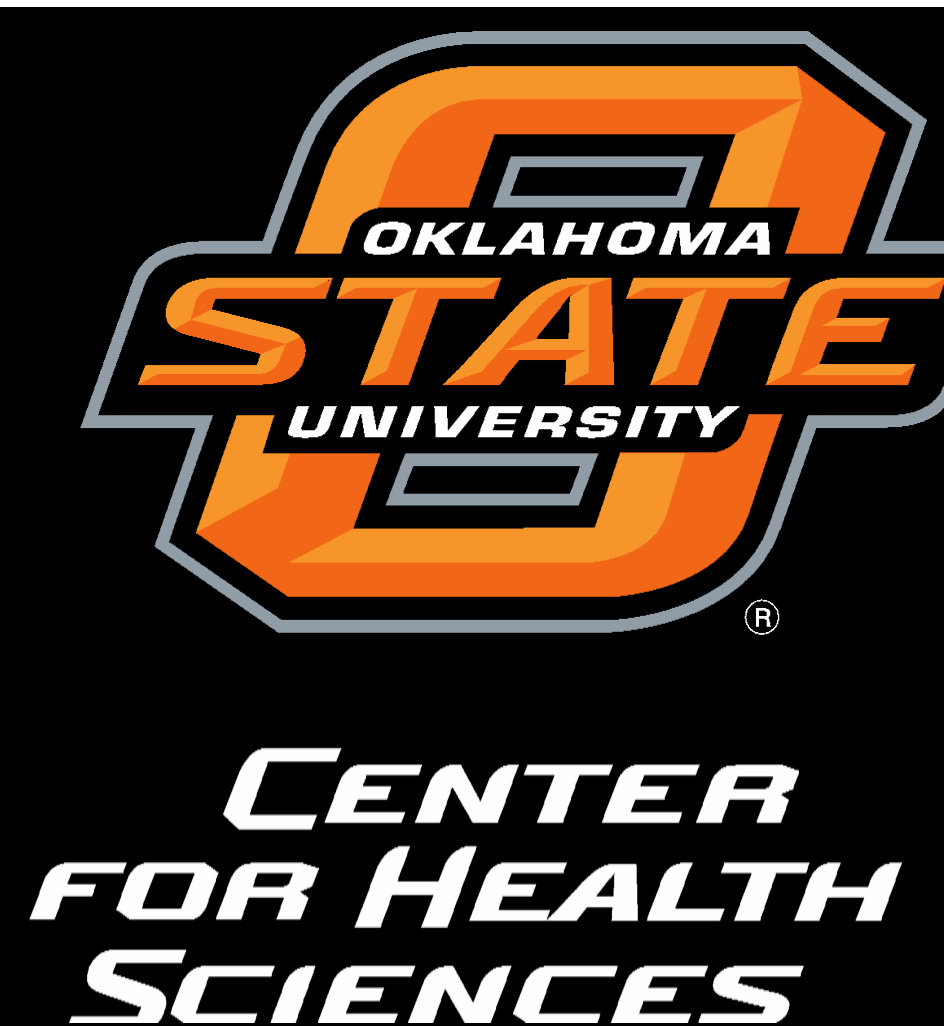




# An Analysis of the Use of Systematic