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Obst, Patricia L. and Smith, Sandy G. and Zinkiewicz, Lucy (2001) *An Exploration of Sense of Community, Part 3: Dimensions and Predictors of Psychological Sense of Community in Geographical Communities*. *Journal of Community Psychology*, 30(1). pp. 119-133.

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An Exploration of Sense of Community, Part 3: Dimensions and Predictors of Psychological Sense of Community in Geographical Communities

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Published as:

Obst, Patricia L. and Smith, Sandy G. and Zinkiewicz, Lucy (2001) An Exploration of Sense of Community, Part 3: Dimensions and Predictors of Psychological Sense of Community in Geographical Communities. *Journal of Community Psychology* 30(1):119-133.

Abstract

Within the discipline of community psychology there remains considerable debate as to the latent structure of psychological sense of community (PSOC). One of the few theoretical discussions is that of McMillan and Chavis (1986), who hypothesized four dimensions: Belonging; Fulfillment of Needs; Influence; and Shared Connections. Discussion has also emerged in the literature regarding the role of identification within PSOC. However few studies have empirically investigated the role of identification in PSOC. The current study explored PSOC in a sample of residents of rural, regional and urban geographical communities ($N = 669$). In an endeavor to clarify the underlying dimensions of PSOC, a test battery included several measures of PSOC as well as measures of identification with the community. The study also examined the role of demographic factors in predicting PSOC. Results provided support for McMillan and Chavis' (1986) four dimensions of PSOC. Further, a fifth dimension emerged, that of Conscious Identification, suggesting that identification is separate to existing dimensions of PSOC. The demographic factors significantly associated with PSOC were type of region, with rural participants displaying higher PSOC than their urban counterparts; participation in local organizations; having children; and a vision of one's neighborhood as broader than just a street or block. These results, and the implications for PSOC research, are discussed.

KEYWORDS: Community Social Identification Geographic

An Exploration of Sense of Community, Part 3: Dimensions and Predictors of Psychological Sense of Community in Geographical Communities

Much has been written on the idea of community, from many perspectives, resulting in a plethora of definitions and uses of the term. In a detailed examination of uses of the term 'community', Hillery (1955) discovered no less than 94 distinct definitions. The term is highly familiar to the general population and is used frequently in everyday conversation. Recently the concept of community has seen a return to great popularity. Loss of community is decried and blamed for a multitude of evils. Politicians use the language of community to capture votes. Urban planners promote the development of sense of community as a cure to many social ailments including crime. Thus community has returned to the social and political agenda as not only something lost but also as something that should be actively rekindled.

The research efforts of social and political scientists have matched this interest with community now studied by many disciplines. Within the psychological discipline community psychology has emerged into a field in its own right, encompassing a broad range of research.

From the framework of working within communities came the need to define in psychological terms what was meant by 'community'. In 1977 Seymour Sarason presented the concept of psychological sense of community as the overarching value by which community psychology should be defined. Sarason (1977) noted the basic characteristics of sense of community as "The perception of similarity with others, an acknowledged interdependence with others, a willingness to maintain this interdependence by giving to or doing for others what one expects from them, the feeling that one is part of a larger dependable and stable structure" (p. 157). From this time community psychologists began to work on empirically defining, operationalizing, and quantifying the construct.

Gusfield (1975) distinguished between two major uses of the term community. The first is the territorial or geographical notion of the word. In this sense community refers to a neighborhood, town, city or region, thus the sense of community implies a sense of belonging to a particular area or the social structure within that area. The second usage pertains to communities of interest and is a more relational usage, concerned with quality and character of human relations without reference to location. Thus one might belong to a community based on a shared interest such as the freemasons, bushwalking, or a language or ethnicity.

Since Sarason (1977) introduced the concept of psychological sense of community (PSOC), researchers (e.g., Buckner, 1988; Doolittle & MacDonald, 1978; Glynn, 1981; McMillan & Chavis, 1986; Skjaeveland, Garling, & Maeland, 1996) have theorized about and debated the dimensions that underlie this construct. This ongoing debate has led to the development of several different scales, each measuring distinct hypothesized dimensions of PSOC. Such scales include Bardo's (1976) Community Satisfaction Scale, Glynn's (1981) Sense of Community Scale, Buckner's (1988) Neighborhood Cohesion Index; and, more recently, Skjaeveland et al.'s (1996) Multidimensional Measure of Neighboring. Most of these scales were developed to enable the measurement of dimensions that theorists felt were omitted in previous scales (see Obst, Zinkiewicz & Smith, (2000a), for a comprehensive review of these scales).

While such developments have enhanced the understanding of PSOC, and have seen scales developed for many specific contexts, they have also resulted in methodological confusion and lack of strong theory building in this area. In a recent article on this topic Chipuer and Pretty (1999) suggest that research into PSOC has consequently become stuck in a construct definition and measurement phase, which frequently has restricted the comparability of results across settings.

However many authors feel that one of the few integrative theories of PSOC, that of

McMillan and Chavis (1986), which was revised by McMillan (1996), provides the best foundation upon which to build our understanding of communities. According to McMillan and Chavis, PSOC consists of four elements: Membership, Influence, Integration and Fulfillment of Needs, and Shared Emotional Connection.

