

A Cross-Cultural Investigation of Adults' Formation of Sense of Community through Environmental Autobiography

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Abstract In contemporary Korean society, urban community environment is often associated with high-density and high-rise residences that make people's relationships superficial, instrumental and impersonal. Furthermore, urban community consistently interplays with neighboring residents and childhood emotional experience are influential on their unconscious images and attitude about their current neighborhood environment, while affecting the environmental attitude and the formation of community sense. Previous research found evidences that increased level of community sense is fostering more feeling of living in so-called "real neighborhood environment." This study aimed to cross-culturally examine what the respondents' emotional perception and their attitude were about the community environment in their childhood through environmental autobiography method and to examine the effects of the results on adults' formation of sense of community for their current community environment. Extensive literature review explored a few important theoretical framework which are closely related to sense of community (SOC) as a result of emotional experience: membership, influence, integration and fulfillment of needs, shared emotional connection and community satisfaction. Chi-square and GLM analysis revealed that there were no demographic, and socio-economic differences between two groups of Korean and US residents. Correlation analysis indicated that childhood emotional experience of Koreans and US citizens was statistically significant on sense of community for their current living community. Multi-regression analysis also found that the degree of influence were the main predictors for building strong sense of current community throughout a cross-cultural group. Furthermore, the relationship between various emotional experience of each factor in previous and current community environment were statistically significantly related. It is concluded that as the positive childhood experience of influence in their past community was going up, the level of sense of community for their current community was strengthened across their cross-cultural background.

Keywords : Cross-cultural Background, Sense of Community(SOC), Emotional Experience, Environmental Autobiography, Community

1. INTRODUCTION

In contemporary urban-oriented society, more than three-quarters of Korean people live in metropolitan areas, and more than two-thirds of those live in multi-family apartment housing.

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Critics often attribute the impersonal relationships between urban neighbors and such other community problems as safety and indifferences of up-keeping the physical environment to human isolation and few chances of meetings between residents in unappealing perceived outdoor public areas. Due to the rapid changing industrialization and economic development, increased stressful urban life urged urban residents to look for certain level of emotional ties and social relations between neighbors as well as basic qualities in a community, such as place identity, sufficient parking lots, secured and comfortable environment.

In particular, lack of the sense of community may be widespread in most housing estates in which diverse socio-demographic and economic profiles of residents may also contribute to the deficiency of social interactions. Moreover, highly dense neighborhoods in urban area are often associated with emotional environment that makes people's relationships superficial, instrumental, and impersonal.

Several studies report that increased level of the sense of community is fostering more feelings of being real neighborhood environment which could be found in traditional villages (Long & Perkins, 2007; McMillan & George, 1986; Glynn, 1981). Further, it is known that high level of sense of community contributes to the

safe, and soundness of community, thus making a better place to live. Plas and Lewis (1996) contended that sense of community is indeed a powerful explanatory tool for understanding community development and individual welling-being, but has not focused on the empirical relationship of environmental variables to the components. For that purpose, such many efforts as well organized community programs and physical planning strategies were applied to promote a sense of community.

On the other hand, it is not well-known whether childhood emotional experiences of different cultural settings are differently impacting adult's frequent neighboring or social activities in current community. Particularly, residents living in diverse cultural background might have different attitude toward their living environment and the relationship between their place attachment and safe environment was mediated in part by social capital (Dallago, et al., 2009). Even though many studies specified the role and elements of the sense of community in a given neighborhood, empirical evidences in relation with emotional experience in childhood through environmental autobiography are scarce (Doolittle & MacDonald, 1978; Glynn, 1981; Riger, LeBailly & Gordon, 1981; Bachrach & Zautra, 1985; Plas & Lewis, 1996; Peterson et al., 2006).

Based on the facts, the purpose of this research intended to cross-culturally investigate what elements are forming healthy and quality-oriented community environment, facilitating social activities among residents and to examine the interrelationship between their childhood emotional experiences and attitudes toward their current environment. Many urban planners and design professionals have advocated the importance of community sense shared by residents as a means to cultivate neighborliness for desirable places to live, but have not explored any substantial features embodied in a highly isolated housing estate.

It is with this broader lens on early experiences of human behavior to focus on the issues of community sense through Environmental Autobiography¹ method and its consequences leading to their attitude toward current community. Firstly, this research reviewed how residents and professionals criticized about the function and meaning of community sense and socialization issues. This examination sets the stage for collecting diverse attitudes, and social and physical environmental attributes of community. Secondly, survey for each group of Koreans and US residents were performed to investigate what components are influencing on the level of the sense of community. Finally, the analyses focused on the cross-cultural effects of emotional experiences on the sense of community regarding current living environment.

¹ Environmental Autobiography refers to the method to reflect upon places that are especially important to one and the impact they had on his life by considering how one's past experiences in places shape him in the here-and-now (Marcus, 1979). In this study, the survey instrumentation required to recall the earliest childhood memories of community experience and check the most influential of them. Then, move through to the present, subjects are also asked to consider how more current community places may have influenced them. This type of analysis is effective tool to explore the introspection of community and to investigate the understanding of one's own experiences and to evaluate preferences and meanings of places.

