



How does wildfire smoke impact early-life health and later-life socioeconomic status?

Sarah Meier, PyroLife ESR



CONTEXT

Wildfire smoke is often associated with immediate health concerns, but what about its effects years down the line? While the short-term health impacts of smoke exposure are well-documented, the long-term consequences remain less understood. Sarah Meier and collaborators delve into this important issue by examining the aftermath of the Great Fire of 1910, one of the largest wildfires in US history.

They investigate how exposure to wildfire smoke during early childhood impacts short-term health and long-term socioeconomic status. To do this, they combine detailed historical data on burned areas, sophisticated smoke dispersion models and comprehensive records, including death certificates and census data from 1900 to 1940.

OUTCOMES

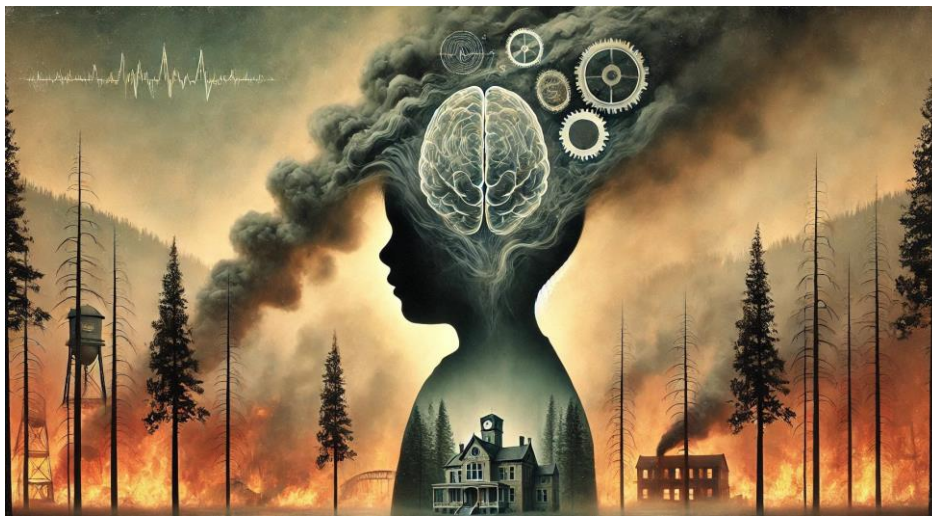


Image: a representation of the impacts on well-being of exposure to wildfire smoke during early childhood.

Wildfire smoke exposure has significant short and long-term effects on under-five-year-olds:

- Their mortality rate increased by approximately 120% during the week of the Great Fire.
- They showed lower socioeconomic outcomes 20-30 years postexposure, ranking 7-11% lower on socioeconomic status scores including earning 4% less than non-exposed children.

IMPACT ON WILDFIRE MANAGEMENT

- Apply a holistic approach to wildfire management that consider long-term impacts of wildfire smoke on human well-being.

RECOMMENDATIONS FOR POLICYMAKERS

- Value the protection of vulnerable populations from the detrimental impacts of wildfire smoke.
- Raise awareness about the severe immediate and long-term health effects of wildfire smoke.
- Promote early intervention to mitigate the socioeconomic disadvantages of individuals exposed to wildfire smoke as children.
- Prioritise the development of comprehensive public health strategies that address the adverse consequences of wildfire smoke exposure, ensuring that all communities, especially those with fewer resources, have access to effective protective measures.

FULL ARTICLE: Meier, S., Strobl, E. & Elliott, R.J.R. (2024). The impact of wildfire smoke exposure on excess mortality and later-life socioeconomic outcomes: The Great Fire of 1910. *Cliometrica*. Freely available at: bit.ly/3O0RQ8S

Collaborators



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