Membership refers to the feeling of belonging, of being part of a collective, and identification with the community. In relation to Influence, for a group to be both cohesive and attractive it must influence its individual members whilst allowing them to feel they have some control and influence over it. The third dimension, Integration and Fulfillment of Needs, refers to the idea that for a community to maintain a positive sense of togetherness, the individual-group association must be rewarding for the individual members. McMillan and Chavis (1986) suggest that common needs, goals and beliefs provide the integrative force for a cohesive community. In relation to Shared Emotional Connection, McMillan and Chavis suggest that the more people interact, the stronger the bond between them, and these bonds then develop into a community spirit. McMillan and Chavis state that these sub elements work together to create the dimensions, which in turn work dynamically together to create and maintain an overall sense of community. Based on this theory and employing a lens methodology (Brunswik, 1956), Chavis, Hogge, McMillan and Wandersman (1986) developed the twelve item Sense of Community Index (SCI).

Several investigators have found support for McMillan and Chavis' (1986) hypothesized dimensions. However such support tends to come from qualitative studies (e.g., Brodsky, 1996; Plas & Lewis, 1996; Sonn & Fisher, 1996) rather than from quantitative studies. In a recent exception, Chipuer and Pretty (1999) examined the psychometric properties of the SCI in neighborhood and workplace settings and found that the SCI tended to factor into dimensions different from those hypothesized by McMillan and Chavis. However Chipuer and Pretty conclude that the SCI provides a good foundation for further PSOC research, and suggest taking a theory driven, integrative approach to PSOC, which should include an examination of how items from other scales may combine with those from the SCI to better represent McMillan and Chavis' four dimensions.

Many of the dimensions which have emerged in sense of community research overlap. Dimensions such as belonging or membership, interaction and ties seem to form an indelible part of sense of community, as to have a sense of community first you must have sense of belonging to that community and interacting with its members. However, research has also shown evidence for several distinct dimensions apart from those theorized by McMillan and Chavis (1986). Dimensions such as annoyance (Skjaveland et al., 1996), quality of environment (Glynn, 1986), and entertainment and attraction (Bardo, 1976) have emerged as quite distinct from other studies.

The current study is part of a larger project which aimed to begin to clarify the dimensions underlying PSOC and enhance theory building in this area. The current study examined PSOC in a sample of members of geographical communities. By including measures of the multiple dimensions highlighted in the literature it was hoped only the strongest and most consistent dimensions would emerge. These dimensions then could be compared with those proposed by McMillan and Chavis (1986). This study was a follow up to a similar study conducted on interest communities (Obst et al., 2000a), which found support for McMillan and Chavis' theorized dimensions with the addition of a new dimension, Conscious Identification. The current study aimed to replicate these findings in a geographical community.

Identification with the community can be seen as an important aspect of dimensions such as McMillan and Chavis' Membership. Chipuer and Pretty (1999), as well as other recent theorists (Fisher & Sonn, 1999; Puddifoot, 1995), also suggest that differences in levels of PSOC may be understood in terms of the degree to which members identify with their

community. Studies that have explored identification in some way (e.g., Fisher & Sonn, 1999; Obst et al., 2000a; Smith, Zinkiewicz & Ryall, 2000) suggest that identification with the community may be an important aspect of PSOC. Smith et al. and Obst et al. employed social identity theory, a well-established theory of group processes and intergroup relationships (Abrams & Hogg, 1990; Hogg & Abrams, 1988; Tajfel & Turner, 1979), as a theoretical framework from which to examine the role of identification in PSOC.

Social identity theory (see Obst et al. (2000a) for a more comprehensive review of SIT) states that when an individual is strongly aware of their group membership and it is of strong value and emotional significance to them, they are said to have strong ingroup identification (Hogg, 1992). Ingroup identification has both affective and cognitive consequences, including biased evaluations of ingroups and outgroups. SIT applies not only to small groups, where all members are known, but also to larger groups and social categories, where it is impossible to interact with or even know all the members of the group. Hence SIT is an appropriate framework with which to examine communities (Hogg, 1992). The present study used insights and measures derived from SIT in its investigation of identification and PSOC.

Several demographic variables have been shown to be associated with PSOC, including community participation (Wandersman & Giamartino, 1980); length of residence (Kasarda & Janowitz, 1974; Royal & Rossi, 1996); income, education (Bonnes, Bonaiuto & Ercolani, 1991; Schwirian & Schwirian, 1993); age, gender, home ownership, children (Buckner, 1988; Davidson, Cotter, & Stovall, 1991; Lounsbury & De Neui, 1996; Robinson & Wilkinson, 1995); and size of town of residence (Prezza & Costantini, 1998). However, not all these variables emerge consistently across all studies. Thus the current study also hoped to examine which of these demographic variables emerged as predictors of PSOC.

Thus the current study aimed to build on sense of community theory in several ways. It extended the recent research by Obst et al. (2000a) by identifying the latent structure of PSOC in members of geographical communities across rural, regional and urban areas. As in that study, the current study included not just one measure of PSOC, such as the SCI, but a number of other well used scales tapping PSOC. They included the Psychological Sense of Community Scale (Glynn, 1981; short form: Nasar & Julian, 1995); the Neighborhood Cohesion Instrument (Buckner, 1988); the Community Satisfaction Scale (Bardo & Bardo, 1983); the Multidimensional Measure of Neighboring (Skjaeveland et al., 1996); and the Urban Identity Scale (Lalli, 1992). Further, several ingroup identification measures taken from SIT were included, to examine the role of identification with a geographical community in PSOC. Data were also gathered on a number of demographic variables shown in past research to be associated with PSOC, in order to examine if any demographic variables emerged as significant predictors of global sense of community.

In addition, little past research has examined the predictive power of SOC dimensions against a global evaluation of SOC. Thus, if support is found for the dimensions outlined by McMillan and Chavis (1986), then do these aspects of PSOC all contribute equally to global SOC? The current study also examined the predictive role of demographic variables and the latent dimensions of PSOC as predictors of global sense of community.

