

Community Security/Safety and Social Capital: An Alternative Interpretation of Broken Window Theory

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Abstract

The concept of social capital has been considered one of the most important social policy agendas in long term social recovery from the 1995 Kobe earthquake. After the fourteen years that have passed since the Kobe earthquake, more than eighty percent of people no longer consider themselves as being the earthquake survivors. It is, however, still strongly felt among many community leaders that social capital plays a major role in community governance. A study forum was started in 2006 in order to investigate the role of social capital in post-earthquake society by conducting field research to nine communities where a sense of social capital was felt still strong in post-recovery normal everyday lives. Eight factors were identified as associated with rich social capital communities. In the following year of 2007, questionnaires measuring the eight factors as well as levels of social capital, sense of social safety and security were administered to 2,637 neighborhood/condominium resident association presidents and 1,813 valid questionnaires were returned. Based on individual scores, ZIP code averages of the above variables were obtained. At the same time, occurrences of street mugging, house and car break-in, and arson per ZIP area were separately collected. Structural Equation Modeling of the survey as well as crime variables revealed that five factors enriched social capital, which in turn mitigated levels of social incivilities that were found to be the direct cause of street crimes, perceived crime risks and fears. In order to examine the generalizability of the current findings, the paper concludes that it is necessary to conduct a similar type of social survey in Korean society.

Keywords: *Social Capital, Questionnaire Survey, Incivilities, Crime Risk and Fear of Crime, GIS, Structural Equation Modelling*

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1. Introduction

One of the biggest concerns in current Japanese society is a steady decline in the sense of safety and security against crimes in urban neighborhood communities. Less face-to-face contact and a lowering of interest in local community affairs among residents have been cited as major causes of this decline. The current paper aims to examine empirically if enriching social capital through resident-government collaborative measures can in fact counter-act this declining trend and make impacts upon a heightened sense of safety and security against crimes in local neighborhoods.

Two distinctively different theoretical frameworks have directed studies on neighborhood crime prevention. One is from a rational choice perspective, which assumes humans are purposeful and goal oriented in such a way as to increase benefits and/or to decrease costs even when choosing criminal behavior alternatives. Clarke (1997) proposed four groups of techniques that reduce situational crime opportunities: 1) increasing perceived effort, 2) increasing perceived risks, 3) reducing anticipated rewards, and 4) removing excuses. One can apply all these techniques to individuals and the physical environment. The rational-choice framework provided urban planners with a theoretical basis for CPTED (Crime Prevention through Environmental Design) (e.g., Newman, 1973), which aimed to increase both 1) perceived effort and 2) perceived risks in physical environments. Likewise, “a broken window” theory by Wilson and Kelling (1982) focuses mainly on 4) removing excuses by enforcing compliance in public space by means of thorough, consistent and immediate enforcements against “small” incivilities among individuals.

Person-in-situation-interactions and social capital perspective represent an alternative approach to neighborhood crime prevention. This perspective emphasizes the importance of communitarian rather than utilitarian, social rather than structural, trust-based rather than enforcement-based ways of crime prevention. Jacobs (1961) asserted that safer streets were characterized by people’s trust that somebody nearby would come and help them in case of incivilities occurring on the street. In other words, rich social capital helps to reduce incivilities because people, rather than enforcement officers, care about what is the right thing to do on the street.

The purpose of this paper is to examine 1) what constitutes social capital, 2) what facilitates enrichment of social capital, 3) whether social capital has empirical impacts upon incivilities, crime risk and fear for crime among residents, and 4) how the findings from the current study can be cross-culturally validated and generalized to other modernized societies such as Korean society.

2. Method

2.1 Background

A study forum was formed in 2006 in order to investigate the role of social capital in social safety and security by conducting field research to nine communities where a sense of social capital was felt still strong in post-1995-earthquake-disaster recovery normal everyday lives in Kobe city (see Figure 1).

