Addressing social determinants of health inequities through settings: A rapid review


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Abstract

Changing settings to be more supportive of health and healthy choices is an optimum way to improve population health and health inequities. This paper uses the World Health Organisation’s (1998) definition of settings approaches to health promotion as those focused on modifying settings' structure and nature. A rapid literature review was undertaken in the period June-August 2014, combining a systematically conducted search of two major databases with targeted searches. The review focused on identifying what works in settings approaches to address the social determinants of health inequities, using Fair Foundations: the VicHealth framework for health equity (VicHealth 2013). This depicts the social determinants of health inequities as three layers of influence, and entry points for action to promote health equity. The evidence review identified work in twelve settings (cities; communities and neighbourhoods; educational; healthcare; online; faith-based; sports; workplaces; prisons; and nightlife, green and temporary settings), and work at the socioeconomic, political and cultural context layer of the Fair Foundations framework (governance, legislation, regulation and policy). It located a relatively small amount of evidence that settings themselves are being changed in ways which address the social determinants of health inequities. Rather, many initiatives focus on individual behaviour change within settings. There is considerable potential for health promotion professionals to focus settings work more upstream and so replace or integrate individual approaches with those addressing daily living conditions and higher level structures, and a significant need for programs to be evaluated for differential equity impacts and published to provide a more solid evidence base.

Introduction

Making the settings where people live and work more supportive of health and healthy choices has long been recognised as an optimum way to improve population health. The World Health Organisation (WHO 1986) recognises that policies and institutional practices shape people’s opportunities to lead healthy lives. The importance of considering how to address the social determinants of health inequities within settings has been stressed in three recent reports (Commission on the Social Determinants of Health (CSDH) 2008); Marmot et al 2010, 2012). This paper provides a rapid review of what settings-based health promotion approaches are effective in addressing the social determinants of health inequities.
The settings approach to health promotion

Settings are places or social contexts where people engage in daily activities, in which environmental, organisational and personal factors interact to affect health and wellbeing, and where people actively use and shape the environment, thus creating or solving health problems (WHO 1998). Settings can also be geographical in nature e.g. cities, places in space and time where people congregate for a specific purpose (Green et al 2000), or places with an organisational structure such as workplaces (WHO 1998). Others are hybrid settings such as community gardens, or virtual settings such as social websites (International Union for Health Promotion & Education (IUHPE) n.d.). The settings approach reflects the WHO's (1986) health promotion philosophy as expressed in a series of statements and charters which build on the Ottawa Charter. WHO (1998) suggests that a settings approach to health promotion should include a focus on multiple, coordinated interventions that modify the physical, social, economic, instructional, organisational, administrative, management, recreational or other aspects of that setting. These clearly relate to the social determinants of health inequities.

Addressing social determinants of health inequities within settings

The social determinants of health are the conditions in which people are born, grow, live, work and play, which influence health (CSDH 2008). The social determinants of health inequities are the conditions and the structural processes that distribute them unequally in society. 'Fair Foundations: the VicHealth framework for health equity' depicts the social determinants of health inequities as three layers of influence, and entry points for action: (a) the socioeconomic, political and cultural context; (b) daily living conditions; and (c) individual health-related factors. These layers, and the process of social stratification which interacts with them, create health inequities - differences in health status between population groups that are socially produced, systematic in their distribution across the population, and avoidable and unfair (Dahlgren & Whitehead 1992). Fair Foundations is based on a conceptual framework developed by the WHO Commission on the Social Determinants of Health (Solar & Irwin 2010).
Although equity should be central to promoting health within settings, not all healthy settings approaches focus on equity or consider how they could impact more on people who are at risk of, or who have, poorer health (Baum 2008). Some settings approaches may address equity by being undertaken in a disadvantaged area or a setting with a large proportion of people living in disadvantaged circumstances, e.g. public rental housing. Addressing inequity however requires not just addressing disadvantaged groups but also levelling the social gradient in health, so that middle groups experience health that is closer to both the top and bottom groups. Importantly, McIntyre (2007) notes a distinction between two questions: “Does it work to improve health?” and “Does it work to reduce health inequities?”, since an intervention which generally works might not reduce health inequities if all social groups benefit equally, and will actually worsen inequities if people of a higher social position benefit more (which is often the case).

Methods

A rapid literature review was conducted (June-August 2014) following UK Government guidelines (n.d.), which include limiting the search where the question is broad. We focused on finding reviews, systematic reviews and evaluations, and included 'grey' sources such as reports. Our focus was identifying evidence of: (1) work in settings that has reduced, or shown promise in reducing, health inequities; (2) settings approaches that address social determinants of health; (3) settings work addressing common social determinants such as gender and ethnicity; and (4) policy and program work in settings. This paper highlights the evidence for (1) and (2). The focus was Australia, but we also identified work in other developed countries.

