Comment on "Health Coaching: 100 Strategies for Weight Loss: A Systematic Review and Meta-Analysis"

Dear Editor:

In their meta-analysis on health coaching strategies for weight loss, Sieczkowska et al. (1) concluded that available evidence is not of "sufficient quality" to support the use of self-reported health coaching as an intervention for weight loss. Given their chosen methods and data interpretation, we argue this conclusion is premature and possibly inaccurate. The authors' choice to include any published article self-reported as "health coaching" is problematic and not acceptable at this point in the development of the field of health coaching.

We have published 2 papers (2, 3) using a standardized definition and criteria for health coaching. This definition agrees with the one used by the National Board of Health and Wellness Coaches (NBHWC), which is the leading body certifying health coaches. NBHWC is a nonprofit affiliate of the National Board of Medical Examiners, responsible for the development of physician licensing examinations in the United States since 1915. The NBHWC is referred to in the Current Procedural Terminology (for health care services recording and billing) codes for health and well-being coaching services recently approved by the American Medical Association (AMA). Accordingly, health and wellness coaching is a patient-centric process whereby coaches assist clients to use insight, personal strengths and resources, goal setting, action steps, and accountability to achieve healthy lifestyle change. There is an accepted knowledge base for health coaching—an "episteme"—that should be recognized and applied.

Sieczkowska et al. provided a definition of health coaching in their Introduction, and this is similar to the NBHWC definition. Ideally, Sieczkowska et al. would have used that definition to provide objectivity for inclusion criteria in their study. Instead, Sieczkowska et al. collected "coaching" studies and stated, "given the lack of a consensual definition of health coaching, and to better capture all the possible ways this intervention has been employed in the literature, we included any study described as 'coaching' by the authors." In our compendium (2, 3) we identified 58 peer-reviewed papers as health coaching to treat obesity. In this process, >100 papers did not meet standardized criteria, although many of these papers claimed to be "coaching." In fact, of 58 articles meeting criteria for a standard health coaching definition, only 8 were included in the primary meta-analysis by Sieczkowska et al. Not using standardized criteria for inclusion is likely to result in acts of omission and commission when selecting papers, leading to a poor representation of the health coaching literature.

Another potential shortcoming of this paper is the strict interpretation of Cohen's *d* and quick dismissal of significant, yet small, effect sizes as "trivial." A small effect size should always be interpreted with consideration for the underlying outcome measure. Glass et al. (4) decried that there is no wisdom in associating effect size metrics with small, medium, large unless the context is fully understood. These authors further argued that a huge effect size (e.g., 2.0) might be "poor" while one of 0.1 might be "good." Glass is one of the creators of the meta-analysis technique. A similar conclusion was reached by Kraft (5) of Brown University when describing results from educational interventions—effects that are small by Cohen's standards are large relative to the impacts of most field-based interventions. In this context, he went on to further define an effect size of 0.05–0.20, such as those seen in the Sieczkowska et al. (1) paper, as moderate.

Weight loss is extremely difficult to achieve and only a 5% decline in body mass is considered clinically significant (6). Therefore, a rather small change or difference in weight, relative to the SD of body weight, can be rather important. If Sieczkowska et al. (1) had provided raw mean differences in addition to effect size then readers could understand if a very low, but significant calculated *d* represented >5% weight loss and had clinical relevance. Without knowing mean weight loss achieved in these studies it is difficult to judge practical importance. When 15 of 16 studies consistently find a positive intervention effect there is something to be further investigated and not dismissed as trivial. Glass might say this is context for discussion.

The question of interpreting effect size aside, the paper in question simply does not present a representative look at the true health and wellness coaching literature. With published papers and the NBHWC providing standards for health and wellness coaching, the lack of defining criteria to select studies for a meta-analysis cannot be overlooked. There was a call to better define the field of health coaching (7); that call was heard, answered (8), and essentially adopted by the NBHWC and AMA. Those currently publishing health and wellness coaching research should accept and make use of this definition and not fall back on the claim that health coaching lacks guiding concepts and a clear definition. When doing a meta-analysis, failure to adopt established criteria to select health-coaching papers will result in an unrepresentative literature sample and potentially faulty conclusions.

Gary A Sforzo
Margaret Moore
Geoff E Moore
Sebastian Harenberg

Adv Nutr 2021;12:1042–1046; doi: https://doi.org/10.1093/advances/nmab020.

From Exercise Science and Athletic Training, Ithaca College, Ithaca, NY, USA (GAS, e-mail: sforzo@ithaca.edu); Wellcoaches Corporation (MM); Wellcoaches Digital, LLC, Wellesley, MA, USA (GEM); and Department of Human Kinetics' StFX University, Antigonish, Nova Scotia, Canada (SH).

The authors reported no funding received for this letter.
Author disclosures: Potential conflicts of interest: MM is CEO of Wellcoaches Corp and GEM is CMO of Wellcoaches Digital. GAS is a research advisor for Wellcoaches. SH reports no potential conflict of interest.
All authors read and approved the final manuscript.

