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# A Study on the Determinants of Fear of Crime based on Ecological Systems Theory

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## Abstract

In this paper, we explored the determinants of fear of crime by focusing on interaction between individuals and social environments surrounding them. Based on the ecological systems theory, this study found some interesting results as follows. It suggests that general fear of crime should be distinguished from specific fear of crime in both microsystem and mezzosystem. More specifically, the factors affecting general fear are not consistent with the ones affecting the specific fear, regardless of the fact that both fears are affected by individuals' perception of crime trends in macrosystem. For example, indirect experience of crime affects specific fear of crime while it does not affect general fear of crime. Moreover, we found that informal control does affect general fear of crime but social bonding does not, while social bonding affects specific fear of crime but informal control does not.

**Key words:** ecological system theory, microsystem, mezzosystem, macrosystem, fear of crime

## Ⅰ. Introduction

Although the chance of being a victim of crime is extremely low, we often feel fear of crime. In Korea, for example, people live under the fear of crime despite the high arrest rate of Korean criminal justice system and its well-established security environment (Lee & Hwang, 2012). Since the fear of crime can circumscribe human behavior and degrade the quality of life, the fact that people live under the fear of crime is considered as non-trivial social problem. As such, since the 1960s, a significant amount of research has been conducted to determine both the causes of such fear and any solutions pertaining to this problem.

The previous researches on the fear of crime can be categorized into three studies: individual level, neighborhood level, and multi-level. The

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individual level studies have focused on individuals' direct and indirect experience as victims of crime or individuals' reaction to crime based on their physical and social vulnerability (Kim & Chang, 2010; Lee, *et. al.*, 2007; Chang, *et. al.*, 2011). The community level studies have focused on differences among community disorder, social integration and social structure, which are considered causes of fear of crime (Ryu & Jung, 2011; Lee, *et. al.*, 2010; Hwang, 2015). Lastly, multi-level studies revolve around the interactive and moderating effects between individual factors and neighborhood factors (Roh & Cho, 2014; Chang, 2015).

While the previous researches have been conducted in multiple dimensions, each research has some limitations. For example, individual-level researches fail to explain differences in the degree of fear of crime, according to community traits, because those studies did not consider social-environmental factors while interpreting the fear of crime. In the case of community-level studies, they simply affix a foreign model of the fear of crime to Korea, which results in an inaccurate picture of the domestic situation. Multi-level studies tend to look for comparative advantage among models and tend to propose models within micro or macro level solely. Due to this tendency, multi-level studies often display inconsistent results.

This study will analyze the factors behind the fear of crime based on Ecological System Theory. There are several reasons why we approach the fear of crime via the Ecological System Theory. The Ecological System Theory is a combined theory of Bronfenbrenner's (1967) Eco-System perspective and General System Theory. Dividing interaction between individuals and environment by Microsystem, Mezzosystem and Macrosystem, this Theory considers not only individual traits but also the effects of interaction with their families, groups, and communities. Considering the fear of crime is not a simple phenomenon but a convoluted complex of emotion and cognition (Hough, 1995), this approach enables us to analyze the reciprocal relation and effects of various environmental systems, surrounding the fear of crime. This study will first examine the reciprocal interaction and correlation between the individual's fear and environment by dividing these into Microsystem, Mezzosystem and Macrosystem categories, and thus find out the influential factors behind both general fear and specific fear.

## II. Literature Review

### 1. Ecological System Theory

Ecological System Theory is the theory that combine the Bronfenbrenner(1967) Eco-system perspective with General Systems Theory. The critical concept in the theory is 'The person in situation', and the word 'in' represents the interaction between individual and environment (Louise & Stephen, 2001). This theory newly approached analysis of individual by considering interactions between individual and environments.