Reviews to Justify Otolaryngology Clinical Trials - Is Research Being Wasted?

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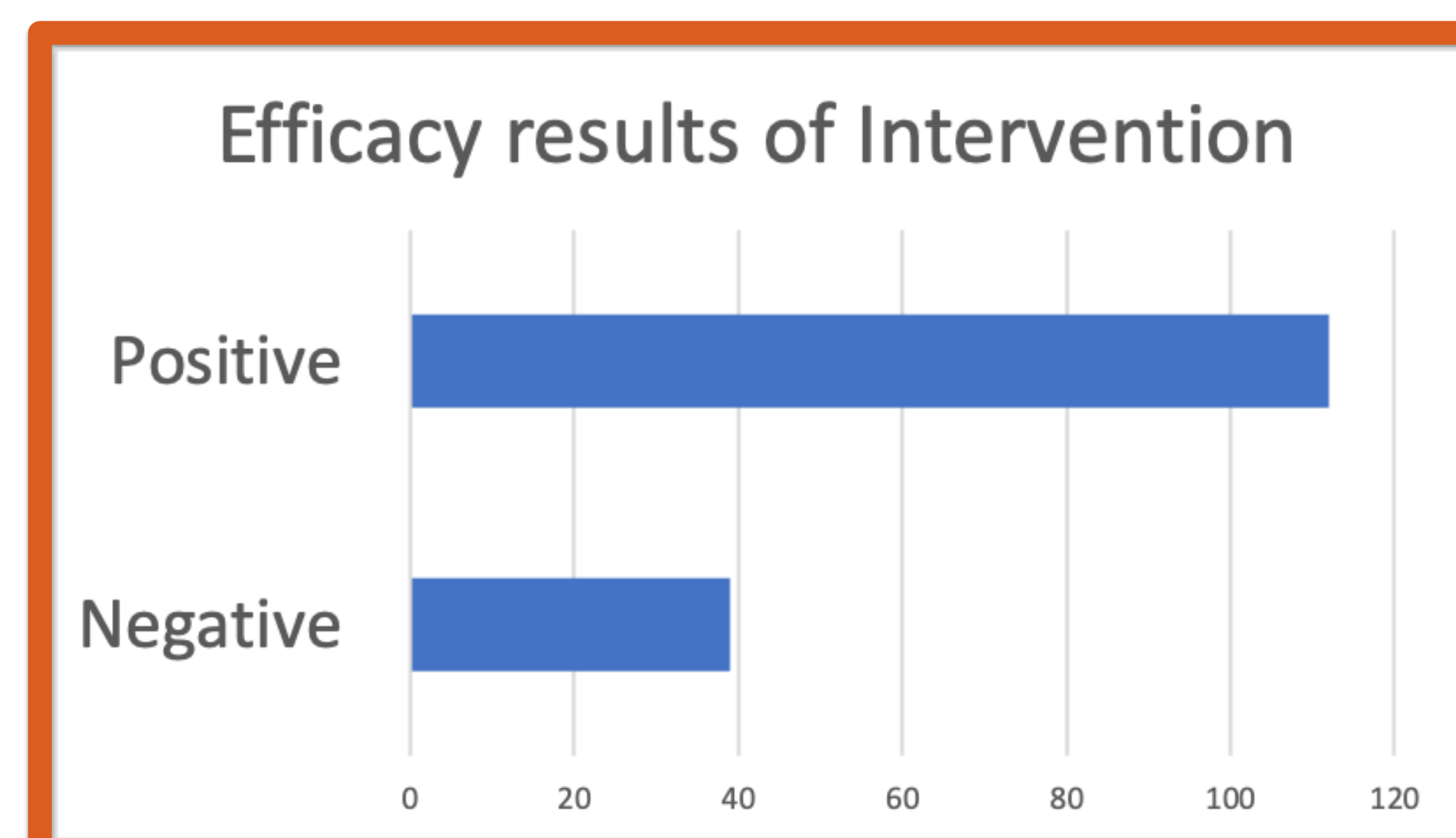