2. THEORETICAL BACKGROUND

2.1 Community environment in contemporary society

In his classical 94 definitions of community, Hillery (1955) explored as the three most commonly mentioned elements the following: a) social interaction; b) common ties in the sense of a shared value system; and c) a geographical area. According to Wikipedia (2012) the community has two distinct meanings; a) A group of interacting people, living in some proximity (i.e., in space, time, or relationship). Community usually refers to a social unity larger than a household that share a common values and has social cohesion, and b) in biology, a community is a group or

society of interacting living organisms sharing a populated environment, helping each other. From the perspective of diverse disciplines, the presence of real neighborhood environment has been closely associated with effective child rearing (Coulton, et al., 1999; Brooks-Gunn, et al., 1993); better health (Kitchen, et al., 2012; Taylor & Covington, 1993); low crime rate (Warner & Pierce, 1993) and general quality of life (O'brien & Ayidiya, 1991).

Even though it is hard to find a consensus regarding its precise definition, the meaning of community today refers to a society of people who shares common group orientation in the sense of a value system, living in certain geographical limitation of physical urban environment. People tend to prefer a social community environment in ways that support social networks, sense of belongs, safe and enough security, providing opportunities of shared emotional connection for neighbors concerned. From the stand point of built environment, community is a self-fulfillment place where such intangible community elements as membership, value, resources, preferences, needs, intent, and a number of other current common issues may be related together, thus resulting in the formation of real neighborhood environment.

In traditional society, naturally formed community had been developed, based on the existing and stable social substructure which provided a framework of hierarchy for a community's social integration and co-works for the production and distribution of goods and agricultural products. In this homogeneous environment, there existed good neighboring activities, mutual supports, and sense of strong place attachment with shared emotional connections.

However, the emergence of the industrialization and technology oriented-development has been increased urban population with specialized independent activities, and this urbanization came to influence high mobility of urban dwellers and social-mix of diverse demographic-socio-economic profiles of residents. It is evident that changes of existing structure of society occurred by high-tech intensive industry and such urban infra-structure as information highway, rapid transition, education system, and so on come to see different type of community environment, impacting neighbor's relationships as being superficial, purposive, and impersonal. In this setting, it is hard to find real neighboring environment where strong bond of human relations, social supports, shared common community goals and place identity can be easily formed. Consequently, this urban community atmosphere is inevitably both ambiguous and misleading, whereas physical environment is established with high quality of planning and design attributes.

In fact, it is contended that the concept of community is closely related to sense of community (SOC), which has been a vitally

important in community planning since it was first defined by Sarason (1974) and theoretically rearranged by McMillan and Chavis in 1986, and redefined again by McMillan in 1996. Therefore, it is summarized that concerns about the changing roles of local communities in modern society now needs to generate a real sense of community for sound, and healthy environment, depending on the characteristics of residents. Further, it also needs to clearly define what kind of mechanism is involved in establishing sense of community, and sustainable functions of community.

2.2 Sense of community (SOC) and its components

New urbanism has questioned whether real neighborhood exists in city area and the conditions under which they are sustained. As information technology, transportation, and life styles have advanced, intimate, private, and exclusive neighboring in a single community has become difficult to find in contemporary society. McMillan defined sense of community as a feeling that members have belonging and being important to each other, and a shared faith that members' needs will be met by their commitment to be together (Chavis et al., 1986). It appears that sense of community functions as social supports that neighbors engage in such as borrowing tools, informal visiting, and asking for help in an emergency. Further, Wilkinson (2007) used such multi-dimensional nature of social cohesion as psychological sense of community, attraction, and neighboring through consistent social interaction. Increased interaction generally increases individuals' social cohesion (Wilkinson, 2008). Through this social interaction, neighbors provide each other with emotional/personal, instrumental, and informational support.

Measuring sense of community (SOC) is thought to be two folded concepts: a) physical environment influences SOC, and b) emotional or spiritual experience influences SOC. Previous research argued that perceptions of neighborhood physical environment associated with attractiveness, aesthetics, greenery or leisurely walking played as much role in shaping behavior as actual personal characteristics (Wood, et al., 2010; Ellaway et al., 2005; Saelens et al., 2004). Poor neighborhoods are transactional settings that can negatively impact human behavior and development (Ohmer, 2010). On the other hand, studies also noted that personal emotional experience also influences the attitude and its perception toward their environment. Greenfield and Marks (2010) maintained that adults' strong sense of community functioned as a protective factor against long-term psychological effects of childhood. Individuals with strong sense of attachment to their community might derive a sense of mastery or the feeling that they can overcome obstacles, because they perceive themselves as part of a cohesive social network (Hobfoll et al., 2002). Since there are many empirical concepts related to measure sense of community, it is necessary to identify and construct the measuring scale for the investigation of sense of community in childhood and current environment respectively, based on existing literature and research concept.

