

A MIXED METHODS APPROACH TO MEASURING NEIGHBOURHOOD SOCIAL CAPITAL:
A CASE STUDY IN SOUTH EAST QUEENSLAND, AUSTRALIA
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1. Abstract

This paper investigates how a mixed-methods approach to measuring social capital in urban planning contexts to enhance best practice outcomes. Literature in the area of social capital, health, participation, resilience and sustainable development suggests that social capital at the neighbourhood scale can increase community cohesion, trust, reciprocity, capacity, civic participation and resilience. Exploring how bonding, bridging and linking social capital is expressed in a middle class coastal community on the Sunshine Coast, Queensland, Australia, a mixed methods approach to measuring social capital and the benefits of qualitative methods in particular provided an in-depth and nuanced understanding of social capital at the neighbourhood unit of analysis. Further, the fluid construct, where growth in one dimension of social capital, such as bonding social capital, can contribute to growth in bridging social capital, and vice versa. The authors argue that social capital is often invoked in an urban planning context to identify socio-economic outcomes. The social capital construct and its comprehensive measurement holds far greater relevance for planners and developers when applied to urban planning best practice in neighbourhoods.

2. Introduction

High levels of social capital are said to contribute to a wide range of positive outcomes for individuals and communities, including higher income, life satisfaction, social cohesion and community welfare (Middleton et al., 2005; OECD (Organisation for Economic Co-operation and Development), 2001). In particular, stocks of social capital are considered essential for communities from a range of stressors through enhanced social participation and engagement, and of diverse networks which contribute to community cohesion, trust, and feeling of safety and security (Kirkby-Geddes et al., 2013; Ziersch et al., 2011; Lyons and Snoxell, 2009; Bromell and Cagney, 2013; Magis, 2010; Poortinga, 2012; Smith et al., 2012).

The relationship between urban planning and positive human health and wellbeing is well acknowledged, with equitable access to resources, distribution of power and physical wellbeing positively correlated with the presence of social capital (Jackson, 2003; Borgonovi, 2010; Baum et al., 2011; Leskosek, 2012; Wakefield, 2005; Szreter and Woolcock, 2004; Rogers et al., 2008). Nevertheless, Cuthill (2010) argues that persistent and negative social outcomes associated with contemporary development in Australia and internationally for the past 10–30 years. Cuthill argues that this is due to a weakening of family, community and democratic values and relationships, and a move away from political processes can be attributed to a combination of interrelated factors including declining infrastructure provision, structural changes in the economy and workforce, and demographic and social changes (Cuthill, 2010). This requires empirical insight into how social capital can contribute to best practice urban planning outcomes. Consistent with previous observations, Baum et al. (2011) suggests there is a need for planning approaches that focus on social outcomes (such as trust, social and civic participation, bonding and bridging social capital).

development outcomes (including community and retail services and recreational facilities) (Ziersch et al., 2011). Case study research in South Australia demonstrated that integrated urban and physical planning considerations had contributed to better than expected outcomes for social capital and mental health in at least one community; suggesting that the quality of the physical environment in the local neighbourhood can have a positive impact on mental health and social capital in the longer term (Ziersch et al., 2011).

In this paper, we contend that social capital holds great potential for urban planning as a mechanism to deliver improved best practice planning outcomes. However, as the evidence base is limited, comprehensive analysis of social capital using mixed methods is crucial to establish its relevance to local residents and context. This paper uses a case study approach to contrast the benefits of using quantitative and qualitative data to measure social capital at the neighbourhood unit of analysis. The findings from the quantitative data are compared with the key themes elicited from the qualitative data to provide not just the status of social capital in the neighbourhood, but insight into ways of improving it. This is the key strength of the mixed methods approach in overcoming limitations present in studies employing a narrower range of data generation and analysis techniques.