Firstly, Bronenbrenner (1967) classifies the interaction between individuals and environment, depending on individual development, into four systems; (i) Microsystem, (ii) Mesosystem, (iii) Exsosystem, and (iv) Macrosystem (Ban, 2015). First, the Microsystem or immediate social

environment is the direct environment to individuals. It can be family, friends and colleagues whom individuals directly interact with. Mesosystem is the interaction among the microsystems, especially focusing on the process of the interaction in more than two Microsystem environments. For child, relationship between teachers in school and parents can be Mesosystem. Exo-system is social structure environmental factors which are indirectly related to individuals. Finally, the Macro-system means the cultural and social influences such as belief and ideology (Choi, 2012).

Based on the Bronfenbrenner(1967) theory, improved ecological models has been suggested. Netting (1993) rearranged ecological system into two systems: Microsystem including the individual, family and small groups and Macrosystem including organization, community and society of state. Peterson (1998) also reorganized it into three systems: Microsystem including the individual's activities, motivation and characteristics in environment with physical and material traits, Mesosystem including the family, social system based on reciprocal relationship among two or more systems individuals participate in and Macrosystem which consist of both factors in Micro- and Meso-system, including the cultural environment. Compton & Gallaway(1999) also developed Ecological System theory into four systems; (i) Individual system, (ii) Microsystem, focusing on the relationship between individuals and family or friends, (iii) Mezzosystem, focusing on the organizations or institutions from which individuals receive services and (iv) Macrosystem, dealing with communities. Finally, Zastrow & Kirst-Ashman (2001) reorganized the Ecological System as Microsystem, Mezzosystem, and Macrosystem: Microsystem incorporating the individual and its traits, and Mezzosystem containing the family, group and neighborhood, which interact with individual, and Macrosystem including organization, community and state of society.

In this article, we adopt Zastrow & Kirst-Ashman's (2001) model to investigate the fear of crime. Given the fear of crime is not a simple phenomenon but a convoluted complex of emotion and cognition (Hough, 1995), this model allows us to have accurate and detailed explanation of the fear of crime; this model subdivides each system as an independent level, which enables us to distinguish various interactions. For example, it allows us to analyze individuals' fear of the crime by considering their experiences as a victim, the environment of their communities, and the severity of crime in their communities.

## 2. Fear of Crime

Since 1960s, the fear of crime has become important research area in criminology and sociology (Kim, 2010). After that, conceptualization of fear of crime and its measurement became the core of research (Chang, 2012). Garofalo (1979) defined fear of crime as 'sense of danger and anxiety elicited by the environment that relate to some aspect of crime for person and further, Furstenberg (1971) distinguished 'fear of crime' with 'concern with crime'.

Through the development in researches, this classification has been apprehend as 'fear of safety or general fear of crime' and 'perceived risk of crime or specific fear of crime' (Kim & Chang, 2010; Ferraro, 1995; LaGrange, *et. al.*, 1992). General fear of crime is generalized formless fear,

such as generalized vulnerability or recognition of safety, being measured by how much people perceived fear in daily life. Specific fear of crime is measurement of how people perceive the fear of victimization caused by specific crime, such as property crime, violent crime and sexual assault. Using this classification, the researches in criminology not only investigate the general fear of crime but also investigate the specific fear of crime in various level; individual, community and multi-level (Oh, 2016). Following preceding researches, this article will examine fear of crime by classifying it into general fear of crime and specific fear of crime.

### 3. Ecological System Theory and Fear of Crime

Ecological System Theory provides a frame of understanding the fear of crime by emphasizing that the factors within each system affect individual behavior both directly and indirectly (Lee & Choi, 2015).

In this article, Microsystem will be personal direct experience of crime and indirect experience of crime. Lewis & Maxfield (1980) noted that personal fear of crime is result from their both direct and indirect experience of crime. Here, indirect victim experience means the close knit family, friends and neighborhoods' victim experience. From this point of view, the more people experience crime, the more the fear of crime is increased (Skogan, 1986; Liska, *et. al.*, 1988; Covington & Taylor, 1991; Hough, 1995; McCoy, *et. al.*, 1996). However, the results of previous researches have not always matched. Wilcox, May & Roberts (2006) and Schafer, *et. al.* (2006) research showed people perceived fear of crime, although they don't have both direct and indirect victim experiences.

