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Social determinants in an Australian urban region: A 'complexity' lens

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ABSTRACT

Area-based strategies have been widely employed in efforts to improve population health and take action on social determinants of health (SDH) and health inequities; including in urban areas where many of the social, economic and environmental factors converge to influence health. Increasingly, these factors are recognised as being part of a complex system, where population health outcomes are shaped by multiple, interacting factors operating at different levels of social organisation. This article reports on research to assess the extent to which an alliance of health and human service networks is able to promote action on SDH within an Australian urban region; using a complex systems frame. We found that such an alliance was able to promote some effective action which takes into account complex interactions between social factors affecting health, but also identified significant potential barriers to other forms of desired action identified by alliance members. We found that a complex systems lens was useful in assessing a collaborative intervention to address SDH within an urban region.

Key words:

Complex systems, urban health, social determinants of health, collaboration

INTRODUCTION

Health researchers, policy makers and service providers concerned with primary health care and action on social determinants of health (SDH) and health equity have long regarded local or regional area-based strategies as important for improving population health (World Health

Organization [WHO], 2008). Such strategies have included Healthy Cities projects (WHO, 1996) and similar initiatives in urban regions (Commission on the Social Determinants of Health [CSDH], 2008). These initiatives respond to continued rapid growth in major cities, with many attendant issues for population health (WHO, 2010; Friel *et al*., 2011). In Australia, the national government is assessing the effects of urban environments on health (Australian Government, 2010), and has also recently implemented a national, area-based framework for planning primary health care (Council of Australian Governments, 2011). Local governments are also being seen as playing an important role in health promotion within their jurisdictions, and some Australian State governments have recently formalised this role in legislation (Buckett, 2012).

Increasingly, the social, economic, physical and environmental factors that affect population health, and the actors, structures and processes which facilitate improvements or not, are recognised as being part of a complex system. This has led to a growing interest in the application of systems science to issues in public health (Jayasinghe, 2011; Krieger, 2001; Sterman, 2006), and in health or health systems research (Hawe *et al*., 2009; Wilson *et al*., 2009). Systems theory describes events as 'complex' in that they are influenced by multiple variables, the relationships are non-linear and subject to negative or positive feedback effects; and that they are adaptive, unpredictable, and dependent on history (de Savigny and Adam, 2009; Carlson *et al*., 2012). Schensul (2009) also argues that variables can be seen as interacting across different levels of micro, meso and macro-organisation within social systems. Jayasinghe argues that, on a 'complexity' view, the strategies most likely to improve health will be those which are 'multi-pronged, and take into account the diversity of actors, determinants and contexts' (2011). Schensul suggests a complex systems approach to social policy adopts a premise that 'change toward a goal will occur faster and more effectively when synchronized and supported across levels in a social system' (2009).

A complex systems view is consistent with an understanding of SDH, which recognises that population health is affected by multiple social, economic and cultural factors (Solar and Irwin, 2010). For example, disadvantage and resulting problems intersect through factors such as age, culture, gender and ethnicity as well as social location, creating additional layers of complexity (McGibbon and McPherson, 2011). Thus, it has been suggested that policy and practice will not be effective unless the multi-dimensional nature of disadvantage is addressed (Price-Robertson, 2011) and coordinated responses implemented across all areas of public policy (CSDH, 2008). However, while there has been increasing attention to the potential of a complexity frame for improving the implementation and understanding of action on SDH there has been a dearth of empirical studies using complexity to frame their analysis. This study aims to do this through a study of regional collaborative action.

