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Title:

The Kelvin Grove Urban Village: What aspects of design are important for connecting people, place, and health?

Authors:

Julie-Anne Carroll (Centre for Social Change Research, QUT)

Dr Barbara Adkins (Australian Centre for Interactive Design & QUT)

Dr Marcus Foth (Institute for Creative Industries, QUT)

Dr Elizabeth Parker (School of Public Health, QUT)

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The Kelvin Grove Urban Village: What aspects of design are important for connecting people, place, and health?

Abstract

There is an emergent trend in both urban design and health-related literature calling for strengthened connections between these fields, with the aim of meshing social aspects of urban design with current efforts to generate healthier lifestyles and behavioural patterns among urban populations (Gleeson, 2004). As Jackson states, ‘while causal chains are generally complex and not always completely understood, sufficient evidence exists to reveal urban design as a powerful tool for improving human condition’ (p. 191). The Kelvin Grove Urban Village (KGUV) will be discussed in this paper as a case-study for responding to this call. The underlying design principles of KGUV, including its basis in new urbanism, social diversity, and the availability of wide, even, pathways and green spaces identified it as an ideal location for addressing some long-standing questions in the research about which social and physical design features are most salient for increasing people’s propensity to walk or engage in recommended levels of physical activity. The findings from this interdisciplinary investigation examining the patterns and processes connecting people, place and health are presented in this paper, and illustrate the ways in which different urban demographics engage with their immediate environment, in the pursuit of social, recreational, and health-related goals. Implications rising out of these findings are two-fold: firstly, for urban designers to heed the findings in research examining ‘area effects’ on health, and secondly, for health communicators to give deeper consideration to the design features of the context hosting their target demographics prior to the design and dissemination of health promotion messages and campaigns. This way, new urban neighbourhoods stand an increased chance of creating environments that encourage and allow increased levels of physical activity, and health communicators are more likely to create campaigns and interventions that resonate within the contexts in which they are delivered and received.

Introduction

This paper firstly draws on the current bodies of research in both urban design and public health to develop the need for a stronger empirical link between these disciplines in light of existing evidence that points to a connection between urban neighbourhood contexts and population health and well-being. A review of the research in the field of urban design that indicates its salience for both real and perceived well-being is provided, as well as evidence from research in health demonstrating that household and neighbourhood contexts exert powerful, yet still largely unexplained influences on human health-related behaviours. The identification in the literature of this common concern between the disciplines regarding which ‘ingredients’ of urban neighbourhoods that make them dynamic, healthy, and socially sustainable provided the rationale for this research investigation aimed at developing insights into we know about ‘what works’ for people in urban settings.

Secondly, the paper provides a description of the Kelvin Grove Urban Village (KGUV) which is a medium-density, mixed-tenure, urban neighbourhood based on the design principles of new urbanism, and situated in close proximity to the Central Business District (CBD) in Brisbane, Australia as the case-study for this investigation. It outlines the ways in which the qualities and characteristics of this new urban context allows research into the role of urban design in mediating the relationships between people, place, and health to be undertaken. The Village will be discussed for its unique design qualities and its contribution to finding out more about the ways in which urban neighbourhoods and living contexts elicit what have come to be known as ‘ecological effects’ on health.

Thirdly, the paper reviews methodologies and findings from qualitative investigation of residents’ experiences within KGUV, with special emphasis on the presence of health-related resources and a mixed-tenure demographic. Residents participated in a number of research activities to gain insights into the ways in which the presence of people from different social sectors, and resources such as parks, BBQs, wide walking and bikeways and the close proximity of shops and public transport affect how physically active they were likely to be. Research questions targeted how residents felt about their own housing and accommodation within the village, the overall design

of the Village, and their prior housing histories and attitudes to health and physical activity.

Finally, the paper discusses the potential of KGUV to provide a resource for further investigations into the relationships between people, place, and health and as a proponent of healthier lifestyles for vulnerable demographics. In particular, the role of design on lifestyle and health-related behaviours is highlighted, with future implications for urban designers who are aiming to generate sustainable communities with the potential to mediate the relationship between poorer demographics and less healthy and fulfilling lifestyles. Also, to highlight the importance of built design, social mix, and local resources in alleviating ghettoisation, urban decay, and the increased likelihood of lower socioeconomic groups being highly transient across both the private and public housing markets. It is the intention of this study to identify links between urban design, population health, and health communication that contain the potential to ensure that the needs of vulnerable social groups are considered in the building and marketing of new developments, and that health researchers effectively understand the importance of the nature of an urban environment on the likelihood of populations to respond to community health promotion efforts in a sustainable way.

Rationale and Background

Urban planning and design research has identified a number of key ‘ingredients’ that appear to be important in contributing to the overall health and quality of life for residents living in urban areas (Jackson, 2003). These include, but are not limited to, the following design components:

- Contours/skylines/variety of height (Al-Hathloul, 1999).
- Land-use (Wester-Herber, 2004)
- Biodiversity (Sandstrom, 2005)
- Building conditions and aesthetics (Hembree, 2005)
- Quality of own dwelling (Turkolglu, 1997)
- Public space and meeting points (Vogt & Marans, 2003)
- Greenery and green connectors (Teo & Hung, 1996)
- Identity Markers (Oktay, 2002)
- Roadworks (Foo, 2001)

These findings are important as they assist planners and designers to incorporate and consider components that contribute to improved social functioning, satisfaction, quality of life and health of residents. As Jackson (2003) notes ‘while causal chains are generally complex and not always completely understood, sufficient evidence exists to reveal urban design as a powerful tool improving human condition’ (p. 191).

