Reducing social inequities in health through settings-related interventions — a conceptual framework

Martine Shareck¹,², Katherine L. Frohlich¹,² and Blake Poland³

Abstract: Introduction: The creation of supportive environments for health is a basic action principle of health promotion, and equity is a core value. A settings approach offers an opportunity to bridge these two, with its focus on the interplay between individual, environmental and social determinants of health. Methods: We conducted a scoping review of the literature on theoretical bases and practical applications of the settings approach. Interventions targeting social inequities in health through action on various settings were analyzed to establish what is done in health equity research and action as it relates to settings. Results: Four elements emerged as central to an equity-focused settings approach: a focus on social determinants of health, addressing the needs of marginalized groups, effecting change in a setting’s structure, and involving stakeholders. Each came with related challenges. To offer potential solutions to these challenges we developed a conceptual framework that integrates theoretical and methodological approaches, along with six core guiding principles, into a ‘settings praxis’. Conclusions: Reducing social inequities in health through the creation of supportive environments requires the application of the settings approach in an innovative way. The proposed conceptual framework can serve as a guide to do so, and help develop, implement and evaluate equity-focused settings-related interventions. (Global Health Promotion, 2013; 20(2): 39–52).

Keywords: health promotion, research, social inequities

Introduction

The Ottawa Charter for Health Promotion was conceived in 1986 with the objective of achieving Health for All by the year 2000. This implied reducing inequities in health between and within nations (1). Today, despite years of concerted anti-poverty work and equity-focused programming, social inequities in health within and between countries are increasing (2,3), and emerging challenges such as rapid urbanization, climate change, energy insecurity and environmental degradation threaten to further widen these social gaps in health (4,5). In this context, interest in the potential of the settings approach to health promotion to influence social inequities in health has been renewed (6).

The settings approach aims to influence health through action on ‘the places or social contexts in which people engage in daily activities, in which environmental, organizational and personal factors interact to affect health and well-being’ (7), as well as on people found within these settings (8). Conceptually it offers strong bases for action on social inequities in health, defined here as systematic differences in health outcomes or health risks between groups that occupy unequal positions in the social hierarchy based on their wealth, power,
race, or other dimensions of marginalization (9). First, the settings approach is rooted in an ecological model of health promotion that views health and health behaviors as being influenced by multiple interacting factors, including the physical (natural and built) and social (organizational, community and policy) determinants at the root of social inequities in health (10). Second, settings are conceptualized as complex, dynamic and open systems composed of individuals, structures and the relations between them, and have permeable boundaries. As such, social inequities in health observed in a school may arise from conditions encountered in another setting such as the neighborhood (11). Third, the settings approach involves developing and changing the setting’s organization and structure, and the individuals found within it, rather than focusing on the latter exclusively (6,12). This systemic view of settings is said to prevent ‘diverting attention from the overarching social, economic and environmental influences’ on social inequities in health (13).

In practice, however, as successful and widespread as the settings approach appears to be in creating supportive environments for health (6), there are indications that the settings most likely to take up this work are those with pre-existing capacities that position them more favorably in the social hierarchy. Without explicit attention to equity, many settings-related initiatives may exacerbate rather than mitigate social inequities in health (14). Further, the potential of the settings approach to systematically tackle social inequities in health remains underexplored. Identifying what constitutes the key elements of a settings approach specifically focused on reducing social inequities in health, and understanding how to apply them, is required.

Objective

To shed light on these issues, a Settings Approach Working Group (SAWG) involving members of the academic, government and health sectors was initiated by the Public Health Agency of Canada. At the SAWG’s request, we conducted a scoping review of the literature to answer the following questions: i) what is currently done in health equity research and action as it relates to settings? and ii) what are the practical foundations of a settings approach focused on reducing social inequities in health? Our review of initiatives highlighted four commonalities and related challenges associated with applying the settings approach to reduce social inequities in health. In the first part of this paper we discuss the challenges, while in the second, we propose a ‘settings praxis’ to help overcome them and inform an innovative, equity-focused use of the settings approach.

