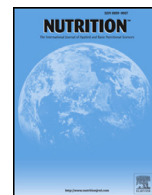


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Letter to the editor

Author's response to comment on "Determinants of malnutrition among children: A systematic review"

To the Editor

I have read with great interest the letter to the editor submitted by Keikha and Kelishadi regarding my article, titled "Determinants of malnutrition among children: A systematic review", which was published in *Nutrition* in 2022 [1]. I would like to address the concerns raised by Keikha and Kelishadi [2] regarding methodological and conceptual problems. These concerns included conducting a systematic review, its dimensions, and using databases to search for evidence; the use of search strategies, time limitations, and the type of articles included; the concept of malnutrition used and references/citations; and related evidence, steps in the systematic review, and registering the protocol.

I thank Keikha and Kelishadi [2] for pointing out some minor mistakes in the text that need an explanation. The systematic review explored factors associated with the prevalence of malnutrition among children. According to this study, maternal education, household income, maternal nutritional status, age of the child, access to sanitation at home, size of the family, order of birth, and child's birth weight were the most consistent factors associated with child malnutrition [1]. Systematic reviews must have more than one author to avoid bias and ensure that judgment is unbiased, but if care is taken by one author, the purpose can be achieved [3].

Malnutrition is caused by a variety of factors that are interconnected [4]. For instance, an inadequate dietary intake may result in a child getting sick more often, which in turn reduces appetite, inhibits the absorption of food nutrients, and may damage earning capacity later in life, which then further aggravates poverty and contributes to malnutrition. Thus, all aspects of malnutrition need to be explored. A systematic review should consult more than two databases, but many studies only use a single one [5]. Researchers have found that, when specific searches are conducted, Google Scholar finds the majority of the literature identified using other databases [6]. Therefore, using Google Scholar as a sole database is not as disadvantageous as using other databases.

Constructing a search strategy that incorporates synonyms, endings of words, phrases, and abbreviations is vital when conducting systematic reviews. The methodology used in this systematic review [1] incorporated all these components. To include all

studies conducted to date is not possible in one systematic review, and a time limitation is necessary. Although the study period was limited from 2012 to 2021, one study conducted in 1996 was included inadvertently for analysis. Rarely can we find all studies published throughout history, and even if we can, the bulk of the work may be too large to review. Thus, we often limit our searches to certain publication periods by looking at publication dates [7]. None of the articles included in the review had participants with an average age of 80 y, and if there were, they could be the parents of children who were analyzed.

According to the World Health Organization [8], malnutrition occurs when energy and/or nutrients are inadequate, excessive, or imbalanced, and is grouped into two broad categories. The first category is undernutrition, which includes stunting (low height for age), wasting (low weight for height), and being underweight (low weight for age). Overnutrition is the other category, and includes being overweight, obesity, and diet-related noncommunicable diseases (e.g., heart disease, stroke, diabetes, and cancer). The reference was assessed from Research Gate [9] and thus not invalid.

The bulk of the work may be too large and complicated to review, and would require more time and energy. As such, integrating all related evidences into one review is not possible; therefore, a time limit is required. We completed most of the critical steps in the systematic review process, but will take care of the remaining ones in the future.

I thank Keikha and Kelishadi for their interesting and constructive suggestions that persuaded me to take another look at my old work. I acknowledge that while proofreading this document, I missed a few errors that should have been corrected. Even so, I hope I addressed all points adequately, and encourage every author to keep critically reviewing the literature they read.

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