Regarding the scale of sense of community, McMillan and Chavis (1986) firstly theorized that the prediction of overall sense of community was categorized by four distinctive elements: membership, influence, integration and fulfillment of needs, and shared emotional connection. For methodological interpretation of sense of community, After 10 years later, McMillan (1996) renamed again as follows: spirit (=membership), trust (=influence), trade

(=integration and fulfillment of needs), and art (=shared emotional connection). He viewed sense of community as a spirit of belonging together, a feeling that there is an authority structure that can be trusted, an awareness that trade, and mutual benefit come from being together, and a spirit that comes from shared experiences that are presented as art, which are linked in a self-reinforcing circle one another.

Peterson, Speer, and Hughey(2006) demonstrated that main factors were citizen participation, psychological empowerment, and health-related quality of life. From their research, they suggested that SCI showed that positively and negatively worded items in these four main factors correlated each other. At the individual level, Long and Perkins(2007) reaffirmed that SOC is intimately related to social capital(neighboring, citizen participation, collective efficacy), informal(social control), communitarianism, place attachment, community confidence, and community satisfaction. He argues that place and social are inextricably bound, and studying the impact of the social alone on community-oriented construct constrains full understanding of multilevel phenomena. In validating an 8-item brief sense of community scale, Peterson et al. (2008) developed SOC (sense of community) dimensions of needs fulfillment, group membership, influence, and shared emotional connection. Based on extensive research, they founds that these brief scales were correlated with community participation, psychological empowerment, mental health, and depression, which provided empirical supports for more expanded multi-dimensional SOC. Further, for the assessment of adolescents in Italy, Chiessi et al. (2010) validated five components of SOC, comprised of 20 items as follows: satisfaction of needs and opportunities for involvement; support and emotional connection with peers; support and emotional connection in the community; sense of belongings; and opportunities for influence. In order to enhance SOC, they contended that it needed to consider everyday settings in which people participate and the broader social and cultural contexts within SOC is experienced. In cross-cultural comparative analysis of 13 countries on SOC, Dallago et al. (2009) found that subjects differently perceived their local neighborhood area (place attachment, social capital and safety), and there existed different level of community cognitions are interrelated. In other words, promotion of SOC can conflict with multicultural diversity because it tends to emphasize group member similarity and appears to be higher in homogeneous communities (Townlet et al., 2011).

In domestic research on SOC, there a few research on SOC. Lee and Shin (2009) specified five major components as follows: sense of belonging (=membership), citizen participation (=influence), sense of connection (=shared emotional connection), satisfaction with community (=need fulfillment), place-attachment. In the study, they found that interaction among residents and environmental and psychological characteristics significantly affected SOC. Further, based on three SOC components of community attachment, community identity, and social interaction, Choi and Kong (2007) revealed that physical environment and its site planning characteristics were closely related.

In regard to the promotion of sense of community, Kim's recent study (2010) contended that it is necessary to provide a community garden and its program for neighbors. His research confirmed that inducing resident participation by providing a physical environment of vegetable garden in common area of community

environment for neighbors was the most effective strategy for building strong sense of community through many contacts of social interaction. This notion was supported by many previous studies and also practically supported by Tapp's(2009) idea of master plan in Georgia. In fact, transforming vacant land into vegetable and floral spaces has created opportunities for community building (Armstrong, 2000), civic participation (Mannarini & Fedi, 2009; Glover, 2004), and youth and community development (Hung, 2004). According to Saldvar-Tanaka and Krasny (2004), community gardens are functioning not only site for the production of traditional fruit and vegetables, but also for social meeting spaces and sharing common interests among neighbors. Ohmer et al. (2009) illustrated that the importance of community gardening and conservation efforts in improving and beautifying distressed communities, promoting sustainable community development, and increasing civic engagement and conservation practices.



Figure 1. Residents' participation at community vegetable & floral garden.²

It was evident that physical characteristics in community played an important role in promoting sense of community. At the same time, extensive literature review implied that experience in childhood may influence the attitudes and values of their later life toward environment and sense of community. From the phenomenological approach, residential environment could be defined as emotional or meaningful connection between resident and place and this is the result of substantial experiences on site (Lee, 1988). However, it is unclear whether emotional experience in environment promotes or decreases sense of community, based on their cultural background.

Up to now, issues of sense of community, along with community garden are discussed. Many studies have identified that main components of sense of community were based on four distinctive concepts: a) needs fulfillment, b) group membership, meaning feeling of belong or place attachment, c) influence of a member on the community through participation, and d) shared emotional connection. However, previous research found that this classical definition of SOC and its measuring components does not fully explain the interplay of overall environmental context and human behavior, implying the need of holistic investigation on residents' perceptual attitudes about their environment. For that purpose, this study added 'community satisfaction with physical environment' for SOC.

² Tapp (2009), as a practicing urban planner, proposed a common vegetable and floral garden in his master plan which played an important role in strengthening sense of community by working together in Serenbe community, Atlanta, Georgia. Later, this planning strategy was thought to be effective planning approach for vitalizing the community.

Wood, et al. (2010) suggested the synthesizing framework explaining the relationship between perceptions of neighborhood and sense of community by articulating the notion of 'walking,' in physical environment. The model indicated that sense of community can be enhanced by living in physical communities that encourage leisurely walking.