Scoping review

Methods

Given the exploratory nature of our study and broad scope of our research questions, a scoping review was chosen over a more traditional systematic review. Systematic reviews typically focus on precise questions and specific study designs with a narrow range in quality (15). Alternatively, scoping reviews are useful in providing answers to broad questions, summarizing existing research without focusing on the quality of studies, and interpreting the literature while looking for recurring themes. It often includes a consultation process where themes are discussed with experts in the topic area, and interpreted in context to identify gaps and opportunities for innovation (15). In light of this, conducting a scoping review seemed most appropriate to meet our objectives.

Search strategy

The first author of the paper (MS) performed a literature search in Medline (Ovid), Web of Knowledge (ISI), CINAHL and Sociological Abstracts. The following keywords and combinations thereof yielded relevant results: setting* approach, health promoting settings, health promot* settin*, health* settings, healthy cit*, healthy neighbo*, health* neighbo*, health* school, health* workplace, health* prison, health* hospital, ecological, system(s), inequ*, social, disparit* and equity. Following the principle of saturation, we stopped searching once the same references were being found with new keywords. Reference lists of the retrieved articles were also scanned for additional references and project titles of initiatives were used as search keywords (15). Article titles and abstracts were screened for mention of keywords related to the settings approach and health (in)equity, and full texts were subsequently scanned for descriptive information on the intervention.
Inclusion and exclusion criteria

Our search was limited to material written in English or French and published between January 1990 and April 2010. We chose 1990 as the lower cut-off point to allow for some time between the first reference made to the settings approach in 1986 and discussion of its use in the literature. Included in our review were interventions that relied on the settings approach with the aim to influence social inequities in health. This goal could be explicitly stated in the intervention objectives, or it could be non-explicit, as with initiatives aiming to improve health or social conditions by targeting a marginalized setting (e.g. Beck et al. [16]). The assumption behind this latter approach is that improving the health of marginalized groups will lead to a narrowing of the difference between them and better off social groups (17). Excluded from the review were interventions using the setting as a base from which to exclusively deliver individual-centered interventions such as health education activities (also termed ‘health promotion in settings’ [18]).

Data extraction and analysis

Thirty-five articles concerning 20 different initiatives (Appendix A) were critically analyzed by MS using guiding questions developed for the project based on work by SAWG members (8). For each intervention, we documented: their aim(s); the type(s) of settings targeted; what was acted on and how; who was involved; whether interventions had been evaluated, and if so, how and what the results were; and issues discussed by the authors. We identified commonalities across initiatives and documented challenges related to each of these. As recommended by Levac et al., we complemented our discussion of challenges with related literature and experience and opinion of SAWG members who provided insights beyond those in the literature (19).

Findings

Overview of initiatives

Among the documents we reviewed, we found initiatives that focused on health issues (20–27), and others that strove to improve the social conditions of people in a setting (16,28–54). The majority of initiatives directly targeted marginalized areas, schools or workplaces (16,20–30,32–35,38,40, 42,44–46,48–54), while fewer interventions focused on whole populations found in settings that were not necessarily deprived, as seen with Healthy Cities initiatives (31,36,37,39,41,43,45,47). Programs included action at multiple levels of a setting (from the individual to structural dimensions) (16,20–22,24–28,30–51,53,54) or at the structural level only (23,29,52). Many programs involved lay stakeholders in intervention development or implementation (16,20–25,27–29,31,33–51,53,54). A number of programs had been evaluated for their impact on various outcomes such as participation, organizational change or smoking (20–27,29–35,38,40–48,52), but few evaluations of intervention impact on social inequities in health per se were found (44).

Commonalities and associated challenges

We identified four commonalities across the interventions reviewed. Each characteristic came with related challenges that should be attended to if the settings approach is to be used effectively to reduce social inequities in health.

