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LETTER TO THE EDITOR

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A Case Study on the Significance of the Explicit and Tacit Knowledge in Environmental Health: A Letter to the Editor on the "Pesticide Use Practice and Associated Factors Among Rural Community of Malga District, Sidama Regional State, South Ethiopia"

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Dear Editor,

The insightful article by Lelamo et al,[1] on pesticide use in the rural community of Malga District, provides important evidence for the significance of the following 7 pillars which are of paramount importance in environmental health management: (a) explicit knowledge, (b) tacit knowledge, (c) awareness raising, (d) environmental regulation and monitoring, (e) poverty reduction, (f) personal protection, and (g) innovation, which is closely related to the acquisition of both explicit and tacit knowledge.

According to the main findings of the study, the safer utilization of pesticides was positively associated with formal education (ie, explicit knowledge) and experience (ie, tacit knowledge). Moreover, the impact of the purchasing place—source—of the chemical products reveals the importance of environmental regulation and monitoring, since organized retail structures were found to be more "environmentally friendly" compared to local markets. Another significant finding is the impact of the lack of personal protection measures when handling pesticides. This emphasizes the need for awareness raising and addressing the supply and cost of personal protection equipment, which may increase the economic burden on low-income workers.

Furthermore, according to relevant official data, the number of new cancer cases in the female population of Ethiopia is almost double that in the male population.[2] Ethiopian women are at a higher risk of developing cancer, which is one of the most significant health impacts of pesticide use. While cancer has a multifactorial cause, it is crucial to record all the routes through which women are directly or indirectly exposed to carcinogenic chemicals. Considering that the participants in this study are mainly men, it is important to obtain further insights into their probable role in the pesticide exposure of their female relatives. Specifically, it is necessary to document all routes of women's everyday exposure to hazardous chemical substances, including the potential exposure resulting from laundering agricultural work clothes at home.

A brief review of the available literature reveals the undisputed fact that Ethiopia urgently needs to manage pesticide use, which is responsible for numerous domestic health impairments, including cancer.[3] Ethiopia may serve as a case study for the urgent need to control pesticide use and mitigate environmental pollution and relevant health risks, similar to how Bangladesh and Tuvalu serve as case studies for climate change and sea level rise.[4,5] This underscores the didactic importance of the article of Lelamo et al, which should be incorporated into various teaching materials related to pesticide management.

There is also an urgent need to adopt innovative approaches in pesticide management that are characterized by both effectiveness and low cost, considering the economic instability of developing countries. For instance, certain low-cost artificial intelligence applications, that can be applied in environmental management and everyday practices which are either directly or indirectly related to environmental health, could play a complementary role in protecting the rural population from pesticide mismanagement.

Overall, apart from substantially contributing to the literature on pesticide use in Ethiopia, the article by Lelamo et al generates fruitful discussion on the aforementioned environmental health pillars. We strongly believe that, in addition to their contribution to the relevant literature, such articles have clear didactic value in environmental health education. In particular, the findings of such studies reveal the multidimensional nature of environmental health management, its dependence on parameters such as local vulnerability, the need to disseminate explicit and tacit knowledge, and the importance of awareness raising and innovative low-cost solutions.

Author Contributions

SM: Conceptualization, Writing—original draft. NK: Writing—review and editing.

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