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Do you see the same cat that I see? Inter- and intra-observer reliability for Qualitative Behaviour Assessment as temperament indicator in domestic cats

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Abstract

*Qualitative Behaviour Assessment (QBA) is used to assess animals' emotional expressions and its potential for serving as an indicator of temperament has been explored. This method is open to assessors' interpretation and it is therefore necessary to evaluate the observers' reliability for different species and contexts. We aimed to assess the intra- and inter-observer reliability of QBA as an indicator of cat (*Felis catus*) temperament. The QBA was applied by 19 observers with divergent profiles of contact with cats (cat owners vs non-owners) and experience in behavioural assessment (experienced vs inexperienced). Forty-two, 12-min videos were assessed, composed of footage of four behavioural tests: unfamiliar person, novel object, conspecific reaction, and food offering tests. By using Principal Component Analysis, we found three principal components (PC) that were considered the main dimensions of cat temperament. According to Kendall's coefficient of concordance, intra-observer reliability was high to very high in PC1 (0.80–0.90) and moderate to high in PC2 and PC3 (0.50–0.82). Inter-observer reliability for the 19 observers was high in PC1 (0.71) and low in PC2 and PC3 (0.21–0.29). The individual concordances with the gold observer (defined based on greater experience with the QBA) ranged from moderate to high. We concluded that QBA could be a reliable tool to assess cat temperament, given the high values of intra- and inter-observer reliabilities in PC1, which is the dimension that most explains the behavioural variations in the cats' temperament. The same did not occur for PC2 and PC3, showing that reliability varied among the different dimensions and observers.*

Keywords: *animal welfare, behaviour, companion animals, personality, rating method, shelter cats*