The search had three phases. Phase 1 developed a search strategy and pre-set terms relating to: "Settings", "What works", "Intervention", "Social Determinants" and "Equity" (see Appendix 1). Our search on "Equity" included both equity terms (Friel et al 2013; Lorenc et al 2013) and equity groups. A systematically organised search was made of Web of Science and Scopus, with parameters of publication since 2004, English language, and developed country. Two researchers assessed abstracts (and main text if unclear); criteria for exclusion included purely theoretical/conceptual papers, study protocols, items on clinical health assessment/treatment or professional training, items not about health promotion (eg assisted reproduction), other uses of ‘setting/s’ (eg ‘goal setting’ or settings just used for recruitment), and items simply using ‘community setting’ to mean ‘outside of acute care’.
We excluded a large number of items reporting settings for health promotion which only focused on changing individual knowledge, attitudes and behaviour, e.g. smoking, physical activity. Following the WHO (1998) recommendations that settings approaches should change structures, we focused on such interventions because, when individual behaviour change approaches are undertaken in isolation from a broader strategy which also changes organisational structures and environments, they are generally ineffectual in addressing health inequities because individuals may not have sufficient resources to make the expected changes and this may even exacerbate inequities (Baum 2009, 2011). Similarly to O’Mara-Eves et al’s (2013) systematic literature search on community engagement to reduce health inequities, we found difficulties searching for broad topics such as ‘healthy settings’ and ‘social determinants’ because these cut across many disciplines and outcomes. Additionally, even where settings approaches were addressing social determinants, most work rarely evaluated differential health equity impacts.

Phase 2 was a refined search of Informit, the Cochrane and Campbell Systematic Review Libraries, Google and GoogleScholar, and handsearching of reference lists. Phase 3 scanned relevant websites for further items including governments, key institutions and research centres working on social determinants and equity. Table 1 details the search results. The 202 items remaining in scope were analysed and synthesised.

Findings

This section first presents the review’s general findings followed by findings for each of the different types of settings. Overall we did identify approaches across settings that address, or show promise in addressing, the social determinants of health inequities according to the WHO (1998) definition of settings-approaches which modify the physical, social, economic, instructional, organisational, administrative, management, recreational or other aspects of that

**Table 1 – search results**

<table>
<thead>
<tr>
<th>Database</th>
<th>Search Areas</th>
<th>Items returned</th>
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setting’. However, despite our comprehensive search terms for social determinants, inequity and settings, our review suggests that much settings-based work is individual behaviour change intervention within settings rather than approaches which change the setting itself, which would improve daily living conditions or structural drivers of behaviours, or approaches which integrate both. We therefore agree with Dooris’ (2006) that there can be confusion between the concept of promoting health within a setting to directly modify individual behaviours, and modifying the conditions of the setting itself to provide a supportive context for behaviour change. In the former, the ‘setting’ is simply a neutral vehicle to access populations to
undertake individually focussed activities (Whitelaw et al 2001); in contrast, the latter addresses the social determinants of health and health inequities.

Our review has some limitations. A rapid review aims to give an overview of the field rather than systematically assessing each piece of evidence. While our search terms focused on what works in settings to address the social determinants of health inequities, we strongly agree with O'Mara-Eves et al (2011) that lack of detail about health inequities in article titles, abstracts and keywords makes it difficult to detect such studies. Other studies, for example in named local government areas, did not always explain whether the localities were significant choices from a health equity perspective, and rarely provided analysis about social determinants of health inequities. Our review was also unable to determine the extent to which healthy settings action may inadvertently result in intervention-generated inequities (IGIs: Lorenc et al 2013), for example where some settings are better resourced than others and so improve health in a way that intensifies the social gradient in health. Equity-driven allocation of resources is one means of overcoming this risk but we found little explicit evidence of this in the literature.

The next section presents the findings under the different types of settings identified in the review.

**Healthy Cities**

Our search located 17 items about healthy cities, from large metropolitan areas to small local areas. The Healthy Cities Program is one of the most well-known settings-based approaches to health promotion. In these programs, health inequities can be addressed through city governance and planning, including investment in active transport, environmental design and regulatory controls (e.g. alcohol outlet density in disadvantaged neighbourhoods) (CSDH 2008). Some initiatives take a life course approach. South Australia's City of Unley (2011) is applying the Age-Friendly City approach to improve roads and footpaths to maximise accessibility, update obsolete community facilities, and develop libraries as online access hubs. Bendigo in Victoria is a UNICEF Child-Friendly City. With its relatively socio-economically disadvantaged population, this initiative is developing quality infrastructure, capacity in health and teaching workforces, and organisational improvements such as the city's first playgroup with a qualified worker to increase engagement with families experiencing disadvantage (St
Lukes Anglicare 2011). Nine key factors support sustainability of Healthy Cities initiatives, including a strong social health vision with a focus on equity; a model that can adapt to local conditions, and strongly supported community involvement that represents genuine engagement, which can support equity by providing opportunities for otherwise less powerful groups or community members to be represented in governance and to build their capacity in community representation (Baum et al 2006).

Transit-Oriented Designs (TODs) show how planning can create healthy places to live, work, and play around transit stations (eg Boujenko et al 2012; Department for Health & Ageing SA 2012), for example promoting mixed land use and community gardens near a light rail station in Houston Texas (Solitare et al 2012). Gender-mainstreaming can address power imbalances and accepted structures in cities by questioning 'old-fashioned' land-use zoning which was developed predominantly by and for male ways of working (Greed 2005). For example, over 60 pilot projects in Vienna since the 1990s have considered the health impacts of women's differential use of urban space. Laws, rules and regulations were created to redress the belief that work is only undertaken outside the home (Foran 2013). Changes were also made to daily living conditions, for example designing a 'Women-Work-City' apartment complex to better support women who, compared with men, spend significant time at home on domestic work and childcare (Foran 2013). Courtyards enabled families to spend time outdoors; a kindergarten, pharmacy, doctor's office and public transport were provided nearby; and redesigned parks created different spaces for boys' and girls' activity, resulting in girls spending increased time outdoors (Foran 2013).

