Neighbourhood Life, Social Capital and Perceptions of Safety in the Western Suburbs of Adelaide

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Abstract

In this paper we report on a South Australian study of perceptions of safety and aspects of neighbourhood life including social capital which involved the analysis of 2400 self-completed questionnaires. A path analysis found that perceptions of safety were directly associated with gender, age, perceptions of neighbourhood pollution and neighbourhood trust, and indirectly associated with age, neighbourhood pollution and neighbourhood connections. We conclude with a discussion of the implications of the findings for public policy.

Keywords: safety, social capital, neighbourhood, path analysis

1. Introduction

This paper explores the relationship between perceptions of safety and aspects of neighbourhood life in the Western suburbs of Adelaide, South Australia. We examine the impact of some of the social and physical characteristics of neighbourhoods on residents' perceptions of safety. We explore social aspects through the relationships between elements of neighbourhood-related social capital and perceived safety, and physical characteristics of the neighbourhood through the impact of perceptions of neighbourhood pollution on perceptions of safety. We also consider the inter-relationships of these factors and examine how demographic variables such as age and gender may mediate the relationship between neighbourhood-related factors and perceptions of safety. We conclude with a discussion of the implications of the findings for public policy.

1.1 Neighbourhood life, social capital and safety

The experience and fear of crime is often linked to people's place of residence and significant neighbourhood-level differences in crime have been found in a number of countries where deprived areas often experience higher levels of crime (Hale, 1996; Kawachi et al, 1999; Shaw, Tunstall & Dorling, 2004; Weatherburn, 1992). The concept of social capital has been used to understand these variations.

Social capital is a conceptually complex and contested term, with two main schools of thought (Baum & Ziersch, 2003). Robert Putnam conceived of social capital as a community-level resource and public good, and defined social capital as: "features of social organisation such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit" (Putnam, 1995, pg. 67). Pierre Bourdieu, in contrast, focused on the resources that accrue to individuals as a result of their membership of social networks (Bourdieu, 1986). He defined social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition" (pg. 248). Common to both definitions is a consideration of social networks and social interaction.

Studies have found that local differences in incidence of crime are associated with variation in the quality and quantity of social interactions, and that communities with strong neighbourhood networks and high levels of social cohesion have lower levels of crime. A multilevel study in Chicago, USA, found that a combined measure of neighbourhood social cohesion and informal social control was associated with lower levels of violent crime in neighbourhoods (Sampson, Raudenbush & Earles, 1997; Sampson & Raudenbush, 1999). In an Australian study, Carcach & Huntley (2002) found lower crime rates in areas with high levels of participation in community organisations. In Great Britain, Sampson and Groves (1989) found that density of local friendship networks and participation in local organisations had an impact on a range of crimes such as assaults and burglaries. Less research has considered the impact of neighbourhood social interactions and networks on fear of crime or perceptions of safety. An exception is McCrea et al (2005) in Australia who found that neighbourhood trust, neighbourhood reciprocity, neighbourhood involvement did not significantly predict fear of crime once age, gender and physical characteristics of the neighbourhood were taken into account.

A growing body of research has linked perceptions of neighbourhood with a fear of crime, which in turn can affect the degree to which people participate and interact in their community (Austin et al. 2002; Macintyre & Ellaway 2000; Ziersch et al. 2005). The evidence here is somewhat contradictory. Some research has found that fear of crime has a negative effect on neighbourhood cohesion, participation in neighbourhood associations and community ties (Makowitz et al, 2001; Riger et al, 1981; Saergent & Winkel, 2004; Skogan, 1990; Ziersch et al, 2005). Similarly, qualitative research from Australia (Palmer et al. 2005) has found that fear of crime can present a significant barrier to opportunities for social interactions within neighbourhoods. Alternatively, Taylor (1996) suggests that people living in neighbourhoods experiencing more crime may be more involved in their local neighbourhoods.

