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**THE EFFECTS OF ORGANIZATIONAL FACTORS ON CITIZEN  
PARTICIPATION IN COMMUNITY CRIME PREVENTION  
PROGRAMS IN JAPAN**

**By  
Juichi Kobayashi**

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**A Dissertation Submitted to the Faculty of the  
DEPARTMENT OF PSYCHOLOGY  
In Partial Fulfillment of the Requirements  
For the Degree of  
DOCTOR OF PHILOSOPHY  
In the Graduate College  
THE UNIVERSITY OF ARIZONA**

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As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Juichi Kobayashi entitled The Effects of Organizational Factors on Citizen Participation in Community Crime Prevention Programs in Japan

and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy

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A handwritten signature in cursive script, reading "Juel Kobayashi", is written over a horizontal line.

## TABLE OF CONTENTS

LIST OF ILLUSTRATIONS .....	5
LIST OF TABLES .....	6
ABSTRACT.....	7
INTRODUCTION.....	8
NEIGHBORHOOD ASSOCIATIONS IN JAPAN .....	10
THE THEORETICAL MODEL .....	13
Commitment to Activities.....	13
Fear of Crime .....	15
Sense of Control Over Neighborhood.....	16
Organizational Traits .....	19
Research Hypotheses .....	23
STUDY 1 .....	26
Method .....	26
Subjects and Procedure .....	26
Measures .....	27
Analytic Strategy.....	33
Results.....	35
Cross-sectional Models.....	35
Longitudinal Models.....	38
Summary .....	42
STUDY 2 .....	58
Method .....	58
Subjects and Procedure .....	58
Measures .....	59
Analytic Strategy.....	63
Results.....	64
The Model Explaining Sense of Control Over Neighborhood .....	65
The Model Explaining Frequency of Participation.....	66
The Model Explaining Willingness for Future Participation.....	69
The Model Explaining Bad Prospect for Neighborhood Safety .....	71
Summary .....	73
DISCUSSION .....	80
REFERENCES .....	86

## LIST OF ILLUSTRATIONS

<b>FIGURE 1. Theoretical Model of Citizen Participation in Community Crime Prevention .....</b>	<b>25</b>
<b>FIGURE 2A. Result of SEM on Cross-sectional Data: Model 1 .....</b>	<b>47</b>
<b>FIGURE 2B. Result of SEM on Cross-sectional Data: Model 2 .....</b>	<b>48</b>
<b>FIGURE 3A. Result of SEM on Longitudinal Data: Model 1 .....</b>	<b>53</b>
<b>FIGURE 3B. Result of SEM on Longitudinal Data: Model 2 .....</b>	<b>54</b>

## LIST OF TABLES

TABLE 1. Descriptive Statistics of Manifest Variables: Cross-sectional Models in Study 1 .....	44
TABLE 2. Descriptive Statistics of Manifest Variables: Longitudinal Models in Study 1 .....	45
TABLE 3. Factor Structure of the Measurement Model: Cross-sectional Models.....	46
TABLE 4. Statistical and Practical Indices of Fit for Nested Models: Cross-sectional Models.....	49
TABLE 5. Standardized Path Coefficients of Structural Paths in Model 1 on Cross-sectional Data .....	50
TABLE 6. Decomposition of Standardized Effects of Organizational Factors in Model 1: Cross-sectional Data.....	51
TABLE 7. Factor Structure of the Measurement Model: Longitudinal Models.....	52
TABLE 8. Statistical and Practical Indices of Fit for Nested Models: Longitudinal Models.....	55
TABLE 9. Standardized Path Coefficients of Structural Paths in Model 1 on Longitudinal Data .....	56
TABLE 10. Decomposition of Standardized Effects of Organizational Factors in Model 1: Longitudinal Data.....	57
TABLE 11. Descriptive Statistics of Variables Used in Study 2.....	75
TABLE 12. Coefficients of HLM Explaining Sense of Control Over Neighborhood...	76
TABLE 13. Coefficients of HLM Explaining Frequency of Participation .....	77
TABLE 14. Coefficients of HLM Explaining Willingness for Future participation .....	78
TABLE 15. Coefficients of HLM Explaining Bad Prospect for Neighborhood Safety .....	79

## ABSTRACT

Structural equation modeling and hierarchical linear modeling were used to examine the effects of citizen participation in crime prevention programs and fear of crime among residents in Japan. The democratic and efficient management of the programs by citizen leaders, and their adequate support by the police, were found to increase the commitment of residents to crime prevention activities. Further, a sense of personal control over the neighborhood was found to mediate much more of the amount of the impact of these organizational factors on the commitment of residents to crime prevention activities than was the perceived social cohesion of the neighborhood. By contrast, perceived social cohesion was found to significantly decrease the fear of crime among residents, although it did not mediate a substantial amount of the alleviating effects of support by police on the fear of crime. The cross-cultural and policy implications are discussed.

## INTRODUCTION

Experts have suggested that strong social cohesion among neighborhood residents is a key factor in low crime rates and the high level of security in Japanese society. It has been assumed that the strong cohesiveness among residents is maintained by powerful organizations of neighborhood residents, i.e., neighborhood associations, which are called “Chonai-kai” or “Jichi-kai” in Japanese (see Ames 1981 and Bayley, 1991). In Japan, neighborhood associations have been the basis of crime prevention activities by community residents for quite some time. However, during recent years, it has been said that the activities of neighborhood associations are in decline. Japanese policy makers have suggested that this trend has contributed to the recent increase in the crime rate and the fear of crime among residents, and a lower level of cooperation of residents with police activities, such as in criminal investigation in urban areas (The National Police Agency, 1995).

Some measures should be taken to deal with these situations. One possible measure is to improve the organizational arrangements of neighborhood associations to facilitate their crime prevention activities. Therefore, this study is aimed at empirically determining what kinds of organizational factors enhance the involvement of residents in activities of neighborhood associations, and further contribute to the beneficial consequences of these activities such as a decrease in the fear of crime. Since in Japan there is a dearth of theoretical and empirical literature in the field of citizen participation

in community activities, such as crime prevention activities, research hypotheses are generally based on the literature in the U.S. By combining findings in the U.S. research and anecdotal observations provided by practitioners, this research makes and empirically tests a theoretical model of the effects of organizational factors on citizen participation in community crime prevention. Thus, the goal of this research is to produce empirical findings that will help increase citizen participation in community crime prevention programs in Japan. Additionally, this study is expected to increase our cross-cultural understanding of citizen participation and neighborhood safety by examining the validity of a theoretical model derived from the research literature in the U.S.

## NEIGHBORHOOD ASSOCIATIONS IN JAPAN

Before describing the theoretical model to be tested in this research, specific features of neighborhood associations should be discussed. In Japan, neighborhood associations have hierarchical structures (see Bayley, 1991, pp.86-92). Under the big umbrella of the neighborhood association, which is generally organized at the level of municipalities, come smaller units of residents, which are organized at the level of residential blocks, i.e., block associations.

Participation of residents in the activities of block associations is not compulsory. However, except for temporary residents, most people almost automatically choose to become members of the block association governing their residence. This is because some services of local public agencies are provided to residents through hierarchical channels of the neighborhood association. For example, most of the information of public agencies is given to residents through newsletters, which are distributed through neighborhood associations. Thus, neighborhood associations act in the role of intermediary structures that connect residents with public agencies. Further, some residential estates require people who wish to live there to join the neighborhood association by contract. Under these circumstances, more than 80% of the community residents throughout the country are members of neighborhood associations.

The household is the base of participation in neighborhood associations. In each household, residents pay approximately 10 dollars per month to support the activities of

the neighborhood association. Although almost all residents are members of neighborhood associations, many of them are just passive recipients of the services and their participation is nominal.

In each neighborhood association, there are several branches that specialize in specific activities. The crime prevention branch is engaged in organizing citizen patrols, distributing crime prevention tips, and organizing youth recreational activities. This branch is composed of citizen leaders who represent each block association in the neighborhood. Although crime prevention activities are occasionally organized jointly among several block associations, citizen leaders basically organize and manage crime prevention activities in their own block. They have to contact local police departments by themselves to get useful information on crime prevention and solicit residents of their block to participate in crime prevention activities. Thus, depending on the abilities and enthusiasm of citizen leaders, crime prevention activities at the block level are very different even within areas of the same neighborhood association.

As mentioned above, the activities of the neighborhood associations have become less active recently. One of the reasons for the unpopularity of neighborhood associations is considered to be the generally conservative and undemocratic nature of those organizations (Kurasawa, 1996). The management of the activities of many of the associations has been controlled by only small numbers of long-term residents who are traditionally descendants of feudal lords. They have been more likely to maintain the status quo and less likely to represent the needs of the majority of the residents. Therefore, younger and more liberal people are more eager to participate in the activities

of more liberal and self-independent groups, such as those involved with environmental protection and recycling. However, in some urban neighborhoods, joint activities between the neighborhood associations and self-independent groups have been emerging. Consequently, in those neighborhoods, the activities of the neighborhood associations in general, and crime prevention activities in particular, have been said to be more active and more democratically managed.

Unfortunately, the preceding observations are largely based upon the anecdotes of activists in a limited number of neighborhoods. Therefore, this study attempts to empirically clarify organizational factors that enhance the involvement of residents in community crime prevention programs.

## THE THEORETICAL MODEL

FIGURE 1 presents the proposed theoretical model of effects of organizational factors that is tested in this study. In the following pages, details of each causal factor in the theoretical model are described with analysis of the related research literature.

### Commitment to Activities

The commitment of residents to crime prevention activities is one of the final dependent variables in the theoretical model. As explained above, it has been argued that crime prevention activities of neighborhood associations have been on the decrease, and this is one of the causes for the recent increase in Japan's crime rate. Therefore, it is vitally important to increase citizen participation in organized crime prevention activities, like those mentioned earlier (e.g., citizen patrols, crime prevention meetings, distribution of crime prevention tips, and organized youth recreational activities).

In addition to these organizational activities, it is the intent of community crime prevention programs to increase more routine behaviors between neighbors to prevent criminal victimization, such as discussing crime problems with neighbors, asking a neighbor to watch over a house when going out, and warning a neighbor to be on guard when a suspicious stranger is noticed hanging about. According to the research literature in community crime prevention (Hope, 1995; Rosenbaum, 1988; Rosenbaum, Lurigio & Davis, 1998), it is relatively easy to maintain the level of routine neighborly behavior

once its patterns are established, although it is generally difficult to maintain the viability of organized community activities. Furthermore, many of the experts in community crime prevention insist that routine neighborly behavior of residents is a much stronger determinant of neighborhood safety than organized activities like an organized citizen patrol. Thus, routine neighborly behavior is an important measure of residents' commitment to crime prevention activities that will be used to examine the theoretical model.

Community crime prevention programs are also expected to increase the amount of cooperation between residents and police activities such as criminal investigations. Since cooperation with criminal investigations is a reactive rather than a proactive action, it is not crime prevention in the strictest sense. However, apprehension of criminals does contribute to the prevention of subsequent crime and alleviation of fear of crime among residents, and citizen cooperation with criminal investigations is essential in keeping neighborhood safety. Thus, cooperation of residents with criminal investigations is treated as one measure of the commitment of residents to crime prevention activities in this research.

Since it is possible to assume that three types of activities, i.e., organizational activities, routine neighborly behavior, and cooperation with police activities, are highly or at least moderately correlated, each activity (or related willingness) is treated as an indicator of a latent factor in the structural equation modeling used in the current research.

## Fear of Crime

Fear of crime is the second, final dependent variable in the theoretical model to be tested in this research. Alleviation of fear of crime among residents is one of the important aims of community crime prevention programs in the U.S., and other western countries (Hope, 1995; Rosenbaum, 1988; Rosenbaum & Heath, 1990; Rosenbaum, Lurigio & Davis, 1998). By contrast, fear of crime has not been an important policy issue in Japan until recently. However, after the massive earthquake in the western part of the country, and heinous, organized criminal activity by a religious cult in the mid-1990's, concerns about public safety among the general populace have increased (Prime Minister's Office, 1997). Thus, policy makers are beginning to pay more attention to the psychological impact of crime and disaster on community residents. Furthermore, international comparative studies on crime and safety reveal that fear of crime among Japanese people is not particularly lower than that of other advanced countries, even though the crime rate in Japan is much lower than that of other countries (see Japan Urban Security Research Institute, 1992 and Van Dijk et al, 1990).

Although empirical research on the fear of crime is still limited in Japan, the research literature in the U.S. suggests that the fear of crime seriously decreases the quality of life among community residents. It further contributes to the deterioration of neighborhood safety by constraining cooperative behavior among residents (see Skogan, 1990 and Wilson & Kelling, 1982). Obviously, some interest in neighborhood safety, which is based on a rational understanding of real situations, is necessary to motivate residents to participate in community crime prevention programs. But, extreme fear of

crime among residents seems detrimental to these efforts in Japan as well. Thus, it is justifiable to place the alleviation of the fear of crime as the final dependent variable in the theoretical model to be tested in the current research.

