Does training method matter?

Trends in dog training

(Kata Tóth, 25th April, 2022)
Why do we train dogs?
(Castro et al., 2021)

• more, than thousands of years lived together (Wayne, 2012)
• originally: they had a 'job’ to do → hunting, herding, guarding etc.
• nowadays:
  • 'family dogs’ or companion dogs
    • preventing or managing dog behavioral problems
    • successful dog-human relationships
    • maximizing benefits
  • sporting dogs → successfully accomplish their role (winning prizes)
  • working dogs → successfully accomplish their jobs
Training methods

• mostly operant conditioning principles

• 4 categories: negative reinforcement, negative punishment, positive reinforcement, positive punishment  
  (Guilherme-Fernandez et al., 2017)
  • usually divided into 2 categories:
    • aversive-based methods (negative reinforcement, positive punishment)
    • reward-based methods (positive reinforcement, negative punishment)
Training methods

• aversive-based methods:
  • shock-, pinch-collar, punishment, throwing bag etc. (Beerda et al., 1998)
  • stress-related behaviours during training
  • elevated cortisol levels
  • problematic behaviours such as fear and aggression

• limitations to form a strong conclusion:
  • studies usually rely on surveys
  • focus on military/police/laboratory dogs → instead of naive dogs under ongoing training
  • empirical studies mainly concentrate on the effect of shock-collar → many several techniques

(Guilherme-Fernandez et al., 2017)
Training methods

• reward-based methods:
  • more human
  • equally or more efficient, than aversive training methods (Guilherme-Fernandez et al., 2017)
  • clicker-training → successful in scent working and in service dog training (Willis et al., 2004; Cornu et al., 2011)
• nowadays: only positive reinforcement → is it possible?
Training methods

• Castro et al., 2020:
  • Portugal dog schools around Porto
  • methods: aversive, mixed, positive reinforcement
  • cortisol level measurement
  • stress-related behaviour during trainings
  • cognitive bias-test
Fig 2. Number of occurrences of each stress-related behavior averaged across the three training sessions for Group Aversive (white bars), Group Mixed (grey bars) and Group Reward (black bars). Vertical bars show the SEM. * stands for statistically significant differences for least square means at $\alpha = 0.05$. 
Fig 1. Schematic representation of the cognitive bias task.
The goal of the training

• training a new task
• solving a problem
• owner satisfaction → depending more on the behavioural problem? (Herwijnen et al., 2018)
• teaching the owner:
  • dog trainers
  • behaviourists
  • veterinary behaviourists (Koch, 2018)
• success: influenced by the owner’s cognitive status (Stevens et al., 2021)
Animal welfare

• more highlighted area (Taylor et al., 2007; Belshaw et al., 2015)

• veterinarian, neurophysiological, natural living concept (Philpotts et al., 2019)

• hard to examine → methods?

• solving a behavioural problem
  • jumping up, aggression against people, excitement
  • is it really a problematic behaviour?
Improving dog training methods: Efficacy and efficiency of reward and mixed training methods

Ana Catarina Vieira de Castro, Angelo Araujo, Andre Fonseca, I. Anna S. Olsson

• registered report protocol
• military (N=10) and police dogs (N=20)
• 3 groups: aversive, reward based, mixed method
• trained dogs
• new tasks: food refusal, interrupted recall, dumbbell retrieval, placing items in basket
Resources


Resources

26. Colleen S. Koch, 2018: Veterinary behaviorists should be the first, not the last, resort for optimal patient care https://doi.org/10.2460/javma.253.9.1110
27. Ana Catarina Vieira de Castro, Angelo Araujo, Andre Fonseca, I. Anna S. Olsson: Improving dog training methods: Efficacy and efficiency of reward and mixed training methods
Thank you for your attention!