In exploring the relationship between crime, fear of crime, and social interaction and cohesion, a key school of thought is the social disorganisation theory of the Chicago School (Shaw & McKay, 1942). This theory argues that communities which lack social cohesion are less effective in exerting informal social control to establish and maintain norms to reduce crime and violence (Sampson & Wilson, 1995). It is argued that social connections between neighbours affect the local levels of trust, cohesion and resources for collective action in the community, thereby promoting informal measures of social control that deter crime and promote feelings of safety. Likewise it is argued that fear of crime, as well as actual crime, and neighbourhood disorder, interrupt social ties between residents in disadvantaged areas (Forrest & Kearns, 2001; Palmer et al, 2005; Sampson & Wilson, 1995).

In this way, the relationship between fear of crime and the social life of neighbourhoods can be self-reinforcing as is suggested in some of the empirical work outlined above. That is, a fear of crime may promote distrust between neighbours, which interferes with the ability of neighbours to form social ties, which may lead further to the breakdown of order in the area and increased fear of crime (Forrest & Kearns, 2001; Ross, Mirowsky & Pribesh, 2001; Ross, Mirowsky & Pribesh, 2002; Skogan, 1990). As Kawachi et al (1999) conclude:

> If people shun their neighbours due to fear of crime, fewer opportunities exist for local networks and associations to take hold. The resulting disorganisation of community structure in turn fuels further crime, producing a vicious cycle of declining social capital, followed by rising crime, followed by further disinvestments in social capital (pg. 727).

Research has also found associations between other aspects of neighbourhood life, fear of crime and feelings of safety, such as the impact of physical 'incivilities'. In their seminal 'broken windows' work Wilson & Kelling (1982) wrote of how signs of physical disorder in neighbourhoods, such as vandalism, graffiti and dirtiness, could contribute to a sense of danger and fear of crime. Other research has found similar associations between aspects of the physical environment and perceptions of safety (eg. McCrea et al 2005; Ross and Mirowsky, 2001).

A number of demographic characteristics have also been identified as affecting fear of crime and feelings of safety or vulnerability (see Hale, 1996). Consistently, studies

show that older people and women are more likely to report fear of crime or insecurity in public places (Hale, 1996; Lupton, 1999). This is despite the fact that neither are victimised at a higher rate than other groups (Tulloch et al, 1998). In addition to being female and older, poorer people, ethnic minorities and those with previous direct or indirect experiences of victimisation also report lower feelings of safety (Grabosky, 1995; Hale, 1996).

In this paper we draw on Bourdieu's definition of social capital to explore the relationship between social capital and aspects of neighbourhood life. Using quantitative survey data, we examine the impact of the physical and social environment of neighbourhood life on residents' perceptions of safety and fear of crime, together with demographic factors that may independently affect perceptions of safety or mediate the impact of neighbourhood-related factors on perceptions of safety.

2. Method

2.1 Setting

The data presented here were collected in the western suburbs of metropolitan Adelaide. The region has a lower socioeconomic status than Australia overall, but has pockets of intense advantage and disadvantage, reflected most notably in the housing types of the area. Several of the suburbs which border the city's fringe have been 'gentrified', attracting professionals who work in the city, while others have little residential housing, being home to various factories serving a number of light and heavy industries. Several of the wealthier suburbs within the region afford their owners spectacular ocean views along parts of Adelaide's coastline, while some of the poorest suburbs in the region are characterised by high levels of public housing. More broadly, the region has a higher than average concentration of migrants and people for whom English is not their first language, and has an older than Australian average population.

2.2 Data collection

This data was part of a broader study of social capital, neighbourhood life and health undertaken in the Western suburbs of Adelaide with data collection occurring in 1997 (see Baum et al, 2000 for a full description of the methodology). A self-completed mailed questionnaire formed the basis of the study and included items relating to perceptions of the physical environment, neighbourhood connections, neighbourhood trust, participation, safety and a range of demographic indicators. The questionnaire also included items about health, but these are not discussed here. It was sent to 4000 residents, randomly selected from the electoral register with up to three reminders given. Replies were received from 64%.

Samples from electoral registers in Australia may under-represent younger people who may not have registered to vote and non-English speaking people (because they are less likely to be eligible to vote). Compared with census data in the region, the sample was slightly skewed towards women and older people. Apart from these minor variations the sample is representative of the demographics of the study region.