### Sense of Control Over Neighborhood

Sense of control over neighborhood, which is an intervening variable in the theoretical model, is composed of two components: sense of personal control over the neighborhood and perceived social cohesion of the neighborhood.

First, sense of personal control over the neighborhood, which can also be labeled as perceived personal efficacy over the neighborhood, refers to the perception that a person can exert a significant amount of influence on neighborhood conditions that affect the life of the residents. This perception includes a critical understanding of the causal agents in policymaking that affect conditions of the neighborhood (Zimmerman, 1995). This means that if a person knows who it is that determines the policies that affect the quality of life in the neighborhood, he or she can protect the environment of the neighborhood by persuading that policy maker. Obviously, a sense of personal control over the neighborhood is typical of citizen leaders who successfully solve problems affecting their communities. According to the empirical literature in community psychology on citizen participation and empowerment (e.g., Prestby & Wandersman, 1985; Wandersman & Florin, 1990; Wittig & Bettencourt, 1996; Zimmerman & Perkins, 1995), a sense of personal control over the neighborhood is a critical factor in citizen participation in community activities. That is, people who have a greater sense of

personal control over the neighborhood vigorously participate in community activities. Thus, although there is no previous empirical research on the sense of personal control as a determinant of citizen participation in community activities in Japan, it seems reasonable to assume that a sense of personal control over the neighborhood increases the commitment of residents to crime prevention activities in the theoretical model. Further, as for the relationship between a sense of personal control over the neighborhood and the fear of crime among resident participants, there is some empirical research in the U.S., which found that a sense of control decreases the fear of crime (e.g., Cohn et al, 1978; Gibbs et al, 1998; Normoyle and Lavrakas, 1984; Tyler, 1981). Although a sense of control used in the previous research is a more general concept that includes sense of predictability, it is highly possible that a more specific type of sense of control, i.e., sense of personal control over the neighborhood, is a critical determinant of the fear of crime. Thus, it is hypothesized that a sense of personal control alleviates the fear of crime among resident participants in the theoretical model.

By contrast, perceived social cohesion of the neighborhood, which can also be labeled as perceived informal social control or perceived collective efficacy of the neighborhood, refers to the perception that residents in the neighborhood can get together to solve neighborhood problems. Social cohesion or collective efficacy has been highlighted as the most important ingredient of neighborhood safety in social disorganization theory, which is one of the major criminological theories (Bursik, 1988; Bursik & Grasmick, 1993). The importance of social cohesion in maintaining neighborhood safety is empirically supported by the recent research of Robert Sampson of

the New Chicago School (Sampson & Grove, 1989; Sampson, Morenoff, & Earls, 1999; Sampson, Raudenbush, & Earls, 1997). Although related empirical research is totally lacking in Japan, the research findings of the New Chicago School may reasonably justify the assumption of Japanese policy makers that the decrease of community cohesion is a major cause of the recent increase in crime and fear of crime in Japan. Therefore, perceived social cohesion by residents is reasonably hypothesized to decrease their fear of crime in the theoretical model. Further, as for the relationship between perceived social cohesion and the commitment of residents to crime prevention activities, strong empirical support does not seem available from previous research in the U.S. However, David Bayley (1991), an internationally well-known expert in policing and comparative criminology, observed that strong social cohesion in Japan encourages neighborhood residents to engage in collective activities to maintain neighborhood safety. Although Bayley's observation is not based on rigorous systematic observation, it closely matches the well-known image of the group-oriented mentality of the Japanese people. Thus, in the theoretical model of the current research, it is assumed that the perceived social cohesion of the neighborhood increases the commitment of residents to crime prevention activities.

It is highly reasonable to assume that the two preceding components of the sense of control over the neighborhood, i.e., a sense of personal control over the neighborhood and perceived social cohesion of the neighborhood, are highly, or at least moderately, correlated. This is because residents cannot feel a sense of personal control over the neighborhood if social cohesion among the residents is lacking. However, with regard to

the treatment of the above two components, it seems possible to establish two competing hypotheses. One hypothesis is that although the two components are correlated, they should be treated as separate intervening variables since each of these components has differential relationships with independent variables (i.e., organizational traits) and final dependent variables (i.e., commitment to activities and fear of crime) in the theoretical model. The alternative hypothesis is that the two components should be treated as indicators of a global factor of sense of control over the neighborhood since the two components are significantly correlated, and they have almost identical relationships with independent variables and final dependent variables in the theoretical model. The current research is the first empirical endeavor to test the relative validity of these competing hypotheses. The findings regarding these two competing hypotheses are expected to increase our understanding of the role of a sense of control over the neighborhood in causal process of citizen participation in community crime prevention activities.

### Organizational Traits

Organizational traits of community crime prevention programs, which are independent variables in the theoretical model, are divided into three variables: democratic and efficient management, support by the police, and support by organizations other than the police.

Democratic and efficient management means that a citizen leader manages the organizational activities of crime prevention activities democratically and efficiently. As mentioned previously, depending on the abilities and enthusiasm of citizen leaders, crime

prevention activities at the block level are very different even within areas of the same neighborhood association. Some anecdotal evidence of successful citizen leaders in Japan provides some clues to specific features of democratic and efficient leadership. In addition, the empirical literature on organizational factors and citizen participation in the U.S. provides us with general features of democratic and efficient leadership (e.g., Giamartino & Wandersman, 1983; Maton and Salem, 1995; Prestby & Wandersman, 1985; Prestby et al, 1990). By combining the anecdotal evidence and the research findings, the following should be considered critical features of successful leadership. The first feature is participatory democratic leadership. This means that the citizen leader should give all participants an opportunity to express their opinions concerning important decisions, and to do jobs, which reflect their respective aptitudes and contribute to their personal skill development. Second, in addition to democratic management, the citizen leader should manage organizational activities efficiently in order to produce beneficial outcomes of activities. For this, the citizen leader should make plans for group activities, try to collaborate with neighboring block associations, and mobilize resources in the community by soliciting the support of police and other organizations. These aspects of successful leadership are considered inseparable, and jointly contribute to the production of beneficial effects. As for the effects of democratic and efficient management on a sense of control over the neighborhood, previous research in the U.S. found that democratic and efficient management increases both a sense of personal control over the neighborhood, and a perceived social cohesion of the neighborhood. Thus, by adding the hypotheses regarding the effects of a sense of control on the final dependent variables, it

is justifiable to hypothesize that democratic and efficient management increases the commitment of residents to crime prevention activities, and decreases the fear of crime among residents partly through an increase in a sense of control over the neighborhood. It is not presently possible to assume that a sense of control over the neighborhood is the only intervening variable that mediates the relationships between democratic and efficient management, and the final dependent variables. Democratic and efficient management is hypothesized to have direct effects on the commitment to activities and the fear of crime in the theoretical model.

The second factor of organizational traits, support by the police, has been emphasized in the recent movement toward community policing in the U.S. (Rosenbaum, 1994, 1995; Skogan & Hartnett, 1997). Before the rise of community policing, i.e., in the era of professional policing, the police were considered to be solely responsible for maintaining public safety, and police administrators emphasized reactive responses (e.g., investigation) rather than proactive responses (e.g., crime prevention activities). However, professional policing was found to be ineffective in keeping social order because it tended to widen the distance between the police and community residents. In contrast, in the current era of community policing, the police are no longer solely responsible for maintaining community safety. However, the cooperative effort between the police and community residents is considered to be very important in maintaining social order. Specifically, the police are increasingly expected to become facilitators of citizen efforts to keep neighborhood safety through crime prevention activities. The police are expected to hear more of the needs and the requests of community residents,

and to provide community residents with useful information, such as updated statistics of local crime and crime prevention tips. This reflects the current status of community policing in the U.S., and a very similar situation has been emerging recently in Japan. In 1994, the National Police Agency instructed each local police department to encourage more community residents to take the initiative in community crime prevention activities by providing adequate support. The police administrators expected an increase in community cohesion and a decrease in the crime rate and the fear of crime by increasing the participation of community residents in crime prevention activities. Actually, some of the data that is used in the current study was made available by demonstration projects that evaluated the impact of revised community-oriented policing on neighborhood residents. Thus, by representing the expectations of police administrators in Japan in the theoretical model, it is hypothesized that adequate support by the police increases the commitment of residents to crime prevention activities, and decreases the fear of crime among residents. Furthermore, a sense of control over the neighborhood is hypothesized to partially mediate the relationships between support by the police and the final dependent variables.

Finally, the third factor of organizational traits, i.e., support by organizations other than police, has been also emphasized in the recent movement toward community policing in the U.S. and Japan. Furthermore, the research literature in community psychology suggests that mobilization of various resources in the neighborhood is important in producing successful outcomes in community activities by residents (e.g., Prestby & Wandersman, 1985; Wandersman & Florin, 1990; Wittig & Bettencourt, 1996;

Zimmerman & Perkins, 1995). In U.S., the police have been trying to facilitate and coordinate working partnerships with schools, businesses, churches, and social service agencies to keep neighborhood safety. Similarly, in Japan, since the beginning of revised community-oriented policing in 1994, the police have been trying to facilitate working partnerships with municipal public agencies, businesses, and schools in their efforts at crime prevention through environmental design (CPTED), and community youth programs to prevent juvenile delinquency. Although the support provided by organizations other than the police does not seem enough at the current stage of development, it is on the increase in many parts of the country. Thus, in the theoretical model, it is hypothesized that support by organizations other than the police increases the commitment of residents to crime prevention activities, and decreases the fear of crime among residents. Furthermore, a sense of control over the neighborhood is hypothesized to partially mediate the relationships between support by other organizations and the final dependent variables.

As for the relationships among the three preceding organizational traits, it seems difficult to specify a direction of causality since reciprocal relationships are expected among them. Thus, by treating the three organizational traits as separate independent variables, the current research only examines the relative effects of each organizational trait on intervening and final dependent variables.

### Research Hypotheses

The specified research hypotheses in the model are summarized as follows.

(1) The specific organizational traits (e.g. democratic and efficient management, support by the police, and support by organizations other than police) increase the level of commitment to activities among participants and decrease their fear of crime directly (or through factors unspecified in the current research).

(2) The specific organizational traits increase the sense of control over the neighborhood among participants (i.e., a sense of personal control over the neighborhood and a perceived social cohesion of the neighborhood).

(3) Sense of control over the neighborhood among participants increases their level of commitment to crime prevention activities, and decreases their fear of crime.

In addition, as mentioned previously, there are two competing hypotheses regarding the relative effects of two components of sense of control over the neighborhood in the theoretical model. These research hypotheses are examined in the following two studies that are based on different data sets.

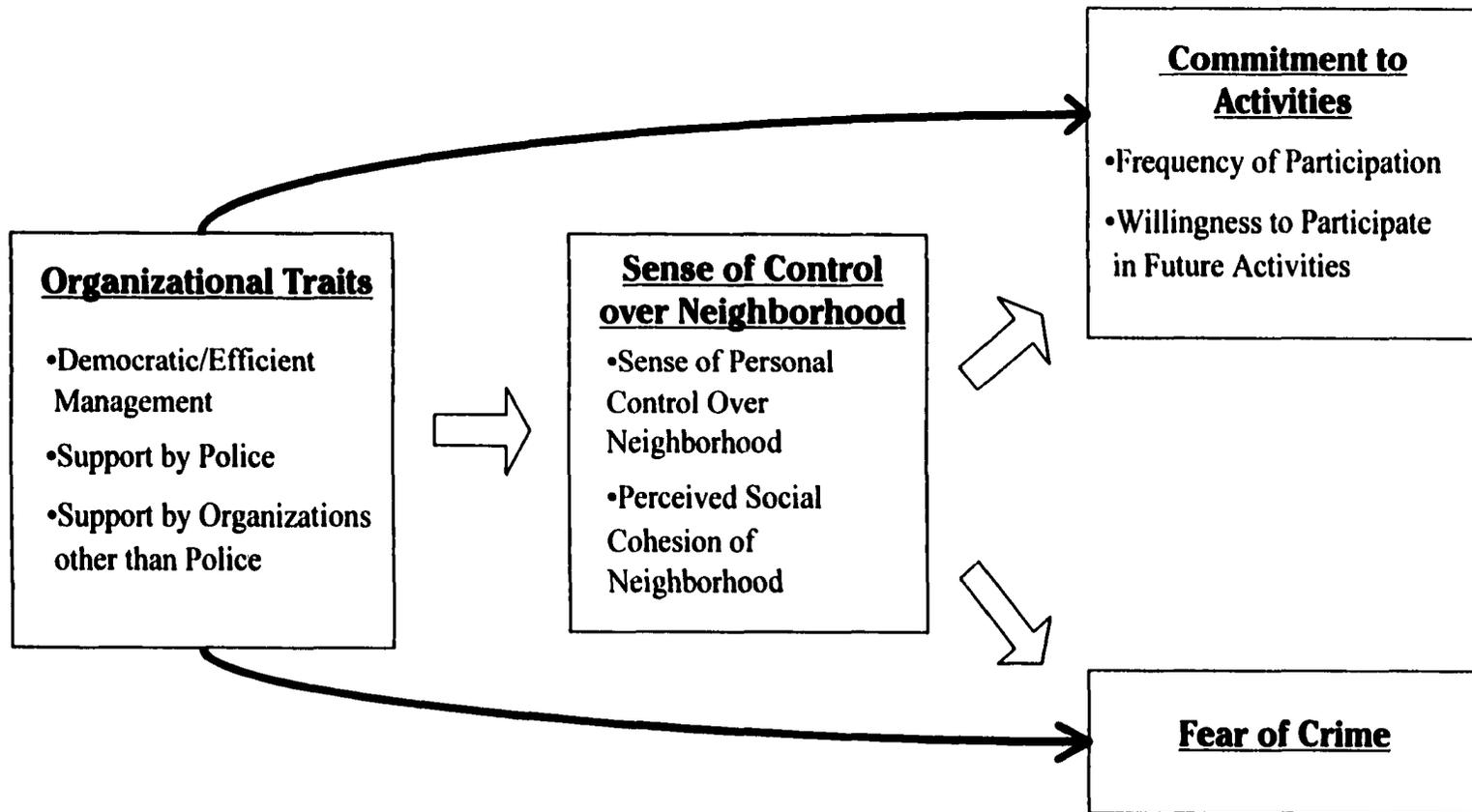


FIGURE 1. Theoretical Model of Citizen Participation in Community Crime Prevention

## STUDY 1

In the first study, structural equation modeling with latent variables was used to examine the validity of the theoretical model described above. Since the data of the first study is based on a quota sample of residents selected from only 42 neighborhoods, and that subjects from the same neighborhoods do not necessarily participate in the same crime prevention activities if they live in different blocks within the same neighborhoods, only individual-level variables, including individual perception of organizational factors, were used. However, the strength of the first study is that data were collected twice (one year apart) from most of the subjects and it is therefore possible to confirm the validity of the theoretical model using change scores of variables in addition to the analysis based on cross-sectional data.

