**Potential signs of joint problems, dog owner awareness and the use of social media**

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Regardless of the condition in question, veterinary practitioners are heavily reliant upon dog owners identifying potential health issues and seeking advice, especially for conditions where signs may be intermittent and not apparent during annual check-ups.

Luxating patella, defined as "*medial or lateral displacement of the patella from the femoral trochlear groove, usually a development disease*" (Côté, 2010), can occur to varying degrees. Intermittent skipping in dogs has been noted to be a potential sign of joint problems such as grade 1 patella luxation (where the patella returns to its groove without needing manipulation) (Coile, 2000; Denny and Butterworth, 2008). Medial patellar luxation has been the most common patella related problem documented, generally associated with small/toy breeds (Côté, 2010). Little research, however, has been carried out on owner awareness and knowledge of skipping as a sign of a potential health problem.

A substantial gap exists in identifying owner knowledge of normal dog gait, something made even more problematic by the lack of scientific research in this area. In particular, the importance of this in dogs that are at risk of developing patella luxation should not be overlooked, and attention drawn to specific behaviours such as skipping that may be indicative of this condition. There is scope that a review of owners with dogs that hop, skip or perform other abnormal locomotion could explore their awareness, views and knowledge of the reason for these behaviours. In addition, similar to Burn (2011), who investigated tail chasing by analysing YouTube videos, research could be conducted with skipping to identify the response of owners to their dogs performing this behaviour and/or potential lack of owner awareness of the possible welfare implications of such abnormal locomotion.

YouTube is an immense repository for video content, with over 1 billion users, and every minute around 300 hours of video are uploaded (YouTube, n.d). Despite the videos uploaded to YouTube not following a specific protocol, videos of behaviours can be collated and used for preliminary research into dog skipping behaviour (Nelson and Fijn, 2013). Additional videos could assess behaviour and abnormal gait of dogs with other potential joint problems such as hip dysplasia. However, it is important to note that the use of videos gathered from social media for specific research contexts, such as behavioural observation, is at risk of bias as they have the potential for manipulation or editing, therefore well-defined search criteria need to be followed (Nelson and Fijn, 2013). Despite this there are a variety of benefits to using YouTube to assess behaviour problems or behaviour as a result of a potential health problem. Namely, a potentially large sample is available and is easily accessible and cost efficient (Burn, 2011).

To investigate this area the authors have identified 10 suitable videos sourced through YouTube using the term “Dog skipping”. All videos included dogs which were skipping whilst walking and all skipping was seen in the hind limbs. Eight out of the 10 dogs were of a small size; the breed of dog could not be established. Four videos implied that humour was associated with the video either by the laughter (1), encouragement (1) or background music (2). Two dogs appeared to be in an enclosed garden whereas the remaining eight appeared to be in a public area. Only one video had an additional comment in place which stated that the dog “he skips when he’s happy.” This suggests that the owner, or person video recording, in question may not understand the potential problematic signs, as seen previously with tail chasing (Burn, 2011). A larger study could include more detailed information, depending on availability, such as dogs age, sex, breed, environmental factors (e.g. in public), indicators of who was videoing (owner/non-owner) and information gathered from comments.

Such research may go some way to help identify a lack of awareness of the potential signs of joint disorders in pet dogs and, if required, highlight the best ways to educate owners about this issue potentially resulting in an owner receiving timely veterinary advice. Further research on this topic is underway at Moulton College but anyone interested in contributing relevant data/case studies is encouraged to email Wanda McCormick (Wanda.McCormick@moulton.ac.uk).

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