2.3 Data analysis

A latent variable path analysis was performed using partial least squares (PLS) regression procedures (Sellin, 1995; Sellin & Keeves, 1994) with the computer software PLSPATH

3.1 (Sellin, 1990). Latent variable path analysis involves the creation of 'latent variables', or unobservable theoretical constructs, through their association with observable or 'manifest variables' (See Falk, 1987; Ziersch et al, 2005 for further details). A PLS approach is more appropriate where there are many manifest and latent variables, where some or all of the manifest variables are categorical, where distributions are non-normal and under conditions of heteroscedasticity (ie where the residuals on manifest and latent variables are correlated) (Falk, 1987).

In PLS path analysis the outer model indicates the relationships between the latent variables and the observed or manifest variables. There are three types of relationships between a latent variable and its associated manifest variables. In inward mode the latent variable is seen as being produced by manifest variables where the latent variable is estimated in a way similar to multiple regression analysis and regression weights are calculated. In the inward mode, where a latent variable has one categorical manifest variable with three or more categories, each category can be converted into separate binary/dichotomous manifest variables. As for other types of regression analyses, one of the variables is then left out and made the dummy or comparison variable, against which the other variables are compared. In outward mode the latent variable is estimated in a way similar to that of a principal component, and factor loadings are used to represent the common variance among manifest variables. Factor loadings $>\pm0.30$ are considered significant. In unity mode the latent variable has only one associated manifest variable and both the weight and factor loading is always 1.00. In all three modes both weights and loadings generally range between +1 and −1 and the results are therefore in standardised form.

The inner model illustrates the relationships among the latent variables, and the strength of these relationships is indicated by the regression weights for each path. PLS path analysis enables an estimation of the strength of both direct relationships between latent variables, and also the indirect relationships between latent variables through their common association with mediating variables.

In PLS path analysis an initial hypothetical model posits a sequential relationship between latent variables such that the effect of a variable on all other variables that come after it in the model sequence can be considered (this means that two way relationships between variables are not considered). This model is then trimmed with paths between latent variables removed if the weights were less than 0.10 (Cohen, 1992). However, for paths directly leading to the perceived safety outcome variable, this criterion was relaxed to less than 0.08, to allow for a consideration of less important but potentially interesting findings. Traditional significance testing is not appropriate in PLS path analysis and it is not possible to devise goodness of fit statistics. Instead, the size of the estimated path coefficient is used to assess the strength of a variable's effect. In addition, using a jack-knife procedure, standard errors can be calculated by PLSPATH 3.1 and paths trimmed according to a 'rule of thumb' where the jack-knife mean of a path must also be twice the jack-knife standard error, to remain in the inner model. R2 values are also reported for each latent variable indicating the proportion of variance accounted for by the model.

Eleven latent variables were included in the initial model. Please see Appendix 1 for a full description of their associated manifest variables and outer model.

Six demographic variables were created: GENDER[1], AGE, EDUCATION, INCOME, HOUSEHOLD TYPE and YEARS AT ADDRESS.

A number of variables specifically associated with neighbourhood, social capital and safety were created. NEIGHBOURHOOD POLLUTION related to perceptions of the level of noise in the neighbourhood and how clean the neighbourhood was. This variable was negatively coded such that high scores indicated perceptions of the neighbourhood as quiet and clean. Three social capital variables were included which focused on social connections between neighbours, trust of other residents and the exchange of favours. NEIGHBOURHOOD CONNECTIONS included four questions regarding the strength of connections with other neighbourhood residents. The variable NEIGHBOURHOOD TRUST related to the extent to which people felt that most people in the neighbourhood could be trusted. RECIPROCITY consisted of the number of favours given (chosen from a list) in the last twelve months and the number of favours received, calculated in the same way. It should be noted that these related to favours to and from neighbours and friends, and as such do not relate to neighbourhood only. The outcome variable, PERCEIVED SAFETY involved resident's perceptions of their neighbourhood as a safe place to walk around at night, and their feelings of safety in the home.

3. Results

3.1 Overall perceptions of safety

Questionnaire respondents were asked to rate their neighbourhood on a five point scale from a very unsafe place to walk around at night ('1') to a very safe place to walk around at night ('5') (Table 1). A minority of people rated their neighbourhood as very safe or very unsafe (ie. 1 or 5), with the majority rating it as either a '3' or a '4'.