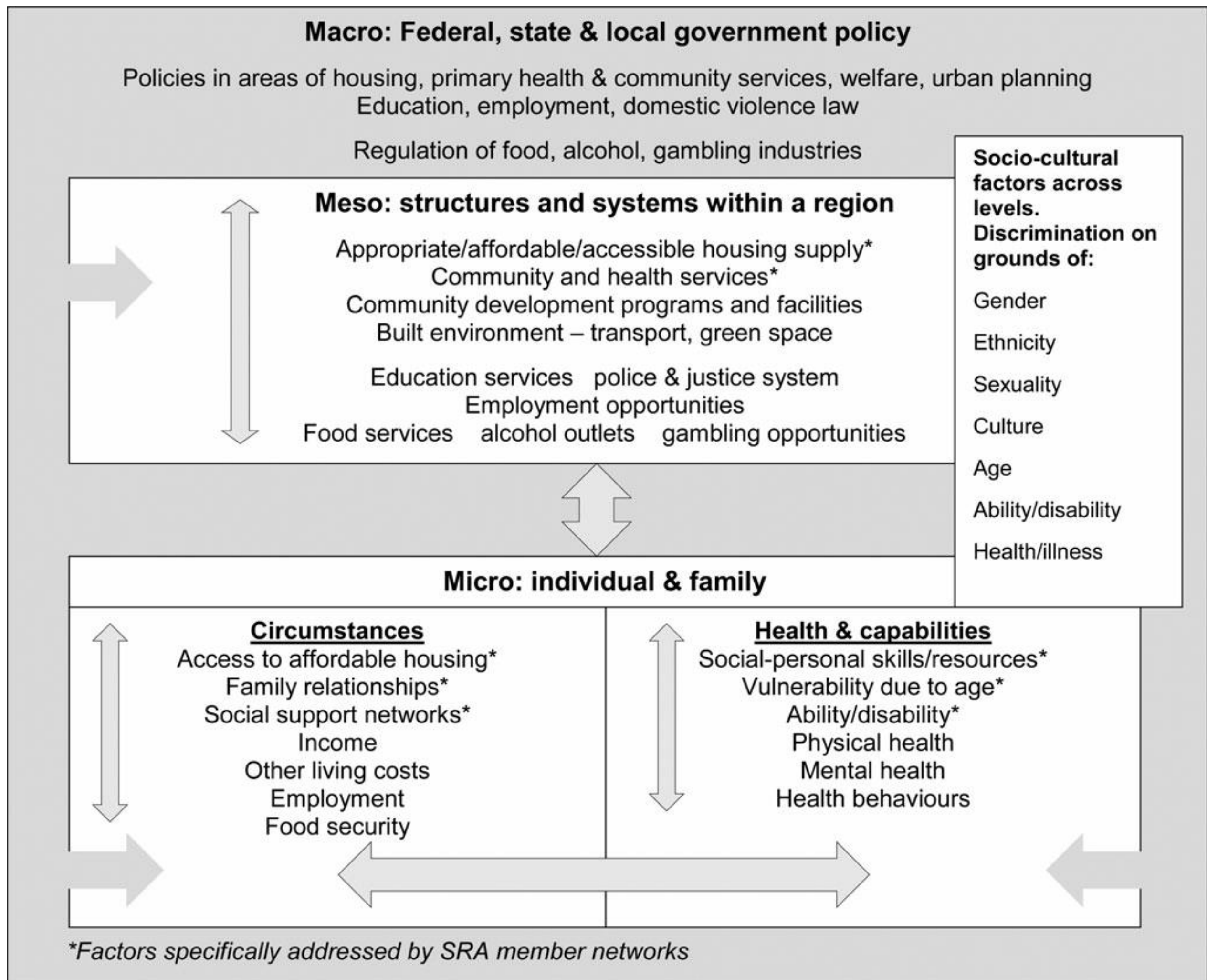
The *Southern Regional Alliance* (SRA) was formed in 2010 between six inter-agency networks (described in Box 1) in the southern metropolitan region of Adelaide, the capital city of South Australia to encourage collaboration within a South Australian urban region, and improve outcomes for disadvantaged people through addressing the SDH. This article reports on qualitative research conducted with the SRA which aimed to:

1. Assess the extent to which an alliance of health and human service networks is able to promote effective action on SDH in an Australian urban region
2. Identify potential barriers to the alliance promoting such action
3. Consider how a complexity lens aids analysis of these issues

Our 'complexity' framework developed for interpretation of research findings is summarised in Figure 1. Based on our review of literature (including that on housing related issues as discussed below) and understanding of evidence on SDH we conceptualised commonly identified determinants as operating at, and interacting within or between, three levels of social organisation (with interactions illustrated by the arrows). The factors mentioned are

examples drawn from SDH literature, and those on which SRA member organisations reported taking action are marked, to illustrate how we saw their activities placed within this framework.

Figure 1: Complex interaction of factors influencing health and social outcomes



Background

The two main goals of the SRA are to adopt a regional approach, and to provide a vehicle for shared advocacy and collaboration between human and community service agencies and groups, in order to address social disadvantage and SDH. Each of the six member networks

(see Box 1) provide for shared action on issues of common interest among agencies operating in the region.