Figure 2 presents a conceptual framework for the formation of sense of community. This model contends that emotional experience in childhood and attitude formed later influences adulthood values and their behavior patterns toward their current environment at the different socio-demographic and economic levels.

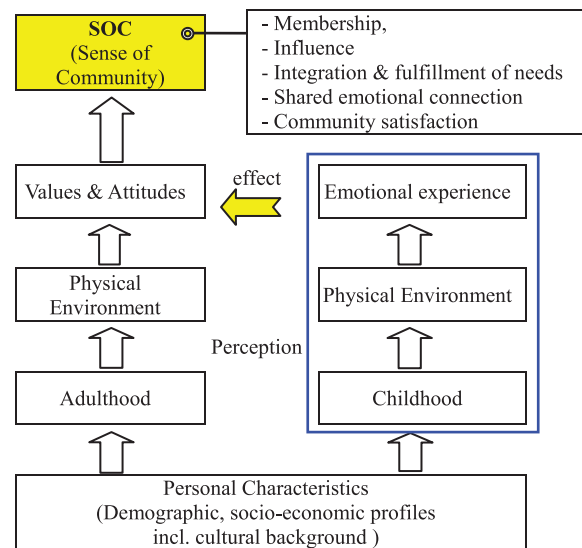


Figure 2. Conceptual framework for adults' formation of SOC (sense of community)

3. METHODOLOGY

In order to examine the cross-cultural effects of emotional experiences for sense of community, it is necessary to explore what the level of sense of community is. For that purpose, two sets of survey group were selected. The first, consisted of Korea students at college was selected and analyzed for comparison which was secondary data (Kim, 2010). The next group was residents in Austin, Texas, US. A questionnaire on a five-point Likert scale was designed to evaluate five components of sense of community: 1=strongly disagreed and 5=strongly agreed. Thirty-four survey statements and seven questions, asking socio-demographic and economic characteristics of Korean and US residents were developed by modifying existing instrumentation. The actual data set was based on the results of survey samples collected from September 2010 through February 2012. 448 survey samples were responded and collected for analysis through SPSS program. Each scale of major concepts (i.e., membership, influences, needs fulfillment, shared emotional connection, and satisfaction with community) was calculated by average means of each component. In order to verify appropriateness of survey index, Cronbach's Reliability test was performed to verify the stability of indices ($\alpha = .9436$).

4. ANALYSIS AND RESULTS

4.1 Personal characteristics and their relations with SOC

In order to examine the cross-cultural effects of individual characteristics on sense of community at childhood era, χ^2 and General Linear Model (GLM) analysis were performed (see Table 1). The Chi square analysis (χ^2) revealed that each group's individual characteristics from their own cultural background were statistically significant on the level of SOC at the level of $p=.001$: gender, age, personality, type of residence (H-type), and living period of residence (L-type). This means that the demographic and socio-economic profiles of childhood are too diverse to expect homogeneous community background, even in each country. It is notable that SOC is continuously going up higher, depending on age (See also Figure 3) From the perspective of cognitive psychology, it is reported that an older adult's memory is disproportionately better for positive rather than negative environment compared to a younger adult (Zelinski et al., 2011). In fact, it seems that they tend to dramatize their old memories of emotional experience in a positive environment, implying that they were living in old fashioned communities than young generations. Even though the limitations of sample profiles of each group, GLM procedure indicated that there was no significant cross-cultural difference on individual characteristics for sense of community, implying that gender, age, personalities, or other socio-economic features at childhood era by nature, are not main factors, influencing adults' formation of SOC later life.

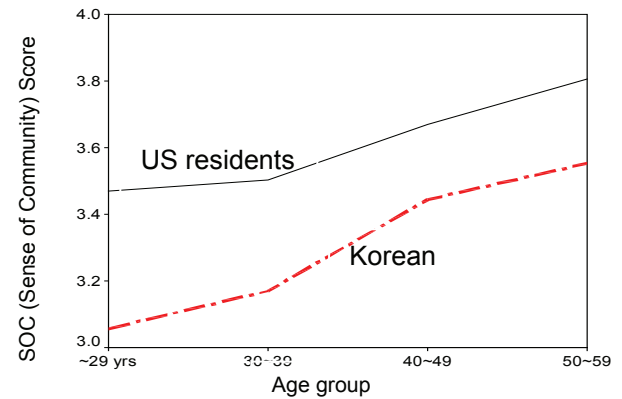


Figure 3. Relationship between Age and SOC of Korean-US Residents

4.2 Emotional experience of SOC from different cultural background

As indicated in Table 2, one-way ANOVA showed that the resident of US at childhood era had experienced statistically significant higher degree of SOC components than Korean group: membership ($M = 3.75$), influence ($M = 3.65$), integration and fulfillment of needs ($M = 3.44$), shared emotional connection ($M = 3.49$), community satisfaction ($M = 3.91$). In particular, the component of 'satisfaction with community' indicated that US residents ($M = 3.91$) had experienced high level of satisfaction with their communities than Korean ($M = 3.20$), implying overall physical environment was safe and attractive place to live. From the standpoint of cross-cultural background, the analysis found that US residents' perception of SOC was somewhat higher than Korean group at childhood period.