Table 1: Rating of neighbourhood as a safe place to walk around at night

	Frequency	Percent
Very unsafe place (1)	217	8.5
2	345	13.5
3	771	30.4
4	730	28.7
Very safe place (5)	396	15.6
Total	2459	96.8
Missing	81	3.2
Total	**2540**	**100.0**

Table 2: Rating of whether feel safe in own home

	Frequency	Percent
None of the time	40	1.6
Some of the time	159	6.3
Most of the time	1134	44.6
All of the time	1178	46.4
Total	2511	98.8
Missing	29	1.2
Total	**2540**	**100.0**

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1 In the text latent variable names are written in small capitals.

Questionnaire respondents were also asked if they felt safe in their home and asked to rate this on a four point scale ranging from all of the time to none of the time (Table 2). A very small proportion of people never felt safe in their home, with almost half always feeling safe in their home.

3.2 Path analysis

The outer model results are presented in Figure 1. The outer model indicated that the manifest variables of 'perceptions of the safety of the area' (0.91) and 'feelings of safety in their own home' (0.73) both loaded strongly on the latent variable of PERCEIVED SAFETY, supporting the utility of this variable.

The inner model indicated that four variables were positively associated with PERCEIVED SAFETY, explaining one third of the variance (see Table 3 and Figure 1[2]). GENDER was negatively associated with PERCEIVED SAFETY, with women feeling less safe. AGE was negatively associated with PERCEIVED SAFETY[3]. However, there was also an indirect positive effect. The older age groups were positively associated with variables that were themselves directly positively associated with perceptions of safety. This suggests, for example, that even though people of older age groups tend to be more trusting (see Figure 1) (which is positively associated with perceptions of safety), overall they are less likely to feel safe.

## Table 3: Significant direct and indirect effects on perceived safety (inner model)

	Variable	R2	Direct _	Total _	Indirect _	Correlation
Perceived safety		0.36				
gender			-0.17	-0.17	0.00	-0.18
age			-0.19	-0.04	*0.15	-0.03
neighbourhood pollution			0.23	0.43	*0.20	0.40
neighbourhood connections			-	0.10	*0.10	0.15
neighbourhood trust			0.44	0.44	-	0.51

*Indicates significant indirect paths (ie weights≥0.10)

NEIGHBOURHOOD TRUST and NEIGHBOURHOOD POLLUTION were also positively associated with PERCEIVED SAFETY, with feelings of safety higher amongst those who rated their area as clean and quiet, and their fellow residents as trustworthy. NEIGHBOURHOOD POLLUTION was also positively indirectly associated with perceptions of safety (Table 3). NEIGHBOURHOOD CONNECTIONS was indirectly positively associated with PERCEIVED SAFETY, with those with strong neighbourhood ties, feeling safer.

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2   Figure 1 includes the inner model relationships between the neighbourhood, social capital and safety variables, and the impact of the demographic variables. However, for simplicity, it does not show the interrelationships between the demographic variables.

3   In PLS path analysis, where a latent variable A is negatively associated with latent variable B, and latent variable A has a manifest variable that is negatively associated with it – the relationship between that latent A manifest variable and latent variable B is multiplicative, that is, it becomes positive. Therefore where the latent variable of age is negatively associated with perceived safety and the younger age groups have negative weights – these younger age groups are more likely to feel safe than the older age groups.