3. Key Concepts and Measures

A lack of consensus on how the social capital construct is defined, the elements of the construct, and the absence of a suitable conceptual framework for an urban planning context, have made measurement difficult, resulting in limited practical application in an urban planning context (for a synthesis see Authors, forthcoming). Consequently, it has been suggested that urban planners must strive to understand the different facets of social capital if they are to have practical use of it (Rohe, 2004). One approach to understanding social capital is to identify the dimensions of bonding, bridging and linking social capital. Despite the challenges of the definition and measurement of the social capital construct, research by Stanley et al. (2004) found that there is likely to be significant dollar benefits where policies and programs support bonding and bridging social capital networks, thereby reducing the risks of social exclusion. As a result, improve personal well-being. Bonding social capital is defined as close-knit relationships that look inward and reinforce exclusive identities and homogenous groups (family, close friends and neighbours (Putnam, 2000; Hutchinson et al., 2004)). Linking social capital, that these types of social networks contribute to enhanced sustainable development. Linking social capital focuses on trust and reciprocity to build relationships between people (Roselley et al., 2003; and de Groot, 2003; Cuthill, 2010; Bijl, 2011; Dale and Newman, 2010).

Bridging capital is defined as the links and relationships that are outward looking and connect people across diverse social divides accessed through participation in local organizations or interest or volunteer groups (Putnam, 2000). Several authors suggest that these types of networks allow for greater diversity in the individual's social network, a great benefit for novel information to flow (Portes, 1998; Granovetter, 2005). Further, it is suggested that relationships between people enhance civic participation and resilience (Bajaj et al., 2010) and that civic participation (a characteristic of strong bridging social capital) enables communities to adapt to the effects of climate change through social processes (Flora, 1998). In addition, it is suggested that social capital is the most effective mechanism for buffering against the detrimental influences of neighbourhood deprivation (Hutchinson et al., 2004), with bridging and linking social capital emphasis on building relationships (Middleton et al., 2005).

A third dimension of social capital, linking social capital, can be defined as networks of trusting relationships between people who are interacting across institutionalised power or authority gradients in society (Szreter and W. Strengthening bridging and linking social capital is recognised as one of the poverty and disadvantage, as social capital can overcome multi-scalar barriers silos and structural holes in communities to access decision makers, and it diverse connections that enables community resilience (Dale and Newman, 2010). It has been suggested that cities and regions with strong social networks can facilitate (Carillo, 2004; Yitgitcanlar et al., 2012). However, in a review of the urban social capital is largely invoked in studies to identify and regenerate low-socio-economic example, Middleton et al. (2005) observes that the World Bank suggests a causal relationship between social networks and economic wealth, and as a result, focuses on increasing linking social capital in developing countries to increase social networks and welfare of communities. A review of the related literature revealed limited evidence regarding how social capital is measured in communities that are not socio-economically disadvantaged. In addition, the review identified limited use of the concept (authors, forthcoming).

Measurement of social capital at the neighbourhood unit of analysis in public health is generally concerned with either qualitative (Kirkby-Geddes et al., 2013; Kingsley, 2006; Wood et al., 2013) or quantitative approaches (Middleton et al., 2005; Zayas, 2006; Cabrera and Najarian, 2013; Poortinga, 2012). However, singular method studies neglecting the intricacies of the social capital concept and omitting contextual factors. For example, a quantitative study by Middleton et al. (2005) found that examining social capital by unpacking it into the dimensions of the construct did not always match the dimensions suggested by the academic literature in relation to age or socio-economic status. It is acknowledged that the use of quantitative methods only, may have methodological limitations and therefore use both qualitative and quantitative methods to provide a broad overview of social capital in a neighbourhood, as well as a deeper understanding of reasons for social capital solutions to practical improvement, particularly from a planning perspective.