'Community' settings and neighbourhoods

'The community' and neighbourhood are common health promotion settings. While a large range of 'community settings' articles were found, most did not suggest changing the setting itself but focussed on behaviour change (and we do not report these here). A good example of addressing social determinants of health inequities comes from a remote Australian Aboriginal community where the management policy of the sole local store was changed to improve fresh grocery supplies, which was moderately effective in improving residents’ health (WHO 2009). Neighbourhood settings supporting health equity include community gardens which promote
physical and mental health and community cohesion; in Canada these have specifically been developed to promote health for Indigenous communities (Mundel & Chapman 2010).

Community settings initiatives also address health inequities through engaging local people to promote or volunteer in a program. Volunteer-delivered programs in communities and/or homes in Ireland and Wales have provided mothers living in socially marginalised circumstances with parenting and child development support, which improved children's nutrition and cognitive development and mothers' mental health and basic literacy (Fitzpatrick, Molloy & Johnson 1997; Jensen et al 2013). To address poor outcomes in communities with high levels of disadvantage in Ballymun in Ireland, The Early Years, Childhood And Family Taskgroup of the European review of social determinants reported that broader community change was combined with changes to educational settings which included locally governed partnerships, integration with local economic regeneration and supporting residents into employment, housing, and community services (WHO 2013).

There are many locality-based obesity prevention initiatives in Australia, yet effective evaluation is needed to identify how much these address health inequities (Nichols et al 2013). A preliminary analysis of one program (the OPAL Obesity Prevention & Lifestyle Program) shows that community stakeholders (including local government) saw education and parents as the program's primary targets and few suggested addressing ‘healthy environments’ (Jones 2013). Other community examples include walking events, which are moderately effective in increasing physical activity when combined with broader supports such as walking maps and signage, advertising in local newspapers, and capacity building within local government (WHO 2009). A project in three Australian rural communities identified agricultural retail outlets as settings to promote farmers' hearing health, since the outlets supply hearing protection resources. The projects significantly improved farmers’ awareness of hearing health and use of screening services, an important initiative considering that 60-70% of farmers suffer hearing loss from noise injury compared to 27% in the general population (Lower et al 2010).

In England, Health Action Zones (HAZs) supported multi-agency partnerships to develop local programs on employment, housing and education to reduce health inequities (Judge & Bauld 2006). Lessons learned include the need for policies to plan to measure outcomes as well as
outputs. For example, a winter warmth project for older people - providing grants for insulation and home improvements - measured only the number of users rather than assessing quality of life (Bauld et al 2005) or differential impacts across the social gradient. The HAZs successfully raised the profile of, and created a policy space for, a social health approach to health inequities in local areas and profiled otherwise marginalised issues such as domestic violence (Bauld et al 2005; Benzeval 2003).

**Educational settings**

Educational settings accounted for the largest number of items in our review (n=36). In the last twenty years a range of programs have developed in educational settings, particularly preschool and primary schools (Birdthistle, 1999; IUHPE, n.d; WHO 1998). They can potentially be highly effective in addressing health inequities because they reach a broad population (WHO 2013), but only if they address social determinants. The main structural strategies we found were modifying menus; providing universal free meals programs or targeted food provision; changing curricula to include nutrition and health promotion, mental wellbeing, substance abuse and racism; changing the overall ethos/environment; engaging with families/communities; establishing clear referral pathways for community-based support services (eg Langford et al 2014; Mukoma & Flisher 2004), and ensuring play areas meet national safety and size standards (Larson et al 2011).

Health equity in schools has particularly been addressed through nutrition initiatives. School breakfast and meal programmes have proven effective in the UK and Australia for children from low-socioeconomic and Indigenous backgrounds in improving physical and mental health, student concentration, punctuality, attendance, and social relations between students and staff (Davies 2012; Kristjansson et al 2006). Providing free fruit and vegetables has increased intake for children from disadvantaged backgrounds (WHO 2009). However, targeted approaches can lead to shame and stigma for recipients (Davies 2012). One free school meals/snacks program in the UK proved that a universal approach can benefit all students across the social spectrum through improved eating habits, regular eating, healthy feelings, healthier food choices outside school, classroom calmness and behaviour, reduced drinking of sugar sweetened beverages for breakfast, and less going to bed hungry (Colquhoun et al 2008).
A Cochrane review of childhood obesity prevention programs found that programs of 12+ weeks' duration targeting 6-12 year olds reduced BMI where they changed school curriculum and food supply, environment and culture; of the studies which assessed equity outcomes, some reported positive impacts for lower status groups while others reported no association (Waters et al 2011). Yet most programs focus only on individual behaviour change. Young et al's (2013) review of health promoting schools concluded that there is little research identifying effective strategies to address equity. It is therefore imperative to evaluate the equity effectiveness of targeted and universal obesity prevention programs (Kristjansson et al 2006; Waters et al 2011).

Mental health has been addressed in schools through curriculum and policy changes, increased support for counsellors, guidelines and training to provide multicultural and anti-racist education, 'bystander training', and violence prevention programs (Greco, Priest & Yin 2010; Maloney & Walter 2005; Rones & Hoagwood 2000; Trinder, Roberts & Cavanagh 2009). For Indigenous students and families, long-term health can be improved by increasing the extent to which schools incorporate Indigenous leadership and community development (Malin 2003). One Australian Aboriginal Focus Schools program supports respectful relationships and sexual health, with Aboriginal education workers and community education officers being vital to standard programs becoming culturally appropriate and meeting local learning needs (Walker, Patel & Luz 2012).

