

Effects of water, sanitation and hygiene (WASH) interventions on nutritional status of children: A systematic review and meta-analysis

Workneh Zemichael Gizaw

Department of environmental and occupational health and safety, University of Gondar, Ethiopia.

Abstract:

Under nutrition is linked with poor water, sanitation and hygiene (WASH) condition. However, there is conflicting evidence on the effect of WASH on nutritional status of children. This review was, therefore, conducted to estimate the pooled effect of WASH interventions on child under nutrition.

Methods:

All published and unpublished cluster-randomized, non-randomized controlled trials, and before and after intervention studies conducted in developing countries were included. Relevant articles were searched from MEDLINE/PubMed, Cochrane Collaboration's database, Web of Science, WHO Global Health Library, Google Scholar, Worldcat and ProQuest electronic databases. The methodological quality of the included studies was assessed using JBI critical appraisal checklist for randomized and non-randomized controlled trials. The risk of bias was assessed using the Cochrane Collaboration's tool for assessing risk of bias in randomized trials. The treatment effect was expressed as standardized mean differences (SMD) with 95% confidence interval (CI).

Conclusion: WASH interventions were significantly associated with increased mean height-for-age-z score in under five years old children. The effect of WASH on linear growth is markedly different with age and types of interventions, either single or combined. Implementing combined WASH interventions has a paramount benefit to improve nutritional status of children.



Biography:

Zemichael is a well presented, self-motivated and confident public health professional who has extensive knowledge and skill of how to successfully investigate public health problems along with the ability to communicate complex and sensitive information about public health matters. I have ample teaching and research experiences. He has been teaching different public health courses including epidemiology and research methodology both graduate and undergraduate students. He is also certified trainer on teaching methodology. He published 33 research articles in internationally reputable journals. His research interest is on sanitation related infectious diseases and common public health outcomes like malnutrition.



Speaker Publications:

- Workneh Zemichael Gizaw et al; Sick building syndrome and associated risk factors among the population of Gondar town, northwest Ethiopia, Jan 2020.
- Workneh Zemichael Gizaw et al; Dembiya, Northwest Ethiopia: A Community-Based Cross-sectional Study, Dec 2019.
- Workneh Zemichael Gizaw et al; Indoor bacterial load and its correlation to physical indoor air quality parameters in public primary schools, Dec 2019.
- Workneh Zemichael Gizaw et al; Public health risks related to food safety issues in the food market: a systematic literature review, Nov 2019.

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