Increasingly, in Western countries, master planned communities have risen in popularity and demand, and, in the process, have introduced a range of complexities and challenges for planners hoping to locate and include the types of features that will generate and sustain healthy and fulfilling lifestyles for residents. Further, urban planners and designers are currently facing the challenges involved in being able to deliver the types of ‘communities’ being offered in the marketing rhetoric of these prêt-a porte lifestyle packages (Luymes, 1997; Gleeson, 1994). Much criticism has arisen regarding the ultimate inability of urban planners to match the promises offered in the real estate brochures of these enclave communities. These criticisms are encompassed in the following quotes by leading researchers in this area:

- ‘Image and product are concepts that are researched and packaged long before the community even opens for sales’ (Wolford, 1993).
- ‘The theme of ‘community’ found in the marketing rhetoric is absent from the critical literature on enclave communities, and is indeed antithetical to the warnings about the breakdown of civil public life’ (Luymes, 1997, p. 194).

Therefore, the challenge remains within urban planning and design to be able to locate the social and affective aspects of design that allow thriving, dynamic, and healthy communities to be (re)created. Further, to be able to incorporate and coordinate the built ingredients known to benefit the well-being of residents, such as pathways, bikeways, and green recreational areas, in a way that allows communities to be developed, and positive social networks and functions to be maintained.

Contemporary design literature points to the following outcomes as 'most in demand', and simultaneously most difficult to deliver:

- Community (Gleeson, 1994)
- Diversity (Luymes, 1997)
- Participation (Al-Hathloul, 2004).
- Sustainability (Van den Dobbelstein & de Wilde, 2004)
- Identity (Oktay, 2002; Teo & Huang, 1996).
- Culture and History (Antrop, 2005).

With a contemporary focus on space and economic efficiencies and a trend towards master planned communities, the delivery of these principles in the lived experience of residents is very challenging from a design perspective. However, the difficulty in delivering these outcomes is not only a problem at the level of everyday design dilemmas. Part of the difficulty also lies in the requirement for a framework which can capture the realities and parameters of design processes on the one hand, and the lived experience of subsequent designed environments. The work of Henri Lefebvre in *The Production of Space* is an important analytical resource in focusing on the processes of translation of a design into residents' experiences. He distinguishes three levels at which space is produced: Representations of space – space conceptualised by planning, design and development professionals; Representational space – space as it is perceived or experienced symbolically by inhabitants; and Spatial practices – space as it is lived and the point at which the conceptualised and symbolically represented space are appropriated in everyday contexts of residents (Lefebvre, 1991).

Based on these analytical levels, the notion of community, for example, may figure in 1) planning and development principles, 2) at the level of marketing and symbolic representation of a development and 3) may be seen as present or absent in the lived experience of residents. At each of these levels there is no guarantee that the meaning of 'community' is translated unproblematically across these levels. In a planning environment which is intensifying the requirement for identifying 'what works' and 'how it works' in terms of generating healthy and satisfied residents in urban areas, a framework such as this that can accommodate the logics, understandings and processes at stake in each of these levels of design is critical for an understanding of the full set of processes required to deliver principles such as "community". This also provides for research that is able to examine the processes via which a range and combination of place characteristics combine to produce these outcomes.

The importance of research that focuses on the different levels at which space is produced and experienced is very evident from a review of public health literature as it pertains to urban environments. Public health research has been particularly interested in the physical, social, and economic characteristics of urban places, as they have been found, in various forms and examples, to affect both the health behaviours and outcomes of the people who live there (Macintyre, 2002; Bush, 2001; Diez-Roux, 2000; Pickett, 2002; Titze, 2005; Giles-Corti, 2005). Preventative medical perspectives have engaged in much research regarding the ways in which the built features of urban design, such as the presence of pathways, bikeways, public transport and green meeting spaces can contribute to the likelihood of residents being physically active in an area (O'Loughlin, 1999; Badland, 2005; Kirtland, 2003), while social epidemiologists and health promotion researchers have been interested in locating 'psychosocial' attributes of a place, such as social cohesion and capital, culture, and a sense of safety and belonging in terms of their apparent ability to improve the health behaviours and outcomes of those who live there (Chandola, 2001; Markowitz, 2003; Feigelman, 2000; Shiell & Hawe, 2000).

In Western contexts, such as Australia, health inequalities researchers have repeatedly shown that the socioeconomic qualities of urban places - via area or residential composition – comprise the most powerful variables influencing the health behaviours that can be observed there, and the morbidity and mortality rates of that area (Frolich, 2002; Turrell, 2003; Macintyre, 2002). Much effort has been conducted in this area of research to being able to accurately measure and define the socioeconomic position of an area and its people in order to be able to identify the specific ecological contexts contributing to worse health for poorer urban populations (Ecob, 2000; Sleigh et al, 2005; Cummins et al, 2005; Macintyre, 2002). The socioeconomic characteristics of a person's place of residence that have been shown to matter from a health perspective, include housing quality, type, and tenure, as well as overcrowding (Ellaway et al 1996; Waters, 2001). Further, the income, employment, and educational levels of residents (both co-dwellers and neighbours), as well as the socioeconomic measure given to an area, as calculated by such measures as Accessibility/Remoteness Index of Australia (ARIA) and the Socioeconomic Index for Areas (SEIFA) have also been identified as salient determinants of the health and well-being of residents. More

recently, variables relating to the perceived socioeconomic position of an area, such as reputation and stigma, have also been identified as salient variables mediating the place/health relationship (Sooman et al, 1995; Gregory et al; 1996; Bush et al, 2001). What is less established, however, is *how* these patterns come to exist and what the motivational linkages or barriers are between the socioeconomic position of an urban area and what people do there in terms of their health. There are a number of interesting, and largely unresolved, points regarding the ways in which this variable operationalises to produce ‘health effects’ in urban areas. Some of these include:

1. The complexity of socioeconomic position as a ‘determinant’ of health: How is it that higher-risk health behaviours become embedded in the lifestyles of poorer social demographics?
2. The salience of socioeconomic position of an area: How do factors within urban neighbourhoods differently affect lifestyle and health?
3. The contextual nature of socioeconomic influences: Why is it that socioeconomic context is more powerful than individual measures of socioeconomic position as a predictor of lifestyle and health?

