LOCAL RESOURCES AND HEALTH

Overview of knowledge synthesis

Parks, roads, supermarkets, apartment buildings and community centers shape our everyday lives. The quality and quantity of these local resources vary depending on the living environment. Is there a connection between urban populations' access to these resources and their health and well-being?

To answer this question, we conducted an in-depth study of the scholarly literature in four areas: sustainable mobility, food environment, housing and community life (see the study overview on page 4). This fact sheet provides a summary of our results on housing.

HOUSING

HOUSING is a vast area with three dimensions: symbolic (home), environmental (physical and social location) and material. We studied the material dimension, which "... includes the physical integrity of the home (e.g., need for repair) and residents' exposure to physical, biological and chemical hazards in the home". This dimension also encompasses affordability, since the financial resources put into housing can limit investments (or expenditures) in other resources aimed at improving occupants' health. Finally, the market forces that govern housing were also included"[1] for their impact on the redistribution of wealth at the population level.

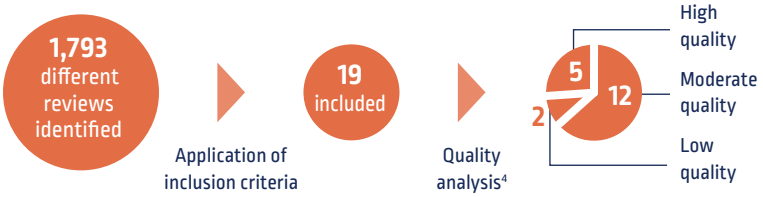
We obtained results for the following resources: biological pollutants, chemical pollutants (most frequently studied, radon, newly identified), indoor painting and renovation, ventilation, physical environment and material environment. Various associations were found between these resources and respiratory health, lung cancer, physical activity, cardiovascular health and mental health. However, no results were found regarding overcrowding, infestations, spatial layout, accessibility and housing affordability, or for diabetes, healthy weight, tobacco use, traumas, healthy eating, perceived health and well-being.

HIGHLIGHTS

As you can see from the center pages, most of the knowledge syntheses on housing deal with indoor air quality and respiratory diseases in children.

The high quality syntheses suggest that biological pollutants (mold and dampness) are clearly associated with an increase in respiratory diseases in children, such as asthma. **Half of the moderate quality syntheses** show clearly unfavorable or unfavorable trend associations for respiratory health, especially between the most frequently studied chemical pollutants (nitrogen dioxide and formaldehyde) and respiratory health. However, two of these studies conclude that the presence of mold or dampness is, conversely, associated with a lower prevalence of respiratory diseases in children. Indeed, exposure to respiratory irritants during childhood may protect against the development of allergy-caused diseases. Finally, in one synthesis, housing related financial distress is clearly unfavorable to cardiovascular health and mental health in the elderly.

Most of these 19 syntheses are based on European, North American and Australian studies. They cover 174 original and relevant studies. This is the only area with fairly robust research designs (cohort and case-control studies). However, it remains difficult to pinpoint which air pollutants are responsible for the observed health effects, and to distinguish between the effects of exposure within and outside the home. Most of the excluded syntheses were not in fact knowledge syntheses.



An academic article is under development.

For additional information:
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LOCAL RESOURCES AND HEALTH

HOUSING

HEALTH VARIABLES ▶ **RESPIRATORY HEALTH**

HOUSING RELATED RESOURCES ▼

AIR QUALITY

- BIOLOGICAL POLLUTANTS (DAMPNESS AND MOLD)
- MOST FREQUENTLY STUDIED CHEMICAL POLLUTANTS
- RADON
- NEWLY IDENTIFIED CHEMICAL POLLUTANTS
- INDOOR PAINTING AND RENOVATION ACTIVITIES
- VENTILATION

- PHYSICAL ENVIRONMENT LESS PRIVATE SPACES (EX. GARDENS)
- MATERIAL ENVIRONMENT HOUSING RELATED FINANCIAL DISTRESS (EX. PROPERTY FORECLOSURE)

Each dot corresponds to an association between a resource and a health variable.

Low quality reviews are excluded.

Empty space: no results available.

