

'The Puppy Project' seeks to develop a short and accurate assessment that will predict the risk of a young dog developing a behavioural pathology later in life. Here we focus on one potential assessment: the 'Sit/Down/Stay Test'. A study by Bryant et al. (2018) compared results of this test for detection and pet dogs. Our focus is solely on pet dogs, but at two distinct times in their lives: 3- and 12-months (puppyhood vs. onset of adulthood). Each dog was given 3 signals, in order, "sit, down, stay" under 2 conditions: facing their owner and then with their owner's back facing them. We assessed select behaviours associated with fear/anxiety/stress that resulted from the breakdowns in communication during the back-facing condition. These behaviours were measured from video recordings using continuous sampling and analyzed using the Wilcoxon signed-rank test or the chi-square test. Task success was significantly and consistently poorer during the back-facing test for both age groups relative to the front-facing test ($p < 0.001$) at 12-months. Additionally, lack of previously established communication was associated with a significant increase in stress/anxiety levels in all dogs at 3- and 12-months ($p < 0.001$, $p < 0.015$). These results suggest a possible link between impaired communication skills and the development of behavioural pathologies. Understanding how lack of early signaling communication in the 'Sit/Down/Stay Test' affects later behaviour could help pioneer a new field of preventative canine behavioural medicine.