Research that examines how the socioeconomic traits of urban places play out in every day lives of residents to produce the health-related outcomes that have been repeatedly observed by researchers is needed to further knowledge about the ways in which place affects people. This way, both urban planners and health researchers and practitioners can gain insight into not only *what* appears to matter in terms of the co-existence of particular traits and health outcomes, but how built resources and residential composition can be composed and positioned in ways that generate meanings that are interpreted and enacted by residents as healthier lifestyles. If the pathways connecting people, place and health can be more adequately understood or conceptualised, then changes and developments can be made in urban areas based on the meaningful ways that people are likely to experience such efforts.

In light of this empirical research and the gaps in knowledge that currently remain within the fields of urban design and population health, the following research questions were developed for investigation within the Kelvin Grove Urban Village (KGUV), which was identified as an appropriate urban case-study.

1. What are the contextual social processes that influence lifestyle and well-being in urban neighbourhoods?
2. What aspects of design are conducive to producing healthier lifestyle patterns, especially amongst lower socioeconomic demographics?
3. Which aspects of demographic, living context, and everyday life need to be considered by urban designers and public health researchers working towards decreased health inequalities and increased social sustainability?

Case Study: What is the Kelvin Grove Urban Village and how does it allow us to address research questions about urban design and health?

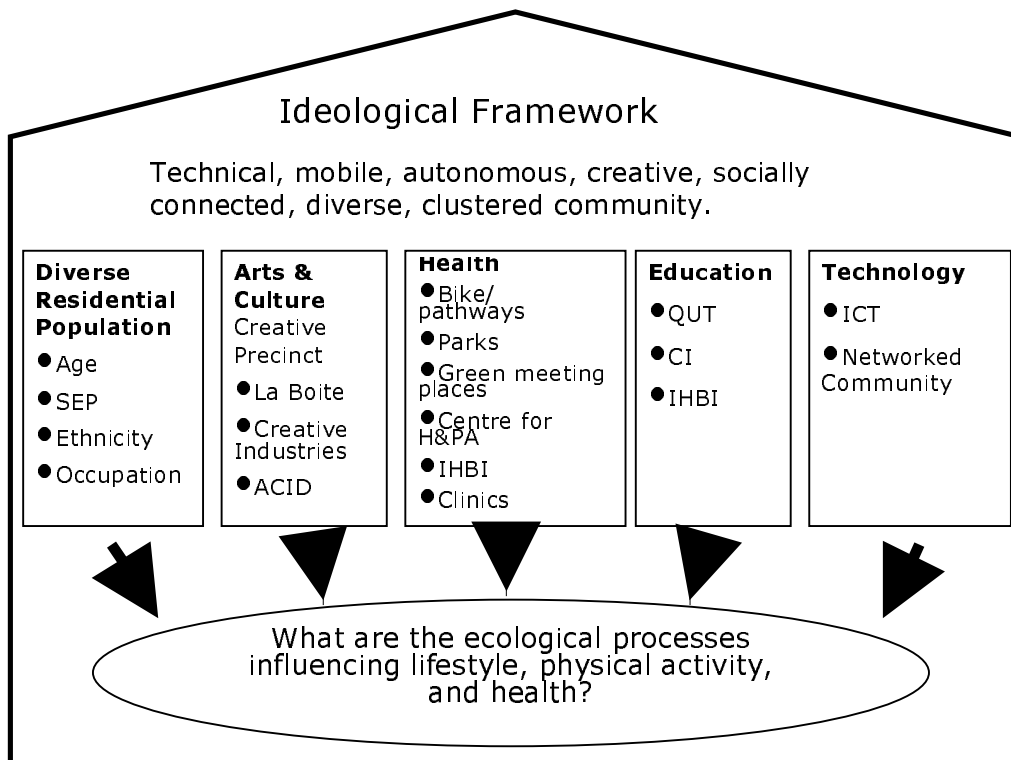
KGUV is an \$800 million mixed-tenure, medium density, inner urban planned community based on the design principles of ‘new urbanism’ located approximately two kilometres from the Central Business District (CBD) in Brisbane, Australia. According to Steuteville (2004) ‘New urbanism is a reaction to sprawl. It is based on principles of planning and architecture that work together to create human-scale, walkable communities. The new urbanism includes traditional architects and those with modernist sensibilities. All, however, believe in the power and ability of traditional neighbourhoods to restore functional, sustainable communities’ (p 23). A further key feature of the new urbanist aspirations of the development is a planning focus on diversity and heterogeneity in housing types, land uses and social groups (De Villiers, 1997). KGUV has been built with the aims of achieving a vibrant, healthy, diverse and socially sustainable urban community that has access to a range of cultural, health, and educational resources.