In light of the theory-building work of McMillan and Chavis, and others such as Chipuer and Pretty (1999) and Obst et al. (2000a) who have used this approach in the exploration of PSOC in various communities, it was hypothesized that support would be found for the dimensions of PSOC put forward by McMillan and Chavis, namely Membership, Influence, Fulfilment of Needs, and Shared Emotional Connection in participants' geographical community PSOC. Further, based on recent research and discussion which suggests that identification is separate to other dimensions of PSOC (Obst et al., 2000a; Smith et al., 2000), it was also hypothesized that ingroup identification as

conceptualized by SIT would emerge as a distinct dimension in its own right. It was further hypothesized that all latent dimensions of PSOC and the dimension of ingroup identification would be significantly associated with global SOC. Finally, on the basis of past research, it was hypothesized that the demographic variables of age, gender, length and status of residency, income, education, children, region, and participation levels would be significant predictors of global SOC.

Method

Participants

Participants were 669 residents (299 males and 370 females) of towns and cities in southeast Queensland. Their ages ranged from 18 to 69 years with a mean age of 36.5 years ($SD = 14.2$ years). Of these, 344 resided in urban areas (158 males and 186 females); 201 in regional areas (84 males and 117 females); and 122 in rural areas (55 males and 67 females). Participants were recruited through a convenience sampling procedure.

Materials

Research materials consisted of a questionnaire including the following measures. Fifteen items assessed basic demographics: gender, age, ethnicity, marital status, financial status, employment status, education, area and length of residence, number of children, number of people in the home, and membership in local organizations. Seventy-five items assessed the dimensions of PSOC highlighted in the literature. These items were based on a combination of the following measures: the Sense of Community Index (SCI; Chavis et al., 1986); the Psychological Sense of Community Scale (PSCS; Glynn, 1981; short form: Nasar & Julian, 1995); the Neighborhood Cohesion Instrument (NCI; Buckner, 1988); the Community Satisfaction Scale (CSS; Bardo & Bardo, 1983); the Urban Identity Scale (UIS; Lalli, 1992); and the Multidimensional Measure of Neighboring (MMN; Skjaeveland et al., 1996). These scales were included to assess a wide range of hypothesized dimensions of PSOC and to encompass an array of distal cues of PSOC as described in the Brunswik lens model (1956). In cases where scales had very similar items, the item was included only once.

In order to assess identification with the local neighborhood, the Three Dimensional Strength of Group Identification Scale (Cameron, 1998) and the Strength of Ingroup Identification Scale (SGIS) (Brown, Condor, Mathews, Wade & Williams, 1986) were included, adding 22 items in total. Cameron's scale has only recently been developed, and was included because it taps into different aspects of identification: affective aspects, consciousness of group membership, and group evaluation, which are respectively measured by the Ingroup Affect scale (CIA), the Ingroup Ties scale (CIT) and the Ingroup Centrality scale (CC). The SGIS has been widely used in SIT research, and has been shown to be a reliable and valid measure of ingroup identification.

Two questions assessing self reported feelings of sense of community were also included to assess feelings of global sense of community (e.g., "In general, I feel that my local neighborhood has a strong sense of community"). Such measures have been used in previous research (e.g., Wilson & Baldassare, 1996).

All items were responded to on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). All items were modified to consistently refer to respondents' local neighborhoods. All scales contained a number of negatively worded items, which were reverse scored before analysis.

Procedure

Participants were approached by the researcher or research assistants in shopping centers, coffee shops, movie theatres and other public places. While this sampling technique does present limitations in that it was not purely random, every attempt was made to access a wide range of respondents in terms of age, ethnicity, gender, and socioeconomic status.

The researcher explained the nature and purpose of the research, the confidentiality of

responses, and the voluntary nature of participation, and invited participation from those who met the selection criteria. Selection criteria consisted of being 18 years of age or over and currently residing in the local area. Those agreeing to participate in the research were then given the questionnaire. Participants were able to complete the questionnaire immediately and return it directly to the researcher, or were provided with a reply paid envelope for return at a later date.

This procedure was consistent across all localities sampled. The areas sampled consisted of ten suburbs of an urban city, three regional cities, and two rural towns, all in southeastern Queensland.

Approximately 1000 questionnaire packages were distributed across all localities. Of these, 669 were completed and returned, representing a 67% response rate.

Results

Latent Dimensions of Sense of Community

The 99 items measuring PSOC and identification with local neighborhood were entered into a principal components analysis. Inspection of communalities and correlation matrices indicated that the data were suitable for this analysis. This was confirmed by a KMO sampling adequacy of .94 and a significant Bartlett's test of sphericity. Five factors with eigenvalues above 1 emerged, accounting for 58% of the total item variance. The solution was subjected to an orthogonal varimax rotation as none of the interfactor correlations were greater than .4. A cutoff loading of .4 was utilized resulting in simple factor structure, and with this criterion only four items did not load onto a factor. (See Appendix A for details of factors, the source of items and their loadings.)

The first factor accounted for 24% of the total variance. This contained 29 items focusing on ties to community members and shared values (e.g., "I feel a strong sense of ties with the other people who live in my local neighborhood"; "A feeling of fellowship runs deep between me and other people in my local neighborhood"; "I have a lot in common with other people who live in my local neighborhood"). This factor was labeled Community Ties and Shared Values. Items loading onto this factor originated in most of the PSOC scales, the SGIS and the CIT.