4. The Case Study

The findings in this article are based on research in a coastal suburb on the northern coast of Queensland, Australia. Part of the rapidly growing South East Queensland region is an emerging suburban area consisting of a number of subdivisions built in the 1990s and situated in close proximity to the regional centres of Caloundra and Maroochydore. The suburb has beaches, and highway access to the State capital of Brisbane 1 hour south. The 10 kilometre area of Little Mountain the total population is 9,045. The age composition of the population is 5–14 years (1,576 17.42%), followed by 35–44 years (1,418 15.68%), 15–34 years (1,092 12.07%), with a median age of 39 years (Australian Bureau of Statistics, 2011). Limited housing diversity is evident, with 2,410 predominantly detached homes compared to 252 townhouse/unit dwellings. A large proportion of residents are owner-occupied (2,309 dwellings), with 605 public and private rental dwellings. The median weekly income per person is \$1,113 with a median rent of \$380 per week and a median mortgage of \$1,983 per month. Of the 6,891 persons over 15 years of age, there was a 6.1% unemployment rate with about 37% not in the labour force, made up of retirees and stay-at-home parents (Australian Bureau of Statistics, 2011). One of the reasons for studying this area are the factors that might contribute to social capital in the face of major future development in the area. These include a residential subdivision, a residential and mixed use development.

around a future railway station, and a potentially innovative development incorporating affordable housing and community facilities, the latter of which will also be available to the broader community.

5. Methods

The study utilised a mixed methods explanatory sequential design in three phases to gain a deeper understanding of what might contribute to social capital in the community. It provides empirical evidence of the factors arising from a mixed methods design using quantitative data from an adult residents Neighbourhood Survey, with this being deepened by use of qualitative data from adult residents focus groups. Intercept surveys were conducted at a local shopping centre to triangulate a portion of the data. This research forms part of a larger study that includes quantitative resident surveys between 15–17 years, qualitative focus groups with youth residents and planning staff at the Local Council, reported elsewhere (authors, in prep).

5.1 Phase 1

A quantitative survey instrument was used to measure social capital at the neighbourhood level. The sampling strategy invited 2,000 households in a delineated catchment area to participate by letterbox drop in an online neighbourhood survey, or to request a hard copy survey. The neighbourhood survey returned 102 adult respondents (n=102) from 2,000 possible households (0.051%) between April–June 2013. Due to the low response rate, to contribute to random sampling of the data set, Intercept Surveys were also conducted. The neighbourhood social capital survey instrument was developed based on existing tools found in the literature to test the dimensions of bonding, bridging and linking social capital (Bullen and Onyx, 1998; Rohe, 2004; Olsen et al., 1985; Middleton et al., 2004; Woolcock, 2004). These included elements that are understood to positively contribute to the presence of high levels of social capital, such as subjective wellbeing and health. The variables are detailed in Authors (forthcoming), where the qualitative phase of the study is investigated in detail. Further, five open ended questions were posed about social capital in the neighbourhood, including frequency and preferences regarding participating in community activities, the features they like best about their neighbourhood, and what would most improve the neighbourhood. The results of the neighbourhood social capital survey were analysed by statistical relationship between variables in SPSS. The data from the focus group questions for focus groups conducted in Phase 2 to explore in greater depth the meaning behind the survey results.

Due to the low response rate to the Neighbourhood Survey, Intercept Surveys were conducted on a further random sample of resident perspectives about the neighbourhood and community. Intercept Surveys (n=62) were conducted at a local small scale shopping centre location. Of the participants, 37.1% were aged 18–35 years old, 43.55% were 36–50 years old, 11.29% were 51–70 years old and 8.06% were 70+ years of age. The demographic profile of participants generally matches the community age profile, however there was a higher proportion of female participants in the Intercept survey than the community gender profile was. The ratio of male to female compared to 48.41% male and 51.59% female in the broader population.