The WHO Health Promoting Universities Network has existed since 1997 and many people, learn, work and socialise in these settings (Orme & Dooris 2010; Tsouros et al 1998). A review of ‘healthy universities’ activity in England confirms growing interest (Dooris & Doherty 2010) but there are fewer reports on this sector than other education settings. The Government of South Australia (2011) plans to address the social determinants of health inequities in further education by providing access to active transport to or within campuses, making healthy food a requirement in canteen policies, and examining factors that impact the health and wellbeing of international students.

**Healthcare settings**
There is a significant amount of literature on healthcare settings addressing the social determinants of health inequities through improving the distribution or location of healthcare services and changing governance structures. We identified whole-of-population approaches and community engagement approaches, including community health centres and the WHO Health Promoting Hospitals initiative. A review of 12 systematic reviews of best practice to reduce racial and ethnic healthcare inequities found that promising interventions included addressing health system culture and quality of care (Chin et al 2012). In Australia, Aboriginal Community Controlled Health Organisations are a practical expression of self-determination in Indigenous health policy and service delivery and have proven effective (Freeman et al 2011; Russell 2013).

Hospitals can also be health promoting (Johnson & Baum 2001). For example, during Sydney's Liverpool Hospital redevelopment, which serves a relatively disadvantaged population, the recommendations of an Equity Focused Health Impact Assessment (Mahoney et al 2004) included providing a shared walking/cycling route to the hospital, providing breastfeeding facilities and quiet/spiritual areas, and using designs which avoid culturally inappropriate décor (New South Wales Health 2009a). The ‘arts in hospital’ movement aims at intermediate health gains through increasing social participation, and projects playing music in waiting rooms which measure direct health effects such as reduced blood pressure (Macnaughton, White & Stacy 2005).

Providing healthcare in community settings is particularly successful in increasing access for marginalised groups such as young men, men who are gay, homosexually active, CALD, middle-aged and older, fathers, and men abused in childhood (Bentley 2006). Similarly, families experiencing disadvantage view health service provision in non-stigmatising settings, such as schools, as more accessible (Butler et al 2012). Outreach visits also increase access to specialist consultations for remote disadvantaged communities (Gruen et al 2006), while community-based midwifery can address broader determinants of health for teen, low-income and single mothers through providing access to domestic violence, housing and welfare services (Nixon, Byrne & Church 2003). Other supportive structural changes include providing small grants to social and community services, which in New South Wales led to improved organisational support for smoke-free policies and staff training in supporting smoking
cessation, that in turn led to reduced smoking among disadvantaged clients in mental health organisations (Hull et al 2012).

Healthcare settings’ attempts to change individual behaviour are often unsuccessful when broader determinants are overlooked. Unhealthy behaviours are can often be mechanisms for coping with poverty, so that individual-focused interventions overlook broader issues (Dunn 2014). For example, an Aboriginal Medical Service in Western Sydney introduced culturally appropriate cooking classes to increase Aboriginal people's access to diabetes education (Abbott et al 2010). The qualitative evaluation showed some improvement in nutrition knowledge and cooking skills, but participants were limited in their ability to change diets by their broader socioeconomic context, such as being unable to afford healthier food (Abbott et al 2010).

**Workplaces**

We located a large amount of literature on workplace health promotion which only focused on changing individual behaviours of healthy eating, physical activity and smoking in the setting, rather than changing structures or conditions. Systematic reviews and a national UK review show that physical activity programs dominate the workplace health literature, despite a limited and inconclusive association with increased physical activity (Bull et al 2008; Engbers et al 2005). Chu and colleagues (2000) recommend workplace interventions which combine individual approaches with organisational strategies to improve occupational health.

Workplace settings approaches addressing broader determinants include clarifying role ambiguity, reducing workplace noise, and improving work relationships and workers’ involvement in decision-making (Noblet & LaMontagne 2006; Worksafe Victoria 2009). There is strong evidence for improved health where interventions increase workers’ job control and autonomy (Bellow 2008). Targeted approaches can address the needs of particular groups; for example, one Australian strategy, developed with worker representatives, gave workers who were mothers a 10-minute break at 4pm to check that their children had arrived home safely from school, resulting in reduced worker anxiety and absenteeism and better afternoon performance (Noblet & LaMontagne 2006). Another Australian study found that people with low mental health and lower socioeconomic status are supported by workplace policies.
addressing relationships, employment security and degree of control over hours, as well as psychosocial protections that enable workers to make changes or complaints without detrimental repercussions such as vilification (MacKenzie et al 2013). Organisational and supervisory support also show promise in reducing discriminatory attitudes towards employees with disabilities (Snyder et al 2009), while the health of older workers benefits from organisations providing flexible work options to accommodate caring responsibilities and strategies to address transport, travel and housing (Osborne et al 2013). Settings which focus on the primary users’ health, such as students in schools, are also workplaces for others, and an Austrian study shows that teachers’ stress from implementing schools-based health promotion could be reduced through a whole-school approach to workplace organisational change (Gugglberger, Flaschberger & Teutsch 2014).