References

1. Sieczkowska S, Padilha de Lima A, Swinton PA, Dolan E, Roschel H., Gualano B. Health coaching strategies for weight loss: a systematic review and meta-analysis. Adv Nutr 2020;1–12. https://doi.org/10.1093/advances/nmaa159.
2. Sforzo GA, Kaye MP, Todorova I, Harenberg S, Costello K, Cobus-Kuo L, Faber A, Frates E, Moore M. Compendium of the health and wellness coaching literature, Am J Lifestyle Med 2017;12:436–47.
3. Sforzo GA, Kaye MP, Harenberg S, Costello K, Cobus-Kuo L, Rauff E, Edman JS, Frates E, Moore M. Compendium of the health and wellness coaching: 2019 addendum. Am J Lifestyle Med 2019;14:155–68.
4. Glass GV, McGaw B, Smith ML. Meta-analysis in social research. Beverly Hills (CA): Sage; 1981.
5. Kraft MA. Interpreting effect sizes of education interventions. Educational Researcher 2020;49(4):241–53.
6. Jensen MD, Ryan DH, Donato KA, Apovian CM, Ard JD, Comuzzie AG, Hu FB, Hubbard VS, Jakicic JM, Kushner RF, et al. Guidelines for managing overweight and obesity in adults. Obesity 2014;22:S1–410.
7. Wolever RQ, Eisenberg DM. What is health coaching anyway? Standards needed to enable rigorous research. Arch Intern Med 2011;171(22):2017–8.
8. Wolever RQ, Simmons LA, Sforzo GA, Dill D, Kaye M, Bechard EM, Southard ME, Kennedy M, Vosloo J, Yang N. A systematic review of the literature on health and wellness coaching: defining a key behavioral intervention in healthcare. Glob Adv Health Med 2013;2(4):38–57.

doi: https://doi.org/10.1093/advances/nmab020

Reply to GA Sforzo

Dear Editor:

Sforzo et al. (1) criticized our systematic review and meta-analysis (2) due to an alleged lack of a standardized definition of health coaching, leading to a "problematic" selection of studies. In their latest compendium on health coaching (3), the authors stated that "Health and wellness coaching is an emerging discipline championing healthy behavior change as means of averting or mitigating chronic lifestyle related diseases." In selecting studies for their compendium, they used the following criteria: "Training: Health coach was trained and used behavior change theory and coaching processes; Professionals: Health coach was a trained health care professional; Goals: Patient partially or wholly determined behavior change or health goals; Accountability: Patient progress was monitored; Relationship: Patient–clinician relationship provided opportunity to develop (one coach per patient and at least 3 sessions)." These criteria demonstrate how open and vague definitions of "health coaching" really are, given that they can equally be applied to most lifestyle interventions, with no clear distinctions between coaching and other behavioral programs. Adding confusion to these already subjective criteria, the authors stated that "inclusion was at the discretion of the reviewer in that not all criteria had to be met for an article to be retained." This means the authors could select studies involving any sort of lifestyle intervention. For instance, studies by Janssen et al. (4) and Lin et al. (5), which were included in the compendium, actually investigated the use of motivational interviewing–based lifestyle interventions, conducted by psychologists (4) or nurses (5). Motivational interviewing, which has been studied and implemented long before the emergence of health coaching, is a behavioral technique based upon robust principles of experimental social psychology and applying processes, such as attribution, cognitive dissonance, and self-efficacy (6). There was not a single mention of "health coaching" in the original manuscripts (4, 5). Therefore, it is difficult to justify their inclusion in a health coaching compendium. To avoid similar selection bias, for our review we opted to select those studies that self-defined their interventions as health coaching. Amidst such an uncertainty, we deemed the researchers themselves to be best placed to define their own intervention.

Notwithstanding, as the authors claimed that our outcomes were influenced by our selection criteria, we analyzed the quality of those studies included in their compendium but not in our review ($n = 16$) using the same quality assessment described in our study (2). We found that 56% were of very low, 6% of low, 19% of moderate, and 19% of high quality. This aligns well with our original data, in which 58% of the studies were of very low, 13% of low, 8% of moderate, and 21% of high quality, thus supporting our main conclusion that health coaching literature lacks quality, irrespective of selection criteria.

The authors also criticized our meta-analytic approach, particularly the interpretations based on effect sizes. The choice of how to pool and present data in a succinct, informative, and robust manner is challenging indeed. Given the relatively small number of studies and common reporting of weight, BMI, or waist circumference, it was decided that it would be best to pool all 3 measurement outcomes as standardized effect size. It provides an intuitive understanding of how future individuals performing similar interventions would be expected to change relative to the sampled population. In their letter, the authors quote the importance of considering reported effect sizes within the context of what is expected for specific interventions. And this is exactly what we did. A change of 0.1 SD demonstrates very little change relative to the population, and taking into consideration the use of only high-quality research, this shrinks to 0.04 SDs. Putting that into perspective, meta-analytic data on motivational interviewing for weight loss show standardized effects to the order of ∼0.5–0.7 SDs (7, 8), at least ∼5 times higher than those seen in our