Mezzosystem factors will be neighborhood disorder and collective efficacy. Wilson & Kelling (1982)'s Broken Windows Theory suggests that neighborhood disorder increases the fear of crime, and such fear circumscribes the resident's activity, which results in the community disorganization, the lack of a sense of community or fellowship, and the increase of more serious crime (Park & Jang, 2013). Skogan (1990) also see neighborhood disorder as 'spiral of decay', which means the fear of crime rise from neighborhood disorder eventually deteriorates the quality of life (Roh & Cho, 2014). Collective efficacy, on the other hand, consists of two critical concepts, neighborhoods' relationship and participation; Under the view of collective efficacy, if neighbors have a strong relationship based on trust, such relationship can prevent potential criminals from coming into the community and committing a crime.

Finally, individual's perception toward trends of crime can be a factor of Macrosystem when we apply Macrosystem concept into criminal environment (Lee & Choi, 2015). In the literature, interestingly, there are two different views regarding this issue: While some criminologists suggested that increasing trends of crime causes the fear of crime to increase (Brunton-Smith & Stugis, 2011; Breetzke & Pearson, 2014; Visser, *et. al.*, 2013), the others suggested that trends of crime is not significantly related to the fear of crime. On the other hand, although there are official statistics which illustrates the trends of crime, the individual's perception of severity of crime can be different. Different perception toward the trends of crime can

make difference in fear of crime. If individuals judge trends of crime in their resident area is increasing, they would perceive more the probability of being victim than those who do not account. Whether the perception truly mirrors the trend or not, perception toward trends of crime can illustrates individual's assessment of the state of society.

## Ⅲ. Research Methods

### 1. Data Description

This study used data from 2014 Korean Crime Victim Survey(KCVS), a survey conducted by Korean Institute of Criminology. The purpose of KCVS is verifying the victimization rates and damages and outcomes of crimes, identifying the factors which cause vulnerability to crimes, and illuminating the general public's perception of and attitude towards crimes by surveying the citizen (Choi, *et. al.*, 2014).

The targeted population of this survey were the households and its members who are 14 years old or older residing in areas within the territory of the Republic of Korea. Using 2010 Population and Housing Census' enumeration districts as sampling frame, it extracted the samples; Stratified random probability sampling for Enumeration district sampling and selecting 10 household form each district for household sampling (Choi, *et. al.*, 2014). Total number of samples of household are 6,960 households and the total number of people surveyed are 14,977 (Choi, *et. al.*, 2014).

### 2. Variables

#### 1) Dependent Variables

This study employed the fear of crime perceived over the past year as dependent variable. As general fear, two survey items, "feeling of being afraid to being alone at night" and "feeling of being afraid to go out alone at night", are used(α=.878). As specific fear, fear regarding to eight types of crime are measured; theft, robbery, violence, fraud, sexual assault, destruction, trespass and harassment(α=.937). Both fears were measured on 5-point response scale to "not worried at all" to "very worried"

#### 2) Independent Variables

Independent variables in this study can be classified into three systems, based on Ecological System Theory.