### Method

#### Subjects and Procedure

The current analysis of Study 1 is a secondary analysis of the data collected by the National Police Agency, which originally intended to evaluate the impact of demonstration projects in crime prevention on neighborhood residents. In each of 42 urban neighborhoods, which were chosen by the National Police Agency as sites for the demonstration projects, quota samples of 300 residents were selected from a list of

registered adult residents made available by each neighborhood association. Each quota sample was sampled to approximately reflect the distribution of the sex and age of adult residents in each neighborhood. Selected residents were contacted and asked to fill in a questionnaire. Completed questionnaires were returned from 9,053 people for a response rate of 71.8%. Out of this sample, 3,320 persons who had participated in community crime prevention were selected for the current analysis (Time 1 subjects). Then, one year later, a second survey was conducted of the respondents who participated in the first survey. Completed questionnaires were returned from 6,387 people for a response rate of 70.6%. As for the subjects for the current analysis, 2,820 of the 3,320 persons returned completed questionnaires (Time 2 subjects). The first survey was conducted in February of 1994 and the second survey was conducted in February of 1995. As for the demographic traits of the subjects in the current analysis, males comprise 61% of Time 1 subjects, and 59% of Time 2 subjects. The mean age is 52.6 years for Time 1 subjects and 53.3 years for Time 2 subjects. The mean years of residence in the current neighborhood are 28.4 for Time 1 subjects, and 29.4 for Time 2 subjects.

### Measures

The following 29 manifest variables were constructed out of questions included in the questionnaire and were used in the current analysis. Furthermore, each of the following manifest variables was constructed at each time of data collection and the change scores of each manifest variable were calculated for analysis.

**[Perceived Organizational Traits]**

As for perceived organizational traits, the following three latent factors were constructed.

Democratic and Efficient Management (F1). Subjects were asked to rate how much of each of the following statements applied to the community crime prevention activities in which they participated. The responses to the following 7 items were used as separate observable indicators measuring a latent variable.

- 1) Every participant is encouraged to express his/her opinion (V1).
- 2) Activities are properly managed according to predetermined plans (V2).
- 3) Decision making in the group is quick (V3).
- 4) Instructions of our leader are proper (V4).
- 5) Our leader encourages activities of participants (V5).
- 6) Participants help each other to pursue group activities (V6).
- 7) Workload among participants is equal (V7).

The response format for each item was the following: 5 = strongly agree, 4 = somewhat agree, 3 = difficult to say or do not know, 2 = somewhat disagree, 1 = strongly disagree.

Support by Police (F2). With regard to support provided by the police, subjects were asked to rate how much of each of the following statements applied to the community crime prevention activities in which they participated. The responses to the following 2 items were used as separate observable indicators measuring a latent variable.

- 1) The police provide us with updated statistics of local crime (V8).
- 2) The police provide us with useful crime prevention tips (V9).

The response format for each item was the same as that for “Democratic and Efficient Management.”

Support by Organizations other than Police (F3). With regard to support provided by organizations other than the police, subjects were asked to rate how much of each of the following statements applied to the community crime prevention activities in which they participated. The responses to the following 2 items were used as separate observable indicators measuring a latent variable.

- 1) Public agencies other than police give support to our activities (V10).
- 2) Companies give support to our activities (V11).

The response format for each item was the same as that for “Democratic and Efficient Management” and “Support by Police.”

[Sense of Control Over Neighborhood]

The following two latent factors were constructed for sense of control over neighborhood. In structural equation modeling, the two models, which have differential treatment of these two latent factors, are estimated. One is the model that includes the following two latent factors as separate intervening variables. The other is the model in which the following two latent variables are used as indicators to construct second-order factor of sense of control over neighborhood.

Sense of Personal Control Over Neighborhood (F4). This latent variable was measured by using the following 3 items as manifest indicators.

- 1) I can bring the community together (V12).

2) I can improve the situation of the neighborhood by actively participating in community activities (V13).

3) I understand where I can get help to solve neighborhood problems (V14).

Subjects were asked how much they agreed with each of the above statements using the following format: 5 = strongly agree, 4 = somewhat agree, 3 = difficult to say or do not know, 2 = somewhat disagree, 1 = strongly disagree.

Perceived Social Cohesion of Neighborhood (F5). This latent variable represents how participants perceive the level of informal social control and problem solving ability of the neighborhood and was measured by using the following 3 items as manifest indicators.

1) In this neighborhood, people can get together to solve problems (V15).

2) In this neighborhood, people generally share ideas and values (V16).

3) In this neighborhood, people generally help each other (V17).

Subjects were asked how much they agreed with each of the above statements using the same format as that for “Sense of Personal Control Over Neighborhood.”

#### [Commitment to Activities]

As for level of commitment to community crime prevention activities among participants, the following three latent factors were constructed. Out of the three latent factors, two are composed of behavioral measures and one is composed of an attitudinal measure. In structural equation modeling, these three latent factors are used as indicators measuring a second-order latent factor, “Commitment to Activities” (F11).

**Frequency of Participation in Organizational Activities (F6).** Subjects were asked how many times they participated in organizational activities related to community crime prevention in their neighborhood during the past year. This measure is a summation of frequency of participation in each of the following activities (V18).

- 1) Preventive patrol by citizens
- 2) Crime prevention meeting
- 3) Editing and distributing the newsletters of crime prevention
- 4) Visiting elderly people and giving them crime prevention tips
- 5) Making requests for environmental changes such as an increase in street lighting
- 6) Making home security checks
- 7) Youth recreational programs to prevent juvenile delinquency
- 8) Other activities

**Neighborly Actions to Prevent Crime (F7).** In addition to the preceding measure of participation in organizational activities, subjects were asked how often they engaged in routine neighborly behavior to prevent crime. The responses to the following three items were used as separate observable indicators measuring a latent variable.

- 1) When I see a suspicious person hanging around the neighborhood, I give a warning to my neighbors (V19).
- 2) When I go out, I ask my neighbors to watch over my house (V20).
- 3) I talk out crime issues with my neighbors (V21).

The response format for each item was the following: 3 = very often, 2 = sometimes, 1 =

almost never.

**Willingness to Participate in Future Activities (F8).** Subjects were asked questions probing their willingness to participate in future activities to maintain neighborhood safety. The responses to the following two items were used as separate observable indicators measuring a latent variable.

1) If serial arson takes place in your neighborhood, how eager are you to participate in an organized preventive patrol by request? The response format for this item was the following: 3 = very eager, 2 = somewhat eager, 1 = not eager (V22).

2) If a heinous crime has been committed in your neighborhood, how eager are you to cooperate with investigative activities by the police? The response format for this item was the following: 5 = very eager, 4 = somewhat eager, 3 = difficult to say or do not know, 2 = not very eager, 1 = not eager at all (V23).

[Fear of Crime]

As for fear of crime, the following two latent factors were constructed. In structural equation modeling, these two latent factors are used as indicators measuring a second-order latent factor, "Fear of Crime" (F12).

**Bad Prospect for Neighborhood Safety (F9).** Subjects were asked to predict future trends of crime problems in their neighborhood using the following two items. The responses to the 2 items were used as separate observable indicators measuring a latent variable.

1) Do you think that crime will increase in your neighborhood during the next

year? The response format for each item was the following: 5 = will increase a lot, 4 = will increase somewhat, 3 = will not change, 2 = will decrease somewhat, 1 = will decrease a lot (V24).

2) Do you think that crime will increase in your neighborhood during next 5 years? The response format for each item was the following: 3 = will increase, 2 = will not change or do not know, 1 = will decrease (V25).

Estimated Fear of Crime among Residents (F10). Subjects were asked to estimate the fear of crime among the residents in their neighborhood by evaluating the following 4 situations. The responses to the 4 items were used as separate manifest indicators measuring a latent variable.

- 1) When they are in their home alone during the day (V26).
- 2) When they are in their home alone at night (V27).
- 3) When they are walking alone in your neighborhood during the day (V28).
- 4) When they are walking alone in your neighborhood at night (V29).

The response format for each item was the following: 5 = very fearful, 4 = somewhat fearful, 3 = difficult to say or do not know, 2 = not very fearful, 1 = not fearful at all.

Descriptive statistics of the above manifest variables are presented in TABLE 1 and TABLE 2 (cross-sectional data collected in time 1 are listed in TABLE 1, and change scores between time 1 and time 2 are listed in TABLE 2)

### Analytic Strategy

The structural equation modeling procedure using the EQS version 5.7b (Bentler,

1995) was used to test for the goodness-fit of the total model and to analyze direct and indirect (mediating) effects of perceived organizational factors on commitment to crime prevention activities and fear of crime among participants. In EQS, maximum likelihood (ML) was used as the method of estimation. Furthermore, in the maximum likelihood estimation, the robust option was used, which provides an alternative method of estimating the standard errors of parameters when multivariate normality does not hold (as for skewness and kurtosis, see TABLE 1 and TABLE 2). Also, the robust option provides the Satorra-Bentler scaled test statistic, which more closely approximates the chi-square distribution of the overall fit statistic than do the usual test statistics based on the assumption of multivariate normality (Bentler, 1995, pp.47-48). Thus, all the analyses of EQS reported below utilized the Satorra-Bentler chi-square statistic, and the tests of the significance of parameters were computed using the robust standard errors.

First, a saturated model, i.e., the model including all paths according to FIGURE 1, was tested using time 1 data (cross-sectional models). Then, the validity of the same model was examined using change of each variable, which is obtained by subtracting the time 1 score from the time 2 score (longitudinal models). In structural equation modeling, latent factor models are used to control for measurement errors. In the case of latent factors that are measured by only two manifest indicators, their residual variances were set equal to each other for identification. As mentioned in the previous section, second-order factors were constructed for commitment to activities and fear of crime. Further, with regard to sense of control over neighborhood, nested model comparisons were done between the model including its second-order factor and that including its two first-order

factors as separate intervening variables. In the case of the latter model, disturbances of two factors of sense of control were set free to covary.

In addition to the analyses using variables without any transformations, analyses were repeated using residuals of each manifest variable that were available by regressing each variable on the four control variables (sex, age, years in residence, and previous victimization) of the subjects. However, analyses using these residuals produced almost identical results as those of the analyses without the controls of the four variables. Thus, the results of the analyses using variables without any transformations are presented and examined below.

## Results

### Cross-sectional Models

Inspection of the results of the measurement model in TABLE 3 shows how well each of the first-order latent factors is measured using manifest indicators. As shown in Table 3, all standardized factor loadings exceed .50, and they are all statistically significant at  $p < .001$ . This means that all of the first-order latent variables are properly constructed using their respective manifest indicators.

Then, moving on to the structural path models, which include second-order factor models, FIGURE 2A displays the model that includes two first-order factors of sense of control over neighborhood as separate intervening variables (Model 1). In contrast,

FIGURE 2B displays the model that includes second-order factor of sense of control over neighborhood, which is measured using two first-order latent factors as indicators (Model 2). In both FIGURE 2A and FIGURE 2B, only the significant paths are drawn with standardized path coefficients. Furthermore, indices of goodness of fit are shown in TABLE 4. Although both models show excellent fit with the actual data, nested model comparisons indicate that Model 1 has significantly better fit with the data than Model 2 ( $\chi^2=104.99$ ,  $df=4$ ,  $p < .001$ ). Thus, Model 1 should be chosen and the results of Model 1 are closely examined below. For that purpose, standardized path coefficients of all structural paths in Model 1 are listed in TABLE 5. In addition, TABLE 6 displays the decomposition of standardized effects of perceived organizational variables on final dependent variables, i.e., commitment to activities and fear of crime.

