

Housing as a Socio-Economic Determinant of Health

Findings of a National Needs, Gaps and Opportunities Assessment

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ABSTRACT

Background: In 2002-2003, a Needs, Gaps and Opportunities Assessment (NGOA) was conducted to investigate relationships between socio-economic dimensions of housing and health. Recent reviews of the literature point to a dearth of research on the socio-economic dimensions of housing and health, despite its potential for promoting health.

Methods: The NGOA sought to identify research needs and gaps, and future opportunities for research in housing, socio-economic status and health. The methods used included a literature scan, a scan of research capacity, eight regional stakeholder workshops across Canada, and an open-ended e-mail survey of stakeholders. In this paper, we report the findings of the stakeholder consultations.

Findings: The main finding of the NGOA was that there is a significant dearth of research on housing as a socio-economic determinant of health but enormous potential for conducting high-impact, longitudinal and quasi-experimental research in the area. Of particular interest to stakeholder participants in the NGOA were the economic aspects of housing and health; the impact of housing on health for vulnerable subgroups (e.g., Aboriginal peoples, immigrants, children, seniors); the role of socio-economically and ethnically mixed communities; and the interaction between socio-economic aspects of housing and biophysical hazards in the home.

Conclusion: The NGOA demonstrated that there is a substantial audience eager for knowledge on housing as a socio-economic determinant of health and that such knowledge could make an immediate impact on policy decision-making and program operation. Although knowledge gaps are substantial, the NGOA clearly identifies opportunities for high-impact, longitudinal and quasi-experimental research. Recently signed federal-provincial funding agreements for housing make the findings of the NGOA timely. Moreover, the NGOA results demonstrate how research on housing as a socio-economic determinant of health could be a strategy for improving our understanding of the effects of social environments on health and for reducing health disparities.

MeSH terms: Housing; public housing; housing for the elderly; health; mental health; socio-economic factors

In 2002-2003, a Needs, Gaps and Opportunities Assessment (NGOA) was conducted to investigate relationships between socio-economic dimensions of housing and health, with support from the Institute of Population and Public Health (IPPH) of the Canadian Institutes of Health Research (CIHR). Socio-economic factors embedded in everyday life are widely acknowledged to be important determinants of health,^{1,2} and housing is a crucial nexus for the operation of a wide range of socio-economic factors that fundamentally shape the character of everyday life for people across the socio-economic spectrum, including people from vulnerable subgroups.³ It follows that the socio-economic dimensions of housing are highly relevant foci for research in health inequalities. Recent reviews of the literature on housing and population health,^{3,5} however, point to a dearth of research on socio-economic dimensions of housing and health, despite convincing arguments of its potential for promoting health.⁵⁻⁷ Through consultation with relevant stakeholders, therefore, we sought to identify research needs and gaps, and future opportunities for research in housing, socio-economic status (SES) and health. Because space does not permit us to present the complete findings of the NGOA, we focus on the findings of the stakeholder consultations that we conducted using an open-ended e-mail survey and workshops in eight cities across Canada.

BACKGROUND

The existing literature on relationships between housing and health points to a dearth of research on the impact of socio-economic dimensions of housing. Given this lack of existing research, we employed a conceptual framework for studying housing and population health to structure existing research and provide some initial direction for the NGOA.^{3,8} Because housing has a number of attributes with potential influence on health, the model (see Table I) identifies seven attributes of housing (left column) that have the potential to influence health, either directly or indirectly. In the right hand column, the framework lists several types of social disadvantage and vulnerable subpopulations for whom each attribute of housing may be more or less influential. The physical

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design of housing, for example, may be particularly important for seniors. In other words, we argue that many of the housing-related socio-economic factors thought to shape health are magnified for vulnerable subpopulations. A detailed description of the framework is available elsewhere.⁹⁻¹¹

METHODS

As part of the NGOA, we conducted a capacity scan (results not described here), through which we used snowball sampling techniques to identify individuals who would form an initial list of stakeholders for participation in the e-mail survey and/or the workshops. The names of the initial contacts and organizations in the snowball sample were provided by the investigator team and our partners, the National Housing Research Committee and the Canadian Housing Renewal Association. This generated a stakeholder group that included individuals from various government sectors (housing, health, social services, etc.) at different levels (municipal, provincial, federal) and a large number of individuals from non-government organizations, including community health clinics, affordable housing advocacy groups and homeless shelters. We contacted each of the individuals and organizations on our stakeholder list through e-mail, letter or fax and (1) invited them to participate in the process by responding to an on-line questionnaire identifying needs, gaps and opportunities for research in housing and health; (2) asked them if they would be willing to participate in a day-long workshop; and (3) asked them to forward the information to any other stakeholders in housing and health whom they knew of. We estimate that this initial e-mail reached well over 800 people or organizations across Canada, as we were copied on most of the forwarded e-mail correspondence. Our final stakeholder list consisted of 519 individuals or organizations, of which a subset completed the open-ended online questionnaire (111) or attended a workshop (185).