As Microsystem, we employed the personal experience of crime victimization, and subdivide it into direct and indirect criminal victim experience. To measure the direct experience, "criminal victim experience within a year" was asked. For indirect

Table 1. Dependent variable

| | Questionaries |
|---|---|
| General Fear of Crime | I am afraid to being alone at night. |
| | I am afraid of going out alone at night. |
| Specific Fear of Crime | I am afraid that someone might steal my money or goods. |
| | I am afraid that someone might rob my money or goods. |
| | I am afraid that someone might assault me. |
| | I am afraid that someone might fraud me and losing my property. |
| | I am afraid of being sexual assault by someone. |
| | I am afraid that someone might damage my property. |
| | I am afraid that someone might trespass my house. |
| | I am afraid that someone might harass me by stalking. |

Table 2. Independent variable

| | Questionaries |
|---|---|
| Microsystem (Experience of Crime Victim) | I experienced crime victim within a year. |
| | People who are closely related to me(family, cousins, friend, co-workers, etc) experienced crime victim within a year. |
| Mezzosystem (Neighborhood Disorder) | There are lots of people who violate the basic public order, such as jaywalk and illegal parking. |
| | There are many juvenile delinquents who hang around in town. |
| | People who have quarrel with someone are often seen in town |
| | The streets are littered and dirty |
| | There are many dark and remote places in town |
| | There are many abandoned car and vacant buildings in town |
| Mezzosystem (Collective Efficacy) | Neighbors know each other well |
| | I often discuss community issues with neighbors |
| | Neighbors help one another when they encounter difficulties |
| | I often participate in meetings and events in community |
| | I would help local kids if they are bullied by strangers |
| | I would report to police if crimes are occur in town |
| | I would participate in patrol activity if it is needed for crime prevention |
| Macrosystem | Do you think the crimes in our town will increase in the future? |

experience, "the crime victim experience of people who are closely related to individual, such as family, cousins, friends, or co-workers" was asked.

As Mezzosystem, we employed the neighborhood disorder and collective efficacy, which can illustrate the community characteristics. Neighborhood disorder is subdivided into social disorder and physical disorder. To measure the social disorder, three items were used; "There are lots of people who violate the basic public order, such as jaywalk and illegal parking.", "There are many juvenile delinquents who hang around in town", "people who have quarrel with someone are often seen in town" (α=.787). To measure the physical disorder, three items were used; "The streets is littered and dirty", "There are many dark and remote places in town", "There are many abandoned car and vacant buildings in town"(α=.783). On the other hand, Collective efficacy is also subdivided into two categories, social bonding and informal control. To measure the social bonding, four items were used; "Neighbors know each other well", "I often discuss community issues with neighbors", "Neighbors help one another when they encounter difficulties", "I often participate in meetings and events in community"(α=.909). To measure the informal control, three items were used; "I would help local kids if they are bullied by strangers", "I would report to police if crimes are occurring", "If I should patrol for crime prevention, I will participate in" (α=.726). All Mezzosystem factors were measured on 5-point response scale to "very unlikely" to "very likely".

As Macrosystem, the individuals' perception on trends of crime in resident area was employed. To measure, one item, "Do you think the crimes in our town will increase in the future?", is used(α =.726). The Macrosystem factor was measured on 5-point response scale to "very unlikely" to "very likely".

### 3. Statistical Procedure

This research used SPSS WIN 21.0 program for analysis. To analyze the above noted research focus, I performed following four steps. First, for reliability test of used scale, Cronbach's α was

employed. Second, to conduct descriptive statistics analysis, frequency, percentage, and standard deviation, were used. Third, Pearson's Correlation Analysis was employed to calculate the statistical relationships between the independent variables and dependent variables. Finally, Multiple Regression was conducted for verifying the influences of Microsystem, Mezzosystem and Macrosystem on fear of crime. The significance level of study is $p<.05$, $p<.01$, $p<.001$.

## Ⅳ. Results

### 1. Descriptive Statistic Analysis

〈Table 3〉 presents the descriptive statistic results for major variables. Demographic variables were consisted of age, sex, marital status and education level. First, age was measured on "70 or older", "60~69", "50~59", "40~49", "30~39", "20~29" and "Younger than 20" The mean scale score on age was 4.34(SD=7.78). Second, sex was measured on "man" and "women", and 7,058(47.1%) were men. Third, marital status was measured on "married", "never married" and "divorced/widowed", and 9,713(64.9%) were married. Fourth, education level was measured on "elementary graduation or lower", "middle school graduation", "high school graduation", "university/college graduation" and "graduate school or higher" The mean scale score on education level was 2.96(SD=1.07).