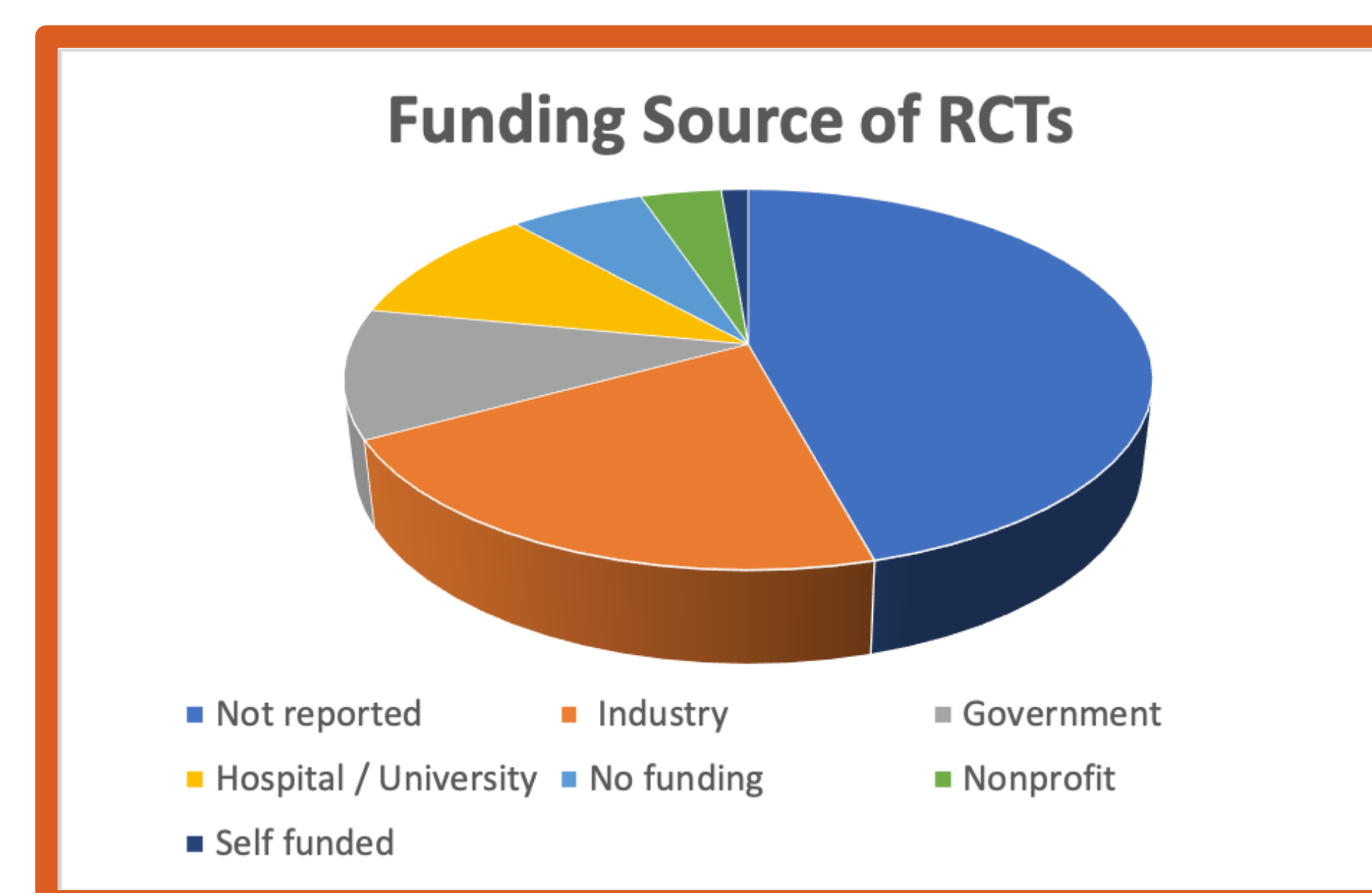
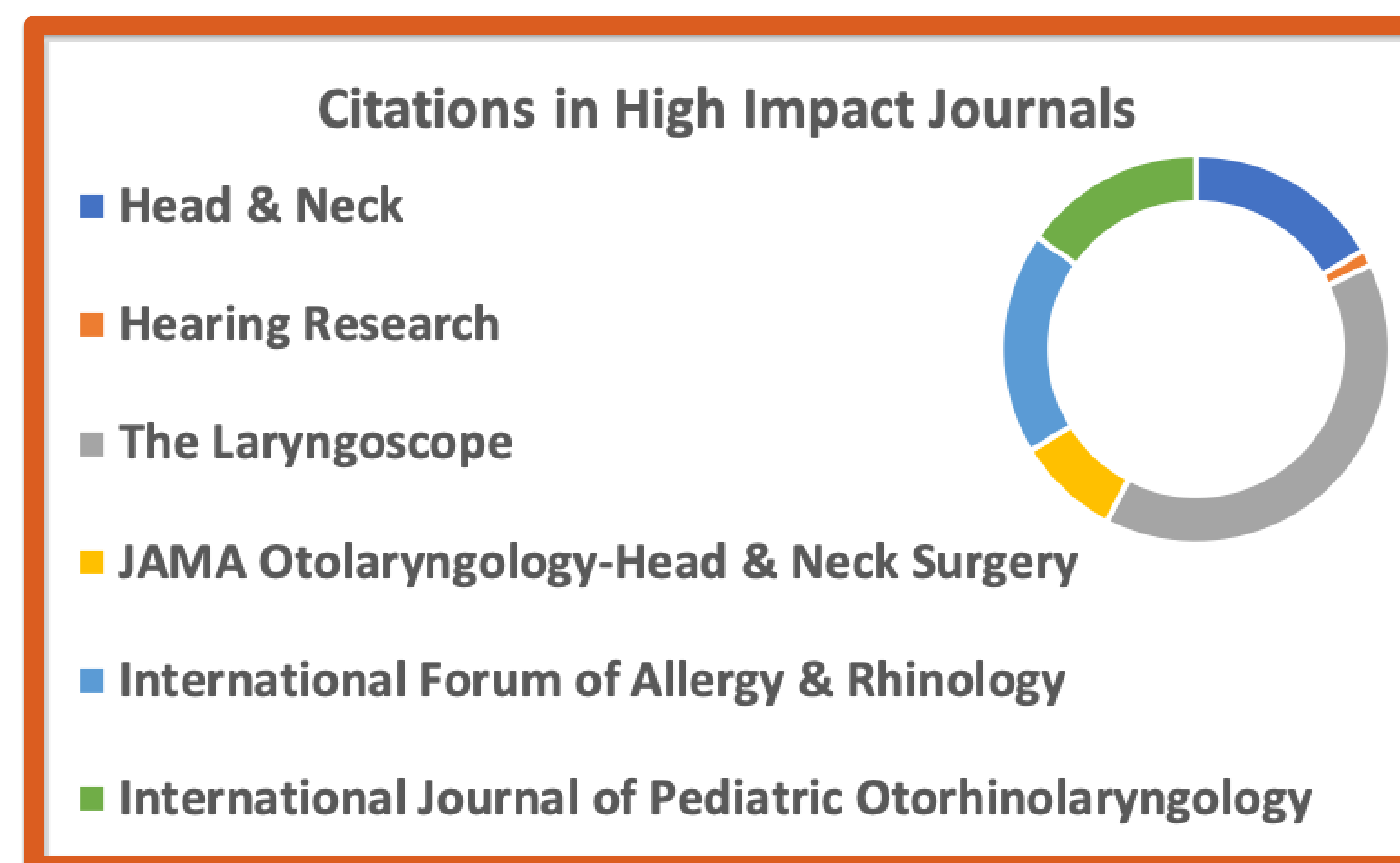