Table 1. Descriptive statistics of childhood and χ^2 & GLM

Item	Korean		US Residents		F (p-value)
	Freq.	SOC	Freq.	SOC	
Gender (χ^2)					
Male	236(71.7%)	242.1**	48(40.3%)	76.8**	.078 (.780)
female	91(27.7%)	3.15 3.16	71(59.7%)	3.61 3.70	
Age (χ^2)					
~29 years	219(67.0%)	1215.6**	10(8.4%)	397.2**	1.07 (.371)
- 39 years	67 (20.5%)	3.05 3.21	16(13.4%)	3.47 3.50	
- 49 years	30 (9.2%)	3.41	54(45.4%)	3.67	
- 59 years	9 (2.8%)	3.55	31(26.1%)	3.81	
- 60 years~	1 (0.3%)	4.58	8(6.7%)	3.84	
Personality (χ^2)					
- Initiative	44 (13.4%)	968.2**	19(16.0%)	432.5**	2.79 (.026)
- Optimistic	180(54.7%)	3.30 3.11	51(42.9%)	3.67 3.76	
- Conservative	62(54.7%)	3.27	34(28.6%)	3.72	
- Realistic	35(18.8%)	2.94	11(9.2%)	3.00	
- Declined	6(10.6%)	3.24	4(3.4%)	-	
H- type (χ^2)					
- APT	126(38.3%)	1063.3**	25(21.0%)	333.0**	1.00 (.369)
- SFA	64 (19.5%)	3.17 3.01	10(8.4%)	3.50 3.65	
- SFD	129(39.2%)	3.19	81(68.1%)	3.71	
- etc.	8(2.4%)	3.56	-	-	
Ownership (χ^2)					
- Owned	221(67.2%)	750.9**	91(76.5%)	188.1**	1.897 (.151)
- Deposits	85 (25.8%)	3.11 3.22	-	3.67 -	
- Rental	14(4.3%)	3.05	28(23.5%)	3.59	
- etc.	6(1.8%)	3.67	-	-	
L- Period (χ^2)					
~ 2 years	27 (9.7%)	633.1**	24(20.7%)	271.5**	.858 (.463)
~5 years	47 (16.8%)	3.13 3.24	25(21.6%)	3.78 3.67	
~10 years	86 (30.8%)	3.16	24(20.7%)	3.51	
~ 11 years ~	119(42.7%)	3.12	43(37.1%)	3.66	

n= 448, (Korean = 329, US residents = 119)

* $p < .05$, ** $p < .01$

Table 2. One-way ANOVA for a cross-cultural childhood emotional experience

SOC Factor	Korean	US Residents	F
Membership	3.36	3.75	27.46**
Influence	3.07	3.65	78.86**
Integration and fulfillment of needs	3.06	3.44	24.73**
Shared emotional connection	2.98	3.49	51.99**
Community satisfaction	3.20	3.91	85.11**
Overall SOC	3.13	3.68	84.40**

n= 448, (Korean = 329, US residents = 119)

* $p < .05$, ** $p < .01$

On the other hand, χ^2 analysis of personal characteristics for adults' attitude of different cultural background toward SOC of current community revealed that there were statistically significant differences in each group except few individual profiles such as membership-Gender-Korean, Influence-Age-Korean, Shared emotional connection-Age-Korean and Influence-House type-Korean, Need fulfillment-Ownership-US. This means that each socio-demographic element is closely related with essential elements of SOC to be 'a real neighborhood'. As shown in Table 3, it appears that US residents reported higher level of membership and shared emotional connection than Korean, implying that sense of belongings and its neighborhood connection are culturally different characteristics in community building.

Table 3. χ^2 Analysis for Personal characteristics and SOC

Personal Character.	SOC(Sense of Community) Factors****					
	M	I	N	S	C	O
Gender	25.3	42.1*	42.6**	33.3	44.4**	245.3**
	45.0**	27.4*	59.5**	41.4**	26.2*	77.9**
Age	131.2**	98.8	153.6**	122.8	120.2**	1027.2**
	169.5**	204.1**	186.8**	205.4**	166.4**	383.9**
Person-ality	204.1**	158.9**	133.8**	165.2**	116.9**	999.8**
	244.1**	204.8**	183.9**	275.9**	202.5**	448.0**
Housing Type	235.5**	101.8	136.9**	161.9**	150.5**	1031.1**
	262.1**	117.8**	144.8**	268.1**	253.5**	314.2**
Owner-ship	137.5**	153.2**	88.6**	128.2**	170.2**	791.5**
	144.6**	73.7**	37.1	160.8**	158.7**	179.9**
Living Period	115.2**	134.8**	109.8**	108.0*	104.1**	641.4**
	133.5**	125.3**	124.1**	118.3**	110.4**	243.9**

n= 448, (Korean = 329, US residents = 119)

* p <.05, ** p <.01

*** Each initial indicates as followings; M= Membership, I=Influence, N= Integration & fulfillment of needs, S= Shared emotional connection, C=Community satisfaction, O= Overall satisfaction

**** Shaded area shows χ^2 Statistics of US residents

4.3 The effects of childhood emotional experience of different cultural background on adults' formation of SOC

In order to identify the effects of childhood emotional experience from different cultural background on adults' formation of SOC, each group's component scores of Korean and US residents were operationally defined as a mean of the selected components of SOC for correlation analysis. Regarding Korean group, Table 4 shows that the effects of childhood emotional experience on adult formation of SOC are statistically significant except 'shared emotional connection.' This means that Koreans' emotional connection with neighbors at childhood are at mere level (Mean= 2.98) because they were not fully developed self-esteem or personal value system, making their own decision.