In Microsystem, direct victim experience and indirect victim experience were measured on "experienced" or "never experienced". 522(3.5%) respondents have direct crime victim experiences, while 827(5.5%) have indirect crime victim experience. In other words, individuals experienced indirect crime victim more than direct crime victim.

In Mezzosystem, neighborhood disorder and collective efficacy were measured. First, in neighborhood disorder, mean scale score on social disorder was 2.22(SD=.78), while physical disorder was 2.24(SD=.78). Second, in collective efficacy, mean scale on social bonding mean was 2.88(SD=.95), while the informal control was 3.31(SD=.78). In sum, both social disorder and physical disorder were not serious and social bonding and informal control were comparatively high.

Table 3. Descriptive statistics analysis (N=14,976)

| | | Frequency | % | Mean | SD | Min – Max |
|---|---|---|---|---|---|---|
| Demographic Variable | | | | | | |
| Age | | | | 4.34 | 1.78 | 1–7 |
| Sex(1=Male) | | 7,058 | 47.1 | | | 0–1 |
| Marital Status(1=Marriage) | | 9,713 | 64.9 | | | 0–1 |
| Education Level | | | | 2.95 | 1.07 | 1–5 |
| Microsystem | | | | | | |
| Direct Victim Experience (1=Yes) | | 522 | 3.5 | | | 0–1 |
| Indirect Victim Expeience(1=Yes) | | 827 | 5.5 | | | 0–1 |
| Mezzosystem | | | | | | |
| Neighborhood Disorder | Social Disorder | | | 2.22 | .75 | 1–5 |
| | Physical Disorder | | | 2.24 | .78 | 1–5 |
| Collective Efficacy | Social Bonding | | | 2.78 | .95 | 1–5 |
| | Informal Control | | | 3.31 | .78 | 1–5 |
| Macrosystem | | | | | | |
| Perception on Trends of Crime | | | | 3.06 | .64 | 1–5 |
| General Fear of Crime | | | | 2.33 | 1.00 | 1–5 |
| Specific Fear of Crime | | | | 2.13 | .77 | 1–5 |

Table 5. Multi regression analysis on general fear of crime

| | Model 1 | | Model 2 | | Model 3 | |
|---|---|---|---|---|---|---|
| | B | β | B | β | B | β |
| Constant | 2.863 | - | 2.860 | - | 1.630 | - |
| Age | -.080*** | -.142 | -.080*** | -.142 | -.057*** | -.101 |
| Sex | -.667*** | -.330 | -.663*** | -.328 | -.650*** | -.322 |
| Marital Status | .045** | .021 | .046** | .022 | .063*** | .030 |
| Education Level | .036*** | .038 | .033** | .035 | .024** | .025 |
| Direct Experience | | | .182*** | .033 | .121** | .022 |
| Indirect Experience | | | .101* | .023 | .013 | .003 |
| Social Disorder | | | | | .272*** | .203 |
| Physical Disorder | | | | | .178*** | .138 |
| Social Bonding | | | | | .000 | .000 |
| Informal Control | | | | | -.079*** | -.061 |
| Trends of Crime | | | | | .132*** | .085 |
| R2(adj.R2) | .126(.126) | | .128(.128) | | .240(.240) | |
| F | 539.857*** | | 366.790*** | | 430.762*** | |

*p<.05, **p<.01, *** p<.001, two-tailed

In Macrosystem, the mean scale score on trends of crime was 3.05(SD=.64), which means people tend to expect the crimes in resident area are likely to increase in future.

In dependent variable, mean scale score on general fear was 2.33(SD=1.00), while specific fear was 2.13(SD=.77). In sum, the general fear of crime, which refers to the feeling of being afraid to being alone or go out alone at night were higher than specific fear of crime.