Focusing on the social determinants of health and related inequities

In our review we found interventions that addressed health issues such as smoking (20–27) or that acted directly on the social determinants of health such as the physical environment or housing (16,28–54). Both appeared to offer some potential to influence social inequities in health. However, interventions that focus directly on the social determinants of health have been discussed as being more promising (55,56). In fact, several authors have critically reflected on the potential failure of issue-based interventions to alleviate social inequities in health because of an inadequate consideration of the social determinants influencing the issue of interest (22,32). For example, a critical assessment of a smoking component of the Health Action Zones suggested that smoking cessation services had failed to address their objectives of reaching disadvantaged smokers and tackling inequities because they had centered on education, self-help and medical treatment provided to motivated would-be quitters.
without addressing the social and economic factors underlying their target population’s smoking behaviors (32). This failure might have resulted from an inadequate understanding of how social inequities in the determinants of health translate into social inequities in health in settings. Below, we present a conceptual framework that can help better harness the social determinants of health in settings-related work.

Addressing the needs of marginalized groups

Intervening in and on marginalized settings (also called ‘targeting’) was the most common approach used to tackle social inequities in health among the initiatives reviewed (16,20–30,32–35,38,40,42,44–46,48–54). Although widespread and laudable, we believe that targeting should be regarded with caution. First, intervening to improve the health of the most marginalized exclusively may not necessarily lead to a narrowing of the difference between them and less marginalized groups if similar improvements in health are occurring concurrently in the latter (57). Second, focusing on marginalized settings without considering how interventions are taken up by different social groups might lead to overlooking a considerable portion of the population one wishes to reach (42,44,58). For instance, two years after the New Deal for Communities program was implemented in deprived areas in the United Kingdom (44), the more educated groups had benefited more from training opportunities than the less educated ones, and educational differences in smoking and income had widened (44). Finally, targeting marginalized settings may position the responsibility for health within the setting population itself. This may divert attention away from the underlying determinants of social inequities in health that lie in power structures responsible for a setting’s marginalization in the first place (30,59,60). Preventing this diversion requires thorough knowledge of a setting, its population and the social context of intervention. Our framework may help understand these aspects.

Effecting change in structures

The importance of effecting change in the structure of a setting stood out from our review, although most interventions included both structural changes and individual-centered activities (16,20–22,24–28,30–51,53,54). Effecting change in a setting’s structure reflects the core characteristics of the settings approach, as well as the need to address the social determinants of health. However, it should be noted that a setting’s structure does not operate independently from the individuals found within it. In order to benefit from structural changes brought to a setting, individuals must be enabled to take advantage of newly created opportunities. Social inequities in health in fact result from inequities in individuals’ capacities to take action for their health as well as in settings’ structures (61). Thus, intervening on both individual and structural dimensions of a setting may be more effective in reducing social inequities in health (8,59,62). Our framework provides some guidance into how to attend to this individual-structure relationship in settings-related work.

Involving stakeholders

Finally, involvement of key stakeholders, particularly that of lay people, stood out as a central consideration for reducing social inequities in health through the settings approach (16,20–25,27–29,31,33–51,53,54). It is held that people’s engagement in needs and resource assessment increases their awareness, builds local capacity to take action on the social determinants of health (28,47,63), and results in more sustainable projects (30,36,64). However, large-scale sustained participation, especially of the most marginalized groups, was often said to be difficult to achieve in practice (25,32,37,47,49,64). For example, in their analysis of a Healthy Cities project in California, Kegler et al. identified lack of time due to competing family and work demands as an important barrier for resident involvement (47). Participation could be facilitated if the actual lived experience of people found within a setting, as well as existing power relations, were considered in settings-related work (8). Rooting interventions in the social context of settings can help address these issues. Below we present theoretical and practical approaches which can prove useful.

A settings praxis to address challenges

Our review provided the essentials of what is currently done in equity-focused settings-related
work, and highlighted four commonalities and associated challenges. A common thread linking the challenges relates to the issue of taking the social context of intervention into account. Here, social context involves not only social norms and other aspects of interpersonal relationships, but also social structures such as class, race and gender, institutional practices, individual and collective behavior, and intersecting personal biographies. Applied to an equity-focused settings approach, attending to the social context requires paying attention to individuals found in a setting, to its physical and social structures, and to the relationship between individuals and structures, as well as to the overarching social and political drivers of social inequities in health.

