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Do you see the same cat that I see? Relationships between Qualitative Behaviour Assessment and indicators traditionally used to assess temperament in domestic cats

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Abstract

This study into the behaviour of domestic cats (Felis catus) aimed to assess the relationship between behavioural expressions obtained via the Qualitative Behaviour Assessment (QBA) and quantitative outcomes of temperament tests. Four behavioural tests were used: Unfamiliar person (UP); Novel object (NO); Conspecific reaction (CR); and Food offering (FO) tests. Tests were filmed and assessed using an ethogram that included 25 discrete behavioural categories, generating quantitative information (coding method) on the existing temperament dimensions. Videos were also assessed by another observer using the QBA method, based on a list of 20 adjectives rated in visual analogue scales (rating method). Data were analysed using Principal Component Analysis. Spearman's rank correlation coefficients were used to relate the principal components (PC) of QBA to the temperament dimensions obtained with the coding method. The QBA allowed us to identify three PC, explaining 76.63% of the total variance. PC1 ranged from 'calm/relaxed/friendly' to 'tense/fearful/alert', reflecting the valence of cats' behavioural and emotional expressions towards the stimuli tested. PC2 ranged from 'indifferent' to 'agitated/active', indicating the level of emotional arousal, and PC3 ranged from 'aggressive' to 'suspicious' and could be interpreted as an axis of 'aggressiveness — caution' in response to the stimuli. The first PC obtained for each test by using the coding method was significantly correlated with the PC1 of QBA, suggesting that the variations in cats' behavioural and emotional expressions identified by QBA were correlated with the main quantitative outcomes of temperament tests traditionally applied for domestic cats. QBA could be a promising tool for identifying and differentiating cat temperament profiles. Further research is required to assess the potential use of QBA as a feasible and practical method for use in shelters.

Keywords: animal welfare, conspecific reaction test, food offering test, novel object test, personality, unfamiliar person test