Abstract:

Pollution is harmful to human physical health and wellbeing. What is less well established is the relationship between adolescent mental health – a growing public health concern – and pollution. In response, we systematically reviewed studies documenting associations between pollution and mental health in adolescents. We searched Africa Wide, Medline, PsycArticles, PsycInfo, PubMed, CINAHL, ERIC, SciELO, Scopus, and Web of Science Core Collection for studies published up to 10 April 2020 that investigated exposure to any pollutant and symptoms of anxiety; depression; disruptive, impulse-control, and conduct disorders; neurodevelopmental disorders; psychosis; or substance abuse in 10-24-year-olds (i.e., adolescents as per expanded and more inclusive definition of adolescence). This identified 2291 records and we assessed 128 papers for inclusion. We used a narrative synthesis to coalesce the studies’ findings. This review is registered on PROSPERO, CRD42020176664. Seventeen studies from Asia, Europe, the Middle East, and North America were included. Air and water pollution exposure was associated with elevated symptoms of depression, generalised anxiety, psychosis, and/or disruptive, impulse control and conduct disorder. Exposure to lead and solvents was associated with neurodevelopmental impairments. Most studies neglected factors that could have supported the mental health resilience of adolescents exposed to pollution. Notwithstanding the limited quality of most reviewed studies, results suggest that pollution exposure is a risk to adolescent mental health. High-quality research is
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Key words: pollution; psychopathology; multisystemic resilience; systematic review; young people
A Systematic Review of the Mental Health Risks and Resilience among Pollution-Exposed Adolescents

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Authors’ contributions. LT led the conceptualization of the review with input from all authors. LS1 and LS 2 conducted the data-base search; YAV, CB, MECL, GPA, MAO, LG, LL, IM, AT, KH, LT facilitated screening and initial study selection; NG, SM, KH & LT facilitated the final selection and data extraction. LT and KH conducted quality and bias assessments and analyzed the data; all other authors confirmed the analysis. LT and KH wrote the first and final drafts of the review. All other authors provided valuable editorial input to the drafts.

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