**Prisons**

A disproportionate number of prison populations are people with poorer health, those experiencing mental health issues, men from lower socioeconomic backgrounds, and non-white people (Dooris et al 2013; Gilles et al 2008). The WHO has a Health in Prisons Project initiative across Europe to promote whole-prison approaches (Moeller et al 2007). Organisation level change in prisons appears to make a significant contribution to health gains. Thus, an Australian Aboriginal-specific inmate health survey identified opportunities such as ensuring access to culturally competent health services, alcohol and other drug services, and welfare support (Indig et al 2010). One UK study linked prisoner health with green space through vegetable, flower and reflection gardens, and beekeeping; these provided transferable skills and work experience, with prisoners reporting improved confidence, mental wellbeing, and better relationships with staff (University of Central Lancashire (UCL) (b) (n.d.). Another study took prisoners outside the prison to construct footpaths and plant trees in nature reserves, which increased feelings of social value, being 'less stressed' and 'happier' (University of Central Lancashire (b) n.d.), although it is unclear whether benefits accrued to less-advantaged as well as more-advantaged prisoners.
Nightlife settings

There is a small but informative literature about addressing ‘risky’ behaviours such as alcohol consumption and other drug-related harm in nightlife settings such as nightclubs, pubs/hotels and bars. Such initiatives improve wellbeing for patrons and people living and working in and around the setting (Jones et al 2011; Kilfoyle & Bellis 1997). An analysis of 52 reviews found good evidence for policies and interventions that limit alcohol sale availability, increase prices or taxation, and reduce drink-driving, although evidence was mixed for interventions in alcohol-server settings (Martineau et al 2013). Such approaches could address inequity where they include strategies to benefit those with poorer health status who are at higher risk of alcohol-related harm. For example, a proportionate universal approach could address all nightlife settings and at the same time provide greater resources for change in less advantaged areas, but we found no evidence of such practice.

Other determinants addressed in UK and Swedish nightlife settings include improving patron safety through increased availability of late-night public transport; better street-lighting and public telephone access; promoting ‘safe-by-design’ concepts; award schemes for smoke-free facilities; supporting venues in adhering to 'safer clubbing' guidelines; providing free water; and training staff in dealing with intoxicated customers (Abdon et al 2011; Hughes & Bellis 2003; Kilfoyle & Bellis 1997). A systematic review shows that the most effective programs in reducing alcohol-related harm in nightlife settings, such as assaults and traffic crashes, are those combining strategies such as community mobilisation, responsible service training, house policies and stricter licensing enforcement (Jones et al 2011). Better outcomes are also obtained through partnerships between agencies such as health, licensing, enforcement, transport, pub/club management, staff, and club-goers themselves (Hughes & Bellis 2003). Despite social determinants being addressed in these settings, there is room for equity considerations to be explicitly included in future planning and evaluation.
Temporary settings

We found a small number of items about temporary settings which hold potential to address the social determinants of health inequities, including mass gatherings, youth events, and one-off sporting events, although we found no differential impact evaluations. Strategies often target a patron population at higher risk of unhealthy behaviours (such as young people) and local residents, and are more successful where agencies collaborate. At World Youth Day in Sydney, 2008, social determinants were addressed through organisational strategies to get people safely to/from the event and avoid violent behaviour, keep them safe in a crowd and well-fed and hydrated (Hutton, Roderick & Munt 2010). Other strategies were providing competitions, discounted 'recovery breakfasts’, a 'chill-out' recovery tent, requiring accommodation deposits, and reducing alcohol consumption by extending food trading hours and police providing free sausage sizzles (Young et al 2001). At the Athens 2004 Olympic Games, 44 agencies developed ten health promotion programs despite shortage of funds (Soteriades et al 2006). Initiatives included a non-smoking policy for the Olympic village and distribution of information about preventing heat-related disorders (Soteriades et al 2006). Hutton and Zannettino (2011) suggest that the Ottawa Charter be used as a framework to assess health and safety at mass gatherings to determine how gatherings can become whole-of-community celebrations rather than a public nuisance. As with nightlife settings, future planning and evaluation could address the lack of explicit focus to date on social determinants of health inequities at temporary gatherings.

Sports settings

Sportswide or statewide policies can reduce risky behaviours such as drinking and smoking, sun exposure and unhealthy eating, which individual sports clubs or organisations feel unable to change alone (Dobbinson, Hayman & Livingstone 2006; Nicholson et al 2013; Priest et al 2008). However, one systematic review found no rigorous studies evaluating the effectiveness of policy interventions in sporting organisations to increase healthy behaviours, attitudes or knowledge (Priest et al 2008) and we found no equity impact evaluations. Change at the socioeconomic, political and cultural context layer can address discrimination. The Australian Human Rights Commission (2013), for example, has developed a national strategy to eliminate
Involvement in sport can increase feelings of inclusion for urban Aboriginal Australians, although its ability to reduce disadvantage is limited (Browne-Yung et al in press). Sports settings can be healing spaces for Aboriginal and non-Aboriginal people to socialise and, in remote communities, sports participation is positively associated with crime and suicide prevention (Godwell, 2000; Tatz & Adair 2009; Tatz 2011). In Victoria, two government departments and five local governments trained young refugees to develop leadership skills to organise sporting events (www.sportswithoutborders.org) and sports clubs can develop environments to reduce hostility towards lesbian, gay, bisexual and transgender people in sport (Symons et al 2010). Training for sports coaches and volunteers can include how to develop inclusive environments and how to take on broader health promotion roles (Kokko et al 2011; Symons et al 2010).