To address the challenges revealed in the scoping review in an innovative way, and better harness the complex and dynamic nature of settings and of the social context of intervention, we developed a framework or ‘settings praxis’. It includes theoretical and practical approaches specifically selected for their potential contribution in addressing the challenges, as well as six guiding principles which ground the application of an equity-focused settings approach. To develop our framework, we drew from the initiatives reviewed, from a wide scope of cognate literature and from discussions among expert members of the SAWG since our aim was to move beyond what had already been done.

How social inequities in health are produced in settings

In line with an ecological and systems model of the settings approach, and with findings from the scoping review, we suggested that acting on the social determinants of health inequities was central to equity-focused settings-related work. In line with this, overarching our framework is the idea that social inequities in health derive from social inequities such as those relative to gender, ethnicity or education. Attending to the individual-structure relationship also stood out as a key finding of our review. Contemporary sociological theories may be helpful here since they view social inequities, both generally and in health, as being produced and reproduced through a recursive dialectical relationship between individuals and structures. We thus posit that i) settings’ structures create constraints and opportunities to individual behaviors, and these, in turn, reify structures, and ii) the joint social inequities in agency and in a setting’s structure give rise to social inequities in health.

Theory

Complexity theory

Complexity theory is a first promising theoretical approach for orienting the settings approach toward reducing social inequities in health since it can prove useful in ‘capturing the added value of ecological, whole system working’ for the settings approach. It explicitly aims to make sense of phenomena by exploring the individual components of systems along with their dynamic interactions and can help articulate how differences in health across social groups arise from these interactions. Complex systems such as settings are characterized by organic, non-linear and emergent properties. In a neighborhood for example, physical decay could lead to social disorganization, which would trigger behavioral pathologies such as crime, thereby engendering a vicious cycle of more decay and disorganization. Such emerging properties and unintended change can be accounted for by theories from complexity science, such as adaptive management that provides the basis for ‘harnessing adaptive change that seems much more attuned to the realities of late-modern (organizational) settings’. Furthermore, complexity theory emphasizes the power of distributed (as opposed to centralized) control, the co-evolution of systems in embedded environments, and sensitivity to initial conditions. It also values tacit and experiential forms of knowledge, although some have argued that ‘the human voice seems to be missing’ from contemporary complexity theory accounts.

Critical realism

Drawing on the work of Bhaskar, critical realism is a second logic of inquiry useful in harnessing the social context of equity-focused settings-related work. Under a critical realist perspective, context is an intrinsic component of an intervention and a relevant object of inquiry, rather than something to control for. Central to
Figure 1. Conceptual framework
critical realism is also the recognition that individuals and structures interact (71,72), which helps acknowledge their joint contribution to social inequities in health. Through this focus on both individuals and structures, critical realism moves attention to the lived experiences of people and to the embedding of phenomena within the social context of settings (67). In a related vein, theory-driven critical realist evaluation aims to uncover how interventions work and through what mechanisms in particular contexts, rather than solely focusing on whether or not interventions have an effect that could be generalized across contexts (67). It thus allows us to disentangle which elements of context facilitate or constrain individual change and why. This is useful given the complexity of settings-related interventions on social inequities in health, and the difficulty in evaluating their effectiveness using more traditional methods. By requiring the thorough understanding of the social context of intervention before and while intervening, critical realism can help overcome the challenges discussed previously.

Practice

Moving from theory to practice, our framework includes approaches that were specifically chosen for their potential in helping address challenges and grasp the social context of interventions. The objective is not to provide a thorough description of the characteristics, advantages and limitations of each approach, but to describe what they can contribute to equity-focused settings-related work.

Community-based participatory intervention and research

We found that an important, albeit challenging, criterion of the settings approach geared toward reducing social inequities in health was the participation of marginalized groups. Community-based participatory intervention and research (CBPIR) can help address this challenge as it has been recognized as an orientation to research that is ‘crucial to the assurance of the involvement of the community’ (73). This effort to engage targeted communities in all phases was seen in Healthy Cities initiatives (28,31,36,37,39,41,47,74). Concerned with the needs of vulnerable groups, CBPIR pays close attention to equity (75) and has the potential to redress power imbalances (73). By giving marginalized groups a say in intervention development, implementation and evaluation, CBPIR can also build on the strengths and assets of particular groups, as was seen in the Healthy Neighborhoods Project (28), and ultimately develop their resilience and their capabilities to sustain health-enhancing changes (76).