The second-order factor models of the resident's commitment to activities and fear of crime are represented in FIGURE 2A. All of the standardized factor loadings are statistically significant at  $p < .001$ , and most of them exceed .50, meaning that both of the second-order factors are properly measured.

Next, with regard to correlations among independent latent variables, which are perceived organizational traits, they are all positive and statistically significant at  $p < .001$ , suggesting reciprocal relationships among these variables. Turning our attention to the effects of these independent variables on intervening variables, three perceived organizational variables jointly explain 6.6% of the variance of sense of personal control and 9.1% of the variance of perceived social cohesion, and each of them has differential effects on these intervening variables (see TABLE 5). Democratic and efficient

management significantly increases both the sense of personal control and perceived social cohesion. In contrast, support by police significantly increases only the sense of personal control, and support by other organizations significantly increases only perceived social cohesion.

Turning our attention to the effects of the independent and intervening variables on final dependent variables, these variables explain 68.6% of the variance of commitment to activities, and 16.7% of the variance of fear of crime. Obviously, each of the independent and intervening variables has differential effects on the final dependent variables. Democratic and efficient management increases commitment to activities directly, although it does not affect the fear of crime directly. By contrast, support by police affects both of the final dependent variables directly, meaning that support by police increases commitment to activities and decreases fear of crime among participants directly. Finally, support by other organizations does not affect significantly either of the final dependent variables directly. As for the effects of intervening variables on the final dependent variables, while sense of personal control has significant effect only on the commitment to activities, perceived social cohesion has significant effect only on the fear of crime. This means that sense of personal control increases commitment to activities, and perceived social cohesion alleviates the fear of crime.

Also, the differential effects of each of the perceived organizational variables are obvious in terms of their total effects (see TABLE 6). Regarding the total effect on commitment to activities, democratic and efficient management has the largest impact, which is 51.4% larger than that of support by police (.377 vs. .249). By contrast, support

by police has the largest total effect on fear of crime, which is 69.6% larger than that of democratic and efficient management (-.156 vs. -.092). Comparatively, support by other organizations has only a negligible total effect on both commitment to activities and fear of crime.

With regard to the significant indirect effect of perceived organizational variables on the final dependent variables, .096 ( $= .145 \times .664$ ) is the indirect effect of democratic and efficient management on commitment to activities, which is mediated by sense of personal control. Since its total effect is .377, this means that the sense of personal control mediates 25.5% of the total effect of democratic and efficient management on commitment to activities among participants. Similarly, .107 ( $= .161 \times .664$ ) is the indirect effect of support by police on commitment to activities, which is mediated by sense of personal control. Since its total effect is .249, this means that sense of personal control mediates 42.9% of the total effect of support by police on commitment to activities among participants.

### Longitudinal Models

Results of longitudinal models, which use the change scores of variables in the theoretical model, are examined below in the same manner as was used in the cross-sectional models.

Take a look at the results of the measurement model in TABLE 7 to examine how well each of the first-order latent factors is measured using manifest indicators. Although most of the standardized factor loadings become lower as compared to those of the cross-

sectional models, many of them exceed .50, and they are all statistically significant at  $p < .001$ . This means that all of the first-order latent variables are properly constructed by using their respective manifest indicators.

Then, moving on to the structural path models that include second-order factor models, FIGURE 3A displays the model that includes two first-order factors of sense of control over neighborhood as separate intervening variables (Model 1). In contrast, FIGURE 3B displays the model that includes the second-order factor of sense of control over neighborhood, which is measured using two first-order latent factors as indicators (Model 2). In both FIGURE 3A and FIGURE 3B, only the significant paths are drawn with standardized path coefficients. Furthermore, indices of goodness of fit are shown in TABLE 8. Although both models show excellent fit with the actual data, nested model comparisons indicate that Model 1 has significantly better fit with the data than Model 2 ( $\chi^2=14.56$ ,  $df=4$ ,  $p < .01$ ). Thus, Model 1 should be chosen and the results of Model 1 are closely examined below. For that purpose, standardized path coefficients of all structural paths in Model 1 are listed in TABLE 9. In addition, TABLE 10 displays the decomposition of standardized effects of perceived organizational variables on final dependent variables, i.e., commitment to activities and fear of crime.

First, take a look at the second-order measurement models of commitment to activities and fear of crime. All of the standardized factor loadings are statistically significant at  $p < .01$  and more than half exceed .50, meaning that both of the second-order factors are properly measured.

Next, with regard to correlations among perceived organizational traits, they are all

positive and statistically significant at  $p < .01$ , although the correlation between democratic and efficient management and support by other organizations is relatively weak ( $r = .07$ ). Tuning our attention to the effects of these independent variables on intervening variables, three perceived organizational variables jointly explain 3.5% of the variance of sense of personal control, and 2.9% of the variance of perceived social cohesion, and each of them has a differential effect on these intervening variables (see TABLE 9). In the case of democratic and efficient management, it significantly increases both sense of personal control and perceived social cohesion. In contrast, support by police significantly increases only sense of personal control, and support by other organizations significantly increases only perceived social cohesion.

The effects of the independent and intervening variables on the final dependent variables explains 38.2% of the variance of commitment to activities, and 6.8% of the variance in fear of crime. Obviously, each of the independent and intervening variables has differential effects on the final dependent variables. Democratic and efficient management increases commitment to activities directly, although it does not affect fear of crime directly. By contrast, support by police affects both of the final dependent variables directly, meaning that support by police increases commitment to activities, and decreases fear of crime among participants directly. Finally, support by other organizations does not affect significantly either of the final dependent variables directly. As for the effects of the intervening variables on the final dependent variables, sense of personal control has a significant effect only on commitment to activities, while perceived social cohesion has a significant effect only on the fear of crime. This means that sense of personal control

increases commitment to activities, and perceived social cohesion alleviates fear of crime.

The differential effects of each of the organizational variables are obvious in terms of their total effects (see TABLE 10). Regarding the total effect on commitment to activities, democratic and efficient management has the largest impact, which is 39.1% larger than that of support by police (.313 vs. .225). By contrast, support by police has the largest total effect on fear of crime. Comparatively, support by other organizations has only a negligible total effect on either commitment to activities or fear of crime. However, the direction of its effects is noteworthy. That is, support by other organizations decreases commitment to activities, and increases fear of crime among participants.

With regard to the significant indirect effect of organizational variables on the final dependent variables, .042 ( $= .131 \times .322$ ) is the indirect effect of democratic and efficient management on commitment to activities, which is mediated by sense of personal control. Since its total effect is .313, this means that sense of personal control mediates 13.5% of the total effect of democratic and efficient management on commitment to activities among participants. Further, .023 ( $= .107 \times .210$ ) is the indirect effect of democratic and efficient management on commitment to activities that is mediated by perceived social cohesion, which is 7.2% of its total effect. Similarly, .030 ( $= .094 \times .322$ ) is the indirect effect of support by police on commitment to activities, which is mediated by sense of personal control. Since its total effect is .225, this means that sense of personal control mediates 13.5% of the total effect of support by police on commitment to activities among participants.

## Summary

In Study 1, structural equation modeling was used to examine the direct and indirect (mediating) effects of perceived organizational factors, i.e., democratic and efficient management, support by police, and support by other organizations, on commitment to crime prevention activities and fear of crime among participants.

To sum up the results of Study 1, we have reached converging findings from both of the cross-sectional and longitudinal models. Each of the organizational factors has a differential impact on the final dependent variables (i.e., commitment to crime prevention activities and fear of crime). Democratic and efficient management has significant effects on both of the final dependent variables, meaning that it increases commitment to activities, and decreases fear of crime. Its impact on commitment to activities is particularly remarkable, and a substantial amount of its total effect on commitment to activities is largely mediated by sense of personal control. On the other hand, the effect of democratic and efficient management on fear of crime is largely mediated by perceived social cohesion. Similarly, support by police has significant effects on both of the final dependent variables, meaning that it increases commitment to activities, and decreases fear of crime. Although its effect on commitment to activities is smaller than that of democratic and efficient management, it is still substantial and is partially mediated by sense of personal control. The effect of support by police on fear of crime is larger than that of democratic and efficient management, although it is not significantly mediated by

either sense of personal control or perceived social cohesion. Finally, support by other organizations does not have a substantial and beneficial impact on either commitment to activities or fear of crime.

**TABLE 1. Descriptive Statistics of Manifest Variables:  
Cross-sectional Models in Study 1**

<b>Variable</b>	<b>M</b>	<b>Range</b>	<b>SD</b>	<b>Skew</b>	<b>Kurtosis</b>
V1 Every participants are encouraged to express opinion	3.78	1-5	0.97	-0.39	-0.60
V2 Activities are properly managed according to plans	3.67	1-5	0.95	-0.38	-0.44
V3 Decision making in the group is quick	3.39	1-5	0.94	-0.16	-0.61
V4 Instructions of our leader are proper	3.59	1-5	0.89	-0.33	-0.33
V5 Our leader encourages participants	3.57	1-5	0.91	-0.32	-0.39
V6 Participants help each other to pursue group activities	3.64	1-5	0.91	-0.38	-0.36
V7 Workloads among participants are equal	3.48	1-5	0.91	-0.32	-0.39
V8 The police provide us with updated crime statistics	3.29	1-5	1.00	-0.09	-0.73
V9 The police provide us with useful crime prevention tips	3.30	1-5	1.00	-0.09	-0.72
V10 Public agencies other than police give us support	2.89	1-5	0.94	0.06	-0.50
V11 Companies give us support	2.58	1-5	0.90	0.09	-0.22
V12 I can bring the community together	2.97	1-5	1.23	-0.07	-1.39
V13 I can improve situations of neighborhood	3.43	1-5	1.10	-0.57	-0.92
V14 I understand where I can get help	3.75	1-5	1.04	-0.96	0.10
V15 In this neighborhood, people can get together	3.75	1-5	1.04	-0.95	0.08
V16 In this neighborhood, people share ideas and values	3.09	1-5	1.14	-0.17	-1.39
V17 In this neighborhood, people help each other	3.70	1-5	0.98	-0.99	0.14
V18 Frequency of participation in organizational activities	10.74	0-362	20.25	6.18	63.05
V19 In seeing a suspicious man, I give a warning to neighbors	1.94	1-3	0.65	0.06	-0.64
V20 When going out, I ask neighbors to watch over my house	1.60	1-3	0.70	0.75	-0.67
V21 I talk out crime issues with neighbors	1.59	1-3	0.58	0.40	-0.72
V22 I will participate in patrols to prevent arsons	2.59	1-3	0.55	-0.95	-0.13
V23 I will cooperate with police investigation	4.24	1-5	0.62	-0.53	1.06
V24 Crime will increase during the next year	3.29	1-5	0.74	-0.28	0.71
V25 Crime will increase during next 5 years	2.30	1-3	0.62	-0.31	-0.66
V26 Fear of crime at home during the day	2.00	1-5	0.80	1.20	1.70
V27 Fear of crime at home during the night	2.54	1-5	1.10	0.63	-0.84
V28 Fear of crime off home during the day	2.38	1-5	1.03	0.82	-0.35
V29 Fear of crime off home during the night	3.47	1-5	1.19	-0.46	-1.11

