

Publication

Lack of effects of the presence of a dog on pain perception in healthy participants - a randomized controlled trial

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Animal-assisted interventions (AAIs) have been shown to be effective in the treatment of pain. Studies suggest that relationships with animals can have comparable qualities to relationships with humans and that this enables animals to provide social support. Further, the presence of an animal can strengthen the therapeutic alliance between patients and treatment providers. This suggests that the analgesic effects of AAI might be mediated by social support from an animal or by strengthening the alliance between the patient and the treatment provider. To test these assumptions, we examined the effects of the presence of a dog on experimentally induced pain in a pain assessment and a pain therapy context. Hundred thirty-two healthy participants were randomly assigned to the conditions "pain," "pain + dog," "pain + placebo," or "pain + placebo + dog." We collected baseline and posttreatment measurements of heat-pain tolerance and the heat-pain threshold and of the corresponding subjective ratings of heat-pain intensity and unpleasantness as well as of participants' perceptions of the study investigator. The primary outcome was heat-pain tolerance. The presence of the dog did not influence the primary outcome ("pain" vs. "pain + dog": difference = 0.04, CI = -0.66 to 0.74, $p = 0.905$; "pain + placebo" vs. "pain + placebo + dog": difference = 0.43, CI = -0.02 to 0.88, $p = 0.059$). Participants did also not perceive the study investigator to be more trustworthy in the presence of the dog ("pain" vs. "pain + dog": difference = 0.10, CI = -0.67 to 0.87, $p = 0.796$; "pain + placebo" vs. "pain + placebo + dog": difference = 0.11, CI = -0.43 to 0.64, $p = 0.695$). The results indicate that the mere presence of a dog does not contribute to pain reduction and that the analgesic effects of AAI that previous studies have found is not replicated in our study as AAI did not increase perceived social support and had no effect on the alliance between the participant and the treatment provider. We assume that the animal most likely needs to be an integrated and plausible part of the treatment rationale so that participants are able to form a treatment-response expectation toward AAI.

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