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The interconnections between household energy, health, and climate change: a comprehensive umbrella review

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Household energy is becoming increasingly important for the maintenance of good health, especially as people spend 90% of their lifetime indoors. However, there are a number of health and climate impacts associated with the generation and use of household energy. To date, there is no holistic picture in the literature describing the interlinkages between household energy, health outcomes and climate change. In order to systematically synthesize the fragmented evidence, an umbrella review will be conducted.

Therefore, a systematic review of peer-reviewed literature was carried out following PRISMA guidelines. Five electronic databases were searched (PubMed, Web of Science, Google Scholar, Cochrane and Scopus) to assess available literature on climate change, health and household energy, from January 1, 1900 through to June 5, 2023.

Preliminary findings highlight the dynamic interactions between the three issues, e.g., the impact of climate change on energy use/production and health outcomes, as well as the impact of different methods of energy use/production on climate change and health outcomes. In addition, the lack of consideration of the current literature on climate change in the context of health and energy is a further finding of the umbrella review. Furthermore, the literature reviewed tends to ignore inclusion criteria (e.g., gender, socioeconomic or spatial aspects), which are also essential for a just transition to a more climate-friendly society in the future.

The goal of the umbrella review is to help policymakers understand the complex interrelationships between the three topics, both now and in the future, as climate change progresses and humanity is forced to adopt different mitigation and adaptation methods that affect energy use and production, as well as health outcomes.