While KGUV is based on new urban principles that have proven highly successful in the other international contexts (Michigan Land Use Institute, 2006; Funders Network for Smart Growth and Liveable Communities, 2007), it is still regarded as somewhat of a ‘social experiment’ in Australian urban design, primarily due to its complex mix of residential groups and local resources, services, and retail options. However, it is optimistically being coined as ‘The Smart Village’ by the State of Queensland’s Premier, Peter Beattie due to its underlying close philosophical ties with Smart Growth design concepts, and David Manzie, Manager of Department of Housing Portfolio Management Division states ‘The vision for the Kelvin Grove Urban Village

was for an inclusive and sustainable community where people live, learn, work and play in one accessible and walkable neighbourhood – and all within two kilometres of the Brisbane central business district’ (Sectorwide, p. 2).

A wide range of demographics has been included in the accommodation options including student accommodation, disability support options, aged accommodation, and people living in government assisted housing via the Brisbane Housing Company (BHC). Within this latter group there is a great variation among residents in terms of age, health, education levels, support needs, and number of children and elderly in their care. In addition, there are apartments that have been sold on the private market ranging in price from \$310, 000 - \$950, 000 AUD. This diverse range of people live in close proximity to a range of resources including retail outlets, the Queensland University of Technology, associated health clubs and services, libraries, parks, wide path and bikeways, and the well-known La Boite Theatre. **Figure 1** below provides a conceptual overview and description of the key social, educational, cultural, and health-related features of KGUV that underpin this unique urban design.

Figure 1. ‘What is KGUV a Case Of?’



KGUV covers a geographical area of approximately 16 ha, and contains around 800 residential units. **Figure 2** below outlines the geographical region occupied by the KGUV and proximity to Brisbane's central business district (CBD). **Figure 3** shows the design plan for KGUV, and the photographs depicted below firstly show the resources in KGUV based on new urbanism principles with special attention to walkways and green places, as well as close proximity to cultural and educational resources; and secondly the housing options on offer to residents.

Map of Geographic Area in which KGUV is located

Kelvin Grove (figure 2.0) is an inner city suburb, situated approximately three kilometres from Brisbane, in which the Kelvin Grove Urban Village is located. The village is built on a sixteen hectare block and is an innovative idea which is the



Figure 2.0:
Aerial photo of
Brisbane
showing location
of Kelvin Grove.

Source: (*KGUV Innovation Implementation Report*, Garred, 2007)

Master Plan

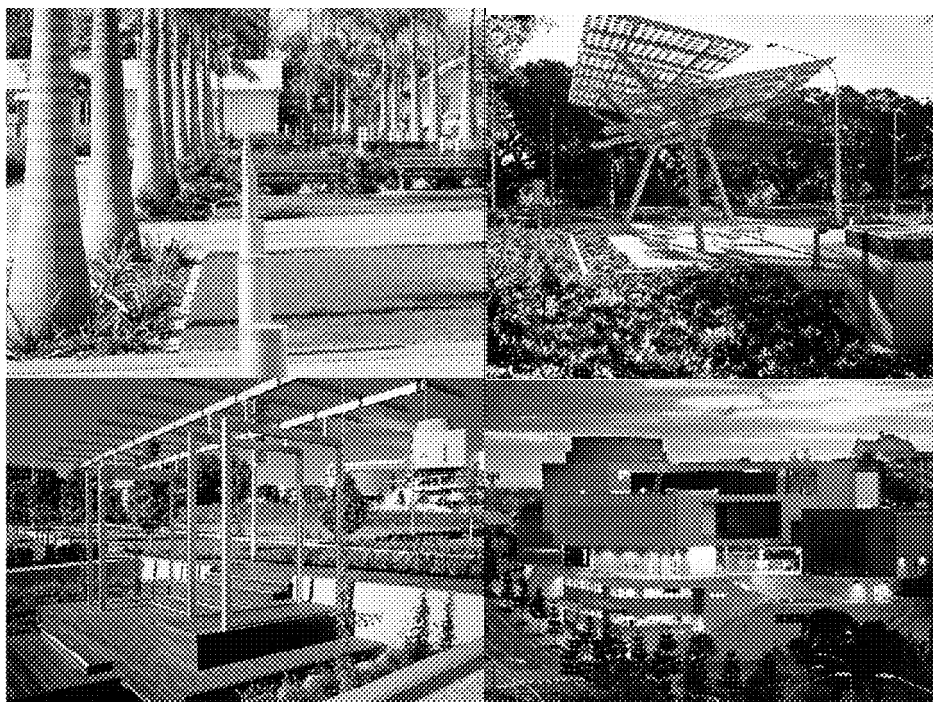


Figure 3.0: Artists impression of the design plan

Source: Official Kelvin Grove Urban Village website

<http://www.kgurbanvillage.com.au/>.

- **Photographs**



Source: (*KGUV Innovation Implementation Report*, Garred, 2007)



Source: (*KGUV Innovation Implementation Report*, Garred, 2007; photographs from the 'blog' <http://theeffectsofanewurbancontextonhealth.blogspot.com/>)

The specific health-related resources that are located in KGUV are outlined in **Table 1** below.

Table 1:

Health Resource	Description	Building Progress
Centre for Physical Activity and Health	The Centre for Physical Activity and Health will be located alongside McCaskie Park, and will contain an indoor pool, indoor multi-purpose courts, a gymnasium and health clinics. The primary function of the Centre will be for QUT teaching purposes, however, it will be available for use by the broader community as well.	Building near completion
School of Optometry	QUT's School of Optometry offers services to the community by students at no cost. Additionally, glasses and contact lenses are available from the clinic at discounted prices.	Complete
Nutrition Clinic	This QUT clinic offers nutritional assessment, dietary advice for both weight gain and loss. Diabetes, cholesterol lowering, sports nutrition and healthy eating.	Complete
Podiatry Clinic	QUT's Podiatry Clinic, which is a part of the School of Public Health, offers prescriptions and patient care.	Complete
Network of Pedestrian and Bike Links	There is a planned network of bicycle links within the Village to surrounding areas. These features have been designed in accordance with the overall philosophy to increase individual autonomy and mobility, as well as improving health and well-being.	Complete
Landscaped Parks and Open Spaces	Within the Village, there are a number of green, open spaces for social gatherings, BBQs and exercise for residents. The Roma Street Parkland and the Victoria Park Golf Course are adjacent to the precinct, and also provide opportunities for outdoor recreation and physical activity.	Complete
Red Cross	In a recent media release (http://www.kgurbanvillage.com.au/about/plan.shtm) it was announced that in 2007 the Australian Red Cross Blood Service would be locating a \$70M facility adjacent to the Institute of Health and Biomedical Institute (IHBI) at the Kelvin Grove Urban Village. This will provide university researchers with increased opportunities and access to resources for conducting biomedical and public health research. This is a promising example of how new stakeholders will invest interests and resources into the Village, based on the collaborative initiatives and potential they see the community as holding.	Construction underway

Due to the commitment to developing resources and the basis in design principles likely to impact on the health of residential populations, KGUV was chosen as the case-study in which to investigate the research questions outlined above. A case study is a single-bounded entity, studied in detail, with a variety of methods, over an extended period, and is selected because it is theoretically representative of the

relationships to be investigated (Yin, 2003). Following this logic, the KGUV (www.kgurbanvillage.com.au) has been identified as a planning and design strategy reflecting a desire to achieve a higher level of integration between residential, commercial, educational, cultural and employment activities (Healy & Birrell, 2004) with great potential for improving residential health and well-being. In this context KGUV represents an explanatory case study, which, according to Yin is oriented to proposing an explanation for an already identified pattern or phenomenon. For this purpose it is studied as a system of relationships with the key purpose of identifying key elements and their interrelationships that are responsible for the production of space/health relationships (Yin, 2003).

As such, KGUV was selected because it was representative of some of the key relationships that have already been identified as at stake in existing theories spanning urban space and health. First, as a mixed tenure development, it provided an opportunity to study residents in subsidised housing, already theorised to be more vulnerable to ill-health, co-located with those from different socio-demographic backgrounds: middle and high income earners as well as students. Further, in the context of an inner city development co-located with educational, cultural recreational and health facilities, it enabled a focus on the role of space, proximity and service availability in health related practices. Third, in terms of Lefebvre's analytical levels of spatial relationships, it allowed an understanding of the different levels of production of space/health relationships: The planning/design representation of those relationships, the symbolic manifestation of those relationships and residents' perception of them, as well as the daily spatial practices in which residents appropriate these relationships.

Thus, KGUV was seen theoretically representative of a development that deliberately encapsulated the relationships that are the focus of this study. For this reason, this urban setting provided a type of 'urban social laboratory' in which to explore people's reactions to urban places and to evaluate, from a health perspective, whether ideas about diversity, connectivity, space and creativity are conducive to outcomes such as improving the health and well-being of residents.

Methodology

Study Participants and Data Collection Methods:

Participants for the qualitative data collection phases were recruited via both telephone and mailed invitation, as well as from the returned surveys from the quantitative research conducted in the KGUV as part of this study. All participants were current residents in KGUV. A multi-method approach was taken to capturing a range of information types from with the case-study over the period of one year, including surveys, online mechanisms such as the 'blog', interviews, workshops, and focus groups. For the 'blog', in-depth interviews, and community focus group all residents were from the Brisbane Housing Company (BHC) apartments, which is a government-supported accommodation project. By this qualification, these participants are all on incomes of \$25 000 or less per annum, and fall into the category of lower socioeconomic position as defined by both housing and income. The workshop, however, included a cross-section representation of residents from across the Village.

The reason for the focus on the lower socioeconomic demographic is due to the evidence in health research that shows that these groups are less likely to engage with their urban neighbourhood in ways that develop their lifestyles and improve their health and wellbeing. In addition, the salience of socioeconomic context as a factor influencing health-related behaviours was of key interest in this study that investigates the role of new urbanism in alleviating such effects. In line with the theoretical contributions of Lefebvre that emphasise the need to draw on the social practices that occupy the space under investigation as a means of understanding how humans interact with the physical and social places they inhabit, methods were created that tapped into BHC participants' accounts of everyday practices and the locales that either enabled or disabled their desires and abilities to lead more active and healthy lifestyles.

The breakdown of participant numbers and qualitative research activities are outlined in **Table 2:**

Participant Numbers	Demographic Details	Data Collection Type
16	BHC residents ranging in age from 18 to 78 years; a range of illnesses, disabilities, and social problems present.	 Blogging: An online mechanism known as a 'blog' was appropriated as a means where residents wrote answers, stories, and opinions about KGUV in relation to healthy lifestyles. There were 214 responses posted on the blog in total. Blog address: http://theeffectsofanewurbancontextonhealth.blogspot.com/
8	BHC residents: Young mothers with children in their care.	 Individual Interviews: Indepth interviews were conducted with lower socioec mothers in their apartments about how their living contexts affect their lifestyles and health.
8	BHC residents: All household members from mothers in round one interviews.	 Household Level Interviews: Household members were all invited to contribute to descriptions of routine, habit, practice and attitudes to health in the families.
8	BHC residents ranging in age from 18 to 78 years; a range of illnesses, disabilities, and social problems present.	 Community Focus Group: Informal, opportunistic interviewing and observation notes were taken from BBQ in local park organized by researchers for BHC residents.
21	Cross-section of KGUV residents from various housing options	 Workshop at the KGUV Community Hub: Residents participated in a range of research activities at the KGUV community hub.