On the other hand, among five components of SOC, US residents indicated that for their adults' attitude toward SOC, they were influenced from childhood experiences of influence, integration and fulfillment of needs, shared emotional connection, and satisfaction with community. The analysis, however, indicates that membership does not impact on their formulation of SOC.

Table 4. Correlation between childhood and adulthood attitude of SOC

SOC Factor	Korean			US residents		
	Child	SOC Adult	Cor.	Child	SOC Adult	Cor.
Membership	3.36	3.79	.233**	3.75	3.81	-.130
Influence	3.07	3.49	.415**	3.65	3.56	.202*
Integration and fulfillment of needs	3.06	3.50	.272**	3.44	3.40	.658**
Shared emotional connection	2.98	3.88	.096	3.49	3.82	.233*
Community Satisfaction	3.20	3.57	.350**	3.91	3.69	.269*
Overall SOC	3.13	3.65	.303**	3.68	3.67	.102

n= 448, (Korean =329, US residents = 119)

1= strongly disagreed, 5= strongly agreed

* p <.05, ** p <.01

According to McMillan (1986), one of the important role of 'membership,' is to be interpreted as the sense of belonging, involving the feeling, belief, and expectation that one fits in the group and has a place there, a feeling of acceptance by group, and a willingness to sacrifice for the group. In particular, negative pearson correlation (p = -.130) implies that as the feeling of belonging and place attachment are firmly built for their neighborhood at childhood, so adults' SOC are inhibiting the strength of current community. From the perspective of SOC, it needs to furnish any substitute with current community, connecting those old and present values of membership. It was also found that there existed statistical significance between childhood and adulthood regarding shared emotional connection, meaning that US residents are interacting and socializing each other at early stage. In fact, the more emotional are the experience and the relationships, the greater the sense of belonging, leading to social cohesion of current community. Consequently, it provides empirical evidence for planning professionals that Korean group needs more social meeting places for facilitation of social interaction between neighbors at childhood, thus leading to more strong level of shared emotional connection.

In an effort to investigate what the major predictors of SOC in each group, linear stepwise regression analysis was performed. As shown in Table 5, the factor of 'influence' among five components did significantly related to SOC for Korean group (See Model A). Peterson et al. (2006) reiterated the meaning of 'influence' as a sense that one matters or, can make a difference, in a community and that the community matters to its members. This finding points to a practical way to facilitate residents' participation and voluntary involvement in community events.

Table 5. A regression analysis for childhood experience in community

Reg. Model	Predictors	Reg. co-efficients	Std. Error	Bata Weight	F	Sig.
Model-A (Kor.)	Influence	.304	.105	.269	8.36	.005**
	Constant	2.583	.387			
	R2=.072, Adj R2=.064					
Model-B (US)	Community Satisfaction	.226	.051	.264	19.99	.000**
	Influence	.252	.068	.259		
	Connection	-.135	.055	-.154		
	Constant	2.556	.179			
R2=.057, Adj R2=.149						

* p <.05, ** p <.01

*** dependent variable: Overall score of SOC at adulthood

On the other hand, for US residents, the independent variables of 'community satisfaction,' 'influence,' 'shared emotional connection' were statistically significant on the dependent variable, 'SOC (Model B).' This means that emotional experience of community satisfaction at childhood plays an important role in inducing or promoting sense of current community among neighbors. It is also notable that as the feeling of shared emotional connection is stronger, the current SOC is show a negative impact. All together, the study indicates that community residents recognize 'influence' as main predictor of their SOC across their cultural background. The linear graph in the following Figure 4 indicates that as the emotional experience of influence at childhood goes up, the level of SOC does respond to the rate of regression coefficient.

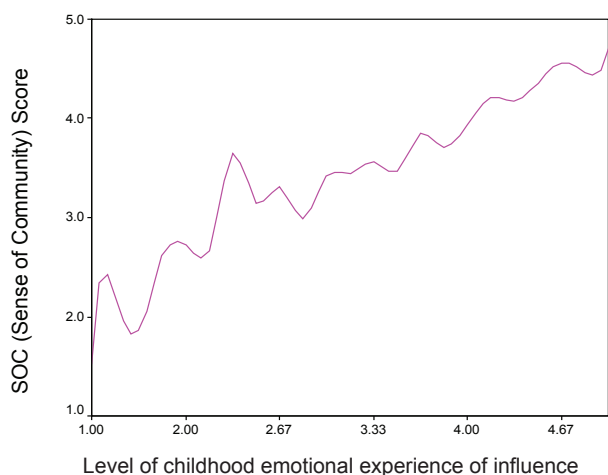


Figure 4. Regression analysis, showing the interrelationship between childhood emotional experience of influence and SOC