Fifteen items had factor loadings greater than .4 on the second factor, accounting for 13% of the variance. Items loading on this factor were those dealing with having some influence over the local community (e.g., "The local council members don't hear the voice of ordinary people who live here"; "I have almost no influence over what my local neighborhood is like"). This factor was labeled Influence, and was comprised mainly of items from the CSS, although items from the SCI, the PSCS, and the MMN were also represented. No items from any of the SIT scales were represented in this factor.

The third factor accounted for 10% of the variance. Thirteen items loaded on this factor, tapping the notion of support available in the community and the ability for community members to work together (e.g., "If there was a serious problem in my local neighborhood, people who live in could get together and solve it", "I believe my neighbors would help me in an emergency"). This factor was labeled Support. The highest loading items were from the PSCS, and the SCI, although the NCI, the MMN, and the CSS were also represented. No items from any of the SIT scales loaded onto this factor.

Thirty items loaded above .4 on Factor 4, which accounted for 7% of the total variance. These items tapped the notion of membership and belonging (e.g., "I feel at home and comfortable in my local neighborhood"; "It is important to me to live in my local neighborhood"). This factor was labeled Belonging. Items comprising this scale came from all six PSOC scales, and the SGIS and CIA scales.

The last factor accounted for 4% of the variance. The eight items loading on this factor were items dealing with conscious identification with the local neighborhood (e.g., "I am not

usually conscious of the fact that I am a resident of my local neighborhood”; “In general being a resident of my neighborhood is an important part of my self image”). This factor was labeled Conscious Identification. This factor was comprised mostly of items from the CC scale, although the UIS, SGIS and SCI were also represented.

All negatively worded questions were then reverse scored. Items scores were then combined into five factor scores according to their factor loadings and were subsequently treated as scales. Table 1 presents the number of items, scale reliability, means and standard deviations of these new composite scales. The reliability of each scale was moderate to very good, with Cronbach’s alpha ranging from .71 for the very large scale of 30 items representing Belonging, to .97 for the scale of Ties and Values. The factor with the highest mean was Belonging, while Identification was the lowest. Ties and Values, Identification and Belonging also had the greatest variance in scores. The first four factors had scale means between 4.42 and 4.92, which placed the average response on the agreement end of the seven point response scale. The Identification factor had a scale mean of 3.88, representing a roughly neutral score on the scale.

The two items measuring overall sense of community (PSOC) were also combined into a single scale by taking the mean score of the items. This scale ranged from 1 (low PSOC) to 7 (high PSOC). The overall mean of this measure was 4.89 ($SD = 1.46$).

Prediction of Overall Sense of Community from Demographics and PSOC Factors

To examine how demographic and PSOC factors predicted overall sense of community, hierarchical multiple regression was used, with demographic factors (gender, age, region, length of residency, residency status, number of children, income, education, whether member of community organizations, and how view local neighborhood) entered at Step 1, and the dimensions of PSOC (Community Ties, Influence, Support, Belonging and Identification) entered at Step 2.

Demographics factors accounted for a significant 18.7% of variance in global SOC ($F(10, 636) = 14.61, p < .001$), while the PSOC factors accounted for an additional 40.7% ($F_{ch}(5, 631) = 126.50, p < .001$). Thus this predictive model accounted for a total of 59.4% of the variance in global sense of community. Table 2 present the beta weights and correlations for these sets of variables.

In relation to demographic variables, when these alone were entered into the equation, age, region, length of residency, residency status, income, being a member of a local organization, and how respondents viewed their neighborhood all emerged as significant predictors of global SOC. However, when the factors of Ties, Influence, Support, Belonging and Identification were also added to the regression at Step 2, the demographic variables that remained significant predictors of overall PSOC in their own right were number of children ($r = .17, p < .01$), with having families and larger families associated with greater sense of community; region ($F(2, 664) = 63.11, p < .001$), with rural respondents reporting greater PSOC ($M = 6.11$) than either regional ($M = 4.54$) or urban respondents ($M = 4.64$); being a member of a local organization ($M = 5.28$), associated with higher PSOC than not belonging to a local organization ($M = 4.75, t(666) = -4.23, p < .001$); and perceived range of neighbourhood ($r = .32$), with a larger view of the neighborhood associated with greater sense of community.

In terms of the PSOC factors, all factors were significant predictors of PSOC, with Identification emerging with the greatest beta weight.

Discussion

This study sought to identify the latent structure of psychological sense of community in geographical communities. As hypothesized a factor analysis of a wide range of pertinent scales found support for the four dimensions theorized by McMillan and Chavis (1986), with the addition of a dimension of Conscious Identification. This is consistent with previous work

conducted by the present authors on interest and geographic communities (Obst et al., 2000a; Smith et al., 2000).

The first factor, Ties and Values, taps items dealing with creating friendships and emotional ties within the community and the similarity of community members. This factor fits with McMillan and Chavis' (1986) notion of Emotional Connection. The second factor, labeled Leadership and Influence, tapped items related to influence over the area and the leadership by local councilors. This is congruent with McMillan and Chavis' notion of Influence, being concerned with the idea of a reciprocal relationship between individuals and the community in terms of their impact on one another.

Items loading on the third factor pertained to support available in the community and the ability to work together and get things done. This factor was labeled Support. This factor is similar to with McMillan and Chavis' (1986) notion of Fulfillment of Needs, which taps the idea that a sense of community enhances feelings of support and safety within their neighborhood and the belief that needs will be met within the community.