QUALITY OF REVIEWS

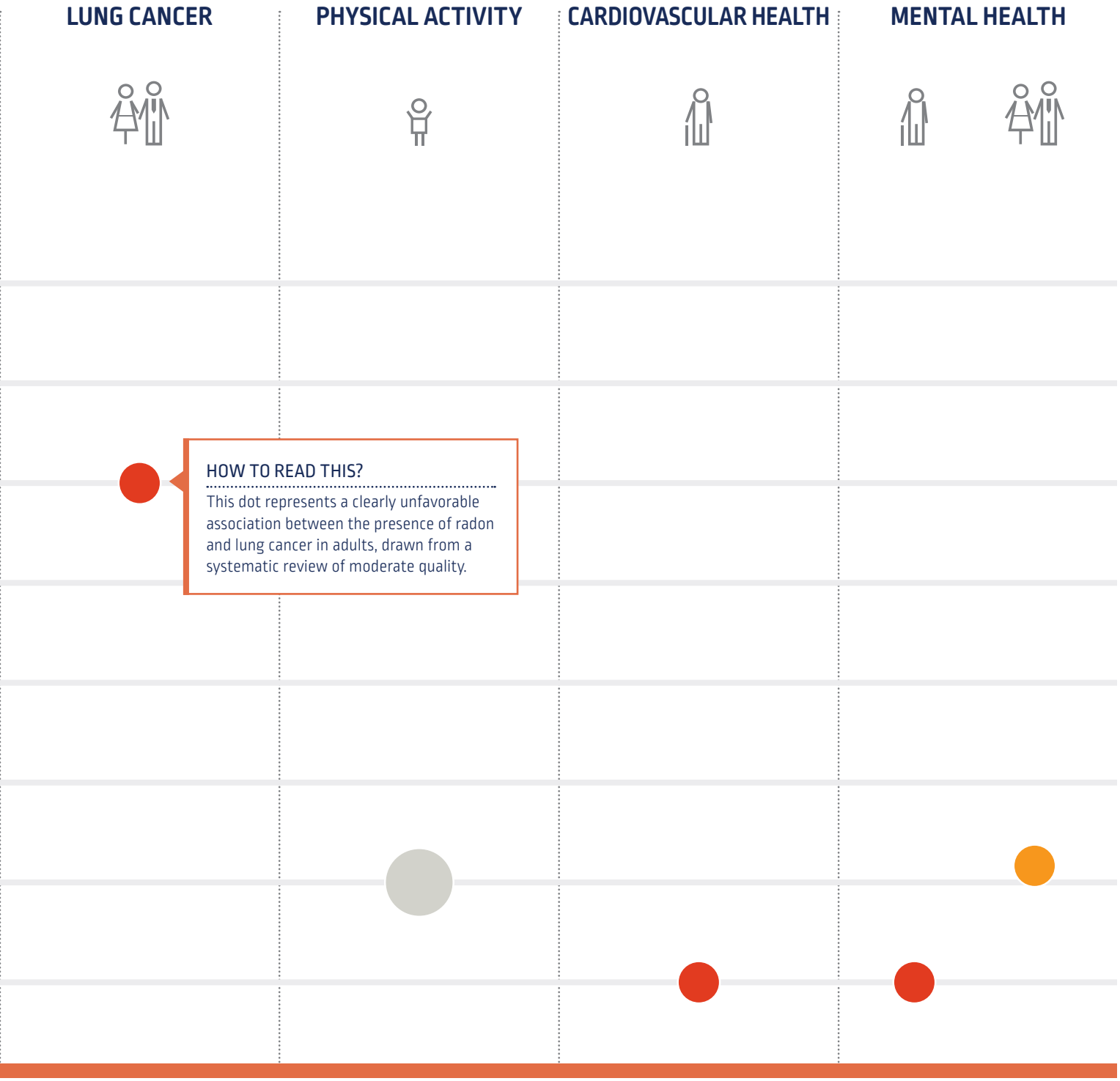
High quality
AMSTAR scores between 8 and 11

Moderate quality
AMSTAR scores between 4 and 7

ASSOCIATIONS BETWEEN HEALTH AND THE PRESENCE OF LOCAL RESOURCES RELATED TO HOUSING

www.chairecacis.org

Perreault, K., Braën, C., Perez, E., Riva, M., Boyer, G., Rehany, É., Potvin, L. 2017



OUR METHODOLOGY AT A GLANCE

The overarching purpose of this study is to provide **a rigorous update of the scholarly knowledge** on associations between characteristics of the food environment, community life, material housing conditions, sustainable mobility, and the physical and mental health of urban populations.

The results here presented are based on an umbrella review, i.e., a rigorous analysis[2] of scholarly works that have synthesized original studies on one of the four areas concerned. The analyzed reviews had to deal with general populations residing in urban neighborhoods of OECD countries; be published in English, French or Spanish between 2008 and 2016; and specify their methodology.

A literature search strategy was applied to 11 databases (6 to 10 per area: Sociological Abstracts, Embase, Medline, etc.) and supplemented with research in the grey literature and the reference lists of the included articles. Review selection and data extraction were performed by two independent reviewers. To assess the quality of methodology in the included syntheses (high, moderate or low), the AMSTAR tool[3] was used.

The present study excluded knowledge syntheses on the health effects of participation in an intervention within the areas concerned, as well as syntheses on associations between the resources and special needs populations or patient types.

AVENUES FOR ACTION AND RESEARCH*

- **Making elected officials and decision-makers better aware of this local population perspective** via training and tools:
  - **to assist decision-making** on regulations and actions to adopt, for example improving living environments including air quality, diminishing the stigma associated with unsanitary conditions, or supporting efforts to uphold citizens' rights;
  - **to advocate** for public policies promoting healthy residential environments, specifically by rallying the interests of stakeholders in public and municipal health.
- **Continuing** partnership research on:
  - affordability, overpopulation, residential instability and the everyday challenges of living with neighbors, especially individuals with mental health problems;
  - ways to take housing into account in public policies (e.g., pertaining to families and children).
- In this area as in the others, **demonstrating caution in the use of "evidence-based data,"** given the number of low and moderate quality reviews and the disparities encountered between different definitions of concepts and measures.

* Our thanks go to the 30 or so stakeholders and managers from the municipal system, health network, and community sector who took part in a workshop on April 19, 2018 to help guide the content for this section.

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1 Dunn, J. R., Deacon, P. 2002. L'approche de la santé de la population en fonction du logement : cadre de recherche, Ottawa, Gouvernement du Canada, Société canadienne d'hypothèques et de logement, p. 51.

2 The detailed protocol is available here: BRAËN, C., PEREZ, E., DESLAURIERS, V. , MERCILLE, G., PERREAULT, K., BILODEAU, A., REHANY, É., POTVIN, L. 2016. Local resources favorable to health: an umbrella review. University of York, Centre for Reviews and Dissemination. Prospero reference no. CRD42016051609. https://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42016051609

3 The standardized AMSTAR (A Measurement Tool to Assess Systematic Reviews): https://amstar.ca/index.php

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