5. SUMMARY AND CONCLUSION

5.1 Summary and discussion

In order to investigate cross-cultural effects on SOC (sense of community), an extensive literature explored found that needs fulfillment, group membership, influence of a member on the community through participation, and shared emotional connection were major components of SOC. And one major concept of community satisfaction was added for this study. The research found that when the current physical settings were controlled for other correlated but basically irrelevant factors to this investigation as a whole, the effect of childhood emotional experience on adults' formation of sense of community from different cultural background does appear to be statistically significant on the facilitation of SOC between neighbor residents. However, they are likely to have a variety level and interplays of SOC components one another, depending on cultural background. However, the analysis of Chi-square & GLM found that the perception of "SOC", which explored from early childhood through environment autobiography was not related to demographic, and socio-economic profiles of the group. However, and additional χ^2 test of each Korean and US resident group indicated that there were meaning interplay between personal profiles and detailed SOC factors in each group. Further, stepwise multiple regression analysis revealed that the most important predictors for SOC were 'influence' for Korean and "satisfaction with community," 'influence,' 'shared emotional connection' for US residents.

All together, 'influence' was the common factor, impacting on their SOC at adulthood. It also demonstrated that as the level of positive emotional experience in influence rose, the overall SOC also responded to the rate. Regarding influence factor as one of major guiding SOC components, the survey items included voluntary community participation, community floral and vegetable gardening, caring and maintaining of the community. In other words, the study suggests that early positive experience in community events and activities is major influential component to adults' formation of SOC about their current community.

5.2 Limitations and Implication for future research

Several research limitations exist. Because of the location of survey site and subject size of US residents, it may not possible to generalize the results in other communities. Since the study included new concept of community satisfaction, and primitive cross-cultural comparative approach, the results cannot be generalized to traditional study of SOC. Moreover, any conclusion concerning the measurement of sense of community must be limited to the survey respondents who experienced community environment. It is possible that those who did not reply to the survey were less supportive of the study concepts. Conclusions regarding residents' attitude and their evaluations will have to be limited to the assessable variables provided by the survey responses based on limited experiences of childhood. Notwithstanding the limitations, the research is one of few studies to examine SOC at cross-cultural level and its findings provide a new direction for a solid building of SOC.

REFERENCES

- Armstrong, D. (2000). A survey of community gardens in upstate New York: Implications for health promotion and community development. *Health and Place*, 6, 319-327.
- Brooks-Gunn, J., Duncan, G., Klebanov, P., & Sealand, N. (1993). Do neighborhoods influence child and adolescent development? *American Journal of Sociology*, 99, 353-395.
- Choi, Y., & Kong, Y.K. (2007). The effects of site planning factors and residential dwellers characteristics on the sense of community against multi-family house. *Journal of the Architectural Institute of Korea*, 23(5), 83-90.
- Coulton, C., Korbin, J. & Su, M. (1999). Neighborhood and child maltreatment: A multi-level study. *Child Abuse and Neglect*, 23(11), 1019-1040.
- Chavis, D. M., Hogge, J. H., McMillan, D. W., & Wandersman, A. (1986). Sense of community through Brunswick's lens: A first look. *Journal of Community Psychology*, 14, 24-40.
- Christens, B.D., & Speer, P.W. (2011). Contextual influences on participation in community organizing: A multilevel longitudinal study. *American Journal of Community Psychology*, 47, 253-263.
- Dallago L, Perkins, D, Santinello, M, Boyce, W, et al. (2009). Adolescent Place Attachment, Social Capital, and Perceived Safety: A Comparison of 13 Countries. *American Journal of Community Psychology*, 44, 148-160.
- Doolittle, R.J., & MacDonald D. (1978). Communication and a sense of community in a metropolitan neighborhood: A factor analytic examination. *Communication Quarterly*, 26, 2-7
- Ellaway et al., (2005). Graffiti, greenery and obesity in adults: secondary analysis of European cross section survey. *BMJ*, 331, 611-612.
- Frankenberg, R. (1977). *Communities in Britain: Social life in town and country*, Middle Sex, England: Penguin Books.
- Glover, T. (2004). Social capital in the lived experiences of community gardens. *Leisure Science*, 26, 143-162.
- Glynn, T.J. (1981). Psychological sense of community: Measurement and application. *Human Relations*, 34, 780-818.