Factor four, labeled Belonging, tapped items dealing with being attached to, being a part of, or belonging to the neighborhood. Some ingroup identification items also loaded on this factor. This factor fits with McMillan and Chavis' (1986) dimension of Membership, which they state is the underlying sense of belonging and identification with the community collective.

Another factor emerged beyond the four theorized by McMillan and Chavis. Items loading on this factor dealt with conscious identification and awareness of fellow members. This factor was labeled Conscious Identification. While many identification items were subsumed within Ties and Values and Belonging, this very conscious awareness of membership was a separate dimension of PSOC. This has emerged consistently in the three studies conducted by the authors using SIT measures of identification (see Obst et al., 2000a, b.; Smith et al., 2000). This suggests that identification measures, taken from the SIT perspective, are a useful addition to PSOC research. More research is needed within the PSOC arena into the importance and specific role of identification with the community. However it clear from the contribution of Ingroup Ties items (from CIT) to the Ties and Values factor, and Ingroup Affect items (from CIA) to the Belonging factor that there are strong theoretical links between identification and SOC. The salience of the new dimension, Conscious Identification, comprised mostly of Ingroup Centrality items (from CC) to the prediction of global SOC clearly supports predictions of considerable theoretical overlap between the two traditions of SIT and community psychology.

It is interesting to compare the current factor structure to that which emerged in examining PSOC in an interest community using the same scales (Obst et al., 2000a). While Belonging, Influence and Conscious Identification emerged as almost identical factors, Community Ties, Shared Values and Support loaded a little differently in the two community types. In the interest community data, items relating to shared values and common beliefs loaded with those relating to cooperative behavior, whereas in the current data they loaded with items relating to friendship and community ties. Thus in the present data the factor labeled Support deals with more tangible aspects of being able to depend on people, receiving help when needed, and the community's ability to achieve goals, rather than dealing with more emotional feelings of similarity between members. This may be because in geographical communities, the community needs to provide for more tangible needs such as safety and security issues without the necessity for one to be very similar to one's neighbours. Similarity may be less important than tangible support when developing friendship and ties within a geographic community where you live. Of course, in an interest community probably there is already a sense of similarity present as members are joined together through their common interest and this similarity provides the cohesive force for cooperative behavior and

community achievements.

Although this is not a direct test of the Sense of Community Index (Chavis et al., 1986), in that many measures of PSOC were included in the questionnaire, the results of the current study are again encouraging in terms of theory building. McMillan and Chavis (1986) have provided one of the few theoretical bases from which to understand the dimensions underlying PSOC, and support has emerged for their theorized dimensions in all studies conducted in this project, within both geographical and interest communities (Obst et al., 2000a, b). Previous studies using only the SCI have failed to show clear support for their dimensions (Chipuer & Pretty, 1999). The results of this study reveal that the SCI can be improved through further collaborative scale development, as has been suggested by other authors (Chavis & Pretty, 1999; Chipuer & Pretty, 1999).

In terms of prediction of overall PSOC, having children and participation in community organizations were the demographic variables that emerged as the most important predictors. Previous literature (e.g., Kasarda & Janowitz, 1974; Lounsbury & De Neui, 1996; Robinson & Wilkinson, 1995; Royal & Rossi, 1996; Wandersman & Giamartino, 1980) has also found that these variables are associated with PSOC. These results suggest, perhaps unsurprisingly, that residents who have children and belong to community organizations are those most likely to have a strong sense of community with their local area. Interestingly, region also emerged as an independent predictor, with stronger PSOC found in rural areas than in regional or urban areas, a finding consistent with Prezza and Costantini (1998). This is perhaps due to the smaller size of rural communities, which may cultivate stronger feelings of belonging, ties, support, influence and interdependence. Finally, how participants viewed their local neighborhood was also associated with PSOC. Participants who saw their local neighborhood as more than just their street or block were more likely to have a stronger sense of community than those who viewed their local neighborhood in more narrow terms. Thus a wider spatial locus of neighbourhood was related to higher levels of SOC which may be related to feelings of inclusiveness.

All the underlying dimensions of PSOC were independent predictors of overall sense of community. Identification actually emerged as the strongest predictor of global PSOC. The more a resident identified with their particular community the more likely they were to have a strong sense of community. While it is interesting to speculate on the possible reasons for this finding, further in depth research on the role of identification in community building is needed to assess why this relationship emerged so strongly.

Interestingly, when comparing the same participants' PSOC with geographical and interest communities, Identification emerged as more important in the interest community than in the participants' geographical communities (Obst et al., 2000b) and was a strong predictor of global SOC. Belonging and Ties were the next most important predictors. Belonging consistently emerged in the research as an important aspect of PSOC (Obst et al., 2000a), with Influence and Support the weakest predictors of global SOC within the community of interest.

In conclusion, this study has presented some important findings. In terms of theory building, the study provided extensive empirical support for McMillan and Chavis' (1986) theory concerning PSOC and the latent dimensions of this construct. This is important for future work in this area as it should encourage further refinement and consolidation of this theoretical perspective. Secondly, it provides empirical evidence for the importance of identification in sense of community, and for its separate and distinct role, which warrants further investigation.

Finally, the study points to what factors are important to neighborhood sense of community in terms of the dimensions underlying PSOC and demographic variables. This has implications for theory building as well as practical application in areas such as planning,

community building, and policy development.