## 2. Correlation Analysis

The correlation analysis conducted before the hypothesis test to find statistical correlation and direction among variables (Cho, *et. al.*, 2008). To conduct correlation analysis, The Pearson's Correlation Analysis is used.

The Pearson's Correlation Analysis reported in 〈Table 4〉 shows that general fear of crime has significant correlation with every variable. Firstly, as Demographic characteristics, sex(r=-.141), age (r=-.316), marital status(r=-.052), education level (r=.074), has significant statistical correlation. In other words, Females feel more fearful of crimes

Table 4. Correlation analysis

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | | | | | | | | | | | | |
| 2 | -.048** | 1 | | | | | | | | | | | |
| 3 | .372** | .063** | 1 | | | | | | | | | | |
| 4 | -.608** | .151** | .007 | 1 | | | | | | | | | |
| 5 | -.013 | -.033** | -.005 | .034** | 1 | | | | | | | | |
| 6 | -.030 | -.006 | -.001 | .053** | .330** | 1 | | | | | | | |
| 7 | -.144** | -.004 | -.038** | .120** | .051** | .076** | 1 | | | | | | |
| 8 | -.040** | -.023** | -.054** | -.016 | .048** | .057** | .619** | 1 | | | | | |
| 9 | .395** | -.073** | .149** | -.385** | -.014 | -.023** | -.106** | .070** | 1 | | | | |
| 10 | .183** | .006 | .112** | -.139** | .006 | .002 | -.082** | -.006 | .527** | 1 | | | |
| 11 | -.052** | .003 | -.020* | .050** | .027** | .026** | .154** | .102** | -.097** | -.023** | 1 | | |
| 12 | -.141** | -.316** | -.052** | .074** | .054** | .042** | .325** | .283** | -.075** | .101** | .137** | 1 | |
| 13 | -.101** | -.176** | -.017* | .076** | .076** | .073** | .374** | .297** | -.017* | -.031** | .150** | .603** | 1 |

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

1=Age, 2=Sex, 3=Marriage Status, 4=Eduction Level, 5=Direct Experience of Crime Victim, 6=Indirect Experience of Crime Victim, 7=Social Disorder, 8=Physical Disorder, 9=Social Bonding, 10=Informal Control, 11=Perception on Trends of Crime, 12=General Fear of Crime, 13=Specific Fear of Crime

than male, lower ages than older ages, unmarried people than married people, people with higher level of education than people with lower level of education. Secondly, the experience of crime victim in Microsystem produce more fear of crime, whether it is direct(r=.054) or indirect(r=.042). Thirdly, neighborhood disorder and collective efficacy also has significant statistical correlation with general fear. The higher the level of social disorder(r=.325), or physical disorder(r−.283), more people have general fear of crimes. Lower social bonding(r=−.075) and informal control (r=.101) allows more general fear of crime. Finally, people who think crimes are increasing in town have more general fear of crime than who does not. Specific fear of crime also has significant correlation with every variable.

### 3. Regression analysis

The main purpose of this study is finding the factors of fear of crime based on Ecological System Theory. To assess the research focus, we conducted multiple regression and results were noted on 〈Table 5〉 and 〈Table 6〉.

First, 〈Table 5〉 illustrates result of multiple regression analysis regarding general fear of crime. Model 1 illustrates result of multiple analysis between demographic variable and general fear of crime (=.126, F=539.857, p〈.001). All demographic variables affect the general fear of crime. Model 2 illustrates result of multiple analysis between crime victim experience and general fear of crime(=.128, F=366.790, p〈.001). Its explanatory power was 0.2% higher than Model 1. Compared to indirect crime experience, experiencing direct crime victim reflects higher levels of fear of crime. Model 3 illustrates result of multiple analysis between variables based on Ecological System Theory and general fear of crime (=.240, F=430.762, p〈.001). Its explanatory power was 11.2% higher than Model 2. However, the indirect victim experience, which has significant correlation in Model 2, does not have statically significant relationship in Model 3. Moreover, social bonding also does not have statistically significant correlation with general fear of crime.