Key Findings

The data from all collection points was brought together and triangulated for analysis using NVIVO software to address the overall research question: which aspects of design are important for connecting people, place, and health? A content and thematic analysis revealed the following factors and processes as being crucial in both understanding how people, place, and health are connected, and which aspects of neighbourhood ecologies are vital for improving residential health and well-being. Analysis of relationships between people, place and health were guided by Lefebvre's attention to the three levels of understanding the ways in which urban spaces are created and utilised, in particular, the design and planning elements, the symbolic or rhetorically created aspects, and the everyday experiences and practices within these dimensions.

- **Overall KGUV Marketing Concept and Place Reputation**

The qualitative data from the various sources of collection revealed that the marketing rhetoric and promotional material, as well as how KGUV was portrayed in the media

and recognised by others in Brisbane affected how they felt about living there, for example, *'It makes us feel really good. It makes us feel poshy for once, you know'* (BHC mother, interview) whereas she claimed that in previous neighbourhoods *'You feel down, you feel like you're nothing, but now here we feel like we're something, you know, cause we're in something nice. It makes us feel good'* (BHC mother, interview). In addition, another participant stated that *'All my friends say oh you're so lucky to be living there, right near the city, and it has everything, and we are in the media, and being part of that buzz is great'* (BHC resident, community focus group).

Not only did it affect how residents felt about living there, but also what they perceived they would be likely to do there. Participants felt that the promotion and reputation of KGUV as a development based on the principles of new urbanism with attention to 'walkability', physical activity, and health influence how they expected their lifestyles to take shape there. This can be demonstrated in the following quotations:

'I think in time KGUV will promote physical activity as it is a new concept in living so I am looking forward to new ideas' (BHC resident, blogging participant).

'KGUV appears to promote a healthier lifestyle through its advertising promotions' (BCH mother, interview).

'I think KGUV does promote health and wellbeing. The parks are encouraging to have a fun activity, while the pathways are great for a run and there is a gym, more serious fitness activities. I think it will also promote social activities and be a very active area' (BHC resident, blogging participant). This quote in particular highlights the interface between physical and symbolic aspects of design and how these are appropriated into spaces that are conducive to health.

In light of what, for the most part, are housing histories steeped in experiences of crime, fear, violence, and poor neighbourhood reputation, both the perception of KGUV via successful marketing packages, as well as the design principles appeared to promote a more active and healthy lifestyle for residents, thus demonstrating the

importance of understanding the psychological and social components of design in enhancing both perceived and actual health.

- **Mixed-Land Use and Proximity to Destinations:**

Participants spoke frequently and at length on the benefits of having highly-regarded and desirable destinations within walking distance from their homes. They mentioned both established venues as well as shows and concerts that were held in and around the CBD for both themselves and their children, for example *'We went and saw a show at The Con (Queensland Conservatorium of Music) and that was great'* (BHC resident, blogging participant) and one mother told of an outing with her four children *'Well I took 'em to the park, and High Five was on, and I take 'em to that, and the shops are closer here... Yes, the kids are more settled here. They can go to libraries' n that here and a park just up the road'*. And further, she went on to explain how this affects her well-being and quality of life *'We'll if they're bored, we just take 'em, take 'em out, instead of stuck here at home, and that stops me from being a bit stressed. And that's even better'* (BHC mother, interviews). Other venues that came up repeatedly as being destination of interest that were within walking distance are illustrated in the following quotes;

'South Bank and The Lyric Theatre are only 15 mins away for all the activities one enjoys and buses are available every 10 mins' (BHC resident, blogging participant).

'I love the Victoria park, if you walk there at night is it wonderful sightseeing, you can see the beautiful city' (BHC resident, blogging participant).

'Roma Street Parklands are beautiful and they are just over there, so that is fantastic to go to' (BHC resident, community focus group).

Residents also acknowledged that the location of a bus service that is centralised with buses frequently travelling to a broad range of destinations was an important design component contributing to the improvement of lifestyle overall, *'It's good in the walking sense, even walking to the buses and there are so many bus services here -*

you can get to the Bulimba ferry, Valley, city - so it's easy to walk to those things' (BHC resident, blogging participant).

In addition to desirable, accessible locations, the close proximity of the University and the La Boite theatre were also raised as destinations and resources that encouraged activity and engagement with the urban neighbourhood, as one participant illustrated *'QUT's coffee shop and maybe library with its computer access and maybe any learning programmes such as writing we all will grow and at the same time learn and also help others'* (BHC resident, blogging participant). Further, the interviews highlighted how these facilities give life to social connections between the BHC residents and other demographics that might not have otherwise met, for example, *'And you can meet the students and talk to them. The international students have come to visit us here'* (BHC resident, blogging participant). Another participant stated that *'being around the students and theatre-goers makes me feel so young and good'* (BHC mother, interviews). An activity in the workshop highlighted the fact that residents felt that the inclusion of social groups as a result of the mixed land-use at KGUV such as students, theatre-goers, university staff and international visitors were perceived as a positive contribution to their lived experiences in the neighbourhood. Both indirect and direct benefits to lifestyle and well-being regarding mixed land-use and walk-ability to destinations were evident in the data, and highlight little-understood and yet potentially salient contribution of social and cultural resources to the improvement of people's health in a place.

- **Parks, Green Spaces and Health-Related Resources**

Participants highlighted the walkways as being highly beneficial for increasing the amount of physical activity they were likely to do, for example, *'I use the pathways for walking. They are better than the walkways I previously had access to, which was a hilly area'* (BHC resident, blogging participant) and *'the walking paths are great and the parks are well established for all sorts of fun and games'* (BHC resident, blogging participant), and further, one participant links design to motivation to a renewed focus on fitness *'I have also been motivated to go for a run in the area, which I haven't done for years due to illness, and have found the pathways useful for this as they are broad'* (BHC resident, blogging participant).