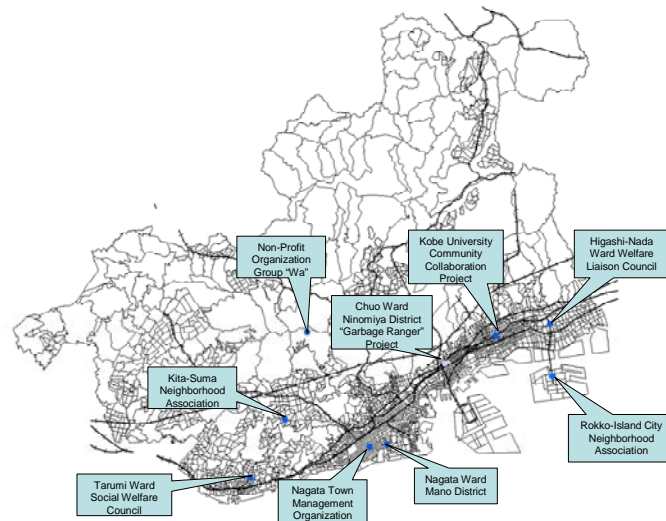


Fig. 1 Researched Nine Communities

Field surveys and interviews with key persons of these nine community activity leaders produced an eight dimension model of social capital enrichment (see Figure 2).

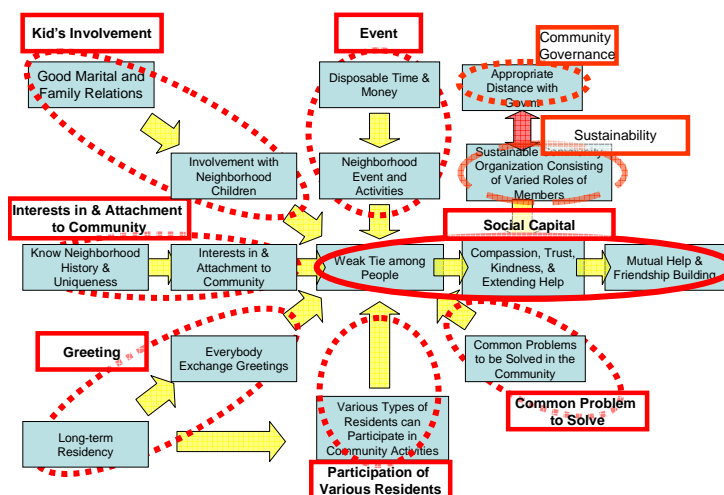


Fig.2 Eight Dimensions of Social Capital Enrichment Identified

2.2 Sample

In the following year of 2007, a questionnaire instrument that measured the eight dimensions as well as levels of social capital, sense of incivilities, social safety and security

were administered to 2,637 neighborhood/condominium resident association presidents and 1,813 valid questionnaires were returned (valid response rate 68.8%). Among those who responded, male accounted for 82.3 % and female 17.4%. Average age of respondents was 63.5 years old (SD=11.5).

2.3 Instruments

Social Capital Enrichment Dimensions: Based on the previous year's field research, 8 social capital enrichment dimensions were identified as seen in Figure 2. Those included 1) interests in and attachment to community, 2) greetings, 3) community events, 4) involving children in community activities, 5) participation of various residents, 6) common problems to solve, 7) local government support, and 8) community governance. A 31 item 5-point Likert scale was created in order to measure each of these dimensions.

Level of Social Capital: Based on Robert Putnam's (2001) definition, a 9 item 5-point Likert scale was developed to measure a level of social capital in terms of the degree of exchanges in daily social network, reciprocity and trust that residents have to each other.

Incivilities: Based on Taylor (2001), a 5 item yes-no scale asked about such street incivilities as litter, broken streetlights, teenage smoking, midnight hanging around by youths and noise/nuisance from hot rod riders.

Crime, Crime Risk and Fear for Crime: Street-block-based actual crime statistics on street muggings, house break-ins, car break-ins and arson were collected from both police and fire department. Possibility and fear of house break-ins, being mugged on the street, car break-ins, and arson were asked by 4-point Likert scales.

3. Results and Discussions

3.1 Social Capital Enrichment Dimensions

Table 1 shows factor analysis results of the 31 item social capital enrichment scale. Five factors were extracted and then VariMax-rotated for the ease of interpretation. For factor 1, those items that were characterized by "participation of various residents, shopkeepers, small business owners", "collaboration among them", "utilizing preexisting informal network", and "involving children" loaded high. Therefore, factor 1 was named "participation of various residents". Most of highly loaded items on factor 2 included "event" and thus it was named "community event" factor. Those items referring to governance of neighborhood/tenant associations loaded high on Factor 3, which was named "community governance" factor. Those items designed to measure efforts to increase interests in and attachments to community loaded high on factor 4. Finally, all "greeting" items loaded high on Factor 5.