Box 1: Southern Regional Alliance member groups

- The *Southern Housing Round Table* consists of 14 State government, federal government and community agencies working in areas of welfare, housing and mental health services. Its main aim is to improve emergency and social housing provision, especially for people with complex needs, who are often socially and economically disadvantaged.
- The *Children and Families Round Table* is an inter-sectoral group of agencies with a focus on children and families. It provides a forum for child and family service providers to respond to policies impacting on children and their families, and collaborate around service delivery.
- The *Aldinga Sellicks Alliance* is a human services roundtable focused on the needs of two low- to middle-income suburban areas on the periphery of southern Adelaide. It involves health services, police, a major charity and a resident association, and aims to promote community activities, service collaboration, and increased services to meet community needs.
- The *Onkaparinga Collaborative Approach to the Prevention of Domestic and Indigenous Family Violence* brings together a range of groups to engage in advocacy and awareness-raising, and promote an integrated response to reducing domestic and Indigenous violence in the region.
- The *Southern Services Reform Group* is funded by the Australian Department of Health and Ageing. It aims to promote reform and improved service coordination for older or disabled people within the region, with a focus on supporting independence and community participation.
- *Healthy Cities Onkaparinga* is a coalition of agencies and community members modelled on the WHO Healthy Cities program (Baum *et al*., 2006). It advocates for local and State government policies consistent with a Healthy Cities approach, and promotes inter-sectoral collaboration and community engagement on local public health issues.

A focus on housing affordability and homelessness

Initial discussions with SRA members indicated a specific interest in housing affordability and homelessness as determinants of health. In order to inform our complex system lens approach, we conducted a preliminary review of literature reflecting on complex relationships between housing affordability and homelessness, other economic and social factors affecting both, and health status. We also reviewed related demographic information on the region.

Housing affordability is influenced by a range of social and economic variables, including both 'higher-level' factors such as government policy, and factors at the individual or family level. For example, Yates *et al.* (2004) argue that housing affordability may be influenced by policies across diverse portfolio areas including transport, urban planning, welfare and taxation; as well as by economic, social and demographic trends. They also point to 'agency' factors such as family size, relationship breakdown, or high levels of mortgage debt. Social or political factors may also impact differently on housing affordability for different social groups. Research in Canada shows that housing and income policies intersect with gender to create especially adverse effects for female lone-parent families (Bryant, 2009). The complex intersection between factors affecting housing affordability mitigates against 'simple' policy responses. For example, Batterham (2012) argues that increasing low-median rental housing supply does not guarantee access for low-income households because actual access is also mediated by household income, population mobility and competition from higher income groups.

Incidence of homelessness is also influenced by many factors. Youth homelessness may occur when teenagers are forced to leave their family home before they enter the labour market. Housing crises and family breakdown also contribute to adult homelessness and may themselves be triggered by a complex mix of 'upstream' structural factors such as housing

shortages, unemployment, inequality, poverty, patriarchy and social exclusion, as well as individual risk factors such as mental illness, family breakdown, or alcohol and substance abuse (MacKenzie and Chamberlain, 2003; Bradshaw *et al*., 2004).

There is evidence that housing and homelessness are both linked to health and wellbeing outcomes (Foster *et al*., 2011). Research suggests that anxieties related to inadequate or unaffordable housing can contribute to mental health problems (Mueller and Tighe, 2007). High housing costs can also contribute to poor living conditions, interrupted schooling, welfare dependency, overcrowding, or family instability, all of which can impact adversely on health (Yates *et al*., 2004). Homelessness also contributes directly to health problems, and to other outcomes associated with poorer health such as unemployment and poor access to services (Bradshaw *et al*., 2004).

The southern suburban region of metropolitan Adelaide, home to around 230,000 people, features a number of the factors discussed above including: around 10% of rental or mortgage-holding households subject to housing stress (> 30% of household income on direct housing costs); localised areas with a relatively high levels of unemployment, low income, and/or single parent families; and around 28 people per 10,000 subject to some form of homelessness (McGrath, 2008; Australian Bureau of Statistics, 2011).

METHODS

Evaluation of SRA Conference on regional action to address social determinants and socioeconomic disadvantage

The main collective activity of the SRA to date has been to organise and run the ‘Connecting in the Urban Village’ Conference in September 2012 (hereafter, ‘the Conference’).