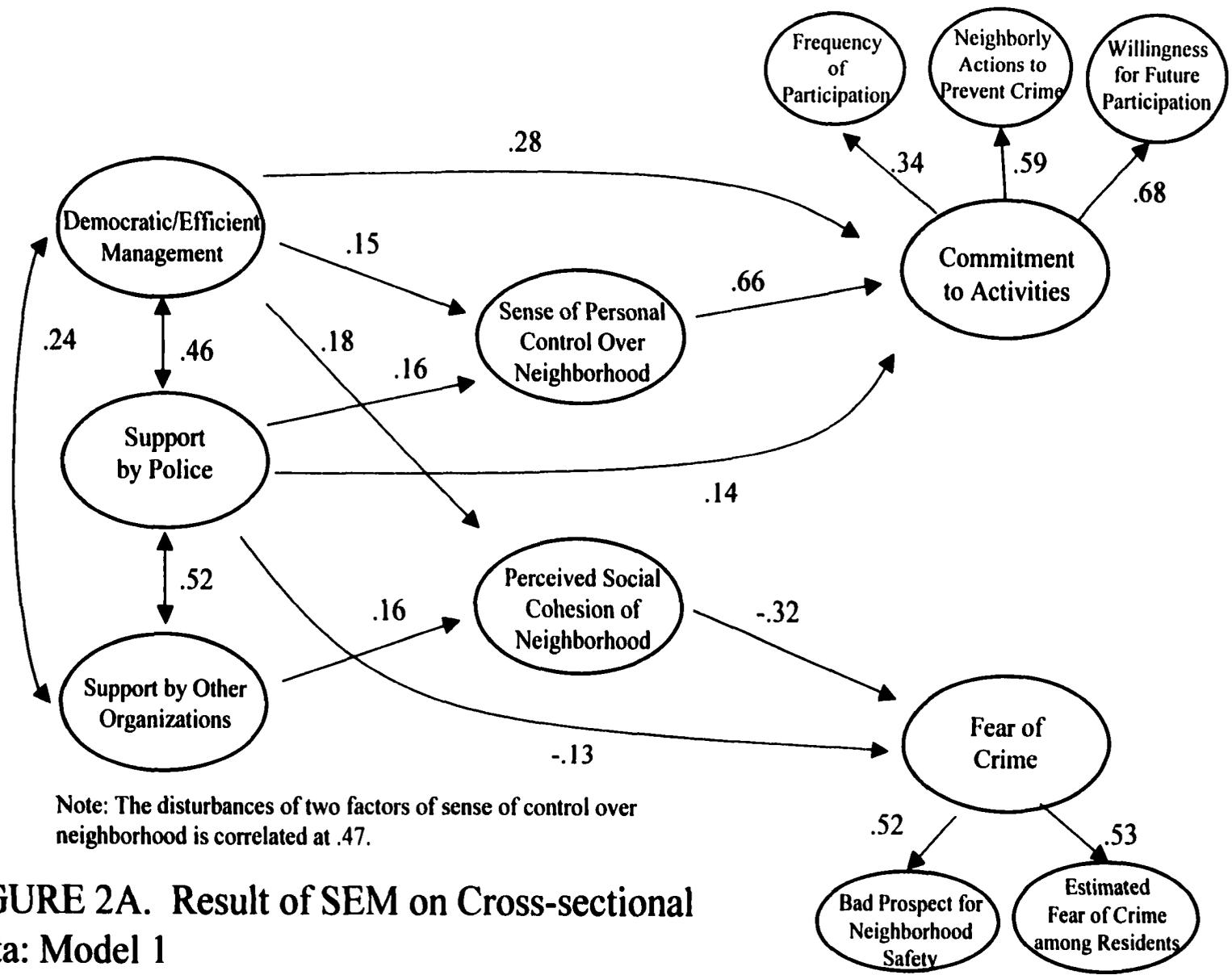
Note: Expressions of some variables are abbreviated. N=3320

**TABLE 2. Descriptive Statistics of Manifest Variables:  
Longitudinal Models in Study I**

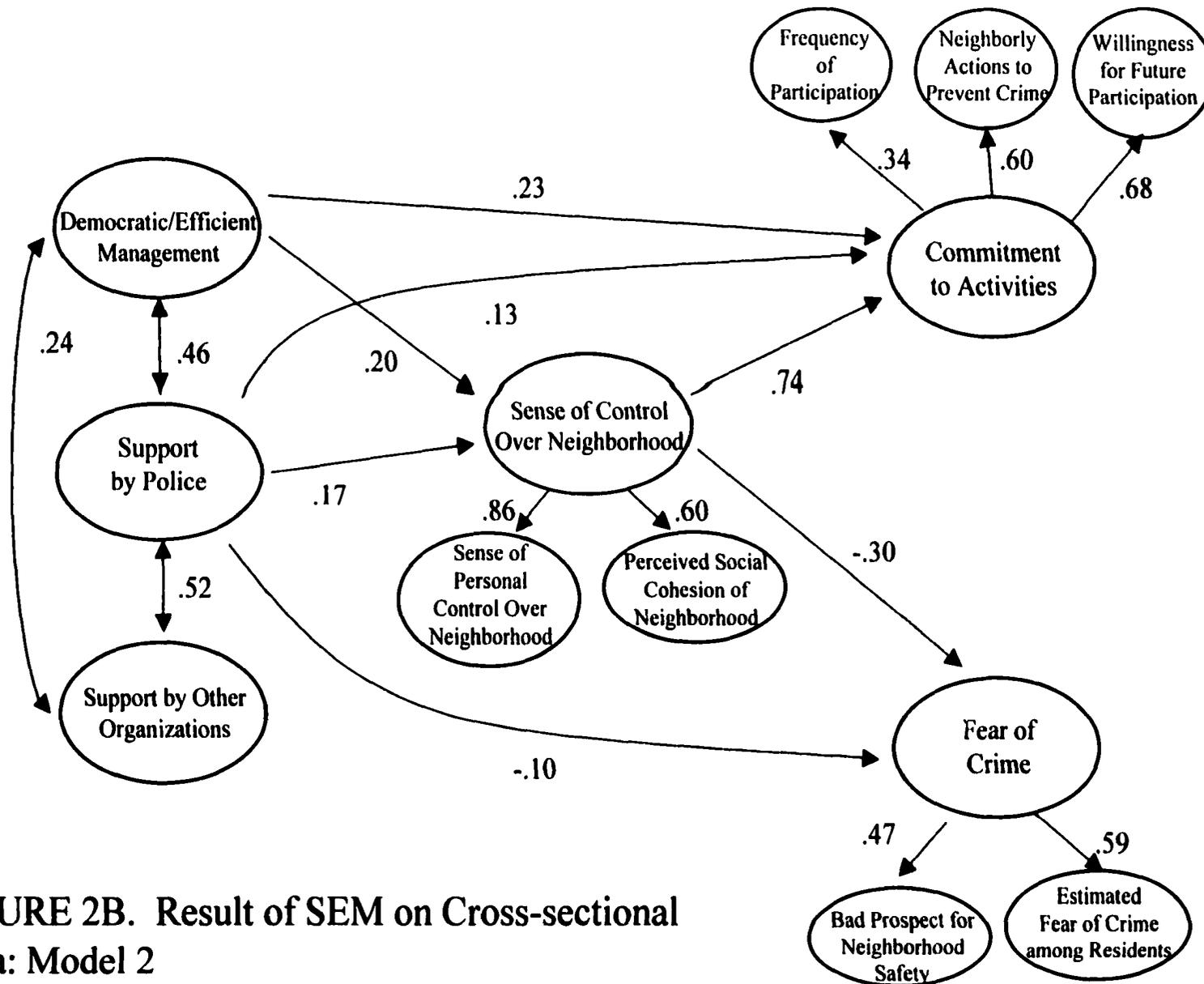
<b>Variable</b>	<b>M</b>	<b>Range</b>	<b>SD</b>	<b>Skew</b>	<b>Kurtosis</b>
V1. Every participants are encouraged to express opinion	0.01	-4-3	1.11	0.00	0.25
V2. Activities are properly managed according to plans	-0.05	-4-3	1.07	-0.02	0.18
V3. Decision making in the group is quick	-0.01	-4-4	1.10	-0.05	0.30
V4. Instructions of our leader are proper	-0.01	-3-4	1.00	0.00	0.37
V5. Our leader encourages participants	0.01	-3-4	1.03	0.05	0.38
V6. Participants help each other to pursue group activities	0.02	-3-4	1.01	-0.02	0.36
V7. Workloads among participants are equal	-0.02	-4-4	1.03	-0.11	0.63
V8. The police provide us with updated crime statistics	0.07	-3-3	1.07	0.00	0.22
V9. The police provide us with useful crime prevention tips	0.06	-4-4	1.12	-0.05	0.10
V10. Public agencies other than police give us support	-0.05	-4-4	1.06	-0.01	0.34
V11. Companies give us support	-0.04	-4-4	1.05	0.06	0.45
V12. I can bring the community together	0.06	-3-4	1.08	0.02	1.06
V13. I can improve situations of neighborhood	0.01	-4-4	1.14	-0.04	0.64
V14. I understand where I can get help	-0.01	-4-4	1.16	-0.03	1.11
V15. In this neighborhood, people can get together	-0.11	-4-4	1.15	0.08	0.85
V16. In this neighborhood, people share ideas and values	-0.14	-4-4	1.26	-0.03	0.18
V17. In this neighborhood, people help each other	-0.11	-4-4	1.08	-0.01	0.79
V18. Frequency of participation in organizational activities	-2.36	-236-116	17.38	-2.60	41.49
V19. In seeing a suspicious man, I give a warning to neighbors	-0.03	-2-2	0.73	0.03	0.54
V20. When going out, I ask neighbors to watch over my house	0.00	-2-2	0.72	0.03	1.02
V21. I talk out crime issues with neighbors	0.01	-2-2	0.65	-0.04	0.59
V22. I will participate in patrols to prevent arsons	0.00	-2-2	0.61	-0.15	1.36
V23. I will cooperate with police investigation	0.11	-3-3	0.70	0.11	1.55
V24. Crime will increase during the next year	-0.13	-3-4	0.82	-0.04	1.22
V25. Crime will increase during next 5 years	-0.06	-2-2	0.71	-0.14	0.70
V26. Fear of crime at home during the day	0.10	-4-3	0.91	0.02	1.77
V27. Fear of crime at home during the night	0.10	-4-4	1.17	0.01	0.67
V28. Fear of crime off home during the day	0.04	-4-4	1.11	-0.05	0.90
V29. Fear of crime off home during the night	-0.04	-4-4	1.20	-0.02	0.41

Note: Expressions of some variables are abbreviated. N=2820





**FIGURE 2A. Result of SEM on Cross-sectional Data: Model 1**



**FIGURE 2B. Result of SEM on Cross-sectional Data: Model 2**

**TABLE 4. Statistical and Practical Indices of Fit for Nested Models on Cross-sectional Data**

	DF	CHI <sup>2</sup>	NFI	NNFI	CFI	Robust CFI
Model 1	358	1389.422**	.945	.951	.956	.961
Model 2	362	1494.413**	.941	.947	.952	.957
Difference	4	104.991**	-.004	-.004	-.004	-.004

Note: CHI<sup>2</sup> is Satorra-Bentler scaled chi-square.

\*\* p<.001

**TABLE 5. Standardized Path Coefficients of Structural Paths in Model 1 on Cross-sectional Data**

Predictor	Explained Variable			
	F4. Sense of Personal Control	F5. Perceived Social Cohesion	F11. Commitment to Activities	F12. Fear of Crime
F1. Democratic and Efficient Management	0.145**	0.178**	0.282**	-0.027
F2. Support by Police	0.161**	0.050	0.143**	-0.131**
F3. Support by Other Organizations	-0.009	0.161**	-0.028	0.012
F4. Sense of Personal Control			0.664**	-0.055
F5. Perceived Social Control			-0.005	-0.320**
R-square	0.066	0.091	0.686	0.167

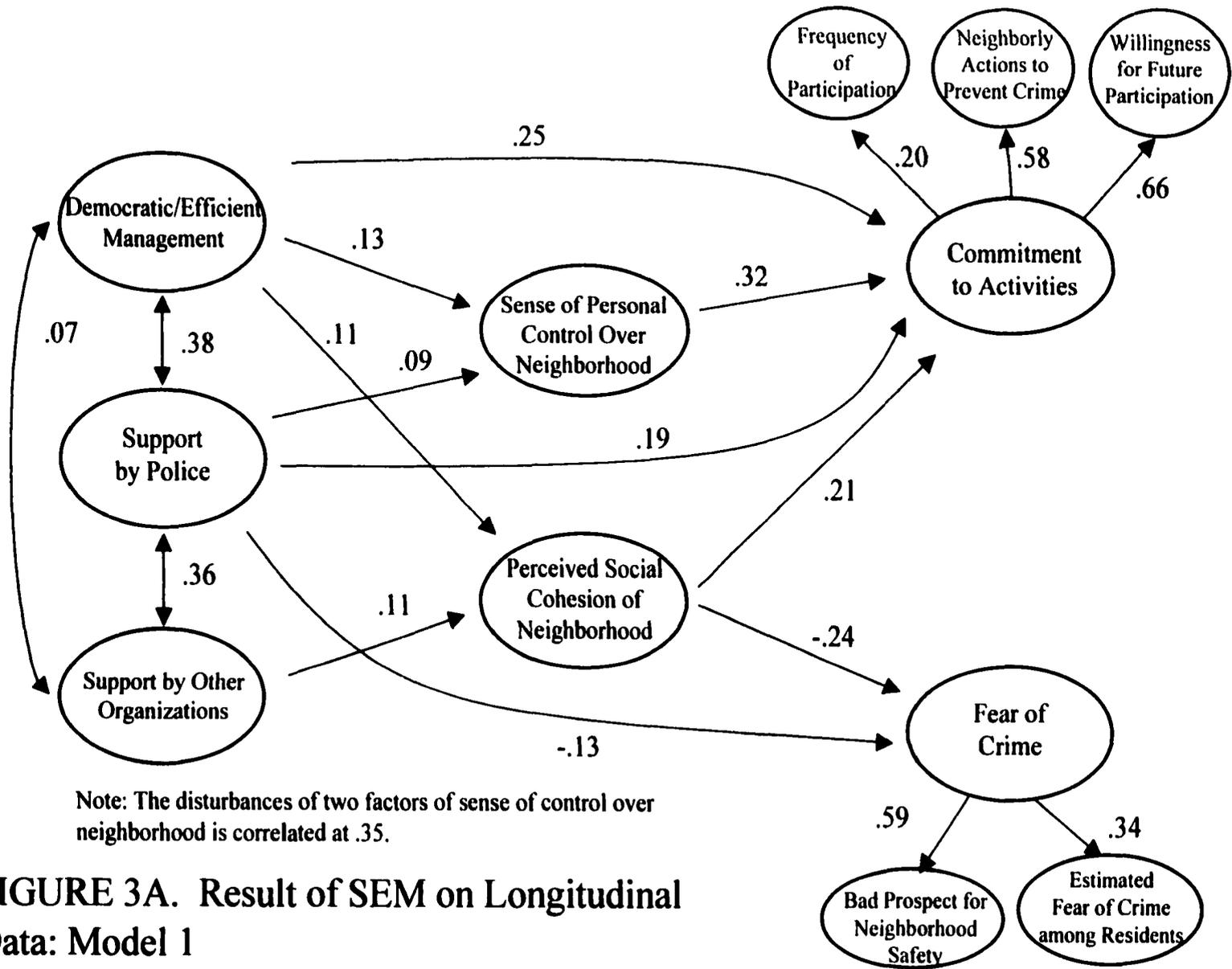
Note: \*\* P < .01

**TABLE 6. Decomposition of Standardized Effects of Organizational Factors in Model 1: Cross-sectional Data**

Predictor	Explained Variable					
	F11. Commitment to Activities			F12. Fear of Crime		
	Total	Direct	Indirect	Total	Direct	Indirect
F1. Democratic/Efficient Management	.377	.282**	.095**	-.092	-.027	-.065**
F2. Support by Police	.249	.143**	.106**	-.156	-.131**	-.025
F3. Support by Other Organizations	-.035	-.028	-.007	-.039	.012	-.051**