Table 1 Factor Analysis Results of Social Capital Enrichment Dimensions

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	
	Participation of Various Residents	Community Event	Community Governance	Interests in & Attachment to Community	Greetings	
Q36_24 Community brokers are active in the community	0.76	0.18	0.20	0.15	0.21	0.72
Q36_22 Storekeepers and small business owners in the community are encouraged to participate in solving problems that threaten the community	0.75	0.18	0.19	0.12	0.21	0.68
Q36_25 Various types of residents, storekeepers, and small business owners are welcomed to express their opinions and for their participation in community activities	0.74	0.17	0.23	0.19	0.18	0.70
Q36_30 The neighborhood association initiates collaboration with shopping streets and small businesses	0.70	0.12	0.18	0.23	-0.03	0.59
Q36_31 The neighborhood association initiates collaboration with Non-Profit Organizations in order to solve community problems	0.65	0.13	0.10	0.26	-0.07	0.52
Q36_18 Encourage children's initiatives to plan and manage community events	0.53	0.51	0.08	0.15	0.03	0.56
Q36_23 The neighborhood association utilizes existing informal human networks in the community	0.51	0.27	0.36	0.13	0.29	0.56
Q36_29 The neighborhood association establishes a financial base through organizing flea market and other nonprofit making community activities	0.45	0.25	0.29	0.12	-0.13	0.38
Q36_15 Make problem solving actions as a part of community fun events	0.42	0.26	0.27	0.22	0.26	0.43
Q36_16 The neighborhood association organizes community events and activities that encourage participation of both adults and children	0.21	0.75	0.24	0.17	0.05	0.70
Q36_11 Residents take initiatives in planning and managing community activities and events	0.10	0.74	0.20	0.21	0.15	0.66
Q36_19 The neighborhood association collaborates with local schools and children's circles when planning community activities and events	0.36	0.65	0.19	0.16	0.09	0.62
Q36_12 The neighborhood association makes special efforts to encourage residents' participation in community activities and events	0.02	0.65	0.33	0.20	0.27	0.64
Q36_17 The neighborhood association prepares a space for the gathering of various age group children and teenagers	0.43	0.63	0.09	0.15	0.07	0.62
Q36_14 The neighborhood association utilizes public funds for community activities and events	0.36	0.52	0.20	0.23	0.13	0.51
Q36_13 The neighborhood association collaborates with volunteer groups and Non-Profit Organizations for community activities and event	0.43	0.48	0.02	0.23	0.20	0.51
Q36_7 Utilize naturally formed drop-in spots in the community	0.25	0.47	0.16	0.34	0.25	0.48
Q36_5 Residents organize "clean-up" days as regular community events	0.01	0.43	0.33	0.23	0.26	0.42
Q36_26 The resident association is making efforts to widely communicate current issues in the community	0.14	0.21	0.78	0.14	0.16	0.71
Q36_27 Always look for those community members who can help with community problem solving actions	0.28	0.17	0.69	0.16	0.24	0.67
Q36_28 Manuals and handbooks on neighborhood association management and policies are available for sustainable community activities	0.18	0.12	0.61	0.05	-0.05	0.42
Q36_32 The neighborhood association tries to keep a principle of equity with local government when organizing community activities	0.33	0.27	0.52	0.29	0.02	0.54
Q36_20 The concerned individuals are welcomed when solving community issues	0.35	0.22	0.50	0.12	0.36	0.56
Q36_3 Always look for attractive and special features of the community	0.30	0.24	0.16	0.76	0.15	0.77
Q36_1 The neighborhood association is keen about learning local traditions, culture and history	0.20	0.25	0.16	0.72	0.15	0.66
Q36_4 The neighborhood association makes efforts to communicate attractive and special features inside and outside the community	0.31	0.22	0.11	0.66	-0.03	0.60
Q36_2 Always look for useful information in community life	0.10	0.23	0.42	0.56	0.23	0.61
Q36_6 The neighborhood association makes efforts to know about local volunteer groups and Non-Profit Organizations	0.36	0.33	0.06	0.45	0.21	0.49
Q36_9 The neighborhood association encourages neighbors to take the initiative to promote greeting among the residents	0.22	0.13	0.08	0.21	0.71	0.62
Q36_8 Neighbors greet each other regularly	-0.06	0.13	0.13	0.01	0.67	0.49
Q36_10 The neighborhood association makes efforts so that local children and adults greet each other on the street	0.35	0.35	0.08	0.28	0.50	0.58
Variance Accounted For (%)	16.62	14.70	10.06	9.79	6.98	

