Overstatement of results in the nutrition and obesity peer-reviewed literature.

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Authors

Menachemi, N, Tajeu, G, Sen, B, Ferdinand, AO, Singleton, C, Utley, J, Affuso, OH, Allison, DB

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Abstract

BACKGROUND: Scientific authors who overreach in presenting results can potentially, without intending to, distort the state of knowledge and inappropriately influence clinicians, decision makers, the media, and the public.

PURPOSE: The goal of the study was to determine the extent to which authors present overreaching statements in the obesity and nutrition literature, and whether journal, author, or study characteristics are associated with this practice.

METHODS: A total of 937 papers on nutrition or obesity published in 2001 and 2011 in leading specialty, medical, and public health journals were systematically studied to estimate the extent to which authors overstate the results of their study in the published abstract. Focus was placed on overreaching statements that may include (1) reporting an associative relationship as causal; (2) making policy recommendations based on observational data that show associations only (e.g., not cause and effect); and (3) generalizing to a population not represented by their sample. Data were compiled in 2012 and analyzed in 2013.

RESULTS: Results indicate that 8.9% of studies have overreaching conclusions with a higher percentage in 2011 compared to 2001 (OR=2.14, risk difference=+3.9%, p=0.020). Unfunded studies (OR=2.41, p=0.039) were more likely to have an overstatement of results of the type described here. In contrast, those with a greater number of coauthors were significantly less likely than those with four or fewer authors (the
reference group) to have overstated results
(seven or eight authors: OR=0.30, risk
difference=-6.1%, p=0.008; ≥9 authors:
OR=0.41, risk difference= -4.0%, p=0.037).

CONCLUSIONS: Overreaching in presenting
results in studies focused on nutrition and obesity
topics is common in articles published in leading
journals. Testable strategies are proposed to
reduce the prevalence of such instances in the
literature.