Note: \*\* P<.01





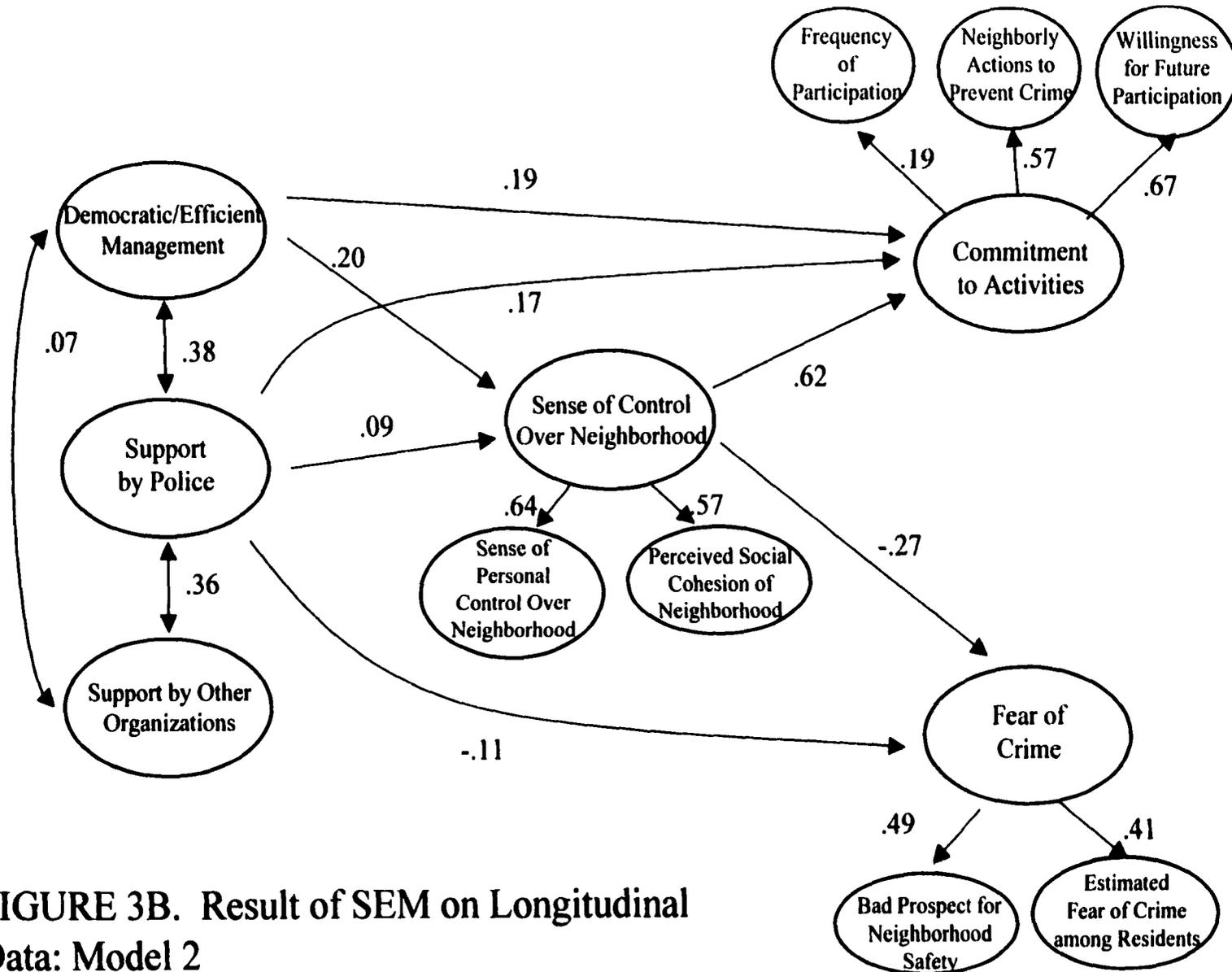


FIGURE 3B. Result of SEM on Longitudinal Data: Model 2

**TABLE 8. Statistical and Practical Indices of Fit for Nested Models on Longitudinal Data**

	DF	CHI <sup>2</sup>	NFI	NNFI	CFI	Robust CFI
Model 1	358	837.037**	.929	.948	.954	.959
Model 2	362	851.584**	.928	.947	.953	.958
Difference	4	14.557*	-.001	-.001	-.001	-.001

Note: CHI<sup>2</sup> is Satorra-Bentler scaled chi-square.

\*\* p<.001, \* p<.01

**TABLE 9. Standardized Path Coefficients of Structural Paths in Model 1 on Longitudinal Data**

Predictor	Explained Variable			
	F4. Sense of Personal Control	F5. Perceived Social Cohesion	F11. Commitment to Activities	F12. Fear of Crime
F1. Democratic and Efficient Management	0.131**	0.107**	0.248**	0.027
F2. Support by Police	0.094**	0.015	0.192**	-0.131*
F3. Support by Other Organizations	-0.004	0.114**	-0.070	0.090
F4. Sense of Personal Control			0.322**	0.010
F5. Perceived Social Control			0.210**	-0.235**
R-square	0.035	0.029	0.382	0.068

Note: \*\* P<.01, \* P<.05

**TABLE 10. Decomposition of Standardized Effects of Organizational Factors in Model 1: Longitudinal Data**

Predictor	Explained Variable					
	F11. Commitment to Activities			F12. Fear of Crime		
	Total	Direct	Indirect	Total	Direct	Indirect
F1. Democratic/Efficient Management	.313	.248**	.065**	.003	.027	-.024*
F2. Support by Police	.225	.192**	.033*	-.134	-.131*	-.003
F3. Support by Other Organizations	-.047	-.070	.022	.063	.090	-.027*

Note: \*\* P<.01, \* P<.05

## STUDY 2

In the second study, data was collected from participants of 436 community organizations that are involved with crime prevention. Thus, organization-level and individual-level variables are available, and both levels are analyzed using hierarchical linear modeling to examine the validity of the theoretical model. Although data of the second study is cross-sectional, unlike Study 1, organizational factors are constructed at the organization-level, which should reflect situations of organization more accurately. Thus, the validity of the research findings of Study 1 will be enhanced if converging results are obtained from Study 2.

### Method

#### Subjects and Procedure

To collect data, social surveys using written questionnaires were administered to community residents who had participated in crime prevention activities in each of 436 neighborhoods throughout the country. The 436 areas, which roughly comprise one third of the total areas of the country, were randomly selected from cities whose population exceeds 50,000 people. Each area is the precinct of one local police department. In each area, one block association was selected and in each block association, 11 persons who had recently participated in crime prevention activities were selected as research subjects.

Thus, unlike Study 1, subjects in the same neighborhood can be properly considered as participants of crime prevention activities of the same organization. Finally, completed questionnaires of 4,751 persons were available for analysis. The survey was conducted from December of 1996 to January of 1997 as an official research project of the National Research Institute of Police Science.

### Measures

While several different levels of variables can be used as independent variables in hierarchical linear modeling, the following 12 manifest variables were used in the current analysis.

#### [Individual-level Variables]

Individual-level variables included four independent variables (sex, age, years in residence, and previous criminal victimization), 2 intervening variables (“Sense of Personal Efficacy over Neighborhood” and “Perceived Social Cohesion of Neighborhood”), and 3 final dependent variables (“Frequency of Participation in Organizational Activities,” “Willingness to Participate in Future Activities,” and “Bad Prospect for Neighborhood Safety”).

Sex. Sex was dummy-coded (1 = male, 0 = female).

Age. Actual age of each subject was used without any categorization.

Years in Residence. Subjects were asked how many years they had lived in the current location. The number of years was used without any categorization.

**Criminal Victimization.** Subjects were asked how many times did they or their family members experience victimization of each of 18 different types of offenses in the neighborhood. Total number of victimizations was used in the current analysis.

**Sense of Personal Control Over Neighborhood.** The same questions used in Study 1 were used to probe how much subjects felt personal control over the neighborhood. The response format and scoring were the same as those used in Study 1. Unlike Study 1, scores of the three items were summed and used in the analysis (Cronbach's  $\alpha = .77$ ).

**Perceived Social Cohesion of Neighborhood.** The same questions used in Study 1 were used to probe how much subjects perceived social cohesion of their neighborhood. The response format and scoring were the same as those used in Study 1. Unlike Study 1, scores of the three items were summed and used in the analysis (Cronbach's  $\alpha = .72$ ).

**Frequency of Participation in Organizational Activities.** The same questions used in Study 1 were used to measure how often subjects participated in community crime prevention activities during the previous year. The response format and scoring were the same as those used in Study 1.

**Willingness to Participate in Future Activities.** Unlike Study 1, the following single item was used to measure how willing subjects are to participate in future activities to maintain neighborhood safety: "How willing are you to participate in community crime prevention activities from now on?" The response format for this item was the following: 5 = strongly agree, 4 = somewhat agree, 3 = difficult to say or do not know, 2 = somewhat disagree, 1 = strongly disagree.

**Bad Prospect for Neighborhood Safety.** Unlike Study 1, the following single

item was used to measure fear of crime among subjects: “Do you think that crime will increase in your neighborhood during next 2-3 years?” The response format for each item was the following: 5 = will increase a lot, 4 = will increase somewhat, 3 = will not change, 2 = will decrease somewhat, 1 = will decrease a lot.

[Organization-level Variables]

Organization-level variables included the following three independent variables.

Democratic and Efficient Management. Measures to probe democratic and efficient management were totally revised in terms of functions of citizen leaders. Subjects were asked to rate the functions of their group leader using the following 8 items.

- 1) Our leader properly makes plans of group activities.
- 2) Our leader is eager to hear opinions of all participants.
- 3) Our leader sees to it that the workload of each participant is equal.
- 4) Our leader tries to communicate with other neighborhood associations.
- 5) Our leader reports the consequences of activities to the participants periodically.
- 6) Our leader tries to convey the needs and requests of community residents to the police.
- 7) Our leader seeks cooperation of organizations other than police.
- 8) Our leader asks each participant to do the job that fully reflects his/her aptitude.

The response format for these items was the following: 5 = strongly agree, 4 = somewhat

agree, 3 = difficult to say or do not know, 2 = somewhat disagree, 1 = strongly disagree. Scores of the eight items were summed (Cronbach's  $\alpha = .92$ ) and aggregated to produce a mean score for each organization (organization-level reliability, which is available from hierarchical linear modeling = .61).

Support by Police. Measures to probe support by police were changed slightly to reflect more of the role that the police play in facilitating initiative of residents. Subjects were asked to rate support of police using the following 3 items.

- 1) The police respect the initiative of community residents.
- 2) The police are eager to hear the needs and the requests of community residents.
- 3) The provision of information (i.e., updated statistics of local crime, crime

prevention tips, and situations of local crime prevention activities) by the police is timely. The response format for these items was the same as that for "Democratic and Efficient Management." Scores of the three items were summed (Cronbach's  $\alpha = .77$ ) and aggregated to produce a mean score for each organization (organization-level reliability, which is available from hierarchical linear modeling = .63).

Support by Organizations other than Police. The same questions used in Study 1 were used to measure how much organizations other than police give support to crime prevention activities. The response format and a way of scoring were also the same as those used in Study 1. Scores of the three items were summed (Cronbach's  $\alpha = .70$ ) and aggregated to produce a mean score for each organization (organization-level reliability, which is available from hierarchical linear modeling = .60).