Questionnaire responses were analyzed by identifying emergent themes and significant quotations, and other data were extracted and classified according to these themes. In addition, eight regional stake-

TABLE I

Housing, Socio-economic Status and Health Framework

| Housing Dimension | Socio-economic Category |
|------------------------|--|
| Physical hazards | Owners/renters |
| Physical design | Different income levels |
| Psychological benefits | Family/household status |
| Social benefits | (Dis)ability |
| Political dimensions | Mental illness |
| Financial dimensions | Life stage (particularly children and seniors) |
| Location | Gender |
| | Ethnicity/immigration |
| | Aboriginal status |

holder consultation workshops were held across Canada between June 2002 and January 2003 in Vancouver, Calgary, Saskatoon, Winnipeg, Toronto, Ottawa, Montreal and Halifax, with a total of 185 participants. Workshop proceedings were recorded by two note-takers and themes abstracted from these notes. Each workshop began with a presentation that included a brief review of existing research on housing and health and an overview of our framework on housing as a socio-economic determinant of health. After the presentation and introductions, participants formed smaller groups (5 to 8 per group) for two discussion sessions. The first session sought participants' feedback on the framework and asked them to discuss how the seven dimensions manifested themselves (if at all) in their own local context. We also asked them to prioritize one or more of the seven dimensions. In the second workshop participants developed research questions, identified data sources and local opportunities for research, and prioritized future research opportunities.

RESULTS

The results of the NGOA are organized into two sections. First, we describe the substantive research themes in the housing and health field that participants in the stakeholder consultations identified as priorities. Second, we identify several methodological issues and opportunities that arose from the stakeholder consultations.

Substantive themes for housing and health research

Themes that emerged from the consultation process centred on four priority areas of housing and health research: economic aspects; life-cycle and life-span issues; housing, social integration and

income/ethnic mix; and the interplay between physical hazards and socio-economic aspects of housing.

(a) Economic aspects of housing and health

Participants in the NGOA emphasized the need for more research on economic aspects of housing and health relationships. Because household income accounts only for household revenues and not necessary expenditures, income gradients in health quite likely underestimate the steepness of the social gradient in health. Participants suggested that a systematic examination is needed of the relative costs of providing housing and support to vulnerable groups, such as people with severe mental illness or addictions, the frail elderly and others, as compared with costs incurred in health and other sectors. This would require the kind of information needed to evaluate the case for investments in housing interventions. Related to this, especially in low-income households, expenditures made on housing are expenditures not made on other health-enhancing goods. Research is needed to ascertain the health consequences of such household budget decisions, especially for low-income households with tight budgets. How and to what extent, in other words, do households with high housing costs "discount" their health?¹² Does subsidized housing have a large enough effect on household disposable income to reduce food insecurity, improve access to health services and improve educational/employment opportunities? What are the effects of home ownership on health in Canada?¹³⁻¹⁶

Particularly for vulnerable subgroups, providing stable, affordable housing may be cost-effective for health, although there is a lack of systematic evidence on this. Recent work by Eberle et al.,¹⁷ for example, showed that in British Columbia the health, social services and criminal justice

systems bear considerable costs because of homelessness. Participants suggested that a systematic examination is needed of the relative costs of providing housing and support to vulnerable groups, such as people with severe mental illness or addictions, the frail elderly and others, as compared with costs incurred in the health and other sectors. This would require the kind of information needed to evaluate the case for investments in housing interventions. This kind of research is rare, and clearly more needs to be done.

One of the issues that participants noted concerns the economic language often used around housing policy issues. They argued for the need to change the language and speak of housing as an investment rather than an expense. At the same time, participants argued that research focused on the economic aspects of housing and health was needed. For example, if what is known anecdotally about the impacts of housing on health care use could be shown through systematic empirical research, it would cast a favourable light on housing investments. In short, stakeholders argued that “*demonstrating economic savings will make the most difference*”.

