirational concept describing opportunities for animals to experience rewarding and fulfilling states of being beyond the removal of pain or stress**



# **IAHAIO International guidelines on care, training and welfare requirements for equines in equine-assisted services**

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1.2 Accurate interpretation of equine behavior, cognitive and sensory capacities, communication strategies, positive states and welfare indicators, signs of stress, discomfort, pain, and fatigue, including presence of stereotypic (coping) behaviors, is necessary to provide appropriate care. Knowledge of common negative impacts on the horses in human environments and mitigation of these should happen.



# Terminology



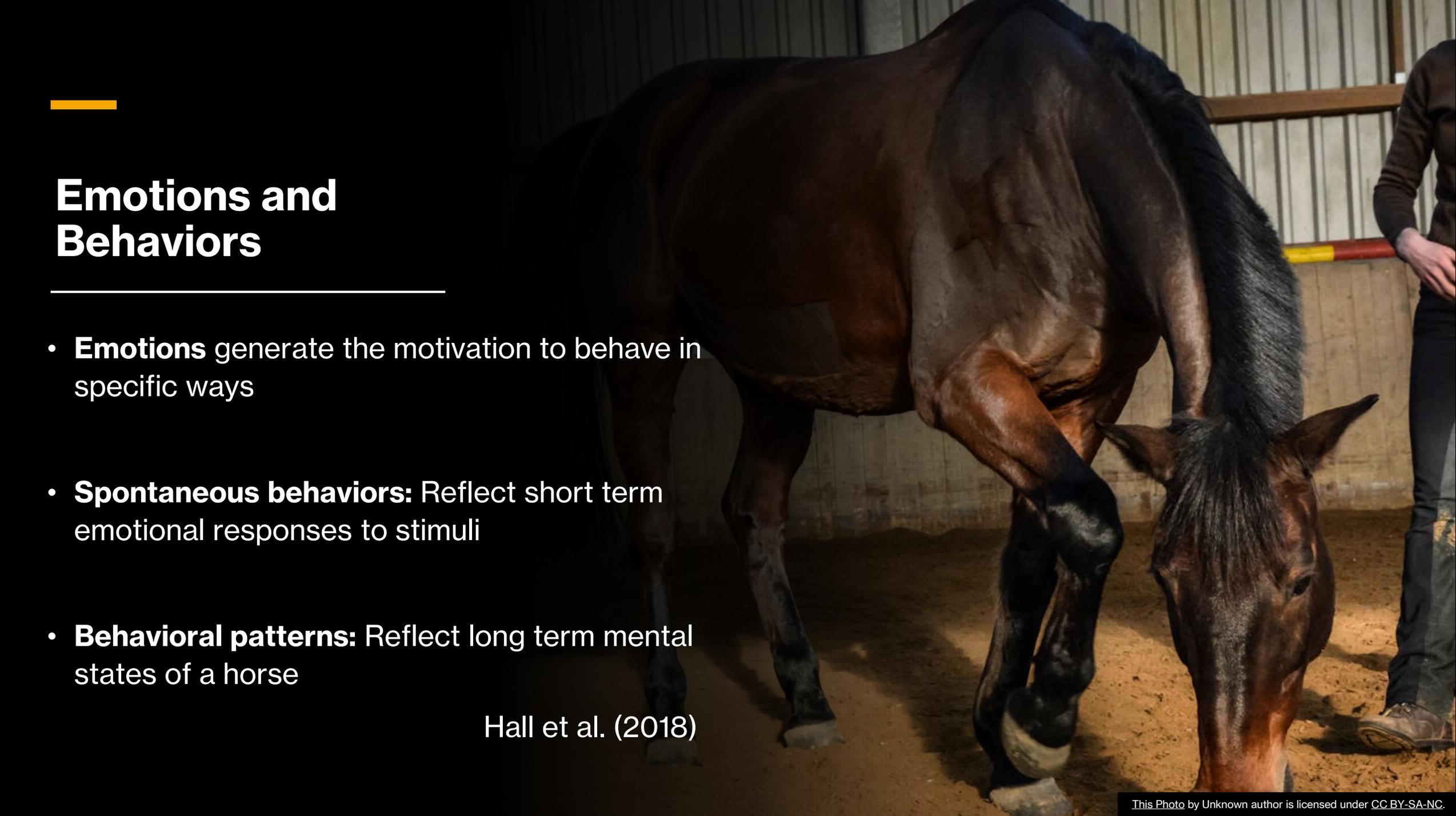
  


# Equine Emotions

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- Valence (pleasantness) and Arousal (intensity)
- Identified through behavioral observation

Hall et al. (2018)



