

**Theme 7:** Research methodology: AAI and quantitative, qualitative and mixed research methods

**Inter-rater reliability, structure, and convergent validity of the Observation of Human-Animal Interaction for Research, Modified Version 1 (OHAIRE-M1)**

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**Introduction:** The use of behavioral data is an objective and quantitative approach that can complement standardized questionnaires in human-animal interaction (HAI) research. The OHAIRE-M1 is a behavior coding system designed specifically for HAI. We investigated its psychometric properties through analyses of its inter-rater reliability, construct validity and convergent validity.

**Methods:** Data were extracted from two studies investigating the outcomes of animal-assisted intervention. One study assessed the effect of animal-assisted activities with guinea pigs for children with autism ( $n = 33$ ) and typically developing children ( $n = 66$ ) ages 5 to 12. Another study assessed the effectiveness of therapeutic horseback riding for children with autism ( $n = 16$ ) ages 6 to 15. A total of 1425 minutes of videos were coded using the OHAIRE-M1. Inter-rater reliability was calculated for a random subset of 20% of videos. Data analysis techniques for validity included an exploratory factor analysis and correlation of data from each study with standardized questionnaire data via Pearson’s  $r$ .

**Results:** Preliminary results indicate excellent inter-rater reliability ( $\kappa = 0.81$ ). Factor analysis data will be presented with a suggested three-factor structure, with main axes representing emotional display, social communication, and problem behaviors. Correlations between scores of the OHAIRE-M1 and matched questionnaire subscales will also be discussed.

**Conclusion:** Initial analyses suggest that the OHAIRE-M1 is a reliable and valid tool to enhance the rigor and standardization of HAI research. Its use in future studies will allow confirmation of its structure on a larger sample, and explore its generalizability with a broader population.

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