## LETTERS TO THE EDITOR

# High-quality research is needed much more than commonly published (low-quality) meta-analyses

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I read with great interest the publication by Pires et al entitled "Publication of meta-analyses in sleep medicine: a scoping review."[1] This study has important strengths, but I am concerned that the authors' conclusions do not reflect the current state of published meta-analyses.

Meta-analysis is a relatively new research area, with the development of guidelines for the conduct and reporting of systematic reviews and meta-analyses just over the past 20–25 years; the QUORUM Statement (1999) was revised to become the PRISMA Statement (2009, updated in 2020).[2,3] These guidelines were published in numerous medical journals, but their use has been uneven. To evaluate the methodological quality of published studies, A Measurement Tool to Assess Systematic Reviews (AMSTAR) was developed in 2007[4] and revised as AMSTAR 2 in 2017.[5] Using AMSTAR 2, researchers have shown that 99% of the 236 published systematic reviews or meta-analyses in the 10 highest-impact otolaryngology journals from 2012–2017 elicited critically low confidence in the results of the reviews![6] This finding is not unique to otolaryngology/head and neck surgery: Similar findings have been shown in numerous other fields, including sleep medicine.[7]

The first concern with the Pires et al[1] study is the choice of 1945–2019 for the published literature search. This period does not reflect the development of sleep medicine as a discipline and does not correspond to the development of scientific meta-analysis methodologies.

Second, it is unclear whether the lower proportion of meta-analyses in the sleep medicine literature compared to other fields is good or bad; given the low confidence in the results of these publications, one could argue that the low proportion in sleep medicine should be even lower. I understand that authors may propose excellent potential research questions and attempt to answer them by reviewing the literature and performing a meta-analysis. Unfortunately, the literature often does not enable a valid, unbiased scientific assessment, and authors may not have appropriate training in meta-analysis research methods. Nevertheless, authors may develop manuscripts and submit to medical journals, which in turn may be eager to publish these systematic reviews and meta-analyses, based on the appearance of scientific authority and the greater likelihood of citations.

High-quality systematic reviews and meta-analyses are essential to the advancement of medical knowledge. Unfortunately, low-quality studies are being published, and we certainly do not need more of these. I would propose that we instead devote resources to high-quality original research that will provide the raw data for systematic reviews and meta-analyses that provide confidence in the results.

## CITATION

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