Arts-enabled approaches

As part of CBPIR or used on their own, arts-enabled approaches such as creative writing or theater are also particularly useful to an equity-focused settings approach. Indeed, they can enable participation of those otherwise alienated by more formal processes of engagement that rely, for example, on public speaking (72). They allow people to communicate their needs and reflect critically on these in a way that is most appropriate to them (77). They are also helpful in understanding the social context of interventions in its complexity by engaging people on both cognitive and emotional levels (72), and enabling them to think reflexively about how context influences their practices, and how these reify structures (72,77). In addition to helping target relevant social determinants of health and attend to the individual-structure relationship, arts-enabled approaches can inform a settings approach that is sensitive to the lived experience people have of their everyday settings. By giving marginalized groups a voice, they can also build their resilience and capabilities to sustain change.

Joined-up approach

Adopting a joined-up approach to settings-related work is another way of taking action on the social determinants of health and related inequities. Reflecting an ecological, open systems model of the settings approach whereby multiple settings are inter-related, a joined-up approach refers to an integrated approach to program implementation within and across settings such as the neighborhood, school and workplace (6). An example was found in the Breathing Space project that implemented smoking bans in primary care, work, educational and community settings to render cultural norms less conducive to smoking (22). A joined-up approach

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requires thorough knowledge of settings relevant to people’s everyday lives, and thus sensitivity to their lived experience. Facilitated by the creation of intersectoral partnerships, it can prevent ‘diverting attention from the overarching social, economic and environmental influences on health’ (13) that cut across settings and health issues and are at the root of social inequities in health.

**Whole-of-government or health in all policies**

In a related vein, ‘whole-of-government’ or ‘health in all policies’ (HiAP) also have as their focus the systematic inquiry of, and action on, the social determinants of health at play in various interrelated settings (78). Acknowledging that the determinants of social inequities in health lie outside the health domain, they act ‘as an overarching conceptual framework for systematic engagement with other sectors’ (78) by requiring that government policies from all sectors, such as employment, housing or transport, be evaluated for their potential impacts on health and increasingly, on health equity (2,78). Although they are usually formulated at high (e.g. national) policy levels, intersectoral policies are nonetheless useful when intervening at more local levels since they act as umbrella policies regulating what needs to be considered by lower, regional- or local-level policies (78). By definition, HiAP need to be sensitive to the social context of intervention (78). Following from this need for sensitivity to local contexts, whole-of-government and HiAP approaches may provide an incentive for deepening the socio-political analysis of equity-focused settings-related work.

**Guiding principles**

The final component of our praxis is a set of six guiding principles that help us move toward an integrated and innovative equity-focused settings approach. Inspired by previous work on settings (8) and community development, these principles were initially presented in a paper on the convergence of the settings approach and sustainability initiatives (79). Based on findings from our scoping review, we suggest the principles are similarly central to equity-focused settings-related work. They are:

- starting where people are and respecting people’s lived experiences;
- rooting practice in the social context of settings;
- deepening the socio-political analysis in order to locate action in the broader context of power relations;
- building on assets and successes already prevailing in settings;
- building resilience and capabilities for sustained change (79).

The principles either reflect foundational characteristics of the settings approach concerned with social inequities in health, or shed focus on important criteria to take into account to overcome the challenges revealed in the review. The theoretical and practical approaches help inform the application of one or more of the guiding principles.

**Discussion and conclusion**

In this paper, we set out to uncover the practical foundations of a settings approach geared toward reducing social inequities in health. Drawing from findings from a scoping review of settings-related interventions, we discussed four commonalities and related challenges. To respond to challenges revealed in the review, we developed a settings praxis integrating conceptual and practical approaches into an innovative perspective on equity-focused settings-related work.