Organisation of the event reflected the main aims of the SRA, encapsulated in the Conference 'key question': '*How can we work together to address the social determinants of health and assist people to navigate pathways out of poverty and homelessness*?' SRA member groups promoted the Conference through their own networks. One hundred and eighty people attended, with roughly even representation from three sectors: government agencies; NGOs; and community, academics and 'other'. 18 workshops held within the event reflected specific interest areas of SRA member groups as described in Box 1. Conference evaluation used three methods: a self-complete questionnaire distributed to all attendees asking which sector they came from, and which elements of the general conference and workshops they found most or least valuable and why; short face-to-face interviews with twelve randomly selected attendees during the event also asking about they had found most or least valuable and why; and an evaluation form completed by the facilitators of each workshop, with questions designed to elicit how discussion had addressed the key Conference question above. A total of 79 completed questionnaires were returned on the day representing 44% of attendees.

SRA Member Interviews

Semi-structured interviews (n=6) with leading representatives of all SRA member groups as shown in Box 1 were held during November 2012; either over the phone or in person, and of approximately 25 minutes duration. Interviewees were asked open-ended questions about the aims and activities of their member group, their perspectives on SDH in the region and the success (or otherwise) of the SRA and the Conference as an emerging effort to promote collaborative action within an urban region in order to address the needs of disadvantaged individuals and families or to address wider SDH. All interviews were audio recorded with prior participant consent, and transcribed into text.

Analysis and evaluation

All qualitative data gathered from the Conference and SRA member interviews were analysed using QSR NVivo 10 software. Thematic analysis was applied to allow for the emergence of themes during the process of data collection and analysis (Ezzy, 2002). Data from conference questionnaires, short interviews and workshop evaluation forms were analysed to identify current or prospective forms of action within the region addressing social disadvantage and/or SDH (as discussed at the Conference) that attendees or workshops commonly identified as valuable or important. Data from SRA member interviews were analysed to identify: their understandings of SDH and social disadvantage within the region; elements of the conference seen as successful in promoting collaborative action on social disadvantage or SDH; future goals for the SRA; and challenges or barriers to achieving those. The decision to adopt a 'complexity' lens to analyse findings and answer our research questions was based on our initial assessment – prior to data gathering – of the scope of aims of the SRA to promote action on multiple factors affecting health and social disadvantage, for individual and families, within the region, and in State government policy. A complex systems lens informed the design of the SRA member interview schedule to probe for perspectives and goals for action at these different levels of social organisation, and was used to interpret findings in order to assess the capabilities, limitations and prospects of the SRA for addressing the complex interactions of SDH within and across micro, meso and macro levels of social organisation (Schensul, 2009), within an urban region.

RESULTS

A number of main themes emerged from the research, relevant to understanding SRA member's and conference attendee's perspectives on SDH in the Southern Adelaide region,

preferred forms of action to address SDH, and perceived barriers to such action. In what follows we have chosen to directly cite comments from SRA member interviews and add comments regarding relevant findings from the several forms of data gathered at the Conference.

Complexity of interactions between housing affordability and homelessness

Consistent with our review of literature, responses from the interviews with SRA members indicated awareness from all members and a depth of understanding from several about complex interactions between housing affordability and/or homelessness, other social and economic variables, and health:

> Unstable housing is a key factor, things that lead to trauma and abuse both impacts on people's physical health but also their mental health and emotional stability and when people are stressed and traumatised then they tend to lose weight and make poorer choices for their general health and wellbeing.
> *(Interviewee 6)*

> So the wider social factors [leading to homelessness] would be mental illness, relationship breakdown, domestic violence, disability, low income and some poverty, disadvantaged age groups like youth, children and young people who are having to leave home… which is related back to relationship breakdown in many cases and violence and abuse in various forms.
> *(Interviewee 6)*

> We also know that domestic violence is the largest cause for families to become homeless and we know the impacts of homelessness are that dislocation, that non-connection, so people's time is taken up trying to survive rather than to be actually

> well. People lose their confidence to engage with one another, to feel safe about being in the neighbourhood in normal ways and so that really impacts on people's wellbeing and health.
>
> *(Interviewee 3)*

SRA members identified a lack of resources for social housing as a key barrier to action in this area.

Availability of affordable, secure housing was also a main theme arising out of the Conference evaluation; both as a crucial element of response to immediate individual crisis or need, and as a broader, government-supported strategy to advance desired social or environmental outcomes in the region.