References

- Abrams, D., & Hogg, M. A. (Eds.) (1990). Social identity theory: Constructive and critical advances. London: Harvester Wheatsheaf.
- Bonnes, M., Bonaiuto, M., & Ercolani, A. (1991). Crowding and residential satisfaction in the urban environment: A contextual approach. Environment and Behavior, *23*, 531-552.
- Bardo, J. W. (1976). Dimensions of community satisfaction in a British new town. Multivariate Experimental Clinical Research, *2*, 129-134.
- Bardo, J., & Bardo, D. (1983). A re-examination of subjective components of community satisfaction in a British new town. Journal of Social Psychology, *120*, 35-43.
- Brunswik (1956). Perception and the representative design of psychological experiments. Berkeley: University of California Press.
- Buckner, J. (1988). The development of an instrument to measure neighborhood cohesion. American Journal of Community Psychology, *16*, 771-791.
- Brodsky, A. (1996). Resilient single mothers in risky neighborhoods: Negative psychological sense of community. Journal of Community Psychology, *24*, 347-363.
- Brown, R., Condor, S., Mathews, A., Wade, G., & Williams, J. (1986). Explaining intergroup differentiation in an industrial organization. Journal of Occupational Psychology, *59*, 273-286.
- Buckner (1988). The development of an instrument to measure neighbourhood cohesion. American Journal of Community Psychology, *16*, 771-791.
- Cameron, J. (1998). A three factor model of social identity. Manuscript under review.
- Chavis, D., Hogge, J., McMillan, D., & Wandersman, A. (1986). Sense of community through Brunswik's lens: A first look. Journal of Community Psychology, *14*, 24-40.
- Chavis, D., & Pretty, G. (1999). Sense of community: Advances in measurement and application. Journal of Community Psychology, *27*, 635-642.
- Chipuer, H., & Pretty, G. (1999). A review of the Sense of Community Index: Current uses, factor structure, reliability, and further development. Journal of Community Psychology, *27*, 643-658.
- Davidson, W., Cotter, P., & Stovall, J. (1991). Social predispositions for the development of sense of community. Psychological Reports, *68*, 817-818.
- Doolittle & MacDonald (1978). Communication and a sense of community in a metropolitan neighbourhood: a factor analytic examination. Communication Quarterly, *26*, 2-7.
- Fisher, A., & Sonn, C. (1999). Aspiration to community: Community responses to rejection. Journal of Community Psychology, *27*, 715-725.
- Glynn, T. (1981). Psychological sense of community: Measurement and application. Human Relations, *34*, 780-818.
- Glynn, T. (1986). Neighborhood and sense of community. Journal of Community Psychology, *14*, 341-352.
- Gusfield, J. (1975). The community: A critical response. New York: Harper Colophon.
- Hillery, G. (1955). Definitions of community: Areas of agreement. Rural Sociology, *20*, 111-123.
- Hogg, M. A. (1992). The social psychology of group cohesiveness: From attraction to social identity. Hemel Hempstead, UK: Harvester Wheatsheaf.
- Hogg, M. A., & Abrams, D. (1988). Social identifications: A social psychology of intergroup relations and group processes. London: Routledge.
- Kasarda, J., & Janowitz, M. (1974). Community attachment in mass society. American Sociological Review, *39*, 328-329.

- Lalli (1992). Urban-related identity: theory, measurement, and empirical findings. Journal of Environmental Psychology, 12(4), 285-303.
- Lounsbury, J., & De Neui, D. (1996). Collegiate psychological sense of community in relation to size of college/university and extroversion. Journal of Community Psychology, 24, 381-394.
- McMillan, D. (1996). Sense of community. Journal of Community Psychology, 24, 315-325.
- McMillan, D., & Chavis, D. (1986). Sense of community: A definition and theory. Journal of Community Psychology, 14, 6-23.
- Nasar, J., & Julian, D. (1995). The psychological sense of community in the neighborhood. Journal of the American Planning Association, 61, 178-184.
- Obst, P., Zinkiewicz, L., & Smith, S. G. (2000a). Sense of community in science fiction fandom, Part 1: Understanding sense of community in an international community of interest. Manuscript under review.
- Obst, P., Zinkiewicz, L., & Smith, S. G. (2000b). Sense of community in science fiction fandom, Part 2: Comparing neighbourhood and interest group sense of community. Manuscript under review.
- Plas & Lewis, (1996). Environmental factors and sense of community in a planned town. American Journal of Community Psychology, 24, 109-143.
- Prezza, M., & Costantini, S. (1998). Sense of community and life satisfaction: Investigation in three different contexts. Journal of Community and Applied Social Psychology, 8, 181-194.
- Puddifoot, J. (1995). Dimensions of community identity. Journal of Community and Applied Social Psychology, 5, 357-370.
- Robinson, D., & Wilkinson, D. (1995). Sense of community in a remote mining town: Validating a neighborhood cohesion scale. American Journal of Community Psychology, 23, 137-148.
- Royal, M., & Rossi, R. (1996). Individual-level correlates of sense of community: Findings from workplace and school. Journal of Community Psychology, 24, 395-416.
- Sarason, S. B. (1977). The psychological sense of community: Prospects for a community psychology. London: Jossey-Bass.
- Schwirian, K., & Schwirian, P. (1993). Neighboring, residential satisfaction and psychological well being in urban elders. Journal of Community Psychology, 21, 918-924.
- Skjaeveland, O., Garling, T., & Maeland, J. G. (1996). A multidimensional measure of neighboring. American Journal of Community Psychology, 24, 413-435.
- Smith, S. G., Zinkiewicz, L., & Ryall, C. T. (2000). Sense of community: Yet another group identification? Manuscript under review.
- Sonn, C., & Fisher, A. (1996). Psychological sense of community in a politically constructed group. Journal of Community Psychology, 24, 417-430.
- Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. Austin & S. Worchel (Eds.), The social psychology of intergroup relations (pp. 33-47). Monterey, CA: Brooks/Cole.
- Wandersman, A., & Giamartino, G. (1980). Community and individual difference characteristics as influences on initial participation. American Journal of Community Psychology, 8, 217-228.
- Wilson, G., & Baldassare, M. (1996). Overall 'sense of community' in a suburban region: The effects of localism, privacy, and urbanization. Environment and Behavior, 28, 27-43.