Faith-placed settings

Some literature considers places of faith as settings to promote health and health equity. Faith organisations have a long history of welfare work with marginalised groups (Ayton et al 2012) and Faith Community Nurses could help expand healthy settings work to address the social determinants of health equity through more partnerships with health and welfare organisations (Ayton, Carey, Joss et al 2012). Faith-placed settings have been extensively used for health promotion in the US (Campbell et al, 2007) although there has been little rigorous evaluation (Asomugha et al, 2011; Peterson et al 2002). They have particularly increased access to health services for screening and self-management support in marginalised communities, for specific religious and ethnic communities, and for people experiencing disadvantage (Lumpkins et al 2013; O’Mara et al 2012; Sauaia et al 2007).

Green settings

'Green' settings leverage the health benefits of being in green space, 'in nature' or parks, and landcare (Poland & Dooris 2010). Proven benefits include improved mental health, physical
activity, self-esteem, and reduced levels of short-sleep duration (a correlate of obesity) (Astell-Burt, Feng & Kolt 2013). Similarly, green school grounds with open play areas, trees and shrubbery enhance children's quality and quantity of physical activity (Dyment et al 2009; Larson et al 2011). The main approaches are whole of population (eg greening cities or schools) or targeting disadvantaged populations. Initiatives can establish new parklands; for example, South Australia’s Playford Alive project brings together 'Healthy Safe & Active' goals with 'Green & Sustainable' goals in a low socio-economic area (City of Playford 2013).

Along with the ‘Greener Outside’ prison programs mentioned earlier, natural resource management programs addressing environmental degradation, land conditions and resource access have increased farmers’ social capital, self-efficacy, social identity and material wellbeing (Schirmer, Berry & O'Brien 2013); they potentially promote equity given that rural health is worse than urban health. An equity perspective in green settings is observed where 'Caring for Country' practices in remote Australian communities have supported significant health and environmental benefits for Aboriginal landowners (Burgess, Mileran & Bailie 2008). Dooris (2004) suggests that environmental programs such as ‘Environmentally sustainable schools’ programmes could be combined with ‘Healthy schools’ programmes for dual benefits.

Online settings

The online world provides access to health-supporting opportunities such as online healthcare and social connection (Golder et al 2010) but individualised behaviour change approaches dominate (Baum, Newman & Biedrzycki 2014; Hoch et al 2012). At the level of socioeconomic, political and cultural context, one Canadian First Nations community is commandeering the Internet in community development to increase capacity for independence, resistance, and for social, cultural and economic activities (Gray-McKay et al 2014). Online settings have also improved health for Indigenous peoples where digital storytelling has enabled strengthening of cultural identity, empowerment, and healing from colonisation impacts (Olding & Adelson 2013). However, many groups are relatively excluded from online settings, including non-English speaking migrants, young people with disabilities, and mothers in disadvantaged circumstances (Newman, Biedrzycki & Baum 2010; Raghavendra et al 2013; Wen et al 2011). Even when online initiatives are intended as universally accessible, such as community websites, more-advantaged groups have better access (Osborne & Patel 2013). The
MYBus Project in Melbourne, Australia, was a community-based online approach where a mobile youth centre addressed geographic and socioeconomic inequities by providing both Internet access and youth-specific health resources (Nansen et al 2013), while in Adelaide, an intensive home-based intervention has increased Internet use and social participation for young people with disabilities (Raghavendra et al 2013). A Digital Equity Tool is being developed to measure the equity impacts of online health initiatives (Newman 2012).

Discussion

This paper set out to identify the extent to which settings address the social determinants of health inequities and indeed we identified a range of settings approaches which do this, including locality-based initiatives, whole-of-population approaches, and targeted sub-population interventions. Although settings more easily address daily living conditions than socio-economic, political and cultural context, we did identify cross-cutting approaches within certain settings which make small contributions to addressing this context, such as expanding governance structures, ensuring genuine involvement of lay people from relevant groups, and encouraging multiple agency partnerships and cross-sectoral collaboration. However, most socio-political factors are outside the influence of healthy settings. Table 2 summarises examples of settings action at different levels, while Box 1 summarises key benefits and limitations in such work.

TABLE 2: Summary of How Settings Are Addressing Social Determinants of Health Inequities