The confluence of social factors on population health

While reactive responses to problems were identified by SRA member representatives as important to address the immediate needs of their clients, they stressed a need to understand and address wider social factors contributing to the problems. Consistent with literature on SDH and a complex systems view of health, all SRA members interviewed demonstrated a similar ability to interpret contemporary individual experiences of social disadvantage and/or poor health within a social context, and as influenced by a variety of social factors over the life course:

> I think certainly the whole social isolation is something that is just massive and there's a whole lot of social issues around that, that affect that. It's lack of transport for people to get places. It's also, I guess, cultural in a sense, you know, families moving away - we don't tend to know our neighbours anymore, we don't have that community kind of

spirit thing happening where you know the people that live around you because that's changed so much.

(*Interviewee* 5)

If you don't feel safe in your home, if you don't have enough money to feed your family or to have a home, that's fundamental to your health.

(Interviewee 4)

There needs to be a broader, more comprehensive understanding of all of the factors that contribute to the health and wellbeing of an individual and the community.

(Interviewee 6)

Addressing these systematic factors was identified as an important way to prevent health problems further down the line, and all saw this as a key role of the SRA.

I think being really mindful that people are complex, issues are complex and it's only by working together that we actually achieve good things.

(Interviewee 1)

I think one of the other important things that the Alliance does is to look at what's happening at a local level but then also look at the systemic issues that actually influence factors at local levels.

(Interviewee 6)

[We need to] develop service models that don't just deal with presenting symptoms… that we question our model to ensure that we are holding in mind the social determinants of health and risk and protective factors for individuals and that we not make all of our approaches individualised, otherwise you end up blaming an individual for not changing when in fact it's the whole social and emotional context that they live

> in that creates a situation for them.
>
> *(Interviewee 4)*

The Conference content provided a range of information on effects of social or economic factors on child development, health and health inequalities, or social disadvantage; and comments from many attendees indicated they found such information valuable. Workshops on domestic violence identified how factors operating at different levels of social organisation can interact to affect outcomes for victims, such as: (macro-level) domestic violence law; (meso-level) police and justice systems; and (micro-level) access to secure housing; while sociocultural factors such as gender discrimination can influence events at all levels.

Expanding the focus from crisis management to prevention: the use of a social determinants frame

Another important theme highlighted by interview participants was the significance of a social determinants perspective for informing preventative strategies.

> Yeah, the move away from preventative a lot of times towards crisis responses. I think we need to have a combination of both and also I think as well making sure that we're constantly listening to people's lived experiences - for different issues.
>
> *(Interviewee 1)*

> There's a core belief in that DV [domestic violence] and Aboriginal family violence is everybody's business and it's the role of the OCA to, really, firstly develop awareness, prevention strategies and responses within agencies and beyond… to reduce the incidence and prevalence of domestic violence.
>
> *(Interviewee 1)*

Again, this was seen as something which the SRA structure could offer to its member networks:

> …it seemed to me that that broader way of thinking would really help our sector in addressing problems because you get a bit sort of – you know, you're just addressing – you're being reactive rather than proactive. Yeah, you're just reacting to stuff rather than looking back and saying 'okay, why is this happening, what else can we look at here in a broader way?
>
> *(Interviewee 5)*

Collaborative action

Collaboration between service agencies and other groups on issues of common interest was reported as a characteristic of all SRA member networks. Some of these focus on service provision to meet individual or family needs in particular domains such as housing, ageing or domestic violence; others on a geographic area. All interviewees described the role of the SRA as one of enabling a form of 'higher-level' collaboration to address ways in which needs and issue cut across these more specific areas of work:

> The Alliance exists as a mechanism to facilitate cross-sectoral discussions between the work of the various roundtables for the health and wellbeing of people in the southern Adelaide region. [It] provides that broad hub for inter-sectoral discussions of which housing and homelessness is a contributor.
>
> *(Interviewee 6)*

> I think the coming together on a regular basis across networks is really important, breaking down silos, because really it's – we can only actually achieve good things by working together and looking for ways that address not just - for example getting

> somebody out of homelessness is only one step in actually supporting them to have a full life.
>
> *(Interviewee 1)*

Interviewees also reported that southern Adelaide has a history of successful inter-sectoral collaboration involving local governments, community groups and State government departments.

> In some ways I think it's fair to say that Healthy Cities has contributed to that culture of agencies working together in the south… so you don't get the silos so much.
>
> *(Interviewee 2)*

Collaboration and 'networking' also emerged as key issues in the evaluation of the SRA Conference. Data from participants and workshops most frequently identified collaboration at the service delivery level as a familiar and valued way to address client problems effectively, and achieve more durable solutions; for example, in dealing with 'hoarding' by social housing tenants. The Conference was generally seen as facilitating strengthened or new collaborative links at this level. However, results also suggested some human service providers see their role as limited to addressing specific client needs, and do not place a value on collaborative action to address other issues.