The intercept survey instrument focussed on asking residents about the types of facilities needed in the neighbourhood, including a range of community and commercial uses. It was firstly unprompted, and then followed up by prompting participants to select the most important answers to a range of community and commercial uses for the neighbourhood.

survey also probed for bonding, bridging and linking social capital linkages community or commercial uses were important to the participant, and how the use help the broader community. The Intercept survey results were entered into Sur ended questions were thematically coded and the quantitative results were analy using graphs and percentages. It is important to note that due to the s Neighbourhood Survey (n102), the Intercept survey (n 62), and the nature of community and social capital construct, this research should be considered an e social capital at a neighbourhood scale of analysis. These survey findings generalised, not just because of the low sample size but because the social contextual and unique between spatial locations.

5.2 Phase 2

In Phase 2, two adult resident focus groups were conducted to explore in greater and meaning behind the survey results (n-12). Focus group participants self-se through completion of the neighbourhood social capital survey, where respondent option to participate in a focus group. The results on bonding, bridging and from the neighbourhood social capital surveys were reported to focus group part were asked if they could confirm if the results matched their perspectives in the findings. The focus group participants were then asked if they could pro local examples of their perspectives and the findings to provide a deeper un context of the findings and of the neighbourhood. The focus group sessions wer and content was analysed using thematic analysis in Nvivo. The addition of component was included to provide greater understanding of social capital, which relative from the perspectives of an individual in a community and between locat This qualitative phase is an important methodological contribution to the understanding of social capital at the neighbourhood scale.

6. Results

The number of participants was: neighbourhood survey (n-102), focus groups (n-1 surveys (n-62). To facilitate a comparison of the quantitative and qualitative we report the results of each method of data collection together under the t bridging and linking social capital, aspects of community life (such as sense and safety) and local meeting places.

6.1 Bonding social capital

The neighbourhood social capital survey found evidence of bonding social c reasonably large social networks and familiarity with neighbours. The survey fou

39% of respondents counted more than 12 close friends;

41% knew more than 12 people to speak with in the neighbourhood and respondents socialise with their neighbours or people in their neighbourh times in a one year period; and

Almost 70% had neither friends nor family living in the suburb prior to 40% had friends and family located in other areas in the Sunshine Coast re

Length of residence varied, with the largest cohort (36%) of respondents indicating residents in Little Mountain for between 4–7 years. The constraint on using only this data can overlook a deeper understanding of the reasons for these characteristics. The data do not indicate if there is a desire to socialise with neighbours or if existing social connections with neighbours are sufficient.

Results from the residents' focus groups illustrate the benefit of including diverse voices. Participants identified potential isolation from their growing new neighbourhoods. Many often do not have friends and/or family already living in the neighbourhood. For example:

People can't move to be near their mum or their friends because they were born here. It's the first place. So if they come here they're coming into virgin territory.
Resident 1)

When asked what the barriers were to developing connections and interaction (social capital) between neighbours in the community, participants observed that barriers included physical determinism of homes and neighbourhoods, and how patterns of casual interaction between neighbours have changed over time. To illustrate:

I think the way that the community has been built leads directly to the current situation. You've got houses instead of . . . apartments [where] you bump into people . . . at the mailbox, in the driveway, putting the bins out, collecting the laundry. You see them; then you get to know your neighbours a lot better. When you're isolated in your own little cocoon you drive into your garage and shut it. You go to the shop or you drive to the supermarket in another suburb to get your books. You don't walk to the shop and meet someone on the way. Yeah, so it's death by car.
(Male Resident 2)

Contrary to the limitation of the findings in the quantitative survey where the reasons for not socialising or getting to know neighbours could not be determined, the intercept survey demonstrated that there was interest in building bonding and bridging social capital between residents in the neighbourhood. For example, when participants were asked why they joined the community, more than 58% of residents suggested they joined to provide opportunities to meet others in the community (58.06%), to enhance community (32.26%), and to give kids something to do (24.19%). The importance of bonding and bridging social capital was demonstrated by intercept survey participants as a method of contributing to the community and fostering a greater sense of community through interactions within the neighbourhood:

..it would bring people together. Most people are good in the community; people are nice. Houses are nice. Community facilities would provide a local place to meet. (intercept survey participant)