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<tr>
<th>Setting</th>
<th>Socioeconomic, Political and Cultural Context</th>
<th>Daily Living Conditions</th>
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<tbody>
<tr>
<td>Healthy cities</td>
<td>Healthy urban planning can benefit everyone’s health; gender mainstreaming addresses power imbalances</td>
<td>New apartment blocks can provide improved daily living conditions, such as outdoor play areas</td>
</tr>
<tr>
<td>Healthy communities &amp; neighbourhoods</td>
<td>Governance structures and committees can be broadened with representatives from a wide range of socioeconomic and demographic groups</td>
<td>Community gardens and walking events promote physical and mental health and social cohesion</td>
</tr>
<tr>
<td>Educational settings</td>
<td>Universal programs such as free school meals or curriculum</td>
<td>Larger and safer outdoor areas provide increased opportunities</td>
</tr>
<tr>
<td>Setting</td>
<td>Example 1</td>
<td>Example 2</td>
</tr>
<tr>
<td>-------------------------</td>
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<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Healthcare settings</td>
<td>Promoting equality for different groups – eg gender equality, establishing Indigenous controlled health services</td>
<td>Arts-in-hospitals includes playing waiting-room music which lowers patient blood pressure</td>
</tr>
<tr>
<td>Workplaces</td>
<td>Changing organisational structures to involve workers in decision-making benefits all workers and special groups</td>
<td>Afternoon breaks for workers who are parents alleviates absenteeism and improves performance</td>
</tr>
<tr>
<td>Prisons</td>
<td>Changing organisational structures to improve access to healthcare, drug and alcohol services, and culturally appropriate improves overall health and that of particular subgroups</td>
<td>Gardening and being outdoors improves prisoner mental health and relationships with staff</td>
</tr>
<tr>
<td>Nightlife settings</td>
<td>Cross-sector collaboration for policies and regulations to improve licensing enforcement and public transport</td>
<td>Providing free water, and training staff to deal with intoxicated customers.</td>
</tr>
<tr>
<td>Temporary settings</td>
<td>Organisational strategies and partnerships can provide safe transport and no-smoking policies</td>
<td>Free food served by police and other agencies reduces alcohol intake and improves patron relationships</td>
</tr>
<tr>
<td>Sports settings</td>
<td>Code-wide strategies can work against racism and support cultural respect and inclusive environments</td>
<td>Individual sports clubs can train sports coaches and volunteer to be health promoters</td>
</tr>
<tr>
<td>Faith-placed settings</td>
<td>Partnerships with health and welfare organisations improve opportunities for people who are less advantaged</td>
<td>Providing a location for community healthcare access for ethnic groups and those experiencing disadvantage</td>
</tr>
<tr>
<td>Green settings</td>
<td>Planning green cities can improve the environment for everyone’s health regardless of individual resources</td>
<td>Natural resource management and caring for country practices improve health for farmers and Aboriginal Australians</td>
</tr>
<tr>
<td>Online settings</td>
<td>Ownership of Internet infrastructure by Indigenous communities changes power structures and opportunities for socioeconomic independence</td>
<td>Providing a mobile youth centre in disadvantaged areas gives free access to Internet and health information</td>
</tr>
</tbody>
</table>
### Box 1: Settings actions required to promote equity

#### Benefits
- Settings can provide a good basis for health equity in all policies across a setting.
- Providing intensive focus on people living in less-advantaged circumstances within a setting can contribute to levelling up the health gradient.
- Providing additional resources to lower socio-economic areas compared to better-off ones can contribute to levelling up the gradient.
- Focussing on an issue within a setting, rather than on a group, can both avoid stigmatising one group and also open up access to others who temporarily or permanently face the same issue.
- Some changes may be beneficial for people’s health by making healthier choices available and affordable such as increasing green space, improving public transport and increasing healthy food supply.
- Settings can address some socioeconomic factors and increase the likelihood of all groups adopting healthier behaviours.
- Combining healthy settings approaches with other approaches (eg environmental initiatives) can provide wins for both sectors from working together.

#### Limitations
- Making certain resources available only to targeted groups can be stigmatising; Locality-based approaches only address equity if they receive sufficient resources to undertake more action than areas with higher levels of advantage.
- Locality-based initiatives may overlook more-disadvantaged minorities who live within more-advantaged areas.
- Initiatives may miss the more-disadvantaged or even increase inequity if the more-advantaged respond.
- Without explicit attention to inclusive actions to improve health, those who are less able to respond may miss out or feel unable to participate.
- Governance and stakeholders may reflect the more powerful in an area; socioeconomic and demographic data could highlight missing representatives.
We found less literature for the socioeconomic, political & cultural context layer than other layers, possibly because settings are predominantly organisationally bounded. Socio-political level strategies included changing legislation, policy, licensing, regulation and planning, while most literature relevant to cultural context was concerned to create non-discriminatory environments. This layer provides supportive environments for improved daily living conditions to make healthy choices easier and promote health by being, for example, culturally inclusive or safe. Some settings worked across multiple layers, with some Healthy cities, for example, providing inclusive governance structures which change the socioeconomic, political context, and addressed urban planning to improve daily living conditions.

Our findings suggest that in addressing the social determinants of health inequities in settings, there is considerable room to replace or integrate individual behaviour approaches with approaches at structural or organisational levels. However, structural interventions often challenge the practices of powerful players and so require more planning and commitment, with extensive cross-sectoral collaboration and committed leadership. Inevitably this leads to less consensual approaches than those using behaviour change only (Baum, 2008). Thus, for childhood obesity, directing interventions to increase exercise levels and improve diet by educating children is less threatening to the social and economic status quo than preventing supermarkets from offering high fat and sugary foods at checkouts. Health promotion professionals and organisations could advocate for more structural and integrated approaches more frequently and can play a key role in supporting the development of legislation, regulations and policies which provide a supportive base layer for change in daily living conditions.

One of the three principles of action to address health equity includes expanding the knowledge base and developing a workforce trained in social determinants of health (CSDH 2008:26). Yet the evidence base on the effectiveness of healthy settings is not well developed Dooris (2006), while a recent review of systematic reviews concluded that the effects of interventions to address social determinants of health are unclear and intervention studies that address health inequities should be prioritised (Bambra et al 2010). Our review suggests that Dooris’s (2006) identification of an urgent need to fund evaluations of interventions within and across settings still holds almost ten years later. Considering the large amount of health promotion being undertaken in 'community settings', particularly on obesity prevention, there is also a dire need
for quantitative and qualitative evaluation of their equity impacts. A number of tools support
purposeful planning and assessment of the (potential) differential and distributional impacts of
a policy, program or project across a population, including Equity-focused Health Impact
Assessment (Harris-Roxas et al 2012) and the New South Wales Healthy Urban Development
Checklist (New South Wales Health 2009b).