The descriptive statistics of the above variables are presented in TABLE 11.

### Analytic Strategy

Hierarchical linear modeling using HLM Version 5.01 (Raudenbush et al, 2000) was used in Study 2 to examine the effects of organizational and individual factors on commitment of participants to crime prevention activities, and their fear of crime. First, in a series of hierarchical linear modeling, each of the intervening variables (“Sense of Personal Control Over Neighborhood” and “Perceived Social Cohesion of Neighborhood”) was regressed on organization-level independent variables and individual-level independent variables (sex, age, years in residence, and previous victimization). This is aimed at examining the effects of organizational traits on sense of control over neighborhood by strictly controlling the effects of individual traits of subjects.

Next, each of the final dependent variables (“Frequency of Participation in Organizational Activities,” “Willingness to Participate in Future Activities,” and “Bad Prospect for Neighborhood Safety”) was regressed on organization-level independent variables and individual-level independent variables. This attempts to examine the effects of organizational factors on commitment of participants to community crime prevention activities, and their fear of crime by strictly controlling the effects of individual traits of subjects. In a series of hierarchical linear modeling, three models were examined, in which one was without any measure of sense of control over neighborhood as an independent variable, and two models in which either of two measures of sense of control

over neighborhood was an independent variable. By comparing the results of the three models, it is possible to examine the mediating effects of sense of control over neighborhood on the relationships between organizational factors and commitment to activities or fear of crime among participants (for a discussion of statistical analysis testing of mediating effects, see Baron, R.M., & Kenny, D.A., 1986).

In all of the hierarchical linear modeling in the current study, a random-intercept model is estimated with level 1 covariates (i.e., sex, age, years in residence, previous victimization, and two measures of sense of control over neighborhood), in which each level 1 covariate is centered around its respective grand mean (see Bryk and Raudenbush 1992, pp.95-96). Thus, hierarchical linear modeling in the current study provided us with a stringent estimate of the effects of organizational factors on commitment to activities and fear of crime after the effects of individual-level variables had been controlled. Because of small within-cluster sample sizes (mean =10.9), a “fixed-effect” model that assumes the same influence of individual traits in all organizations is estimated. Furthermore, all variables used in the analysis are transformed to z-scores to allow us to compare the coefficients of different predictors for their relative size. Finally, robust standard errors were used to calculate p-values because their calculations do not assume homogeneity of variance across organizations.

## Results

The results of a series of hierarchical linear modeling are shown in TABLE 12 to

TABLE 15. Results of each table are examined below.

#### The Model Explaining Sense of Control Over Neighborhood

A one-way ANOVA model, which has no Level I (individual) or Level II (organization) predictors, was estimated to examine the between- and within-group variation in the dependent variable. It is possible to reject the null hypothesis that there is no between-group variation in the estimated true scores of either sense of personal control over neighborhood or perceived social cohesion of neighborhood ” ( $\chi^2=1290.97$ ,  $p < .001$  for the former;  $\chi^2= 822.77$ ,  $p < .001$  for the latter). Between-group variation represents 15.2 % of the total variance of sense of personal control, and 7.5 % of the total variance of perceived social cohesion, which are an ample amount of variance to be explained by using organization-level predictors.

Turning to the results shown in TABLE 12, in case of the model explaining sense of personal control, organization-level and individual-level predictors jointly explain 26.6 % of the total variance of sense of personal control. The coefficients of three organization-level variables are all positive and statistically significant, meaning that participants who have a higher sense of personal control are more likely to be members of organizations that are democratically and efficiently managed, or properly supported by police or other organizations. Regarding the size of coefficient, democratic and efficient management is the largest (.093), followed by support by police (.083), which is 89.2% of democratic and efficient management. However, the size of the coefficient for support by organizations other than police is only about 40% of that for either of the other

organization-level variables (.034). This means that support by other organizations is relatively less important than other organizational factors in enhancing sense of personal control among participants. As for individual-level predictors, the coefficients of four variables are all statistically significant, meaning that participants who feel a higher sense of personal control are more likely to be male or old, lived long in the neighborhood, and experienced criminal victimization previously.

Next, in the case of the model explaining perceived social cohesion, 10.7% of its total variance is explained. The coefficients of three organization-level variables are all positive and statistically significant, meaning that participants who perceive more social cohesion of neighborhood are more likely to be members of organizations that are democratically and efficiently managed, or properly supported by police or other organizations. Support by other organizations is the largest coefficient (.080), followed by support by police (.069), and democratic and efficient management (.048). This means that democratic and efficient management is relatively less important than support from police or other organizations in enhancing perceived social cohesion of neighborhood. As for individual-level predictors, the coefficients of two variables are statistically significant, meaning that participants who perceive more social cohesion of neighborhood are more likely to be old or have lived long in the neighborhood.

#### The Model Explaining Frequency of Participation

A one-way ANOVA model makes it possible to reject the null hypothesis that there is no between-group variation in the estimated true scores of frequency of

participation in organizational activities ( $\chi^2=1197.69$ ,  $p < .001$ ). Between-group variation represents 13.8 % of the total variance of frequency of participation, which is an ample amount of variance to be explained by using organization-level predictors.

Turning to the results in TABLE 13, for the model without any intervening variable as a predictor (Model 1), 9.5 % of the total variance is explained by three organization-level variables, and four individual-level predictors. The coefficients of two organization-level variables are positive and statistically significant. This means that residents who participate in organizational activities more frequently are more likely to be members of organizations that are democratically and efficiently managed, or properly supported by police. Regarding the size of the coefficient, support by police is 26.3% larger than that of democratic and efficient management (.072 vs. .057). As for individual-level predictors, the coefficients of three variables are statistically significant, meaning that residents who participated in organizational activities more frequently are more likely to be male or old, and experienced criminal victimization previously.

Moving to the model that includes organizational-level variables, individual-level control variables, and sense of personal control as predictors (Model 2), 13.2% of the total variance of frequency of participation is explained, meaning that 3.7% of the increase is attributable to the addition of sense of personal control as a predictor. The coefficient for sense of personal control is positive and statistically significant, and its size is substantial (.210). This means that participants who feel a greater sense of personal control are more likely to participate frequently in crime prevention activities. As for the coefficients of organization-level predictors, only one remains statistically significant.

The coefficient for democratic and efficient management is no longer statistically significant (.038). Its substantial shrinkage means that sense of personal control mediates 33.3% of the effects of democratic and efficient management on frequency of participation. Further, although the coefficient for support by police remains statistically significant, its substantial shrinkage means that sense of personal control mediates 23.6% of the effects of support by police on frequency of participation. Before turning to the next model, substantial shrinkage of the coefficients for sex and age should be mentioned. Their shrinkage indicates that sense of personal control mediates 52.7% of the effects of sex, and 34.4% of the effects of age on frequency of participation. This means that male or old residents are more likely to participate in crime prevention activities largely because they feel a greater sense of personal control over the neighborhood than their counterparts.

Considering the model using organization-level variables, individual-level control variables, and perceived social cohesion as predictors (Model 3), 9.7% of the total variance in frequency of participation is explained, meaning that only a 0.2% increase is attributable to the addition of perceived social cohesion as a predictor. The coefficient for perceived social cohesion is positive and statistically significant, meaning that participants who perceive more social cohesion of the neighborhood are more likely to participate frequently. However, its size (.046) is much smaller than that of sense of personal control in Model 2. The coefficient for each of two organization-level predictors remains statistically significant, and the size of its coefficient has been reduced only slightly. Perceived social cohesion mediates only 3.5% of the effects of democratic and

efficient management, and 4.2% of the effects of support by police on frequency of participation. This means that the mediating effects of perceived social cohesion are negligible in explaining frequency of participation.

#### The Model Explaining Willingness for Future Participation

A one-way ANOVA model makes it possible to reject the null hypothesis that there is no between-group variation in the estimated true score of willingness to participate in future activities ( $\chi^2=1048.81$ ,  $p < .001$ ). Between-group variation represents 11.4 % of the total variance in willingness for future participation, which is an ample amount of variance to be explained by using organization-level predictors.

Turning to the results in TABLE 14, representing the model without any intervening variable as a predictor (Model 1), 12.6% of the total variance of willingness for future participation is explained. The coefficients of two organization-level variables are positive and statistically significant, meaning that residents who express more willingness for future participation are more likely to be members of organizations that are democratically and efficiently managed, or properly supported by the police. The coefficient for democratic and efficient management is 21.4% larger than that of support by police (.125 vs. .103), meaning that democratic and efficient management is more influential in enhancing willingness for participation than support by police. As for individual-level predictors, the coefficients of all four variables are positive and statistically significant, meaning that residents who express more willingness for future participation are more likely to be male or old, have lived long in the neighborhood, or

experienced criminal victimization previously.

Next, for the model using organization-level variables, individual-level control variables, and sense of personal control as predictors (Model 2), 23.0% of the total variance of willingness for future participation is explained, indicating that a 10.4% increase of explained variance is attributable to the addition of sense of personal control as a predictor. The coefficient for sense of personal control is statistically significant and its size is very substantial (.372). This means that participants who feel a greater sense of personal control are more likely to express willingness for future participation. The coefficient for each of two organization-level predictors remains statistically significant. However, the size of its coefficient has been greatly reduced. In the case of democratic and efficient management, its coefficient has shrunk to .090, meaning that sense of personal control mediates 28.0% of the effects of democratic and efficient management on willingness for future participation. Similarly, in the case of support by police, its coefficient has shrunk to .072, meaning that sense of personal control mediates 30.1% of the effects of support by police on willingness for future participation. Before turning to the next model, the substantial shrinkage of the coefficients for sex, age and years in residence should be mentioned. Their shrinkage indicates that sense of personal control mediates 48.6% of the effects of sex, 70.3% of the effects of age, and 87.5% of the effects of years in residence on willingness for future participation. This means that residents who are male, old, or live long are more likely to express willingness for future participation largely because they feel a greater sense of personal control over the neighborhood.

Moving to the model using organization-level variables and perceived social cohesion as predictors (Model 3), 14.0% of the total variance of willingness for future participation is explained, meaning that only a 1.4% increase is attributable to the addition of perceived social cohesion as a predictor. The coefficient for perceived social cohesion is positive and statistically significant. But its size (.131) is much smaller than that of sense of personal control in Model 2. The coefficient for each of two organization-level predictors remains statistically significant, and the size of its coefficient has been reduced slightly as compared with sense of personal control. Perceived social cohesion mediates only 4.8% of the effects of democratic and efficient management, and 8.7% of the effects of support by police on willingness for future participation. This means that the mediating effects of perceived social cohesion are relatively small in explaining willingness for future participation.

#### The Model Explaining Bad Prospect for Neighborhood Safety

A one-way ANOVA model makes it possible to reject the null hypothesis that there is no between-group variation in the estimated true scores of bad prospect for neighborhood safety ( $\chi^2=995.13$ ,  $p < .001$ ). Between-group variation represents 10.5 % of the total variance in bad prospect for neighborhood safety, which is an ample amount of variance to be explained by using organization-level predictors.

In TABLE 15, the model without any intervening variable as a predictor (Model 1), shows that 4.7% of the total variance of bad prospect for neighborhood safety is explained. The coefficients of two organization-level variables are negative and

statistically significant, meaning that residents who feel a bad prospect for neighborhood safety are less likely to be members of organizations that are properly supported by police or other organizations. The coefficient for support by police is 64.6% larger than support by other organizations (-.079 vs. -.048), meaning that support by police is more influential in decreasing fear of crime among participants than support by other organizations. As for individual-level predictors, the coefficients of three variables are statistically significant, meaning that residents who feel more fear of crime are more likely to be female or young, or experienced criminal victimization previously.

Next, the model using organization-level variables, individual-level control variables and sense of personal control as predictors (Model 2), demonstrates that 4.8% of the total variance of bad prospect for neighborhood safety is explained, meaning that only a 0.1% increase of explained variance is attributable to the addition of sense of personal control as a predictor. The coefficient for sense of personal control is negative and statistically significant, meaning that participants who feel a greater sense of personal control are less likely to feel fear of crime. However, its size is relatively small (-.044). As for the coefficients for organization-level predictors, two variables remain statistically significant with little shrinkage in their coefficients. In the case of support by police, its coefficient has shrunk to -.075, meaning that sense of personal control mediates 5.1% of the effects of support by police on bad prospect for neighborhood safety. Similarly, in the case of support by organization other than police, its coefficient has shrunk to -.047, meaning that sense of personal control mediates only 2.1% of the effects of support by other organizations on bad prospect for neighborhood safety. Thus, the mediating effect

of sense of personal control is negligible in explaining fear of crime among participants.