Less commonly, comments referred to collaboration to promote desirable changes in structures and systems in areas such as urban planning, housing supply or the court system, at a regional or State level. Thus it appears that the idea of 'collaboration' and its perceived potential benefits were seen in different ways.

Community involvement and development

SRA members frequently described action to facilitate and promote community engagement and development as an important activity and goal of the SRA, for example:

> For me it's putting the community, putting the people at the centre of all these issues and going back to that grassroots level… initiatives to support people to actually identify solutions for themselves, is really important… at a localised level looking for local solutions is so important as well so people actually have ownership. That takes longer but it actually has better outcomes in the long term…one thing the Alliance does is look for ways to actually increase opportunities for people to meet each other, to build community connectedness and to reduce social isolation.
>
> *(Interviewee 1)*

One interviewee also described this approach as an important way to get outside what can be the limits of a human service provider role:

> As a service provider sometimes we're at risk of thinking 'we'll never be able to do that'. There's a great deal of energy in our communities to grow communities that they want to live in.
>
> *(Interviewee 4)*

However, SRA members saw a lack of sustained government support for community development programs as a barrier to gains in this area. Participatory community engagement and development also came to the fore throughout the Conference evaluation, as an important (and under-utilised) strategy to promote wellbeing and social inclusion and reduce social disadvantage in the region. Conference participants saw such strategies as appealing because they can address multiple aspects of social disadvantage, provide a vehicle for community

members to identify and pursue goals, and are ‘asset-building’ and health promoting rather than being deficit focused.

Higher level policy change

SRA members also identified a goal for the SRA to influence ‘higher-level’ policies and decisions, especially at the level of State Government, impacting on social disadvantage or SDH within the region; and the Conference was seen in part as working toward that end.

> I think we really want to place ourselves strongly and strategically to be recognised by decision-makers within government, that we do represent the south and to be able to be influential in that, to be consulted, etc., and really take – to be seen to be taking action, so to be working together on an agreed direction.
> *(Interviewee 4)*

> The Conference was quite a unique opportunity to look at that at a regional level, to say what should be going on in this region in order to get better health and wellbeing outcomes for the population of the southern Adelaide region?
> *(Interviewee 6)*

Conference participants or workshops recommended the SRA seek to engage with local or State government policy makers in areas such as regional planning, child-friendly environments, public health and domestic violence law.

Funding arrangements

Several SRA members working for publically-funded human service agencies identified funding arrangements with government as constraints on their ability to engage in SRA activities. These included: collaborative activity as a voluntary task additional to paid work; time demands; funding arrangements defining narrow, prescribes forms of activity where

severe disadvantage or 'crisis' may be the trigger for service intervention; and sense of putting public funding at risk by engaging in policy advocacy.

> I think again the barriers would be time and energy because the members of the regional alliance are senior managers in various government and non-government agencies and they're not directly funded to do this work… it's true of each of the chairs of the regional roundtables, they all do that through personal commitment to the belief that the collaborative work is the way to move things forward, but I don't know that that's always recognised and valued as highly in all – you know, probably government departments more than anything.
>
> *(Interviewee 6)*

DISCUSSION

The first two aims of this research were to assess the extent to which an alliance of health and human service networks is able to promote effective action on SDH in an Australian urban region; and to identify potential barriers to such action as articulated by members of the alliance. Our review of findings from the research indicate that SRA members, in seeking to address SDH and reduce social disadvantage in their region of interest, are well aware of how multiple social factors intersect to influence individual and population health and social outcomes, and have interests in addressing those factors at three levels of social organisation:

- the specific circumstances and needs of disadvantaged individuals and families;
- cultural, socioeconomic or structural factors affecting health and social outcomes;
- and the policies of the State government and local governments

As noted earlier, a complex systems view of population health suggests that effective action on issues of social disadvantage and SDH will combine strategies addressing different aspects of 'the problem', at different levels of socio-political organisation (Jayasinghe, 2011; Schensul, 2009). Crucially, it also suggests that negative or positive feedback effects between different factors within or between levels may also act to reinforce or undermine the intended effects of actions taken (Sterman, 2006).

In this section we report on analysis to answer our first two research questions by applying a complexity lens as summarised in Figure 1, and asking how complex interactions of factors within or between these levels identified in the research are likely to support, allow or obstruct the aim of an alliance of human service agencies to promote action on SDH in an urban region.