A note should be made regarding our praxis. We did not intend to suggest that theoretical and practical approaches should necessarily be used all at once, nor in one same intervention. In fact, we would caution against treating them as a rigid protocol. Indeed, this would not respect the guiding principles that reflect the findings that sensitivity to context and a participatory praxis specific to each intervention are central to the settings approach concerned with health equity. These should determine which approach(es) should be applied and how.

Furthermore, the findings reported here should be viewed in light of study limitations. We relied on a scoping review that, by definition, is useful in examining the extent of literature on a given, often wide-ranging, topic. Because of time and cost considerations, we searched only the scientific literature. We acknowledge that the number of initiatives reviewed would have been greater had we
included gray literature. Indeed, many community-based programs aiming to influence social inequities in health such as Healthy Cities initiatives may have been discussed in policy documents produced by local governments rather than in scientific publications. As suggested in scoping review guidelines, we also searched for recurring themes across articles without focusing on the design nor quality of studies. We therefore did not take the methodological limitations of the reviewed studies into account when analyzing the papers and synthesizing our findings.

We believe this scoping review was a necessary first step to establish what has been conducted in research and action on health equity and the settings approach. Findings from our review, namely recurring themes and associated challenges, may serve as a base for more focused systematic reviews, while our framework can serve as a guide to develop, implement and evaluate interventions to create supportive, healthy and equitable settings through actions anchored in the social context of intervention.

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Conflict of interest

None declared.

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Appendix A. Table of reviewed initiatives.

<table>
<thead>
<tr>
<th>Program name and location</th>
<th>Type(s) of setting(s) targeted</th>
<th>Level(s) of action</th>
<th>Characteristics of settings approach</th>
<th>Examples of activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Cities, California, USA (31,39,41,47,74)</td>
<td>Community, not necessarily marginalized</td>
<td>Individual, environmental and organizational levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>Youth development, civic capacity-building, neighborhood improvements and economic development. E.g.: community garden creation, organization of taste-testing events, city-enactment of land and water use policies; development of culturally appropriate gardening training materials and cookbooks.</td>
</tr>
<tr>
<td>Healthy Cities, Noarlunga, Australia (36)</td>
<td>Community, not necessarily marginalized</td>
<td>Individual, physical and social environments</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>Cleaning up the local river estuary; engaging in community development to provide social support; enhancing community safety. Various activities depending on city priorities.</td>
</tr>
<tr>
<td>European Healthy Cities (37)</td>
<td>Community, not necessarily marginalized</td>
<td>Individual, environmental and organizational levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: not explicit</td>
<td>Changing organizational structures to facilitate new ways of delivering health and social care; smoking cessation services.</td>
</tr>
<tr>
<td>Health Action Zones (30,32,37)</td>
<td>Areas, marginalized</td>
<td>Individual and organizational levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: not explicit Whole organization: ✓</td>
<td>Community involvement, cooking classes, installation of speed humps and increase in police patrol.</td>
</tr>
<tr>
<td>Slavic Village Development project, Cleveland, OH, USA (50)</td>
<td>Areas, marginalized; school and worksites also targeted</td>
<td>Individual, environmental, policy levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>Active Living by Design community action model, Safe Routes to School, asset mapping, worksite wellness. Multiple settings targeted (neighborhood, school, workplace).</td>
</tr>
<tr>
<td>Program name and location</td>
<td>Type(s) of setting(s) targeted</td>
<td>Level(s) of action</td>
<td>Characteristics of settings approach</td>
<td>Examples of activities</td>
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<tr>
<td>Healthy Community project, Buffalo, NY, USA (53)</td>
<td>Medical campus and surrounding neighborhoods, marginalized</td>
<td>Individual, environmental, policy levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: not explicited Whole organization: ✓</td>
<td>Active Living by Design community action model; physical improvements to promote walking and cycling; policy changes to create master, art and security plan for active living</td>
</tr>
<tr>
<td>Active Living by Design, Portland, OR, USA (45)</td>
<td>Community, one rural, one marginalized</td>
<td>Individual, environmental and organizational levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>Increase physical accessibility to a trail, development of a school garden, training workshops</td>
</tr>
<tr>
<td>New Deal for Communities, UK (33–35,38,44,46,48)</td>
<td>Areas, marginalized</td>
<td>Individual, environmental and organizational levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>Increased employment opportunities, housing, education, smoking cessation services</td>
</tr>
<tr>
<td>GoWell, Glasgow, Scotland (16)</td>
<td>Areas, marginalized</td>
<td>Individual and structural levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>Housing improvements, service provision, education and employment opportunities planned</td>
</tr>
<tr>
<td>Scottish Housing Health and Regeneration Project, Scotland (52)</td>
<td>Housing complex, marginalized</td>
<td>Physical environment</td>
<td>Ecological: ✓ Systems approach/multiple settings: not explicited Whole organization: ✓</td>
<td>Re-housing tenants to a new socially rented dwellings</td>
</tr>
<tr>
<td>Harlem Hospital Injury Prevention Program, New York, NY, USA (20,21)</td>
<td>Areas, marginalized</td>
<td>Individual, environmental and policy levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>Creation of safe play areas, supervised activities, injury prevention education</td>
</tr>
<tr>
<td>Time to Smile, Glasgow, Scotland (26)</td>
<td>Community, marginalized</td>
<td>Individual, community environment, policy levels</td>
<td>Ecological: No Systems approach/multiple settings: not explicited Whole organization: ✓</td>
<td>Core themes: diet, use of fluoride toothpaste and contact with dental health professionals</td>
</tr>
</tbody>
</table>