Examining the model using organization-level variables, individual-level control variables and perceived social cohesion as predictors (Model 3), 5.8% of the total variance in bad prospect for neighborhood safety is explained, meaning that a 1.1% increase of explained variance is attributable to the addition of perceived social cohesion as a predictor. The coefficient for perceived social cohesion is negative and statistically significant, meaning that participants who perceive more social cohesion are less likely to feel fear of crime. Its size (-.112) is larger than that of sense of personal control in Model 2. This means that perceived social control is more influential in alleviating fear of crime among participants than sense of personal control. As for the coefficient of organization-level predictors, only one remains statistically significant. Although the coefficient for support by police remains statistically significant, it has been reduced to -.071. This means that perceived social cohesion mediates 10.1% of the effects of support by police on bad prospect for neighborhood. By contrast, the coefficient for support by other organizations is no longer statistically significant. Its coefficient has shrunk to -.039, meaning that perceived social cohesion mediates 18.8% of the effects of support by other organizations on bad prospect for neighborhood.

### Summary

In Study 2, hierarchical linear modeling was used to examine the effects of organizational factors on commitment of participants to crime prevention activities and

their fear of crime. Generally, the results provide evidence supporting the theoretical model.

First, referring to the models explaining sense of control over neighborhood, all three organization-level predictors are significantly and positively related to sense of personal control over neighborhood, and perceived social cohesion of neighborhood. However, the relative size of the effects of these predictors is different depending on the measure of sense of control over neighborhood. In comparison, democratic and efficient management is more important in enhancing sense of personal control among participants than in enhancing perceived social cohesion. By contrast, support by organizations other than police is more important in enhancing perceived social cohesion than in enhancing sense of personal control among participants.

Next, in explaining commitment to activities (i.e., frequency of participation in organizational activities or willingness for future participation), democratic and efficient management and support by police are significantly and positively related to commitment to activities among participants. Furthermore, a substantial amount of these effects is mediated by sense of personal control among participants. In contrast, the mediating effect of perceived social cohesion is negligible.

Finally, both support by police and support by other organizations are significantly and negatively related to bad prospect for neighborhood safety. Some amount of these effects is mediated by perceived social cohesion of neighborhood. By contrast, the mediating effect of sense of personal control is negligible.

**TABLE 11. Descriptive Statistics of Variables Used in Study 2**

	<b>M</b>	<b>Range</b>	<b>SD</b>	<b>Skew</b>	<b>Kurtosis</b>
<b>Individual-level (N=4751)</b>					
<b>Sex</b>	0.81	0-1	0.39	-1.58	0.50
<b>Age</b>	57.78	20-90	12.06	-0.48	-0.23
<b>Years in Residence</b>	35.61	0-90	19.95	0.24	-0.97
<b>Criminal Victimization</b>	3.34	0-144	7.94	6.52	65.19
<b>Sense of Personal Control</b>	10.95	3-15	2.65	-0.68	-0.15
<b>Perceived Social Cohesion</b>	10.99	3-15	2.42	-0.71	0.18
<b>Frequency of Participation</b>	22.23	0-479	33.88	4.16	29.13
<b>Willingness of Future Participation</b>	4.07	1-5	0.92	-0.97	0.36
<b>Bad Prospect for Neighborhood Safety</b>	3.49	1-5	0.71	-0.61	0.34
<b>Organization-level (N=436)</b>					
<b>Democratic and Efficient Management</b>	31.23	23.18-37.45	2.49	-0.37	0.12
<b>Support by Police</b>	10.81	6.18-14.36	1.17	-0.17	0.01
<b>Support by Other Organizations</b>	6.00	3.91-8.36	0.76	0.07	-0.24

TABLE 12. Coefficients of HLM Explaining Sense of Control Over Neighborhood

Dependent Variable Predictor	Sense of Personal Control	Perceived Social Cohesion
<u>Organization-level</u>		
Democratic/Efficient Management	.093**	.048*
Support by Police	.083**	.069**
Support by Other Organizations	.034*	.080**
<u>Individual-level</u>		
Sex	.138**	.028
Age	.297**	.122**
Years in Residence	.131**	.159**
Previous Victimization	.061**	.004
% of Variance Explained	26.6	10.7

Note: \*\* p < .01, \* p < .05

**TABLE 13. Coefficients of HLM Explaining Frequency of Participation**

Predictor	Model 1	Model 2	Model 3
<b><u>Organization-level</u></b>			
Democratic/Efficient Management	.057 <sup>*</sup>	.038	.055 <sup>*</sup>
Support by Police	.072 <sup>*</sup>	.055 <sup>*</sup>	.069 <sup>*</sup>
Support by Other Organizations	.021	.014	.017
<b><u>Individual-level</u></b>			
Sense of Personal Control		.210 <sup>**</sup>	
Perceived Social Cohesion			.046 <sup>**</sup>
Sex	.055 <sup>**</sup>	.026	.054 <sup>**</sup>
Age	.183 <sup>**</sup>	.120 <sup>**</sup>	.177 <sup>**</sup>
Years in Residence	.032	.005	.026
Previous Victimization	.132 <sup>**</sup>	.120 <sup>**</sup>	.132 <sup>**</sup>
<b>% of Variance Explained</b>	<b>9.5</b>	<b>13.2</b>	<b>9.7</b>

Note: \*\* p<.01, \* p<.05

TABLE 14. Coefficients of HLM Explaining Willingness for Future Participation

↓ Predictor	Model 1	Model 2	Model 3
<u>Organization-level</u>			
Democratic/Efficient Management	.125**	.090**	.119**
Support by Police	.103**	.072**	.094**
Support by Other Organizations	.001	-.012	-.010
<u>Individual-level</u>			
Sense of Personal Control		.372**	
Perceived Social Cohesion			.131**
Sex	.107**	.055**	.103**
Age	.158**	.047**	.141**
Years in Residence	.056**	.007	.036*
Previous Victimization	.068**	.046**	.068**
% of Variance Explained	12.6	23.0	14.0

Note: \*\* p<.01, \* p<.05

TABLE 15. Coefficients of HLM Explaining Bad Prospect for Neighborhood Safety

Predictor	Model 1	Model 2	Model 3
<u>Organization-level</u>			
Democratic/Efficient Management	-.017	-.013	-.012
Support by Police	-.079**	-.075**	-.071**
Support by Other Organizations	-.048*	-.047*	-.039
<u>Individual-level</u>			
Sense of Personal Control		.044*	
Perceived Social Cohesion			-.112**
Sex	-.036*	-.029	-.033*
Age	-.144**	-.130**	-.129**
Years in Residence	.022	.028	.039*
Previous Victimization	.052**	.054**	.052**
% of Variance Explained	4.7	4.8	5.8

Note: \*\* p<.01, \* p<.05

## DISCUSSION

This research sought to present and to test a theoretical model of the effects of organizational factors on citizen participation in community crime prevention programs and fear of crime among participating residents. The theoretical model was examined in two studies that were based on two different datasets. In the first study, structural equation modeling was used to examine the validity of the theoretical model. Since the data of the first study is based on a quota sample selected from 42 neighborhoods in Japan, and subjects from the same neighborhoods do not necessarily participate in the same crime prevention activities if they live in different blocks within the same neighborhoods, only individual-level variables including individual perception of organizational factors were used. However, the strength of the first study is that data was collected twice (one year apart) from most of the subjects, and it was therefore possible to confirm the validity of the theoretical model using change scores of variables in addition to the analysis based on cross-sectional data. In the second study, on the other hand, data were collected from participants of 436 community organizations that were involved with community crime prevention. Thus, organization-level and individual-level variables were available and both levels of variables were analyzed using hierarchical linear modeling to examine the validity of the theoretical model. As for the reliability of organization-level variables, all three variables were found to have adequate reliability (i.e., more than .60) despite the small within-cluster sample sizes (mean =10.9). Thus,

although the data of the second study is cross-sectional, the validity of research findings is greatly enhanced if converging results are obtained from both of the first and second studies. As results of the two studies indicate, we have reached both converging and diverging findings.

Before discussing the converging and diverging findings, competing hypotheses about the sense of control over neighborhood should be mentioned here. From the nested model comparisons of structural equation modeling in Study 1, it was found that we should treat the two components of sense of control over neighborhood, i.e., sense of personal control over neighborhood and perceived social cohesion of neighborhood, as separate intervening variables in the theoretical model of citizen participation in community crime prevention. This suggests that each of the two measures of sense of control over neighborhood has differential relationships with the independent and the final dependent variables. By reflecting this result, the two components of sense of control were treated as separate predictors in Study 2.

The converging findings made available by the two studies indicate that the two measures of sense of control over neighborhood are found to have a differential impact on the final dependent variables, i.e., commitment of residents to crime prevention activities and their fear of crime. In determining commitment to activities, sense of personal control is much more influential in motivating Japanese people to participate in community crime prevention programs. This means that Japanese people participate in community crime prevention activities vigorously when they feel a sense of personal control over their neighborhood through these activities. By contrast, Japanese people are not enticed much

by the moral obligation of a cohesive community to act collectively to keep neighborhood safety. Thus, the prevailing contrasting view of the Japanese emphasis on social cohesion vs. the American emphasis on personal efficacy is totally wrong in explaining citizen participation in community crime prevention. This finding is very interesting from a cross-cultural point of view because it suggests that Japanese people seek personal empowerment through participation in community activities just as American people do. Also, this finding offers simple, but important, policy implications. That is, policy makers and community leaders in Japan should consciously take more measures to enhance the sense of personal control of each participating resident to increase their level of crime prevention activities. Next, as for determining the fear of crime, out of two measures of sense of control over neighborhood, perceived social cohesion is much more influential in alleviating fear of crime among participating residents. By contrast, the impact of sense of personal control on fear of crime is negligible. Thus, if fear of crime among residents is extremely high, we should take measures to enhance social cohesion of the neighborhood. This finding supports the current views of Japanese policy makers.

As for the converging findings on the effects of organizational traits on the final dependent variables, three organizational factors were found to have a differential impact. Both democratic and efficient management and support by police were significantly and positively related to commitment of participating residents to crime prevention activities. Further, sense of personal control mediates a substantial amount of the impact of these two organizational factors on commitment to activities. This again offers credence to the importance of measures to enhance a sense of personal control over the neighborhood

among residents in motivating them to actively participate in crime prevention programs. Specifically, the police and community leaders should take a more participatory, democratic leadership role and emphasize skill development of each participating resident in management of crime prevention programs. By contrast, a disappointing result is that support by organizations other than the police does not have a significant impact on the commitment of residents to crime prevention activities. This may indicate that the support provided by other organizations is not the kind of support that contributes to individual skill development of each participating resident. Next, for the determinant of fear of crime, in both of the studies, support by police decreased fear of crime among participating residents, although much of this effect is not mediated by perceived social cohesion.

Tuning our attention to the diverging findings, the two studies provide us with different results regarding the effects of democratic and efficient management on fear of crime. While democratic and efficient management significantly decreased fear of crime indirectly through an increase of perceived social cohesion in Study 1, it did not have a significant impact on fear of crime in Study 2. Furthermore, while support by organizations other than police does not have a substantial and beneficial impact on either commitment to activities or fear of crime in Study 1, it did alleviate fear of crime among participating residents partially through an increase of perceived social cohesion in Study 2. Although it is difficult to point out the exact causes of these diverging findings, they might be caused by the different sampling of the two data-sets (small number of neighborhoods and large number of subjects within each neighborhood in Study 1 vs.

large number of neighborhoods and small number of subjects within each neighborhood in Study 2) and different analytic methods (structural equation modeling with latent factors in Study 1 vs. hierarchical linear modeling without latent factors in Study 2). In addition, differences in the time that data were collected might explain part of these findings. As mentioned previously, the revised community-oriented policing programs began in 1994. The data in Study 1 was collected to evaluate the early impact of these programs. The data in Study 2 was collected roughly two years later. During the intervening two years, progress of the revised community-oriented programs might have produced more variance of support by organizations other than police, which caused its significant impact on fear of crime among participating residents of Study 2. Since the mobilization of organizations other than police is new in the practice of community crime prevention in Japan, it takes time to get sufficient support of other organizations in many of the neighborhoods. But, it seems possible that in the future support by other organizations will exert a major impact on citizen participation in community crime prevention, and its beneficial outcomes such as personal empowerment of participating residents and increases in neighborhood safety.

Additionally, some of the individual traits of participants should be mentioned. In Study 2, individual traits of participants such as age and sex were found to be stronger determinants of their participation in crime prevention activities than any of the organizational factors. It was found that male or old residents were more likely to participate in organizational activities of neighborhood associations largely because they felt a greater sense of personal control over the neighborhood than their counterparts.

This signifies that the conservative and feudalistic nature of many of Japanese neighborhood associations still endures. Thus, we should take more drastic measures to democratize these organizations to empower female and young residents. Empowerment of female and young people should contribute to higher security and quality of life in neighborhoods by increasing their active participation in crime prevention activities.

Finally, as for the directions for future research, empirical studies similar to the current research should be conducted in Japan. According to the progress of community-oriented policing and community crime prevention programs, the effects of these programs should be rigorously evaluated and the results should be presented publicly to boost the democratization of community crime prevention programs. For that purpose, in addition to the quantitative studies based on social surveys, systematic observational studies are definitely necessary to reveal the details of how to empower organizational settings to increase community crime prevention.

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