Micro: Individual and family circumstances

Most of the member networks of the SRA work within the region to assist and support individuals or families vulnerable to or experiencing social disadvantage, or undergoing a life crisis. A key rationale of collaboration here is to enable a group of agencies to address different aspects of these often complex circumstances, which may variously involve psychological distress, material deprivation, loss of social ties, encounters with legal systems and so on. Thus, it appears there is a familiar and valued rationale and practice within member networks of collaboration to address multiple factors that (in different ways) affect outcomes for individuals and families. In addition, the value placed on this way of working was strongly reiterated by many Conference participants, especially those working in human service agencies.

Thus, seen through a 'complexity' lens, our findings suggest that networks of human service agencies can effectively address complex intersections between factors affecting individual

capabilities and circumstances at the micro level. Practices of collaboration can provide for combinations of service responses tailored to the specific needs of disadvantaged individuals or families. Action in one area – e.g. access to affordable housing – could have positive feedback effects by facilitating gains in another area – e.g. mental health. However, attitudes within agencies, as well as resource constraints and prescriptive funding arrangements as determined at the macro level, may inhibit collaboration in this form. Relationships indicated in Figure 1 also suggest that macro-level policy settings directly influencing factors at the micro-level such as personal/family income, employment or living costs could facilitate or act as a barrier to positive outcomes in other areas, such as family relationships or individual's health status. Changes in such policies could also significantly shift the overall numbers of people making up the 'demand pool' for meso-level services, affecting the capacity of agencies to provide effective services.

Meso: Addressing social determinants in the region

The human service networks involved in this research share a range of knowledge and extensive experience about the way cultural, economic and structural factors – including availability of health and social services – can and do interact in complex ways within an urban region to affect the level and distribution of health and social outcomes. Organisation of a conference focused on regional responses to SDH and social disadvantage appears to have been an effective vehicle for sharing and developing those perspectives with other NGOs, public agencies operating in the region and community members.

Our findings also show that a collaborative exchange between human service networks to address SDH identified and highlighted two particular meso-level strategies well-suited to addressing systemic or structural factors within an urban region. These strategies can provide

resources for individuals to protect against the potentially adverse, and sometimes compounding effects of other social factors, and/or to promote positive health.

Access to affordable housing in the region – or the lack of it – was identified as a crucial modifier of the potentially adverse effects of ill-health, social disadvantage or acute life crisis for individuals; and thus as having significant effects on population health. Access to stable, affordable housing was discussed as a crucial opportunity to enable individuals and families (with support) to achieve positive change in other aspects of their circumstances, including to build social relationships, or improve realised access to other services and to employment opportunities; a perspective with potentially important implications for policy. This view was reinforced in our literature review.

Community development projects were also highlighted in the research as an important and valued strategy for promoting health and welfare within localised areas, or particular groups, including Aboriginal people. Baum *et al.* suggest that 'complex, multi-sectoral community-based health promotion initiatives can be sustained longer term and do bring significant benefits to their communities, at little cost', and that a key element of such initiatives is community engagement and involvement (2006). Research participants identified the ability of community development approaches to empower community members through engagement in planning and implementing projects, to promote positive determinants of health such as social support and environmental amenity, and to address multiple aspects of social disadvantage. Such views suggest that action by agencies at a meso-level to resource community development projects can have positive effects on factors operating at the individual and family level such as social support, as indicated in Figure 1.

The idea that such actions can be an effective response to the complexity of SDH is consistent with the findings of Hunter *et al.* (2011) that 'social capital' – assessed using

measures of social trust and social, economic or civic participation – is an important mediator between factors such as income and education and health outcomes. Thus, in their view, action to build social capital can be an important and effective strategy to address SDH in localised settings – when it may not be possible to influence wider policy settings. Although, it is also consistent with the analysis offered here to recognise that the apparent benefits of social capital for health are likely (nevertheless) to intersect with effects of socially structured material and economic circumstances (Muntaner *et al.,* 2000). The work of Bourdieu (1986) makes it abundantly clear that social, cultural and economic capitals interact to reinforce one another and when lacking result in exclusionary processes. Local effort to improve each form of capital is important in addressing inequities but at a local level action to build social capital is more easily taken. Cultural and economic capital are more readily influenced by State or national governments.