Figure 1: Path diagram for perceived safety
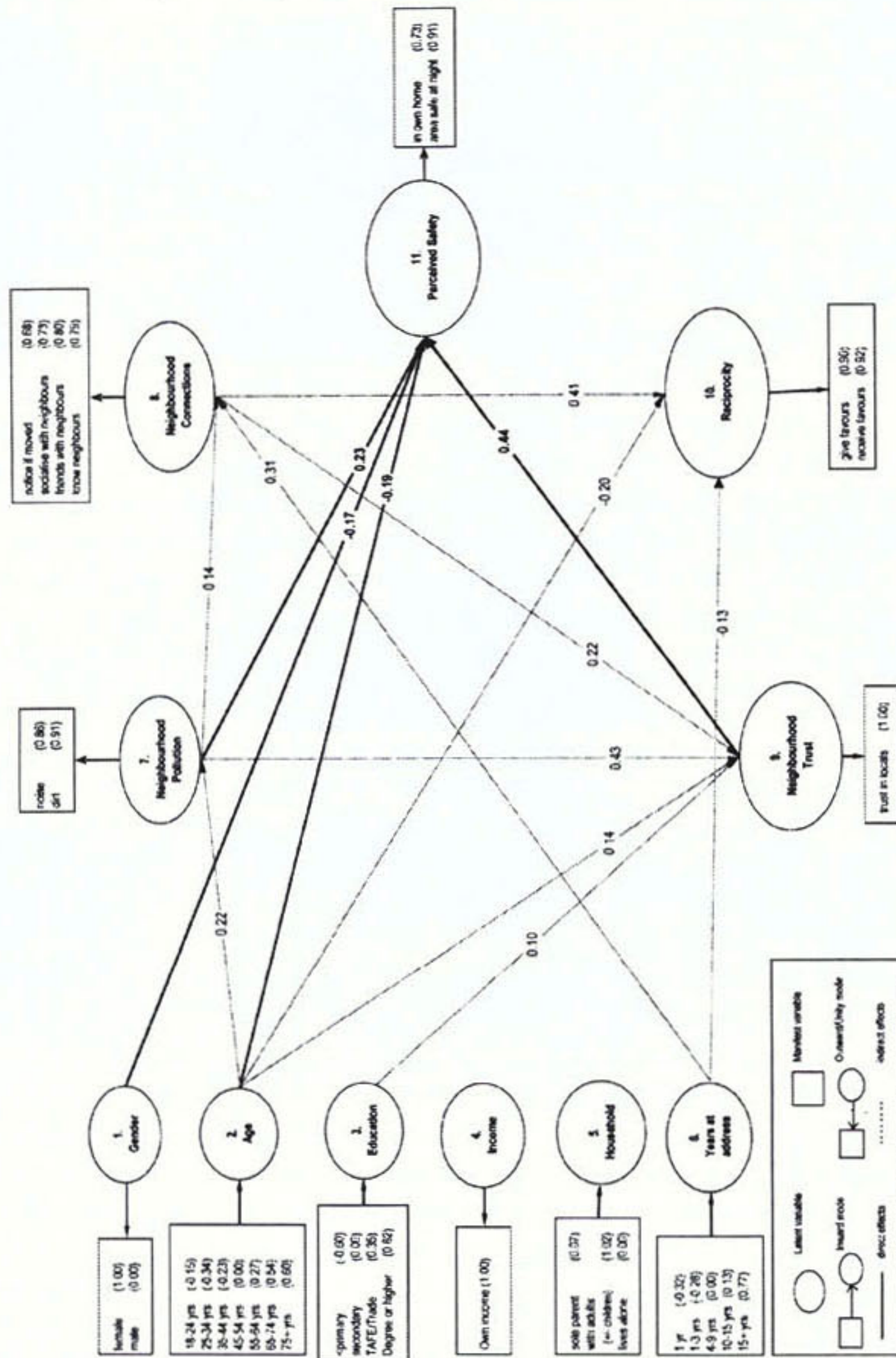
4. Discussion

The results suggest that there were significant neighbourhood-related effects on perceptions of safety for residents in the western suburbs of Adelaide. In particular, the path analysis indicated that elements of neighbourhood-related social capital was significantly associated with perceptions of safety for residents. The analysis indicated that strong connections with, and trust in, neighbours directly or indirectly was associated with greater feelings of safety. This supports Furedi's (1998) argument that where neighbours do not know each other, people appear to feel less safe (see also Palmer et al, 2005), and is in contrast to McCrea et al (2005)'s findings.

