

An evaluation of dog-training techniques: an assessment of efficacy and welfare

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Introduction

Forty percent of Australian families own at least one dog, amounting to approximately four million dogs across Australia (BIS Shrapnel Marketing Intelligence and Forecasting, 1999). Whilst the majority of these human/canine relationships prosper, others do not, accounting, in part, for the 64, 593 dogs received by the RSPCA within the 2002-2003 period (RSPCA Australia website). DiGiacomo et al. (1998) reported that the principal reason given by owners for relinquishment was the persistence of problematic behaviours such as inappropriate barking, urination or defecation. The intention of this report is to demonstrate that problematic behaviours may be, in themselves, symptomatic manifestations of compromised welfare, which emanate from ineffective or inappropriate training. Considering nearly all domestic dogs receive some form of basic training, the improved understanding of dog cognition and training method efficacy will undoubtedly improve animal welfare. This will occur by strengthening the human/canine bond through the minimisation of conflict, anxiety and confusion, that often give rise to additional, or intensify existing, behavioural problems.

Discussion

Hiby et al. (2004) compared the efficacy of various training methods and evaluated their impact on both dog behaviour and welfare. Six hundred 26-question surveys focusing on the training methods used to teach and prevent several recognisable tasks and behaviours were distributed to dog owners in Hampshire and Cambridgeshire, England. Respondents were asked to award obedience scores ranging from one (least obedient) to five (most obedient) for the individual tasks and these scores were combined to give the summed obedience score.

To evaluate behaviour, owners were asked to indicate whether their dog showed any number of problematic behaviours from a list of sixteen. From this survey, twelve methods of training were identified and classified as punishment-based (physical and verbal), reward-based or miscellaneous. Just over 20% of owners employed reward-based only training (60% praise, 51% food and 11% play), 9.8% employed punishment-based only (66% vocal and 12% physical) and 60.4% employed a mixture of punishment and reward. Correlation between punishment, reward frequency and the prevalence of certain problematic behaviours was determined using Spearman's rank correlation tests. The study demonstrated that the summed obedience scores ($P < 0.01$) correlated positively with reward frequency yet negatively with punishment based training ($P = 0.5$).

Furthermore, punishment-based training was found to correlate positively with the number and incidence of problematic behaviours ($P < 0.001$) perhaps because it "creates a state of anxiety or conflict in the dog that is later expressed as a problematic behaviour" (Hiby et al., 2004). Although precedent attests to the effectiveness of aversive training (Leiberman, 1999, Hiby et al. (2004) found that such training did not produce greater obedience, possibly owing to the inappropriate, inconsistent and ill-timed administration of punishment by inexperienced trainers (Hiby et al., 2004). Punishment-based training is also known to produce degrees of implicit suffering (Beerda et al., 1997) and physiological stress (Roll and Unshelm, 1997). Consequently, Hiby et al. (2004) recommend reward-based training, which proves more effective and less traumatic.

Schilder and van der Borg (2004) analysed both the long and short-term behavioural effects associated with shock collar use during the training of German shepherd guard dogs. The study

serves as an interesting comparison to that of Hiby et al. (2004) as it evaluates punishment-based training as performed by specialist trainers. The study compared the conduct of sixteen dogs trained with shock collars to that of fifteen dogs receiving analogous training that had never been shocked. Behavioural reactions were monitored both on and off the training grounds, before and during training, as well as during free-park walks. Ear, tail, and body posture, in addition to various behaviours, were used to evaluate stress, fear and trauma, as opposed to conventional physiological measures, such as cortisol, as training generates high levels of excitement, which alter the accuracy of such measures (Schilder and von der Borg, 2004). Shocked dogs continually demonstrated lower ear position compared with non-shocked dogs during all experimental activities. Similarly, shocked dogs showed an increased frequency of tongue flicking during obedience work in the park and on the training grounds, and exhibited excessive front paw elevation when compared with the control group - indicative of submission, fear and even chronic or acute stress (Beerda et al., 2000).

Schilder and von der Borg (2004) also found that shocked dogs associated their trainer with imminent aversive stimuli and some exhibited "learned helplessness", linking the auditory command directly with being shocked, as opposed to seeing it as punishment for the inappropriate response to that command. The authors recommend the incorporation of more reward-based training and prohibition of shock collar use for the schooling of sport dogs. It was concluded that shocking influences long term welfare "in a negative way" (Schilder and von der Borg, 2004) and that shocked dogs exhibited elevated stress in all activities. One dog, for example, behaved like the shocked dogs despite not having been shocked for over 1.5 years.

McKinley and Young (2003) intended to demonstrate that model-rival training, which exploits the dogs' highly social disposition and observational learning ability, is equally as effective as operant conditioning. In the study, nine dogs were trained using both operant and model-rival conditioning (competing for the trainer's attention by emulating the actions of another) to retrieve nominated objects from a collection of three like (of similar shape and size) objects. The mean training and trial times were 502.7/236.4 and 468.4/201.0 seconds for operant and model-rival methods respectively, demonstrating that dogs "learnt at the same rate and performed the task at the same speed" (McKinley and Young, 2003). This study demonstrates that the model-rival method is a viable training option and, in light of the findings of the fore mentioned studies, would be preferable to punishment-based training, which often follows unsuccessful operant conditioning.

Conclusion

Analysis of the efficacy and psychological impact of training techniques has brought about welfare improvements primarily by enabling trainers to select regimes that work, inflict no harm, mentally engage the animal and consequently, put an end to the aggression-punishment-aggression cycle that may stem from punishment-based training. Improved training also strengthens the human/canine bond and therefore has a secondary effect by reducing relinquishment to pounds.

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