Barriers to success identified by SRA members included a lack of adequate resources and (macro-level) policy support for social housing or community development programs. However, our literature review also suggests that macro and/or meso level action to increase affordable housing supply, for example, may not always result in improved access to affordable housing for disadvantaged families or individuals, because unintended 'side effects' intercede, such as competition from middle income groups (Sterman, 2006; Batterham, 2012). This research also suggested that (macro-level) law in the area of domestic violence can influence actions of (meso-level) police and justice systems, so as to either facilitate or obstruct (micro-level) access to secure housing for women and children subject to domestic violence; and that sociocultural factors such as gender discrimination could adversely influence events at any of these levels.

Notwithstanding these challenges, the SRA has demonstrated an ability to identify and promote strategies in affordable housing and community development suited to addressing

‘complexity’ because they offer forms of intervention able to mitigate potentially adverse impacts of other social or economic variables (Signal *et al*., 2012).

Macro: State and local government policy and politics

This research shows that human service networks working together to promote action on SDH in an urban region place significant importance on engaging with State and local governments; recognising that the actions they are seeking to promote at micro or meso-level will often be facilitated or constrained by the policy choices and actions of these governments.

Our research findings suggest that a conference format focused on SDH and equity issues provided opportunities for engagement between NGOs and service providers, community members and policy makers relating to strategies at the meso-level in areas such as housing, urban planning, community development and domestic violence law. However other areas of policy such as regulation of food, alcohol and gambling industries known to influence outcomes at the meso-level (e.g. numbers of gambling venues) with flow on implications for individual health, economic status and family relationships (Productivity Commission, 1999) were not addressed.

A ‘complexity’ perspective on the issue of policy advocacy, coupled with reflection on research results as discussed above, suggest that effective policy will support a range of meso-level structures and services to be deployed in ways that are mutually reinforcing, build social capital, and have the scope to respond flexibly and collaboratively to complex individual and family circumstances. However, despite the uptake of concepts of ‘joined-up government’ in Australia, what this means in practice is not always clear (Hyde, 2008), and the regulatory processes of government departments at State and Federal levels still appear to work against realisation of such ideas at the localised, service-delivery level. Research

participants identified prescriptive and limited funding and regulation arrangements for human service agencies as a potential barrier to collaborative activity and to action to address SDH. These constraints mean that services are often closely defined, targeting narrowly defined aspects of individual or family 'need', and often working in remedial, crisis-driven ways rather than preventative and health promoting ways.

Thus a 'tension' emerges for human service agencies' advocacy to influence policy to address SDH; between a need for complementary actions and policy support reflecting 'systems thinking' (Sterman, 2006) and the dispositions of governments and public agencies to support services with narrowly defined parameters for action and accountability. Evidence also suggests that advocacy is most successful when it advances only one or two clearly defined, specific proposals for policy change, which also fit with a Government's political objectives (Baum *et al.*, 2013). However, some governments, including State governments in Australia, are applying methodologies to advance cross-sectoral action on SDH, and these have been applied within an urban regional context (Kickbusch and Buckett, 2010). Where these are in effect they may present opportunities for human service agencies or networks to engage with policy makers to implement complementary policy settings and actions across levels of social organisation to improve health and social outcomes.

CONCLUSION

This research suggests that an alliance of human and health service networks provides a means to promote some forms of effective collaborative action to address the complexities of SDH in an urban regional setting. At a micro-level such an alliance can promote collaborative service responses to better address complex needs of individuals and families subject to disadvantage or undergoing a crisis. At a meso level, an alliance can promote regional action

in areas such as affordable housing and community development likely to complement micro-level actions and able to moderate adverse local effects of higher-level policy settings. However, our complexity lens suggests that prospects for effective action at both micro and meso levels over time are likely to be sensitive to government policy influencing individuals' and families' socioeconomic circumstances. State or Federal government agencies policies used to fund and regulate local human service agencies may facilitate or limit collaborative action between agencies to address SDH at micro and meso levels, and inhibit engagement with policy makers.

In relation to our third research question, we find that a complex systems view of the multiple factors influencing health and social disadvantage at different levels of social organisation is an appropriate and useful tool for assessing the ability of an alliance of human service agencies to promote action on SDH within an urban region, and could be applied to evaluate other similar interventions. It provides a way to assess interventions in light of an understanding that actions to address factors influencing health and social disadvantage manifested at one (micro, meso or macro) level can be augmented or undermined by action or inaction on other factors at the same level or at a 'lower' or 'higher' level.

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