..if you know each other you care for each other. If you don't know each other you don't give a hoot. (intercept survey participant)

..allowing people to bond, friendships. (intercept survey participant)

6.2 Bridging social capital

In terms of bridging characteristics, the neighbourhood survey results found that

42% of respondents participated in a local organisation or club between 1 month period;

Almost 64% had not taken part in a local community project in the past year

85% of respondents stated that they did not often participate in neighbourhood activities. When asked 'why'? as an open ended question, 47% were not aware of any activities, 30% stated that other commitments were an issue. When asked what kind of activities they would like to participate in by open ended question, 55% said community events, 36% early childhood care and 35% social groups.

Almost 29% of respondents volunteer in the Little Mountain community and 41% in other communities. This is a reasonably high rate compared with Sunshine Coast participating in voluntary work observed in the 2011 Census (20.2%), Queensland across Australia (17.8 %) (Thomsen et al., 2012).

One of the key impediments for growing bridging social capital identified by adult resident focus groups was the lack of an identifiable centre or activities space in the catchment for residents to meet and socialise in their neighbourhood. Further focus groups suggested the neighbourhood does not provide a sustainable or affordable access to most facilities such as groceries, coffee shops, shopping, restaurants. Access required a car or bus trip. Those relying on public transport found it contributed to isolation.

In the Intercept survey, when participants were asked by open ended question what activities, services or facilities they would like if they were available for the community, thematic responses were activities for children and teenagers (46.77%), a community centre (20.97%), and a coffee shop or restaurant (16.13%). When participants were asked what was most important to them, the top 3 thematic responses were: to give kids things to do (22.58%), opportunities to meet others in the community (46.77%), and to provide a home (22.58%). The results of the intercept survey further clarified how improved access within the neighbourhood could contribute to bridging social capital through participation and generational interaction. For example:

..it would bring all ages together and help [contribute to] sense of community (intercept survey participant)

..everyone wants to feel part of a community - especially older people who are isolated (intercept survey participant)

..anything that gives people things to do and purpose and meaning. Also providing special needs kids to meet others in their neighbourhood. (intercept survey participant)

In addition, participants in the adult residents focus groups suggested that they wanted to begin to access information about what was going on in the community and/or opportunities to volunteer or participate. This is despite the fact that schools, church groups, sporting organisations and others in the community have a range of activities available for residents to participate in if they were interested. This evidenced a gap in access to information about what was happening in the community and opportunities for civic interaction at the neighbourhood level.

... schools and sport but churches too, they have multiple community projects. So there are lots of opportunities around that people have got to be able to know about and things that would interest them. (Male Resident 1)

There was also an acknowledgement that the tendency and desire to participate differed between places, people, and their lifestyle. For example:

We have gotten to know a lot about our older neighbours, and get help from the other side there's a couple who just don't want to talk. So you don't know what their needs are. I guess the answer is communication, interaction, doing things in the community, getting to know each other. (Male Resident 1)

It could also be evidenced bonding social capital had led to bridging social capital and community action against development in the past. For example:

we would never have met (Male Resident 4) if it wasn't for responding to the need for community action here and that segued into being here. (Male Resident 2)

The focus groups found that in addition to community organisations, sporting organisations, faith based organisations, children are also an important facilitator of social capital in families, where adults may not have participated otherwise. One participant said:

I know personally from my experience that I've gotten to know other people who wouldn't have known if my children weren't playing soccer. (Male Resident 1)

We put out 1200 flyers, stick them in the mail and ask people to come along on a day or a Clean Up Australia day. You don't see a lot. What we found is that at schools; you have to get the kids. If you can convince the kids then you can convince the parents. (Male Resident 3)

6.3 Linking social capital

Results on linking social capital were drawn from the neighbourhood survey and the intercept survey did not directly engage with questions relating to linking social capital. However, did any issues (other than traffic congestion) arise from discussions with residents in the intercept surveys. The neighbourhood survey found that while 78% of respondents would contact Council or their local Councillor if they identified a problem or issue, there was less clarity regarding the extent that residents can have input on local issues. For example, while 49% of respondents agreed that they had been asked about their communities needs were and how to address them, 40% disagreed and 13% were unsure. 43% of residents agreed that they could influence what happens in their community and 30% were not sure.