(Continued)
## Appendix A. (Continued)

<table>
<thead>
<tr>
<th>Program name and location</th>
<th>Type(s) of setting(s) targeted</th>
<th>Level(s) of action</th>
<th>Characteristics of settings approach*</th>
<th>Examples of activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Promoting Workplace, UK (23)</td>
<td>University, not marginalized</td>
<td>Policy level</td>
<td>Ecological: ✓ Systems approach/multiple settings: not explicited Whole organization: ✓</td>
<td>Smoking bans</td>
</tr>
<tr>
<td>New York State Healthy Neighborhood Program (asthma component), New York, NY, USA (24)</td>
<td>Households at risk for environmental health hazards, marginalized areas</td>
<td>Individual and physical environment of houses</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>Education about asthma management, community services, and reducing asthma triggers (mattress and pillow covers, furnace filters) in the house</td>
</tr>
<tr>
<td>Breathing Space, Edinburgh, Scotland (22,25)</td>
<td>Areas, marginalized; school, workplace, and primary care establishments also targeted</td>
<td>Individual, environmental, organizational and policy levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: ✓</td>
<td>E.g.: Education, clinics, change in organization, policies</td>
</tr>
<tr>
<td>Sure Start, UK (49,51)</td>
<td>Areas, marginalized</td>
<td>Individual and organizational levels</td>
<td>Ecological: ✓ Systems approach/multiple settings: not explicited Whole organization: ✓</td>
<td>E.g.: Services implemented in nurseries, childcare establishments and schools; childcare and education provided to children and support services provided to their families, centralized in Children’s Centres</td>
</tr>
<tr>
<td>Little Cooks — Parental Networks, Montreal, Canada (27)</td>
<td>Schools, marginalized</td>
<td>Individual and social environment</td>
<td>Ecological: ✓ Systems approach/multiple settings: ✓ Whole organization: not explicited</td>
<td>E.g.: Cooking and nutrition workshops delivered in schools; social development activities aimed at parents; link with local food producers</td>
</tr>
</tbody>
</table>

*Intervention descriptions were screened for their harboring each of the three main characteristics of the settings approach. A checkmark (✓) indicates that the characteristic was integrated in intervention planning, while ‘not explicited’ signifies that not enough information was provided to conclude that the characteristic was integrated in intervention planning. The three characteristics are summarized as:

**Ecological:** A change in the social determinants of health is planned, acknowledging that multiple interacting factors, including the physical (natural and built) and social (organizational, community and policy) influence health and health inequities;

**Systems approach:** Individuals, structures and the relations between them are attended to and/or multiple settings are targeted;

**Whole organization:** Focus is on developing and changing the setting’s organization and structure, and the individuals found within it, rather than focusing on the latter exclusively.