## Emotions and Behaviors

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- **Emotions** generate the motivation to behave in specific ways
- **Spontaneous behaviors:** Reflect short term emotional responses to stimuli
- **Behavioral patterns:** Reflect long term mental states of a horse

Hall et al. (2018)



# What is Normal Behavior for Horses?

- Sensitive and alert to their environment (constant tracking with ears, ears, and body position)
- Active during the day
- Enjoyment of self-grooming, social grooming/interactions, and exploration through movement
- Eating most of the day

# Approach and Avoidance Behaviors

- **Approach/Affiliative Behaviors**

- Seeking contact, leaning into pressure, closing proximity, eyes half-closed, lower lip loose, upper lip extended forward, relaxed nostrils

- **Avoidance/Aggressive Behaviors**

- Moving away from contact, neck muscle tension, eyes wide open, tensing the belly or back, pinned ears, lips tensed and pulled back, biting the air

# Unique Challenges with Decoding Behavioral Messages

- **Contextual Issues:** What aspects of the situation are exerting the most influence on a horse's behavior? Displacement behaviors may appear when a horse is placed in a conflicted situation
- **Masking:** A horse might be less expressive, but also experiencing internal, physical stress (e.g., increased heart rate)
- **Learned Helplessness:** A state of behavioral depression or passive coping; horse appears "dull"



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# Behavioral Aggression

- Inter-individual conflict
- Pain, fear, or history of frustrating experiences
- Reinforced responses
- Anxiety can surface when a horse fears aggressive behavior from another

Hall et al. (2018)

# Whinnies, snorting, and blinking

- Short, lower pitch whinnies indicate positive state, while long, higher pitch whinnies may indicate negative states (Beaver, 2019)
- Recent research suggests snorts could be another indicator of positive emotion states in horses (e.g., snort production higher in pasture) (Stomp et al., 2018)
- Research also suggests spontaneous blink rate could indicate emotion state in horses with an initial decrease at the onset of stressor, followed by an increase in blink rate as a stressor continues (Mott et al., 2020)

# Yawning, licking, and chewing

- Yawning, licking, and chewing can at times present ambiguity
- These behaviors can proceed stressful events
- Shift from sympathetic to parasympathetic dominance

Hall et al. (2018)



# HHI example: Impact of grooming on horses

- Studies suggest studies that horses are impacted by human attitudes and behaviors during grooming sessions (Janczarek, et al., Landsade, et al., 2019)
- In choice test research horses appeared to prefer food over human interaction (Kieson et al., 2020)
- Our research group found that horses' heart rate variability was significantly lower in grooming versus leading activities with unfamiliar people (Rudd et al., 2022)





# Optimizing Success

Addressing Social, Movement, and Foraging Needs



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# Understand how horses budget their time

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- Up to 60% of a horse's day should involve trickle feeding (preferably in groups of preferred friends)
- Horses spend much less time sleeping; however, lying down for uninterrupted sleep bouts, is critical for REM cycle sleep
- Like humans, horse's levels of cortisol change throughout a 24-hour period, impacting level of alertness/energy
- Consider session planning in relationship to a horse's resting patterns and feeding schedule

# Routinely Check for Pain

- Domestic horses face a variety of issues most notably hoof, back/neck, joint, and gastrointestinal pain
- Facial expressions of pain can be misinterpreted
- Pinning ears, muscle tension, biting air during girthing could indicate gastrointestinal ulcers
- Lying down when brought into an arena may indicate sleep deprivation



# Provide Access to Social Engagement

- Inter-individual aggression, whether in housing or the arena, suggests potential problems
- Avoid frequent changes to group housing arrangements
- Social buffering experiences can improve training and in-session experiences for horses
- Recognize age and sex difference, as well as environmental considerations related to play needs

Hall et al. (2018); Ricci-Bonot et al. (2021)

## Provide Environmental Enrichments

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- Encourage resting behaviors (e.g., dry areas, supportive surfaces, and free of obstructions)
- Encourage foraging and exploratory behaviors (e.g., slow feeders, track systems)
- Address physical comforts (e.g., mechanical brushes, shaded and sunny areas)





# Promote Positive Interactions with People through Agency and Choice

- Keep attentional demands brief and rewarding (e.g., how long should a client be able to groom a horse?)
- Consider a horse may not be motivated to repeat the same arena activity several times
- Allow horse movement, and allow them to opt out of an activity
- Teach human participants/clients to recognize horses' preferred areas for touch

Ekholm-Fry (2021)

# Presentation Recap

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- Set aside time to mindfully observe your horses and know their baseline behaviors
- Evaluate and address horses' social, health, and environmental needs
- Plan session activities to support positive interactions with clients
- Provide attentional breaks for horses during sessions; Don't wait for your horse to show significant signs of stress before stopping the activity
- Utilize behavioral cues from horses to adjust or adapt session activities

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