(b) Housing and health for vulnerable groups across the life course

The second substantive issue emphasized in the NGOA consultation was housing and health research for vulnerable groups at various stages in the life course, with particular emphasis on early and late life. It is believed that children in lower SES households are more likely to be exposed to physical, chemical and biological hazards (e.g., mould, radon), possibly creating a “multiple jeopardy” effect. Other direct effects of housing on child development concern the location, design and amenities of housing. An example of the indirect effects of housing on child development is the impact of parental stress¹⁸ and other stressors.¹⁹ Another study showed that substandard housing is often a factor in children being taken into care in the Toronto area.²⁰ Participants in the NGOA made a number of comments important to the direction of this area of research: as one participant argued, “*if you have children mis-housed it follows them through their life cycles*”.

Seniors are another population subgroup for whom housing can be a challenging

issue, particularly seniors of lower SES who suffer from chronic illnesses and are vulnerable to social isolation. There is a wealth of research on seniors’ housing, some of which investigates general housing conditions,²¹ as well as relationships to health, functional status and cognitive functioning.^{22,23} Indeed, as the baby boom generation ages, housing and health issues for seniors will become ever more pressing and the knowledge gaps more acute. Participants in the NGOA suggested that more research is needed to highlight housing affordability issues for a large number of seniors, as well as obstacles to making home modifications to prevent falls and reduce hazards. They noted that there is an urgent need for research tools for rapid, inexpensive but accurate identification of seniors at risk of functional incompetence and social isolation.

(c) Housing, social integration and income/ethnic mix

The housing needs of immigrants, ethnic minorities and Aboriginal peoples were frequently raised as significant health concerns in the consultations. Relatively little is known about housing and health relationships among immigrants and ethnic minorities *per se*, but there is evidence that Aboriginal peoples suffer a very large health burden as a result of substandard housing.²⁴

There is a growing body of research suggesting that a relationship between residential segregation and neighbourhood level socio-economic factors may exert an independent influence upon health and human development, quite apart from an individual’s own SES.²⁵⁻²⁸ These findings raise questions about the effectiveness of urban planning for social mix. Preliminary evidence suggests that living in socially mixed neighbourhoods is beneficial for children from poor families,²⁸ but there is almost no evidence of the effect of *planned* social mix on social or health outcomes. This represents an important area of future research, especially given the credence that this idea has already been given in policy circles.^{29,30}

Important questions were raised by stakeholders about rising urban Aboriginal segregation and segregation of ethnic minorities in cities, in addition to ongoing questions about the health effects of unaffordable, inaccessible and poor-quality

housing for these populations.²⁴ Little is known, however, about the health of urban Aboriginals and the consequences of their spatial and social isolation.³¹⁻³³ Although participants in the NGOA did not widely endorse it as a priority, research is needed to identify and overcome obstacles to improving housing on- and off-reserve and to evaluate successful interventions. No doubt the relative invisibility of the problem gave it a lower profile in the NGOA. Given the magnitude of the health problems attributable to the housing conditions that many Aboriginal peoples in Canada endure and the contribution this likely makes to health disparities, it most certainly warrants a position of high priority in the research profile on housing as a socio-economic determinant of health. The housing and health conditions for immigrants and ethnic minorities also require further high-priority investigation.

(d) Interplay between physical hazards and socio-economic aspects of housing

Although there is a great deal of research on the health effects of physical, chemical and biological hazards in the home, there is little research on the intersection of these issues with SES. Participants in the consultations raised questions about the relationship between socio-economic status and the health effects of biological, chemical and physical hazards in the home. Relatively little research has been done in this area, and there is a lack of even the most basic information on the topic. For example, it is not known whether people of lower SES are more likely to suffer such adverse exposures. Where such exposures exist, presumably in lower SES households there are greater obstacles (i.e., financial) to ameliorating them, underscoring the importance of this knowledge gap. The questions that need to be answered in this substantive area, therefore, include the following: “What is the overall burden of illness and exposure from a given exposure/outcome pair (e.g., mould and respiratory illness)?” and “What is the distribution of such exposures across social groups, especially along socio-economic lines?”; “Are there identifiable obstacles, barriers, and/or constraints to action on the part of exposed individuals, especially of a socio-economic nature?”; “Do methods for rapid and efficient identification of

exposed individuals exist?”³⁴; and “Are there effective interventions for addressing the intersection between bio-physical hazards in the home and SES?”³⁵ Unfortunately, for a dimension of housing so clearly linked to health, there is little evidence on the burden of illness from housing exposures in Canada and little evidence of the effectiveness of interventions to address it. This is a critical research gap.