- Hillery, G.A. (1955). Definitions of community: Areas of agreement. *Rural Sociology*, 20, 111-123.
- Hobfoll, S.E., Jackson, A., Hobfoll, I., Pierce, C.A., and Young, S. (2002). The impact of communal-Mastery versus Self-Mastery on Emotional Outcomes during stressful conditions: A prospective study of Native American Women. *American Journal of Community Psychology*, 30(6), 853-871.
- Hung, Y. (2004). East New York farms: Youth participation in community development and urban agriculture. *Children, Youth and Environment*, 14(1), 56-85.
- Jacobs, J. (1993). *The death and life of great American cities*. New York: Modern Library.
- Kim, W.P. (2010). Effects of childhood emotional experience in physical and social community environment on the formation of community sense. *Journal of the Architectural Institute of Korea*, 26(3), 169-176.
- Kitchen, P., Williams, A., & Chowhan, J. (2012). Sense of community belong and health in Canada: A regional analysis. *Social Indicators Research*, 107(1), 103-126.
- Lee, K.M. (1988). A phenomenological approach to man-environment relationship. *Journal of the Architectural Institute of Korea*, 4(1), 35-45. *Journal of the Architectural Institute of Korea*, 25(3), 223-234.
- Lee, R.Y., & Shin, N.S. (2009). A Study on the sense of community in apartment complex –focused on apartment complex in Gwangju metropolitan city.
- Long, D.A. & Perkins, D.D. (2007). Community social and place predictors of sense of community: a multilevel and longitudinal analysis. *Journal of Community Psychology*, 35(5), 563-581.
- Mannarini, T., & Fedi, A. (2009). Multiple sense of community: the experience and meaning of community. *Journal of Community Psychology*, 37(2), 211-227.
- Marcus, C.C. (1979). *Environmental autobiography*. Institute of Urban & Regional Development, Univ. of California.
- McMillan, D.W. (1996). Sense of Community. *Journal of Community Psychology*, 24(4), 315-325.
- McMillan, D.W., & Chavis, D.M. (1986). Sense of Community: A Definition and Theory. *Journal of Community Psychology*, 14, 6-23.
- Ohmer, M.L., Meadowcroft P., & Freed, K., & Lewis, E. (2009). Community gardening and community development: Individual, social and community benefits of a community conservation program. *Journal of Community Practice*, 17, 377-399.
- Ohmer, M.L. (2010). How theory and research inform citizen participation in poor communities: The ecological perspective and theories on self- and collective efficacy and sense of community. *Journal of Human Behavior in the Social Environment*, 20, 1-19.
- O'Brian, D. & Ayidiya, S. (1991). Neighborhood community and life satisfaction. *Journal of the Community Development Society*, 22, 21-37.
- Peterson, N.A., Speer, P.W., & Hughey, J. (2006). Measuring sense of community: A methodological interpretation of the factor structure debate. *Journal of Community Psychology*, 34(4), 453-469.
- Plas, J & Lewis, S. (1996). Environmental factors and sense of community in a planned town, *American Journal of Community Psychology*, Vol. 24.
- Riger, S., LeBaily, R.K., & Gordon, M.T. (1981). Communities and urbanites' fear of crime: An ecological variations: An experimental approach. *Sociometry*, 167, 228-249.
- Sallis et al., (2004). Active transportation and physical activity: opportunities for collaboration on transportation and public health research. *Transportation Research*, 38, 249-268.
- Saldivar-Tanaka, L., & Krasny, M. (2004). Culturing community development, neighborhood open space, and civic agriculture: the case of Latino community gardens in New York City. *Agriculture and Human Values*, 21, 399-422.
- Sarason, S.B. (1974). *The psychological sense of community: Prospects for community psychology*. San Francisco: Jossey-Bass.
- Tapp, P. (2009). Place making as a sustainable strategy: Serenbe Community. *SNUST International Symposium Proceedings*.
- Taylor, R., & Covington, J. (1993). Community structural change and fear of crime. *Social Problems*, 40, 374-395.
- Townley, G., Kloos, B., Green, E.P., & Franco, M.M. (2011). Reconcilable differences? Human diversity, cultural relativity, and sense of community. *American Journal of Psychology*, 47, 69-85.
- Unger, D.G., & Wandersman. (1982). A neighboring in an urban environment. *American Journal of Community Psychology*, 10, 493-509.
- Warner, B., & Pierce, G. (1993). Reexamining social disorganization theory using calls to the police as a measure of crime. *Criminology Psychology*, 18(1).
- Weidemann, S., & Anderson, J. R. (1985). Residents' perceptions of satisfaction and safety: A basis for change in multifamily housing. *Environment and Behavior*, 14, 695-724.
- Wilcox, B.L. (1981). Social support, life stress, and psychological adjustment: A test of the buffering hypothesis. *American Journal of Sociology*, 9, 371-386.
- Wilkinson, D. (2007). The multidimensional nature of social cohesion: psychological sense of community, attraction, and neighboring. *American Journal of Community Psychology*, 40, 214-229.
- Wilkinson, D. (2008). Individual and community factors affecting psychological sense of community, attraction, and neighboring in rural communities. *Canadian Review of Sociology*. 45(3), 305-329.
- Wikipedia. (2012). <http://en.wikipedia.org/wiki/Community>.
- Wood, L., Frank, L.D., & Giles-Corti, B. (2010). Sense of community and its relationship with walking and neighborhood design. *Social Science & Medicine*, 70(9), 1381-1390.
- Zelinski, E.M., Dalton, S.E., & Hindin, S. (2011). Cognitive changes in healthy older adults. *Journal of the American Society on Aging*, 35(2), 13-20.

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