In the focus groups, barriers to linking social capital were attributed to a lack of ability to work collaboratively with local Council about local issues, such as traffic congestion at schools and low use of public transport due to infrequent service and poor quality of service. A resident participant suggested a more flexible alternative to the significant mass of residents required for good public transport:

nobody catches it anyway ... buses are empty .if you had a private enterprise come in and establish little vans you're away (Male Resident 2).

Focus group participants also identified opportunities for building better link Council and other institutions, need for greater integration of community facilities, greater involvement and capacity building at the neighbourhood level. One resident

.... a multi-dimensional approach is needed. We need to work in conjunction with other groups to get some help here and there, land, plants, signage, etc. ... Help the community get groups up and running and then drop in to see how they are going as a group in terms of support. (Male Resident 4)

6.4 Aspects of community life

While the quantitative results appeared to indicate some sense of community, there was disagreement among respondents about whether it was a close-knit community. For example, 64% of respondents indicated that they are proud to live in the neighbourhood, 64% agreed that the neighbourhood seem to share the same values, 76% agreed that most people in the neighbourhood can be trusted and 61% agreed that most people in the neighbourhood help their neighbours. More than 57% of respondents indicated the sense of community was moderately strong or very strong, and while 42% of respondents agreed it was a close-knit community, 32% disagreed and 26% were not sure. Sense of community in Little Mountain appears to be lower than the Sunshine Coast region where 75.3% of respondents agreed with the statement I feel part of my neighbourhood or community expressed high agreement with the statement My neighbourhood is a friendly place (Thompson et al. (2012)). Results from the intercept survey suggest that residents have greater opportunities to meet and get to know people of all ages in their neighbourhood. The survey suggested a range of community facilities and places to congregate would allow youth to access activities and opportunities for social interaction without the need to travel to nearby suburbs.

Further insights also emerged from the qualitative data derived from the focus group discussions. Respondents provided a greater depth of understanding about what contributed to a sense of community; which was largely associated with the quality of the surroundings, including parkland and natural amenity, perceptions of safety, security and shared community values. Residents indicated they were attracted to Little Mountain by the quality of the environment, amenity; affordable housing compared to older housing stock closer to the beach and a lifestyle a short drive away. However, there was also some ambivalence by residents as communities were changing and becoming more socially fractured and in particular a loss of sense of community, visual amenity and safety and security. Residents also indicated that natural amenity is increasingly under threat by development, with clearing of bushland particularly affecting residents' sense of place.

6.5 Local meeting places

While the survey found almost 50% of respondents used local parks and facilities at least once a week, they were not the predominant meeting place for residents to meet with family. 36% of respondents met at a private home, a café (16%) followed by local shops. The quantitative data does not indicate if this is due to insufficient meeting facilities in the neighbourhood, if respondents prefer meeting at private residences or whether the lack of facilities contributed to this result. However, responses to the short answer question about what services or facilities were missing or need improvement in the neighbourhood included better roads paths and public transport (40%), community facilities (30%), community spaces (23%), more retail shopping (21%), and better parks and facilities (21%).

The rationale for outcomes of the quantitative survey became clearer through the absence of an obvious hub or community space is problematic for residents. The emphasis of any future community facility should be on a community gathering than commercial premises (i.e. restaurant, coffee shop). This suggests that the inclusiveness and accessibility for all age groups is important. Adult focus particularly supported the idea of a not-for-profit coffee shop run by high undertaking business or hospitality vocational training courses through the neighbourhood. The type of place that would be most valuable would be one that offers something regardless of age and ability, and a space that is adaptable to offer some activities.