## INTRODUCTION

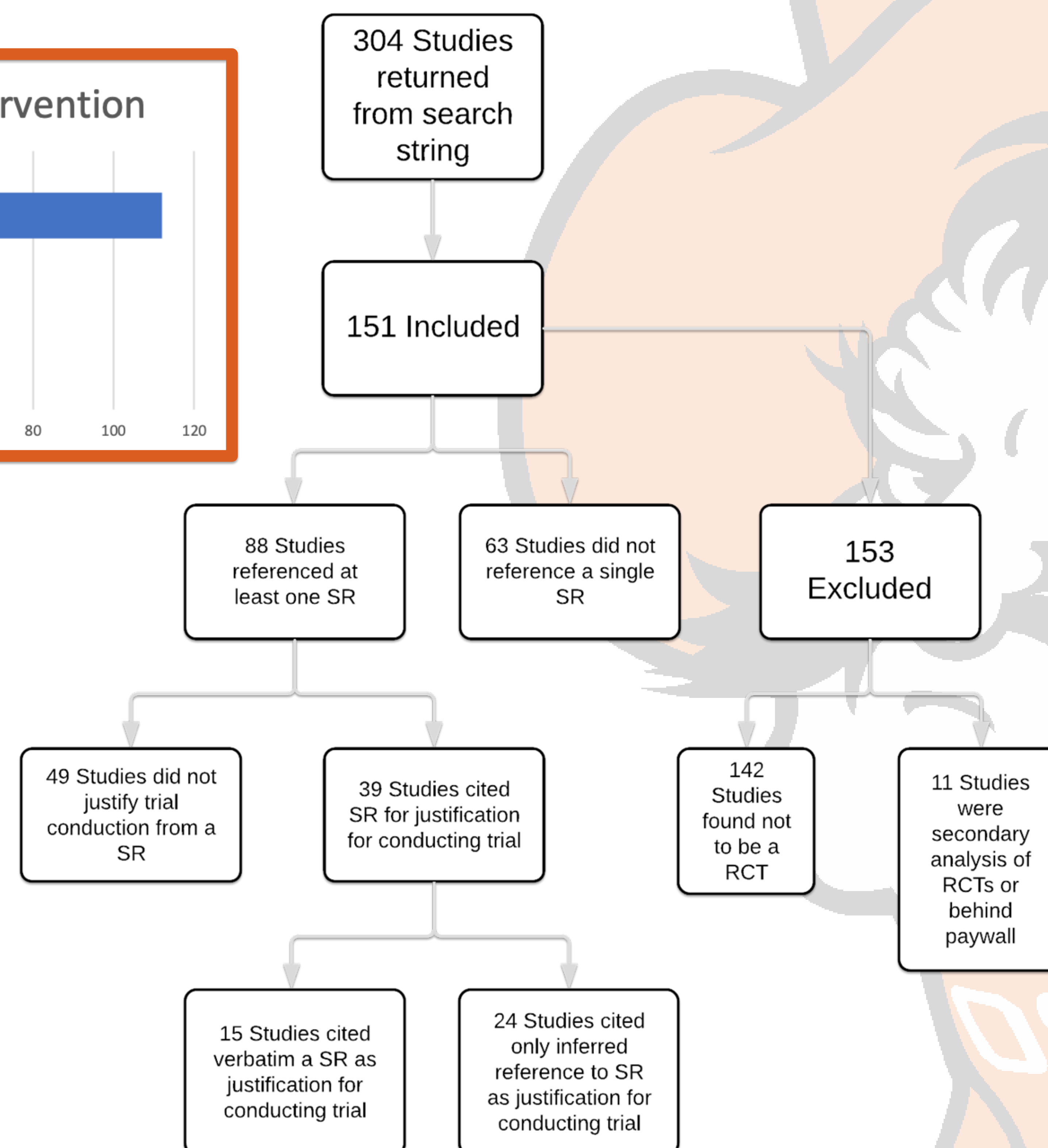
Avoiding poor research methodology such as research waste through duplicative research certainly provides a more cost effective approach to achieving high quality methodologic studies. In 2018, Engelking et al. in the field of anesthesiology explored the use of systematic reviews (SRs) as justification for conducting randomized controlled trials (RCTs) and found that nearly half of the included RCTs did not cite a single SR. The purpose of our study is to explore the level of adherence to guidelines and where a literature search was incorporated and documented SRs were used as justification for conducting a RCT and the amount of research waste as a consequence. To date, no other study to our knowledge has analyzed use of SRs as justification for conducting RCTs in otolaryngology.

## METHODS

We performed a meta-epidemiological cross-sectional study of randomized controlled trials published in top peer reviewed otorhinolaryngological journals according to Google Scholar Metrics. Authors were blinded and data was extracted from the included studies using a Google Form. Data points extracted included the name of the study, the year and journal in which the study was published, whether or not a study cited a systematic review in the introduction, methods and discussion. If a study did cite a systematic review, we recorded whether or not that study used that systematic review as justification for the trial.



\*Image provided by CEBM



## RESULTS

Our Pubmed search was performed on October 16th, 2018 and returned 304 results. Of the 304 articles retrieved, 151 were included. Studies that were excluded in the primary screen were either not RCTs (n=142), or were secondary analysis of previous RCTs (n=4). Seven studies were excluded because the full manuscript was behind a paywall. Overall, 58.3% (88/151) of studies referenced at least one systematic review while shockingly, 41.7% (63/151) articles did not reference at all a systematic review. Possibly even more alarming is the fact that only 27% (24/88) that did cite at least one SR mentioned the SR as justification for conducting the trial and only 17% (15/88) of studies cited verbatim that a SR implicated the need for a RCT to further gaps in knowledge. This shows that of the 88 studies that did include a SR in their research, 55.6% (49/88) did not use a systematic review to justify conducting a RCT.

## CONCLUSION

Based off of our findings, we recommend that efforts be taken to reduce research waste by using systematic reviews and meta-analysis as justification for conducting RCTs. By doing so, greater emphasis may be placed on attaining high quality, evidence-based data when conducting RCTs in otolaryngology and decrease the amount of research waste.