In terms of the physical characteristics of neighbourhoods, the path analysis directly linked perceptions of the noisiness and dirtiness of an area to feelings of safety, supporting the argument that signs of physical disorder can have a distinctly negative impact on residents (McCrea et al, 2005; Ross & Mirowsky, 2001; Wilson & Kelling, 1982). The physical environment was also indirectly linked to feelings of safety in the path analysis. The variable 'neighbourhood pollution' was associated with 'neighbourhood trust' such that people who rated their area as having low pollution were more likely to trust fellow residents. This supports Ross, Mirowsky & Pribesh's (2001) finding that perceptions of neighbourhood disorder, including physical signs, can have a negative impact on trust between neighbours.

In addition to the impact of neighbourhood life, the importance of individual characteristics like gender and age was supported in this study, with women and older people feeling less safe.

A focus on social interaction in neighbourhoods could imply that the residents of high crime neighbourhoods are somehow responsible for local crime levels and their own security, whereas clearly the causes of crime extend beyond social interaction to include structural factors such as unemployment, poverty and the distribution of income. However, exploring the ways that social interaction between neighbours could exacerbate or ameliorate these broader causes of crime may provide policy makers with an additional avenue for development of policies to reduce crime and negative impacts on health.

4.1 Study strengths and limitations

The path analysis enabled consideration of the contribution of a range of variables to feelings of safety and, in particular, indirect effects of variables through other variables. It also enabled an examination of the impact of different elements of social capital on safety, rather than an aggregated measure of social capital which would have obscured the relative importance of the component elements. The study was cross-sectional so causality cannot be assumed. The constraints of the data analysis meant that could only one-way relationships between variables could be examined and the impact of a variable could only be considered for variables following it. This means, for example, that it was not possible to analyse the way that perceptions of safety may impact on neighbourhood connections. However, even if the relationships between safety and aspects of social capital are two-way, it still firmly places social capital as relevant to a consideration of safety.

This study does not explore actual neighbourhood differences in crime or safety, which would have required multilevel modeling. However, it is possible that the factors identified here as contributing to safety may differ according to area of residence. A multilevel exploration of the relationships considered in this study would be a fruitful area of further research.

The neighbourhood pollution variable used in the path analysis only considered one element of the physical characteristics of the neighbourhood. Other physical attributes of a neighbourhood such as the presence of greenery or the proportion of derelict housing or graffiti may also be relevant. The limitation of the reciprocity measure as a

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neighbourhood-based measure, in so far as it does not specifically consider the exchange of favours between neighbourhood residents, has already been noted.

The final models for perceived safety accounted for one third of the variance. There are clearly other factors that are relevant to safety that were not considered here. Likewise, the survey questions focused on safety within the neighbourhood. There are likely to be other factors relevant to feelings of safety beyond the neighbourhood.

5. Conclusion

Our findings suggest that attention to aspects of social capital and the characteristics of the physical environment are helpful in untangling the complex set of variables that underpin perceived safety in neighbourhoods.

Our study, together with similar research that we have cited in this paper, has implications for policies to improve neighbourhood life. Current political discourse in Australia and elsewhere places great emphasis on enforcing law and order (Hogg & Brown, 1998; O'Toole, 2003; Trenwith, 2003). This is expressed through governments stressing the need to be tough on criminals, and elevating community safety through enhanced police numbers, and Federal government preoccupation with terrorism. These policies, however, may result in the negative spiral refers to by Kawachi et al (1999), whereby the heightened policy attention to crime increases the fear of crime and so makes people less likely to venture out in their communities, thereby making them less safe places to be. These 'tough on law and order' policies are not based on an understanding of the complexity of creating a community in which people feel a sense of security and safety.

Our research supports alternative policy discourses, such as 'crime prevention through environmental design' (CPTED) approaches, which stress the importance of measures designed to prevent crime through good urban design and community development actions (Jeffrey, 1971; Saville & Cleveland, 2003a,b). In these approaches policies are built explicitly on an understanding of the links between neighbourhood trust, the pattern of interactions between neighbours and the impact of physical features on crime and feelings of safety. Examples of appropriate urban design include good lighting to make parks safer at night or housing design that facilitates community interaction and 'surveillance' (Cameron & MacDougall, 2000; White, 1999). Community development can be used as part of a crime prevention exercise, in conjunction with measures that address the structural causes of crime. Such a rationale underpinned the Health Action Zones in the UK (Sullivan et al, 2004) which in many cases were concerned with reducing health inequities and reducing crime levels in poor communities. Such initiatives would aim to build relationships between neighbours in order to establish trust and a sense of safety because people know each other. They could also endeavour to build partnerships between communities and police ('linking' social capital, Szreter, 2002) in order to facilitate local involvement in crime prevention measures and also to contribute to a sense of safety through 'reassurance policing' (Fleming, 2005; Gorris & Walters, 1999). Community development approaches can also be tailored to meet specific gender and age needs in terms of perceived safety.