Second, 〈Table 6〉 illustrates the result of multiple regression analysis regarding specific fear of crime. Model 1 illustrates the result of multiple analysis between demographic variable and specific fear of crime (= .045, F=176.592, p〈.001). Although the explanatory power was comparatively low, all demographic variables affects the general fear of crime. Model 2 illustrates result of multiple analysis between crime victim experience and specific fear of crime (=.052, F=136.548, p〈.001). Its explanatory power was 0.8% higher than Model 1. Same as general fear of crime, experiencing direct crime victim reflects higher levels of fear of crime than experiencing indirect crime victim. Model 3 illustrates result of multiple analysis between variables based on Ecological System Theory and specific fear of crime (=.194, F=328.152, p〈.001). Its explanatory power was 14.2% higher than Model 2. Although the results were similar to general fear of crime, indirect experience of crime victim and social bonding, which does not have significant correlation in general fear of crime, does have statically significant correlation with specific fear of crime. On the contrary, informal control does not have significant correlation in

Table 6. Multi regression analysis on specific fear of crime

| | Model 1 | | Model 2 | | Model 3 | |
|---|---|---|---|---|---|---|
| | B | β | B | β | B | β |
| Constant | 2.339 | | 2.334 | | .997 | |
| Age | −.042*** | −.097 | −.043*** | −.098 | −.028*** | −.064 |
| Sex | −.292*** | −.188 | −.288*** | −.185 | −.276*** | −.178 |
| Marital Status | .050** | .030 | .051** | .031 | .051*** | .031 |
| Education Level | .029*** | .040 | .025** | .034 | .024** | .033 |
| Direct Experience | | | .218*** | .052 | .165*** | .039 |
| Indirect Experience | | | .170*** | .050 | .091** | .027 |
| Social Disorder | | | | | .293*** | .284 |
| Physical Disorder | | | | | .100*** | .101 |
| Social Bonding | | | | | .037*** | .046 |
| Informal Control | | | | | −.015 | −.016 |
| Trends of Crime | | | | | .114*** | .095 |
| R2(adj.R2) | .045(.045) | | .052(.052) | | .194(.194) | |
| F | 176.592*** | | 136.548*** | | 328.152*** | |

*p<.05, **p<.01, *** p<.001, two-tailed

specific fear of crime, while it does have significant correlation with general fear of crime.

## V. Conclusion

There is a close relationship between human behaviors and social environments. What it means by social environments here is an interpersonal contact among family members, friends, and colleagues, and social atmosphere such as neighborhood disorder and collective efficacy, and even culture and beliefs in society. The fear of crime cannot be free from such social environments. In this paper, we have discussed the fear of crime by focusing on interaction between individuals and these social environments.

The results have shown that general fear of crime should be distinguished from specific fear of crime in Microsystem and Mezzosystem. More specifically, the factors affecting general fear is not consistent with the ones affecting the specific fear in both Microsystem and Mezzosystem regardless of the fact that both fears are affected by individuals' perception of crime trends in Macrosystem.

In the case of Microsystem, for example, indirect experience of crime affects the specific fear of crime while it does not affect the general fear of crime. Given that the indirect experience of crime is hearing specific victim cases of people close to individuals, it is probable that individuals tend to identify themselves only with specific crime cases which they heard. For example, if individual hear that intimate neighbors or family experienced robbery, they will get fear of being victim of robbery but this indirect experience does not allows them to think staying alone or going out alone at night is fearful. From this result, we cannot conclude that experiencing crime allows fear of crime, but it is highly probable that people get specific fear of crime when they experience either indirect or direct crime.