Table 1
 Rotated Factors Emerging From Principal Components Analysis

Factor	No. Items	% Variance	α	<u>M (SD)</u>
1 Ties & Values	29	24	.97	4.42 (1.36)
2 Influence	15	13	.77	4.49 (0.87)
3 Support	13	10	.72	4.89 (0.98)
4 Belonging	30	7	.71	4.92 (1.15)
5 Identification	8	4	.91	3.88 (1.27)

Note. 1 = lowest level of factor to 7 = highest level of factor.

Table 2
Beta Values and Correlations of Variables Entered into Regression

Variables	β Step 1	β Step 2	r	sr	R^2_{Ch}
Step 1			.		.19***
Gender	.06	.05	.03	.04	
Age	.15*	.04	.26	.02	
Region	.13**	.12***	.32	.08	
Length of Residency	.09*	.05	.16	.04	
Residency Status	.09*	.04	.05	.03	
No. Children	.05	.17***	.17	.11	
Income	-.11**	-.01	-.06	-.01	
Education	-.04	-.01	-.03	-.02	
Local Organization Member	.12**	.08**	.17	.10	
View of Neighborhood	.21***	.07*	.32	.05	
Step 2					.41***
Ties		.35***	.31	.27	
Influence		.06*	.07	.05	
Support		.20***	.19	.19	
Belonging		.37***	.39	.32	
Identification		.56***	.52	.47	

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Appendix A

Factor 1: Ties and Friendship	Loading	Scale
I feel a strong sense of ties with the other people who live in my local neighborhood	.84	CIT SGIS
If I need a little company, I can contact a neighbor I know	.84	MMN
A feeling of fellowship runs deep between me and other people in my local neighborhood	.81	NCI
If I need advice about something I could ask someone in my local neighborhood	.79	NCI
I often help my neighbors with small things or they help me	.78	MMN
I have a lot in common with other people who live in my local neighborhood	.77	CIT
If the people who live in my local area were planning something, I'd think of it as something <u>we're</u> doing rather than something <u>they're</u> doing	.76	NCI
The friendships and associations I have with other people in my local neighborhood mean a lot to me	.76	NCI
If I don't have something I need I can borrow it from a neighbor	.74	MMN
I have made new friends by living in my local neighborhood	.74	MMN
I often visit my neighbors	.74	NCI
If I feel like talking I can generally find someone in my local neighborhood to chat to	.73	PSCS
I find it difficult to form a bond with other people who live in my local neighborhood	-.73	CIT
I feel loyal to the people in my local neighborhood	.72	NCI
I chat with my neighbors when I run into them	.71	MMN
I am quite similar to most people who live in my local neighborhood	.71	NCI PSCS
I borrow things and exchange favors with neighbors	.70	NCI
I have friends in my local neighborhood, who are part of my everyday activities	.69	MMN NCI
My neighbors and I want the same thing from our local neighborhood	.68	SCI
I don't feel a sense of being connected with other people who live in my local neighborhood	-.67	CIT
Lots of things in my local neighborhood remind me of my past	.67	UIS
I think I agree with most people in my local neighborhood about what is important in life	.66	NCI
I really fit in my local neighborhood	.65	CIT
The people who live in my local neighborhood get along well	.61	SCI
I rarely visit other people who live in my local neighborhood	-.61	NCI
My local neighborhood is part of my daily life	.59	UIS
People in my local neighborhood do not share the same values	-.57	SCI
In general I'm glad to be a resident of my local neighborhood	.55	SGIS
I care about what my neighbors think about my actions	.53	SCI

Note. SCI = Sense of Community Index (Chavis et al., 1986). PSCS = Psychological Sense of Community Scale (Glynn, 1981). NCI = Neighborhood Cohesion Instrument (Buckner, 1988). MMN = Multidimensional Measure of Neighboring (Skjaeveland et al., 1996). UIS = Urban Identity Scale (Lalli, 1992). SIS = Strength of Group Identification Scale (Brown et al., 1986). CIT = Ingroup Ties Subscale (Cameron, 1998).

Factor 2: Influence	Loading	Scale
The council does very little done for my local neighborhood	-.85	CSS
The local council cares about what happens in our neighborhood	.84	CSS
The local council run this area to suit themselves	-.69	CSS
People in my local neighborhood don't paint their houses often	-.67	CSS
The local council members don't hear the voice of ordinary people who live here	-.58	CSS
I have almost no influence over what my local neighborhood is like	-.55	SCI
I sometimes get irritated with some of my neighbors	-.53	MMN
People in my local neighborhood don't take care of their gardens	-.52	CCS
Few people in my local neighborhood make enough money	-.50	CSS
My local neighborhood lacks leaders to give it direction	-.49	CSS
Public facilities in my local neighborhood are well maintained	.48	CSS
The authorities in my local neighborhood are generally friendly	.46	PSCS
No one seems to care how our neighborhood looks	-.45	CSS
Noise, which my neighbors make, can occasionally be a big problem	-.43	MMN
Parents in my neighborhood let their children do whatever they want to	-.41	CSS

Note: SCI = Sense of Community Index (Chavis et al., 1986). PSCS = Psychological Sense of Community Scale (Glynn, 1981). CSS = Community Satisfaction Scale (Bardo & Bardo, 1983). MMN = Multidimensional Measure of Neighboring (Skjaeveland et al., 1996).