A comparison of the original 8 dimension social capital enrichment model with the above empirical analysis results indicated that “4) involving children in community activities” was merged into factor 2 (Community Event). Likewise, “6) common problems to solve”, “7) local government support”, and “8) community governance” items were all grouped into factor 3 (Community Governance).

3.2 Social Capital Scale

Table 2 illustrates principal component analysis results of a nine item social capital scale. The first solution accounted for 55.3 % of the total variance and showed good unidimensionality: Those nine items measuring social network, reciprocity and trust showed a convergence (Cronbach’s alpha .90) as the social capital theory (Putnam, 2001) predicted.

Item	Factor Loading
Q37_1 Neighbors regularly greet each other	0.56
Q37_2 Neighbors often chat on the street	0.67
Q37_3 Neighbors participate in joint sport and other hobby activities	0.63
Q37_4 Neighbors go out shopping or dining together	0.76
Q37_5 Neighbors exchange gifts and souvenirs	0.79
Q37_6 Neighbors often visit each other's houses	0.79
Q37_7 Neighbors extend help and show compassion to each other	0.81
Q37_8 Neighbors are willing to help each other for even minor things	0.82
Q37_9 Neighbors become friends with each other easily	0.82
Variance Accounted For (%)	55.33

3.3 Incivilities

Because 5 incivility items on litter, broken street lights, teen ager smoking, midnight hanging around among the youth and hot rod riders were all nominal scale (i.e., yes-no) items, optimal scaling yielded quantified weights for each item's response categories (see Table 3). Cronbach's alpha was .66 and showed a moderate level of internal consistency reliability.

Table 3 Optimal Scaling Results of Incivility Items

Item	Category	Frequency	Category Weight
Q38_1 Litter on the street	Yes	271	-0.94
	No	1469	0.25
	Don't Know	73	-1.61
Q38_2 Broken street lights	Yes	92	-0.89
	No	1618	0.15
	Don't Know	103	-1.60
Q38_3 Teen ager smoking	Yes	437	-0.86
	No	739	0.88
	Don't Know	637	-0.44
Q38_4 Midnight hanging around	Yes	595	-0.77
	No	705	0.96
	Don't Know	513	-0.42
Q38_5 Hot rod riders annoying the community	Yes	550	-0.66
	No	918	0.66
	Don't Know	345	-0.69

3.3 Crime, Crime Risk and Fear for Crime

Table 4 shows principal component analysis results of street-block-based occurrences of street muggings, house break-ins, car break-ins and arson. The first principal component accounted for 50 % of the total variance, indicating areas that are susceptible to one particular type of neighborhood crime are also susceptible to other types of crimes. Table 5 shows principal component analysis results of crime risk items. Only the first eigenvector produced more than 1 eigenvalue which supported the scale's unidimensionality. It accounted for 63 % of the total variance (Cronbach's alpha .80). Similarly, items on fear of crime exhibited high unidimensionality with the first eigenvector accounted for 74 % of the total variance (Cronbach's alpha .89) (see Table 6).

Table 4 Principal Component Analysis Results of Crime Types

	Solution 1
Mugging on the Street (2006)	0.70
House Break-in(2006)	0.53
Car Break-in (Locked Car) (2006)	0.75
Car Break-in (Unlocked Car) (2006)	0.81
Arson (1996 to 2005)	0.71
Variance Accounted For (%)	50.14

Table 5 Principal Component Analysis Results of Crime Risk Items

	Solution 1
Q39_1 Possibility of house break-ins within the next 12 months	0.77
Q39_2 Possibility of being mugged on the street within the next 12 months	0.84
Q39_3 Possibility of car break-ins within the next 12 months	0.82
Q39_4 Possibility of arson within the next 12 months	0.73
Variance Accounted For (%)	62.69

