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Assessment of welfare and brachycephalic obstructive airway syndrome signs in young, breeding age French Bulldogs and Pugs, using owner questionnaire, physical examination and walk tests

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Abstract

Brachycephalic obstructive airway syndrome (BOAS) is a major welfare problem in short-nosed breeds, such as the French Bulldog and Pug. In addition to respiratory difficulties, exercise intolerance and impaired recovery are major signs of BOAS. To select healthier breeding animals, exercise tolerance tests, such as the 1,000-m walk test, are already used in several countries for brachycephalic dogs, although evidence supporting their use is still scarce. The aims of this study were to assess the daily welfare of young, breeding-age French Bulldogs ($n = 44$) and Pugs ($n = 51$) using an owner questionnaire, and to evaluate 6-min walk test (6MWT) and 1,000-m walk test usability for differentiation between non- or mildly BOAS-affected dogs and more severely affected dogs. Only four out of 95 French Bulldog and Pug owners reported that the BOAS signs limited the daily activities of their dogs. However, according to the physical, examination-based veterinary BOAS grading, 31/95 of the dogs had moderate to severe BOAS signs. In both breeds, the more severely affected dogs performed both exercise tests more poorly than those with no or mild BOAS signs. The longer exercise, namely the 1,000-m test, seemed slightly better able at differentiating between affected dogs and less affected ones. The results of this study further support the use of exercise tests as an important part of the breeding selection in French Bulldogs and Pugs. By influencing the breed standards set by Kennel Clubs and by using breeding selection tools, the harmful impacts of brachycephaly can be diminished.

Keywords: animal welfare, brachycephalic obstructive airway syndrome, dog, French Bulldog, Pug, walk test