Background and Purpose

Exposure to wildfire smoke is increasingly commonplace and is especially harmful to people with pre-existing respiratory conditions, such as asthma.

Parts of the world are becoming hotter and drier, which will increase wildfire prevalence, intensity, duration and frequency. Changing climates, forest management, and land use have extended the impact of wildfires for longer periods and led to urban and suburban communities. This extension into areas with greater population density places more people at risk.

Wildfire smoke is a mixture of hazardous air pollutants and airborne particulate matter (PM).

The purpose of this scoping review is to broadly explore research on the health effects of wildfires and nursing’s contribution to the science. A scoping review is used to explore the extent and type of research being conducted in an area, identify research gaps, and determine if a systematic review is feasible or needed.

Methods

PubMed, CINAHL and Google Scholar databases were searched for articles using MeSH and search terms including “nursing” and “wildfires,” “particulate matter,” “smoke” and “theory.”

Nursing’s contribution was classified as published in a nursing journal including at least one nurse author.

Results

Of 8 in nursing journals (See tables 1-3 and figure 1)

Conclusion and Implications for Research and Practice

This scoping review examined publications related to wildfires and health and explored the nursing science contributions. Over three quarters of the articles focused on studying the health effects of exposure to wildfire smoke. Further randomized-controlled trials measuring preclinical changes to lung function would strengthen our knowledge of health effects from wildfire smoke.

Nursing’s contribution to wildfire research needs to increase to meet the demands of this rapidly growing, international problem. Nurses are key in conducting research and translating results to hospital, clinical, and community settings.

Limitations

A major limitation of a scoping review is the lack of an assessment of article quality. However, we balanced that weakness with our overall purpose, which was broad.

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More research from nurses and other disciplines is needed in all areas of wildfires and effects to human health, including vulnerable populations, long-term effects, health within school, occupational health, health of effects, and consequences of smoking wildfires. Randomized-controlled trials measuring preclinical changes to lung function would strengthen our knowledge of health effects from wildfire smoke.

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