Whitehead and Dahlgren (2006) are clear that reducing inequities relies on 'levelling up',
whereby inequities across the health gradient are reduced, yet we found only one initiative
aiming for this. We also note that a focus on ‘settings’ does not enable consideration of the
beneficial context of universal health and welfare services. A review conducted for the CSDH
demonstrated the benefits of universal services in Nordic countries in reducing, although not
eliminating, inequities (Lundberg et al 2008), while comparative analysis of the benefits of
universal and residual strategies across countries and settings holds promise for determining
effectiveness in reducing health inequities (Vallgarda 2010). Thus the broader socio-political
context of a setting is likely to be important to its effectiveness even though it is not possible to
determine this impact from the literature.

Based on our findings, we recommend that reviews and reports on settings which address the
social determinants of health inequities should clearly explain their interpretation of these
terms and include them in abstracts and keywords so that such work is more easily located. We
agree with Tugwell et al (2010) that authors of systematic reviews should include equity
assessments to provide a wider pool of evidence on ‘what works’ to improve health equity. The
Equity Checklist for Systematic Review Authors (Ueffing et al 2012) provides clear guidance
on how to achieve this, and Waters et al (2011) is an example relevant to settings work. Even
where studies identify some differential impacts by socioeconomic status (e.g. income level,
area of residence) it would be pleasing to see evaluation of the extent to which social
determinants are differentially addressed across the socioeconomic spectrum (to reduce the
gradient) as well as for disadvantaged subgroups. Bluford et al (2007) also recommend that
equity impacts for different subgroups within disadvantaged populations be reported e.g. by
ethnicity, gender, health status. However, it is difficult to have controls in settings approaches
and hence can be difficult to know if the settings approach is what caused any observed
changes (Baum 2008). National research bodies should also provide more funding to increase
the evidence base (Baum et al, 2103). Following Shapiro’s (2009) recommendation for
childhood obesity prevention, we recommend establishing an international “Clearinghouse of What Works in Settings to Address the Social Determinants of Health Equity” as a centralised, publicly available mechanism to collect and archive this information. Training and support systems for health promotion workers and managers could also enable translation of this evidence into local initiatives, which would address a key principle of action to address health inequity as recommended by the CSDH (2008:26).

Conclusion

While a wide range of health promotion work is occurring in settings which addresses or holds potential to address the social determinants of health, much of it does not include an in/equity focus nor is it evaluated for effectiveness. More effective initiatives to reduce health inequities will require that approaches reduce the focus on individual behaviour change interventions within settings, and focus more on interventions which change the structure of setting themselves as this is what constitutes action on broader determinants of health inequities. There are also opportunities to combine healthy settings approaches with initiatives from ‘non-health’ sectors, such as environmental sustainability and climate change, and in investigating settings which have had less focus such as green settings. It is important to prioritise settings-based interventions which explicitly set out to address the social determinants of health equity. Health equity may be more appropriately addressed in some settings through a universal approach to improve health without stigmatising targeted groups and which also aims to level the health equity gradient. Programs must also be planned so that people living in disadvantaged circumstances or from disadvantaged backgrounds are not missed and are the focus of particularly intensive intervention within universal frameworks. Mechanisms to disseminate evidence on what works in settings-based approaches to address the social determinants of health inequities are also needed. Political and bureaucratic support will need to be won for ambitious aims of changing systems and organisations to be more equitable and, finally, to determine settings' effectiveness we need also to understand the broader socio-political contexts of settings and the extent to which they too are supportive of health equity.


New South Wales Health (2009a) Liverpool Hospital Stage 2 Redevelopment: Equity-Focused Health Impact Assessment. Sydney South West Area Health Service, Sydney, NSW.


Sports Without Borders (n.d.) Homepage on the Internet. www.sportswithoutborders.org


Young, I., St Leger, L. and Buijs, G. (2013) School Health Promotion: Evidence For Effective Action. (Background Paper SHE Factsheet 2).

**Appendix 1: Search strategy**

OVERVIEW: Settings AND What works AND Intervention AND Social determinants AND Equity AND Population

**Search #1**: (1-10) AND (11-18) AND (19-30) AND (31-64) AND (65-71) AND (88-101)

**Search #2**: As above, but with equity groups (72-87) instead of equity terms (65-71)

**Search terms**

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<thead>
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<th>Settings</th>
<th>Social determinants (continued)</th>
<th>Equity Groups (cont’d)</th>
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<td>2. healthy setting*</td>
<td>41. disadvantage</td>
<td>82. rural</td>
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<td>3. settings-based</td>
<td>42. infrastructur*</td>
<td>83. remote</td>
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<td>4. settings based</td>
<td>43. environment</td>
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<td>44. housing</td>
<td>85. offender</td>
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<td>6. healthy environment*</td>
<td>45. neighb*rhood</td>
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<td>7. supportive environment*</td>
<td>46. communit*</td>
<td>87. disability</td>
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<td>8. easy choice*</td>
<td>47. workplace*</td>
<td>Population</td>
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<td>48. work-based</td>
<td>88. Australia</td>
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<td>10. community-based health promotion</td>
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<td>101.South Australia</td>
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</tbody>
</table>

**What works?**


**Interventions at different levels**


**Social determinants**

31. social determinant* 32. cultur* 33. soci* 34. social capital 35. racism 36. norm* 37. value* 38. economic* 39. income