Residents also commented positively on the number, location, and quality of parks in KGUV for recreational, leisure, and physical activity pursuits, for example *‘On one of our walks we visited all the parks in the area and I saw that Grey Guns park would be ideal when small children of my friends and family come to visit as we can take them for a walk up there and let them kick a ball around and we can sit and talk’* (BHC resident, community focus group) and *‘I usually show visitors around the parks and often relax as the seating is excellent around the pathways and parks’* and further *‘I like the parks surrounding the area because they are so gorgeous and I feel comfortable and satisfied with the air’* (BHC resident, blogging participant). Another resident commented that the combination of pathways suitable for walking and desirable destinations for both utilitarian and health-related reasons *‘It is good for physical activity especially walking and jogging and going sight-seeing is good exercise. And going to the shops’* (BHC resident, blogging participant). The psychological, social, and health benefits on wide, even pathways and well-kept green areas were greatly emphasised in the data, with implications for improving current neighbourhoods and considering the positive aspects of health-related resources such as these in the design of future planned communities.

- **Housing Histories and Perceived Levels of Danger and Fear in the KGUV Neighbourhood**

The transition from previous housing and neighbourhood experiences was contrasted in the data to current perceptions of life in KGUV, and how both lifestyle and well-being have been affected. While not all participants were in agreement about safety issues in KGUV, the data demonstrate the importance of perceived levels of fear and ideas about neighbours as key in determining whether or not residents were likely to be active there, for example *‘Absolutely I walk more here, I didn’t have parks or pathways where I was before, and I never felt safe anyway’* (BHC mother, interviews). Further, participants reported safety as a key factor influencing how mobile and active their children were able to be in KGUV, for example, *‘The kids can go out and we’re not worried about ‘em, in the last places we had to go out check what they’re doing every five seconds, cause there are too many bad people around’* (BHC mother, interviews). And *‘I have used the parks to play with my grandson and*

enjoy the walks on the pathways as it is very safe and secure' (BHC resident, blogging participant). In addition, one participant stated '*...and it's nice and clean here. It's just got a clean feel*' (BHC mother, interviews).

However, some residents still feel that despite the positive aspects of a clean environment that is aesthetically pleasing, the close congregation of lower socioeconomic residents in the BHC apartments recreates a similar problem of fear, based primarily on a perceived connection between demographic qualities of residents and likelihood of crime, for example:

'I hated going out after dark 'cause it was pretty scary, with a high unemployment level. Just um walking down the road, they knew you would have a few dollars on ya, so they'd roll ya for the money for grog or smokes. Because it has a lot of people living in the same spot it reminds me of that, so after dark you don't go out by yourself' (BHC mother, interviews).

This raises questions for the designers of future planned communities about the balance between providing health-related resources and a positive promotional package, and the problematic nature of a mixed-tenure concept, when in fact 'mixed' refers to clusters of lower socioeconomic residents located adjacent to clusters of high socioeconomic residents, rather than a random allocation or physical blending of accommodation options. While marketing rhetoric that promotes a clean-living, healthy lifestyle and health-related resources are important in creating positive, sustainable experiences for residents, social and demographic qualities of the area contribute powerfully to this mix, and need to be considered as important in design as the provision of material and physical resources.

- **Mixed-Tenure:**

Participants talked at length about the problematic nature of being clustered together in apartment-style living with people who are experiencing similar social and economic difficulties, and how when people enduring them are places in close proximity, tensions arise, for example '*Yeah and a lot of these people don't work here either. Like you're meant to live in peace and harmony, but as far as that goes it went*

out the window pretty much straight away' (BHC mother, interviews) and 'Like the police have been here, like, in the first week we were living here, like a half a dozen times. Yeah just through people fighting and bitching and things. And other domestic violence incidents like 6 o'clock in the morning there were people having domestics downstairs...' (BHC mother, interviews), while another mother commented 'But we were here and people were yelling out any time, doesn't matter if it's midnight, three o'clock on the morning, or whatever, and screaming, bawling, over whatever.' Another young mother described the following scenario:

This place, we've had a few hiccups along the way, we've had a man come in and it's the wrong house... with a gun. So that's why we've got the dog here. But um, someone came in with a gun, and they came into the wrong place, so...it was a bit full on. It's a bit like the Bronx here at the moment. Yeah. We've had someone get burnt by hot water by her boyfriend, and the police rock up here like every day. I think it's calming down a bit now, but it's become like pretty full on, like that all comes with the people who are being moved here as well, like yeah, we're all from the same lifestyle but some of us have changed and some of us are still there. So it's difficult in that way, where they have tried to put all lower class people in one building, where some people have moved on and some people haven't.'