Thus we conclude that social capital components and their relationship with other neighbourhood features do have some lessons for public policy. We stress the need for a complex understanding of these relationships and suggest a response that emphasises prevention rather than solely punitive responses that may act in a counterproductive way to increase fear and reduce perceptions of security.

Acknowledgements:

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Appendix 1: Description of variables used in the analysis

VARIABLE (outer model mode)	SCALE / CODING
Gender (unity)	
Female/male	Females coded (1.00)/ Males (0.00)
Age (inward)	
18-24 years	18-24 years (1.00), other (0.00)
25-34 years	25-34 years (1.00), other (0.00)
35-44 years	35-44 years (1.00), other (0.00)
45-54 years	45-54 years (1.00), other (0.00)
55-64 years	55-64 years (1.00), other (0.00)
65-74 years	65-74 years (1.00), other (0.00)
75+ years	75+ years (1.00), other (0.00)
Education (inward)	
Primary school or less	Primary school or less education (1.00), other (0.00)
Secondary school only	Secondary school only education (1.00), other (0.00)
Trade/TAFE	Trade/TAFE education (1.00), other (0.00)
Degree or higher	Degree or higher education (1.00), other (0.00)
Income (outward)	
Income	14 point scale ranging from (<$6,240 - $104,000+ pa)
Household (inward)	
Sole parent with children only	sole parent (1.00), other (0.00)
Live with adults +/- children	with adults (1.00), other (0.00)
Live alone	live alone (1.00), other (0.00)
Years at address (inward)	
<1 year	<1 year (1.00), other (0.00)
1-3 years	1-3 years (1.00), other (0.00)
4-9 years	4-9 years (1.00), other (0.00)
10-15 years	10-15 years (1.00), other (0.00)
>15 years	>15 years (1.00), other (0.00)
Neighbourhood pollution (outward)	
Rating of the noisiness of the neighbourhood	5 point scale ranging from 1 (very noisy) to 5 (very quiet)
Rating of the cleanliness of the neighbourhood	5 point scale ranging from 1 (very dirty) to 5 (very clean)
Neighbourhood connections (outward)	5 point scale ranging from 1 (strongly disagree) to 5 (strongly agree)
Level of agreement "I am good friends with many people in this neighbourhood"	
Level of agreement "If I moved hardly anyone around here would notice"	5 point scale ranging from 5 (strongly agree) to 1 (strongly disagree)
Regularity of visiting neighbours or neighbours visiting	6 point scale ranging from never(1) to once a week or more (6)
Extent to which they know people in the neighbourhood	5 point scale ranging from 1 ("I do not know people in my neighbourhood") to 5 ("I know most of the people in my neighbourhood")
Neighbourhood trust (unity)	
Rating of the neighbourhood as a place where most people can be trusted	5 point scale ranging from 1 ("Most people in the area can not be trusted) to 5 ("Most people in the area can be trusted)
Reciprocity (outward)	
Favours given – "Have you assisted neighbours or friends with the following activities in the past year":	
• listened to their problems; helped them with odd jobs; lent them household equipment; looked after their house while they were away; assisted them with shopping; cared for a member of their family; lent them money; other	Number of favours given
	Number of favours received
Favours received - Have neighbours or friends assisted you with the following activities in the past year:	
• same list as above	
Perceived safety (outward)	
Rating of the neighbourhood as a safe place to walk around at night	1 (Very unsafe place to walk around at night) to 5 (Very safe place to walk around at night)
Answer to "Do you feel safe in your home"	4 point scale ranging from 1 ("none of the time") to 4 ("all of the time")