Factor 3: Support	Loading	Scale
If there was a serious problem in my local neighborhood, people who live in could get together and solve it	.80	PSCS
If there is a problem in my local neighborhood people who live here can get it solved	.78	SCI PSCS
I have no friends in my local neighborhood on whom I can depend	-.74	PSCS
I believe my neighbors would help me in an emergency	.72	NCI
If I have a personal problem, there is no one in my local neighborhood I can turn to	-.67	MMN
I feel good when my neighbors do good things	.65	PSCS
Medical care in my local neighborhood is not as good as in some other places	-.60	CSS
If I had an emergency, even people I don't know well in my neighborhood would be willing to help	.58	NCI PSCS
People know that they can get help from others in my local neighborhood if they are in trouble	.56	PSCS
I would be willing to work together with others on something to improve my local neighborhood	.55	NCI
I never feel quite safe in my local neighborhood	-.53	MMN
People in my local neighborhood are generally critical of others	-.47	CSS
People in my local neighborhood give you a bad name if you insist on being different	-.43	CSS

Note. SCI = Sense of Community Index (Chavis et al., 1986). PSCS = Psychological Sense of Community Scale (Glynn, 1981). NCI = Neighborhood Cohesion Instrument (Buckner, 1988). MMN = Multidimensional Measure of Neighboring (Skjaeveland et al., 1996). CSS = Community Satisfaction Scale (Bardo & Bardo, 1983).

Factor 4: Belonging	Loading	Scale
I plan to remain a resident of my local neighborhood for a number of years	.81	UIS NCI
I expect to live in my local neighborhood for a long time	.79	SCI
I think my local neighborhood is a good place for me to live	.78	SCI CSS
It is important to me to live in my local neighborhood	.78	SCI
I feel at home and comfortable in my local neighborhood	.77	SCI UIS MMN
My local neighborhood is a good place to live	.76	SCI
My local neighborhood is very familiar to me	.75	UIS
I would recognise my local neighborhood in a photograph	.73	UIS
Given the opportunity I would like to move out of my neighborhood	.72	NCI
I feel good when I think about being a resident of my local neighborhood	.70	CIA
I feel strongly attached to my local neighborhood	.69	MMN
I have strong feelings for my local neighborhood	.68	UIS
I would like to stay a resident of my local neighborhood indefinitely	.65	UIS
I feel really at home in my local neighborhood	.61	SCI UIS
I would have better contacts with friends or family if I lived in another area	-.60	MMN
I think the buildings in my local neighborhood are not as nice as most other places I've lived in	-.60	CSS
I don't care if my local neighborhood does well	-.59	PSCS
I feel like I belong in my local neighborhood	.58	NCI
As compared to other areas my local neighborhood has many advantages	.54	UIS
My local neighborhood is dull	-.53	CSS
I often regret that I am a resident of my local neighborhood	-.52	CIA
The green areas help make my local neighborhood a nice place to live	.51	CSS
I don't feel comfortable in my local neighborhood	-.50	MMN
I would really rather live in a different neighborhood	-.49	SGIS
I am looking forward to seeing future development in my local neighborhood	.49	UIS
My local neighborhood plays a part in my future plans	.49	UIS
Overall I am very attracted to living in my local neighborhood	.48	NCI
I cannot imagine living anywhere else	.47	UIS
My local neighborhood is better than any other area I've lived in before	.46	CSS
My local neighborhood is peaceful and orderly	.45	CSS

Note. SCI = Sense of Community Index (Chavis et al., 1986). PSCS = Psychological Sense of Community Scale (Glynn, 1981). NCI = Neighborhood Cohesion Instrument (Buckner, 1988). MMN = Multidimensional Measure of Neighboring (Skjaeveland et al., 1996). CSS = Community Satisfaction Scale (Bardo & Bardo, 1983). UIS = Urban Identity Scale (Lalli, 1992). SGIS = Strength of Group Identification Scale (Brown et al., 1986). CIA = Ingroup Affect Subscale (Cameron, 1998).

Factor 5: Conscious Identification	Loading	Scale
I am not usually conscious of the fact that I am a resident of my local neighborhood	-.75	CC
Being a resident of my local neighborhood has little to do with how I feel about myself	-.70	CC
In general being a resident of my neighborhood is an important part of my self image	.66	CC
Belonging to my neighborhood is a part of who I am	.53	UIS
I often think about being a resident of my local neighborhood	.51	CC
I see myself as being a part of the community that exists in my local neighborhood	.49	SGIS
Very few of my neighbors know me	-.48	SCI
I can recognise most of the people who live in my local neighborhood	.41	SCI

Note. CC = Centrality Subscale (Cameron, 1998). SGIS = Strength of Group Identification Scale (Brown et al., 1986). UIS = Urban Identity Scale (Lalli, 1992). SCI = Sense of Community Index (Chavis et al., 1986).

Items Not Loading above .4 on any Factor	Scale
There is not enough going on in my local neighborhood to keep me busy	CSS
National economic problems are hurting the quality of life in my local neighborhood	CSS
I think the layout of my local area is nice	CSS
My local neighborhood is seen as having prestige	UIS

Note. CSS = Community Satisfaction Scale (Bardo & Bardo, 1983). UIS = Urban Identity Scale (Lalli, 1992).