This final comment highlights quite pointedly, the psychological detriment of classifying housing type by demographic category in terms of restricting their perceived ability to 'move on' or make changes in their lives. Another theme that rose during the interviews with young mothers in BHC apartments, was the problem with a lack of disposable facilities for intravenous drug users in the buildings, with needles being left lying around spaces where their children play. One mother stated '*There is a huge problem with needles, we have to pick them up and put them in bins, and sometimes they are left next to the bins, and I've seen them on the water-tanks, everywhere.'*

Not only the young mothers were affected by the mix of residents in the BHC apartments, with one middle-age couple describing their government supported living experiences in the BHC apartments as follows '*Our neighbour next door - you couldn't wish to meet a nicer couple. And the lass with the baby she is fine now that*

the baby has a cot - but before she was crying a lot. The smokers drive us mad, because they are chain smokers. And we had to call the police because a man was throwing shoes at our louvres at 4am in the morning’ and *‘Someone started a fire in our refuge. Someone smelt the smoke and saw the burnt paper’* (BHC residents, blogging participants). And in this poignant comment, a young mother noted the negative impact on quality of life of being placed in housing that is government supported and is notably defined as such within a community *‘Yeah it’s funny, I’m a big addiction person, and um its even like associating in the same complex as those people then it goes OK, it’s really nice and everything, but you haven’t moved on, it’s still housing commission’* (BHC mother, interviews). Interestingly, despite BHC efforts to call it ‘affordable living’ and to move away from the category of ‘housing commission’, all BHC residents referred to it as such, and spoke of it a drawback from the otherwise positive aspects of design at KGUV. One written comment in a workshop activity regarding the non-BHC housing from a BHC resident stated that people in private accommodation were *‘Rich, tall, and better than us. They think.’* While KGUV has been described as mixed tenure, it does not break the mould from the older style government supported living wherein people from poorer backgrounds are confined to living together in apartments where privacy is low and space is limited.

Community Capacity-Building and Recreational Activities

Finally, when participants were asked about which aspects of design could be improved and what might contribute to how active they were able to be in KGUV, most expressed a need for community-based activities and sport and recreation centres that were affordable, close, and child-friendly. One mother from BHC suggested *‘Like something for the kids, more for the kids to do, instead of just a park and them playing on the slippery slide and they get bored just swinging on swings. We try to take balls usually, but still they need something that is going to be fun. And somewhere where I can take them to do something where I can sit down and relax’* while another stated *‘A mothers’ group would be good, or a play group like we used to have in West End’* and *‘Activities for the kids like sports or martial arts or dancing’* (BHC mother, interviews). Other older residents from BHC also expressed a desire for activities that brought them closer to other residents and got them out of their

apartments ‘A community centre with its facilities e.g. card games, exercise programmes such as tai chi perhaps, just mingling socially perhaps’ (BHC resident, blogging participant) while another said ‘The community hub would be great for people to interact with others to organise some activities’ and ‘...very gentle exercises for families with a B.B.Q afterwards would be an idea for getting to know the residents’ (BHC residents, blogging participants). Some of the parents from BHC spoke positively regarding previous experiences with PCYC, and the many resources it offered to young families, ‘My daughter used to go to the PCYC cause they had everything there for kids and she did Ju Jitsu there’ (BHC mother, interviews). These suggestions and illustrations demonstrate a current need in KGUV for community developers and health promotion workers from government, not-for-profit, and research areas to generate programs and activities that can build social capacity and improve lifestyles and health for residents in a way that contributes to a vibrant and sustainable community.

Discussion, Conclusions, and Future Implications

At the level described by Lefebvre as representations of space – space as it is conceived in planning and design – KGUV clearly displays an orientation to integration between residents and village life and a commitment to the coherent co-location of different tenure developments. This conceptualisation was seen to intersect in important ways with the field of health through the co-location of health facilities, the provision of walking and recreation facilities and a design oriented to encouraging movement and activity. These design values were experienced very positively at symbolic level by participants. In general, the respondents were very supportive of their inner-city location, the mixing of tenures, the availability of services and the diversity of the village in terms of both visitors and residents. Their descriptions of their housing careers positioned their move to KGUV as a change for the better in terms of happiness and well-being.

However, when their responses moved to descriptions of everyday experiences of the space, their utterances revealed a level of ambivalence and negativity. On the one hand, descriptions of spatial practices revealed some very positive changes for the better in their housing circumstances and well-being. The quality of the dwellings is

proving to be a positive influence on both real and perceived well-being, as is the availability of shops and affordable, child-friendly venues, such as the proximity to South Bank and Roma Street Parklands. Additionally, the overall absence of fear is a great contributor to the level of engagement with local resources, especially in light of residents' prior experiences in poorer neighbourhoods and housing histories. However, on the other hand, interviews found that vulnerable groups perceive the poverty, ill-health and addictions of others acutely, and see it as a reflection on themselves when it occurs in close proximity to their living area. Therefore, while the well-designed units, the presence of the university and the theatre and the demographics that utilise these resources contributed to an overall improved sense of well-being for residents, at the level of everyday experience other social aspects of life at KGUV were experienced as more problematic.

While the Brisbane Housing Company residents were able to physically access a range of urban resources that are usually linked with improved health and well-being, such as parks, pathways, and bikeways, at a social level there were a range of complex processes at work generating barriers to a greater connection between these people and the lifestyle on offer to them at KGUV. Firstly, a mistrust of other residents in the same demographic and perception that they were not 'good people' was born out of previous negative experiences living in poorer suburbs in the Brisbane region, thus inhibiting social activity and venturing outdoors to participate more fully in KGUV life. Secondly, close proximity to people with social and health problems meant that another level of symbolism about the KGUV was created internally within the apartment blocks; with used needles, over-flowing bins, broken toys, rummaged-through mailboxes, and even blood stains in some areas comprising a set of semiotics not conducive to feelings of happiness and well-being. Finally, a tension was being played out between aesthetics relating to different components of design, between the physical and the social, and which raise important questions for both urban designers and public health researchers. Further investigation is required to understand the effects of social contexts on health-related behaviours in urban environments, and greater consideration of these effects needs to be taken at a planning level when considering co-location of different demographics and land-use. Stronger research links are needed between health and urban design to ensure that health promotion and intervention takes into account the power of design to

potentially mediate these effects, and for designers to acknowledge the salience of social context and its impact on a range of goals for future planned community, including health and sustainability.

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