



LETTER TO THE EDITORS

Concerns over analytical decisions in “Cat ownership and schizophrenia-related disorders and psychotic-like experiences: a systematic review and meta-analysis”

Braz J Psychiatry. 2024;46:e20243569

doi:10.47626/1516-4446-2024-3569



A meta-analysis of observational studies recently published in *Schizophrenia Bulletin* found a statistically significant association between cat ownership and the development of schizophrenia or psychotic experiences.¹ The findings of this study had significant resonance in Brazil, including news coverage in major newspapers and social media. We believe, however, that its conclusions are influenced by methodological issues that, if left unaddressed, could lead to dangerous immediate consequences in the real world, including the abandonment and mistreatment of animals. In this letter, we present issues that may have been overlooked during the peer-review process.

Although 17 articles were included in the review, upon examining its two forest plots, we only found 15 effect estimates, corresponding to 12 individual studies in both analyses. There is no rationale in the methods section explaining why five of the 17 studies (nearly 30%) were omitted from the meta-analyses, or even what criteria were specifically applied in deciding which studies would be combined, other than a brief sentence in the introduction “... to meta-analyze these estimates after sorting them into comparable study types.” Curiously, the meta-analysis represented in the first forest plot combines a cross-sectional study² and case-control studies, but does *not* include other cross-sectional studies.^{2,3} Assuming that the decision rule was to combine “comparable study types,” it is unclear why these studies were grouped in this way.

Unclear decision rules for combining studies have also left us unsure as to why Solmi et al.,⁴ the only study that prospectively evaluated the association between cat ownership and the development of psychotic experiences in adolescence, which found no association, was not included in any meta-analysis. Among all included studies, it scored best on the Newcastle-Ottawa Quality

Assessment Scale, a tool for evaluating the quality of non-randomized studies. It also had the largest sample of individuals (n = 17,310). While the decision to exclude this study from the analysis may have been supported by reasonable explanations, the authors’ rationale is unknown, which leaves readers unable to understand or assess the adequacy of this analytical decision.

It is imperative for all studies that meet systematic review criteria to be adequately considered for inclusion in the meta-analyses – unless there is a compelling justification for their exclusion. Evidence-based psychiatry often relies on meta-analyses for clinical and public health decision-making; however, truly trustworthy meta-analyses are expected to provide a clear, explicit, and sound rationale for combining studies. The lack of transparency and questionable analytical decisions in this particular study are likely to have produced results that are unreliable at best, and dangerously misleading at worst.

In conclusion, we contend that the findings from McGrath et al.¹ should be considered with great caution until a scientifically valid correction of their manuscript is provided.

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Submitted Jan 29 2024, accepted Jan 31 2024.

Disclosure

The authors report no conflicts of interest.

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Both authors have read and approved of the final version to be published.

Handling Editor: Andre Brunoni

How to cite this article: Gonzaga Y, Eckert I. Concerns over analytical decisions in “Cat ownership and schizophrenia-related disorders and psychotic-like experiences: a systematic review and meta-analysis”. 2024;46:e20243569. <http://doi.org/10.47626/1516-4446-2024-3569>

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