7. Discussion

One of the challenges in measuring social capital is that it is unclear how the capital are inter-related, and whether certain factors influence the growth whether they are a flow-on effect (Woolcock, 2010). This study demonstrates the elements of social capital are inter-related, and can grow cumulatively. relationships developed through a previous neighbourhood response to a development (bonding social capital) were used by locals to help recruit people to participate in a focus group, which exposed them to other residents from different backgrounds). with the spiralling up phenomenon described by Emery & Flora (2006), (where a form of capital advances the performance of another capital in the framework, phenomena similar to the mutual metamorphosis described by Light (2004) and Bourdieu.

Quantitative results showed a high level of bonding social capital due to large and family, although these networks were often outside the spatial proximity of the neighbourhood. The addition of qualitative results revealed that some residents considered approaches to housing and neighbourhood design, with an emphasis on privacy, exclusivity, as elements that may inhibit opportunities for casual interaction. Further, a lack of information about events occurring in the neighbourhood opportunities for casual interaction within the local community. This suggests and other urban professions, can contribute to best practice urban planning by social infrastructure within a neighbourhood coupled with strategies to assist build on bonding, bridging and linking social capital through community events, promotion of neighbourhood organisations, and participation and increased collaboration with local government organisations, local business and local community organisations, and financial resources to address neighbourhood issues.

The neighbourhood survey revealed low bridging social capital based on 85% of participants participating often in activities in the neighbourhood. The inclusion of qualitative provided insight to a solution: a central community space within a walkable neighbourhood beneficial for residents to meet each other, thus fostering greater bridging neighbourhood. This concurs with the research of Kirkby-Geddes et al. (2013) and Woolcock (2004) who suggest that in order for social capital to grow, there needs to be a kind of physical structural environment in place, where individuals can meet, and ties essential for bridging social capital can flourish. The intercept survey demonstrated that residents were interested in building bonding and bridging social capital, and felt that this was particularly effective through the provision of community facilities and places where people can congregate in the community; in particular to provide activities for children. The study found that children were an important facilitator of civic participation.

community, which is consistent with the findings of Wood et al. (2013) who found an important role in facilitating relationships for their family members in the community.

Further, it was found that there was a lack of coordination among institutions about events happening in the neighbourhood. Research by Kirkby-Geddes (2013) found the presence of respected people or organisations who can provide skilled and effective leadership is just as important as the provision of physical infrastructure in order for communities to grow. The implications for urban planners suggest that the provision of physical infrastructure is not a panacea for social capital growth. Programs which foster greater capacity for communities to self-organise or are supported by a facilitator to encourage community development by Baum et al. (2002) are suggested to have greater success in fostering social capital. Wood et al. (2013) found that environments that cater to children and families contribute to building and strengthening of social capital and neighbourhood relationships for adults.

Quantitative data in the neighbourhood survey indicated that linking social capital was important with respect to resident perceptions of their ability to influence decisions concerning their community. 43% of residents agreed that they could influence what happens in their community, 37% were unsure and 30% were not sure. This is consistent with a study examining sustainability in urban areas which found 31.6% of respondents on the Sunshine Coast indicated a high level of agreement with the statement 'I have opportunities to participate in and contribute to local decisions'. In the current study even fewer respondents (27.7%) indicated a high level of agreement with the statement 'I believe my feedback influences Council strategies, policies and decisions' (Thompson et al. 2013) compared to this study (43%). However, qualitative data revealed that there was a strong desire for residents to build their capacity to respond to local issues by working collaboratively with the municipal Council, which is an opportunity to increase positive perceptions of their ability to influence decisions in the neighbourhood (linking social capital). Residents frequently spoke of the need for greater innovation and in particular, the need for greater public spaces, parks, uses and community facilities for the benefit of all residents to minimise car dependency, improve facilities and inefficient land use.

