



Psychology

Ownership of a dog has been associated with greater physical activity, with an improved sense of well-being, and with greater longevity. Although these data are correlational, a causal relationship has very often been assumed. Some University Departments of Psychology even maintain a 'therapy dog', to relieve stress in undergraduates.

Some new light is thrown on this field of research by a recent Swedish study comparing concordance of dog ownership in monozygotic (identical) and in dizygotic (fraternal) twins. The study concludes that dog ownership is strongly heritable. *Heritability* has a technical meaning: the proportion of statistical variance in a trait (here, dog ownership) that is attributable to genetic variation in a given population. The twin study is by Tove Fall and colleagues (2019) 'Evidence of large genetic influences on dog ownership in the Swedish Twin Registry has implications for understanding domestication and health associations', *Scientific Reports*, **9**:7554 (<https://doi.org/10.1038/s41598-019-44083-9>). The same paper has references to studies reporting positive health associations with dog ownership.

Your task: Design an empirical study to discover whether interacting with dogs improves health or well-being. You'll want to give details of how participants will be sampled or recruited, how you will assess 'interaction with dogs', how you will assess the chosen outcome, and how you will analyse your results.

If you go for a correlational study, you'll want to think about causal directions. If you favour an experimental study, you'll want to worry about self-selection by participants.