In the case of Mezzosystem, on the other hand, neighborhood disorder which contains social disorder and physical disorder affects both general and specific fear of crime. In other words, people experience the fear of crime while assessing their neighborhood disorder. Moreover, we have

found that neighborhood disorder affects people strongly than collective efficacy does, which are consistent with the results of the previous studies in the fear of crime.

As for collective efficacy, however, we have found that informal control does affect the general fear but social bonding does not. In contrast, social bonding affects the specific fear of crime but informal control does not. That is, we have found that informal control only affects general fear of crime while social bonding only affects specific fear of crime. This result is contrast to some crime prevention researches that highlights the importance of informal control in crime prevention. In other words, lower informal control, such as lower informal surveillance and participation in crime prevention activities, formulates general fear of crime but it does not formulate specific fear of crime. On the other hand, it is probable that if people are not on intimate terms with our neighbors, they tend to get more specific fear because they can think that there are no one around who could help them when they encounter specific crimes such as theft, robbery, and sexual assault. However, people probably does not get fear of being alone or going out alone at night although they don't have close relationship with neighbors.

Considering that social bonding has become weakened in modern society, while individualism has been strengthened, it seems that the specific fear of crime cannot be alleviated easily. Moreover, current Criminal Justice policy tend to focus on strengthening the informal control, such as promoting citizens to participate in crime prevention activity, while their policy does not have much to do with social bonding. However, we can see from the result that participating in prevention program without social bonding does not seem to help lowering specific fear of crime. Therefore, the criminal justice system should focus not only promoting informal control but also have to implement policies that can strengthen the social bonding. At first glance, dealing with social bonding seems not in the business of criminal justice system. Given that ultimate goal of Criminal Justice System is making safer society that people does not get fear of crime, however, we can say that Criminal Justice System should also deal with social bonding problems.

Although this study provides a stepping stone for developing an account of fear of crime, adopting Ecological System Theory, the limitations of study should be compensated by continued research. First, because this study conducted with secondary data, it fails to see some factors that previous researches considered as significant factor, such as mass media in indirect fear of crime. Second, as this study measure Macrosystem on single factor, other factors should be added in further research. Third, reciprocal relationship among systems should be investigated too.

The safe society is not just the society with low crime rates but the society that people do not get fear of crime. Generally, people want to leave in safe society because all men want to do what they want on their own preferable timing and places. The quality of life is deteriorated if these kinds of desire are frustrated by the fear of crime. This is why the study of the fear of crime needs to be conducted consistently in modern society.

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# 생태학적 체계이론에 기반한 범죄두려움의 영향요인 연구

국문초록 이 연구의 목적은 범죄두려움에 관한 개인행동과 환경의 상호작용 및 영향력을 생태학적 체계이론을 중심으로 미시체계, 중간체계, 거시체계로 나누어 살펴보고, 그 영향요인을 일반적 범죄두려움과 구체적 범죄두려움으로 구분하여 파악하는 것이다. 연구 결과, 각 체계 안에서 구체적 범죄두려움과 일반적 범죄두려움에 영향을 미치는 요소가 다른 것을 확인할 수 있었다. 미시체계 안에서는 간접적인 범죄 피해경험이 구체적 두려움에 영향을 미치는 반면, 일반적 범죄두려움에는 영향을 미치지 않았다. 한편, 중간체계에서는 지역사회무질서가 구체적, 일반적 범죄두려움 모두에 영향을 미쳤다. 하지만 집합효율성 중 비공식통제는 구체적 범죄두려움에 영향을 미치지 않았지만 일반적 범죄두려움에는 영향을 미쳤고, 집합효율성 중 사회적 유대는 일반적 범죄두려움에 영향을 미치지 않았지만 구체적 두려움에는 영향을 미쳤다.

주제어 : 생태학적 체계이론, 미시체계, 중간체계, 거시체계, 범죄두려움

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