Methodology and research capacity needs and opportunities

In a recent systematic review, Thomson et al.⁵ found only six prospective, controlled studies of housing and health in the published literature since the 1930s. The need for prospective, longitudinal studies is crucial in housing and health research because of the possibility of reverse causation – people with poor health can only acquire poor housing. This argument was made repeatedly by NGOA stakeholders. In addition to sorting out the question of causality, longitudinal data are needed for investigating the effectiveness of new and/or existing housing programs. There are at least three study designs that could provide longitudinal data for housing and health, two of which are well suited for use with new or existing organized housing programs. In the first instance, with the simple addition of a few housing-related questions, surveys like the National Population Health Survey and the National Longitudinal Survey of Children and Youth could be used to investigate longitudinal questions about housing and health.

Moreover, housing and health research is particularly well suited to study designs for “natural experiments”. Stakeholders reported that there are hundreds of new public (and private) housing developments opened each year across the country and many other existing units that are vacated and then occupied by new residents. These “natural experiments” could be harnessed for powerful research, because they represent a change from one housing circumstance to a new housing circumstance, and researchers can assess health before and after a resident moves. Evaluative projects structured around these natural experiments are especially powerful if a control group that does not receive the housing intervention can also be assessed.

Currently, however, these initiatives represent lost scientific opportunities.

Some studies have been conducted outside Canada,^{5,36} and these usually involve adapting a research design to an existing housing allocation process, like a wait list. People on the wait list are enrolled in the study, baseline data are collected from them, and then those who receive housing during the study period become the intervention group and those who do not become the control group upon follow-up.* Studies of this type may use primary data or, where available, secondary data. Regarding the latter, if housing providers collected some routine health data where appropriate (e.g., for people with existing illnesses, like mental illness), it would be very inexpensive and efficient to estimate the effects of housing interventions on health and health care utilization. Currently, almost no such evidence exists. Despite the potential for quasi-experimental studies using secondary data like these, data access, suitability and linkage across sectors act as current obstacles. Information is collected from tenants in supportive housing, for example, and some of it is clinical in nature, but the data are inadequate for assessing real change in symptomatology or functioning. Similarly, it is often difficult or impossible to link housing program data with administrative health care data, despite their availability for research purposes in several provinces. Without greater research capacity of this type in housing and health among academics, policy-makers and providers, it will be difficult, however, to overcome obstacles such as this one. Stakeholder participants expressed a desire for even the most basic of data on the effects of housing interventions that would allow for some outcome-based planning, for example, quality of life; costs to health, justice and other sectors; health status; and housing stability.

By their very nature, organized housing programs lend themselves to study using prospective, quasi-experimental research designs, which typically provide strong evidence. There are obstacles to conducting such research with either primary or secondary data (including data availability,

* See, for example, the Scottish Housing and Regeneration Project in Glasgow (SHARP): <http://www.msoc-mrc.gla.ac.uk/SHARP/sharp.html>.

suitability and the prospect for data linkage) but none greater than a lack of researchers in this area.

CONCLUSION

The IPPH of CIHR has prioritized research that contributes to understanding and addressing the policy and program impacts of physical and social environments on health, analyzing and reducing health disparities and promoting equity for vulnerable populations. Housing is important for both its physical and social dimensions and, of all our daily environments, it is the one in which we spend the most time. It is clear from the results of this NGOA in the area of housing and health that we know very little about what kinds of interventions work to reduce health disparities for vulnerable populations and about the pathways linking this crucial social environment to health. The stakeholders who participated in the NGOA described in this paper identified four substantive areas of high priority for further research and a number of methodological opportunities for filling these gaps, as well as the capacity shortcomings that must be addressed before such gaps can be filled.

Specifically, further research is needed in the four substantive areas described. Moreover, in terms of research methodology and capacity, the NGOA findings suggest that there are many squandered opportunities for prospective research on housing and health, despite the existence of an audience for such research and a strong likelihood that research knowledge would be employed in decision-making. This NGOA, in short, recommends significant investments in new research directions to determine the impact that housing policies and programs may have on reducing health disparities and improving our understanding of how social and physical environments influence health.

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