As a middle class suburb, Little Mountain exhibits lower bridging and linking social capital than would be expected from the academic literature. Research by Middleton et al. (2005) found significant differences in bridging and linking social capital between low and high socio-economic areas due to inequalities in wealth and power, but little difference in the bonding social capital between these areas. We contend that as a solution for addressing socio-economic disadvantage, the findings of this study holds some application for urban planners, by increasing housing diversity and supporting a mixed income approach to development. Moreover, the opportunities for contributing to community development through urban planning outcomes through reducing impediments to accessing community infrastructure, implementing programs and fostering community capacity building would contribute to equitable and vibrant communities. In this case study, qualitative data illustrated that the incorporation of public community spaces and facilities and opportunities to work collaboratively with the Council on local issues would assist in developing bridging and linking social capital.

While research by Middleton et al. (2005) suggests that bonding, bridging and linking social capital have limited application as a measurement tool, their research does acknowledge the limitations exist in using quantitative techniques only. Further, a review of the literature (Middleton et al. forthcoming) found limited examples of mixed method approaches regarding social capital in urban studies. We contend that a mixed methods approach to examine bonding, bridging and linking social capital can elicit the unique local context which quantitative methods cannot articulate. This research builds on the work of Middleton et al. (2005) to illustrate the importance of community spaces and facilities and opportunities to work collaboratively with the Council on local issues would assist in developing bridging and linking social capital.

notwithstanding, the social capital dimensions of bonding, bridging and linking particular merit for urban planners to progress best practice urban planning outcomes.

8. Conclusion

In this study, we investigated how a mixed-methods approach to measuring social capital in urban planning contexts to enhance our understanding of how to develop resilient communities. Exploring how bonding, bridging and linking social capital is expressed in a middle class coastal community on the Sunshine Coast, Australia, qualitative methods provided a deeper understanding of social capital at the neighbourhood unit of analysis.

However, some of the limitations of this research must be acknowledged. First, we cannot make broader claims about generalisation to larger populations. The low response rate to the neighbourhood survey is suspected to be a result of the letterbox invitation and participation through a weblink. This process relied on the self-selection of participants for the research. Second, focus group participants self-selected following the neighbourhood survey by indicating their interest to participate in a focus group. This may unintentionally include residents who are predisposed to participate and/or who have high social capital themselves, and may not be representative of the socio-demographic profile of the neighbourhood, a factor pointed out by Stanley et al. (2012). The study however did aim to increase the response rate to the neighbourhood survey, by introducing the intercept survey alongside the letterbox invitation from a random selection of residents. Future research investigating social capital at a larger scale may wish to give consideration to the applicability of the methodological approach used here. However, this article does illustrate the strength of a mixed methods approach to measuring social capital and provides valuable information useful to urban planners and researchers. The findings are particularly applicable to a local scale context and additional research is required for extrapolation to larger scale development or a broader spatial context.

The use of a mixed method approach to investigate social capital in a middle class coastal community has five key findings of this research. First, qualitative research methods found that the design of their homes and communities somewhat restrictive in allowing for casual interactions with neighbours in order for bonding social capital to grow. This is a role for urban planners to consider the value of public open spaces (including space for children and play) as a catalyst for fostering bonding and bridging social capital within a neighbourhood.

Second, qualitative methods found that the provision of a non-commercial centre offering a range of affordable activities for all ages and abilities would promote bonding and bridging social capital to grow. However, leadership and support to facilitate these activities will be integral to success. Third, qualitative methods revealed the importance of collaborating with the local municipal Council to address community issues. Engagement with organisations through access to information and resources is a useful approach to foster the growth of linking social capital as well as to assist in increasing and enhancing opportunities for engaged governance approaches.

Finally, we contend that while the social capital construct is often invoked in a local context to address socio-economic inequities, it holds far greater opportunities for urban developers to contribute to best practice urban planning outcomes, by fostering social capital in neighbourhoods. This would be enhanced through using mixed methods in the measurement of social capital to give direction to the potential priorities in a neighbourhood based on residents and the local context.

9. References

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