Table 6 Principal Component Analysis Results of Fear for Crime

	Solution 1
Q40_1 Fear of a house break-in	0.83
Q40_2 Fear of being mugged on the street	0.89
Q40_3 Fear of a car break-in	0.87
Q40_4 Fear of arson	0.85
Variance Accounted For (%)	74.45

3.5 Spatial Comparison of Crime and Social Capital Index

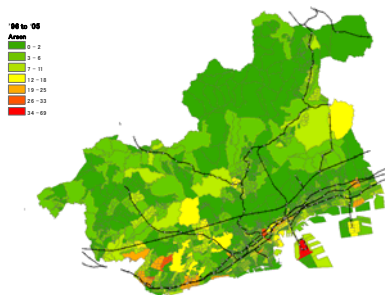


Fig.3 Arson ('96 to '05)

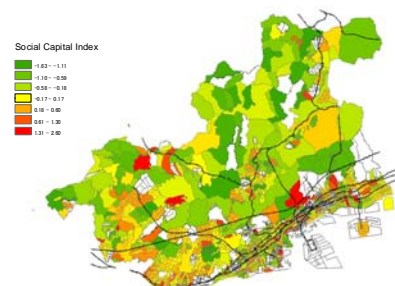


Fig.4 Social Capital Index

Note) White areas indicate that no questionnaires were returned.

Scores from principal component and optimal scaling analyses were aggregated by ZIP code, which provided areal indices on social capital and crime related variables. These

indices were then geo-mapped using GIS. Comparison of those maps suggested a spatial correlation between neighborhood crime (Figure 3) and social capital (Figure 4).

3.6 Causal Analyses

Table 7 shows correlations among social capital and its enrichment variables, as well as incivilities, crime, crime risk and fear for crime variables. Structural equation modeling

Table 7 Correlations among ZIP-code-based aggregated variables

	1	2	3	4	5	6	7	8	9	10	Mean	SD
1 Participation of Various Residents	1										0.01	0.86
2 Event	-0.09	1									0.12	0.80
3 Community Governance	-0.02	0.00	1								0.08	0.75
4 Interests in & Attachment to Community	-0.01	0.08	-0.01	1							0.12	0.85
5 Greeting	0.05	-0.02	-0.06	-0.04	1						0.06	0.78
6 Social Capital	0.07	0.26	0.23	0.19	0.26	1					0.12	0.76
7 Incivilities	0.10	-0.08	-0.04	-0.13	-0.06	-0.15	1				-0.08	0.77
8 Crime Risk	0.03	0.00	-0.06	0.02	-0.04	-0.09	0.30	1			-0.02	0.77
9 Fear for Crime	0.03	-0.04	-0.02	-0.06	0.03	-0.09	0.23	0.54	1		-0.01	0.79
10 Crime Index	0.11	-0.15	-0.15	-0.04	0.00	-0.13	0.13	0.15	0.08	1	0.00	1.00

(SEM) of these variables showed a very good fit and confirmed that five factors enriched social capital, which in turn prevented levels of social incivilities that were found to be the direct cause for street crimes, perceived crime risks and fears.

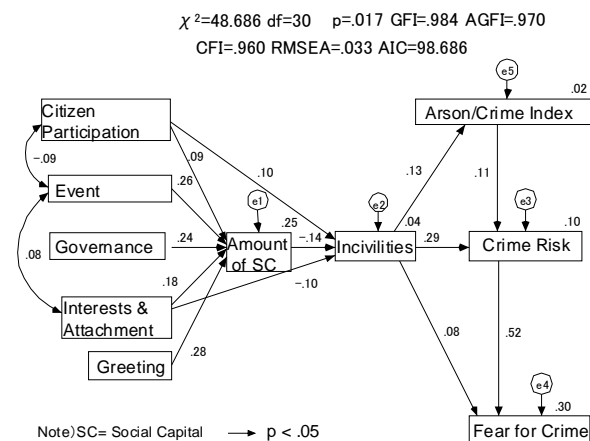


Fig.5 Causal Modelling Results among Social Capital, Incivilities, Crime, Crime Risk and Fear for Crime Variables.

In order to examine the generalizability of the current findings, the paper concludes that it is necessary to conduct a similar type of social surveys in another industrialized society such as Korean society.

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