Predictors of Individuals' Behavioral Characteristics of Routine Activities Theory: Analysis of a Synthesis Model of Socio-Economic Status, Victimization, and Fear of Crime

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Abstract: Researchers have studied victimization, fear of crime, and individuals' behavioral characteristics to investigate the origin of crime and victimization, such as the routine activity theory. However, little research has examined how the behavioral characteristics were formed in theory. Although the elements of socioeconomic status, victimization experience, and fear of crime are believed to cause differences in human behaviors, the current study attempts to examine which predictors construct behavior characteristics like the routine activity theory, including target suitability and guardianship. Using the most recent, nationally collected official crime victimization data from South Korea (Korean Crime Victimization Survey, 2014), the study analyzed the variables with statistical models. The results suggest the following:(1) an individual's socioeconomic status – such as gender, age, and education level – rather than victimization experience or fear of crime, are significant predictors of target suitability;(2) higher levels of fear of crime predict higher levels of guardianship; and (3) the victimization experience did not predict either target suitability or guardianship.

Keywords: Routine activity theory, Victimization, Fear of crime, Protective behaviors, Victim.

INTRODUCTION

One of the main topics of criminology focuses on the relationship between crime and human behavior. Researchers have mainly conceptualized fear of crime and victimization with opportunistic factors and discussed both direct and indirect relationships with human behaviors. For example, people's everyday behaviors, like lifestyle and routine activities, could increase and decrease the possibility of being a victim of crime (Hindelang *et al*., 1978; Cohen & Felson, 1979). This notion caused researchers to construct a theory on the logic that individuals' behaviors could influence victimization. From a psychological point of view, what people do is generally influenced by what people think. Based on the theoretical framework, researchers conceptualized and conducted various research on the relationships between fear of crime, victimization, and behaviors: (1) crime prevention behaviors are related to victimization (Ferraro, 1995; Allen, 2013; Giblin, 2008; Giblin *et al*., 2012; Guerette & Santana, 2010; Tewksbury &Mustaine, 2003);(2) people's behaviors for preventing crime are related to their fear of crime (Barrett, Jennings, & Lynch, 2012; Liska, Sanchirico, & Reed, 1988; May, 2001); and (3) fear of crime is related to victimization(Lee & Ulmer,

2000; Perkins & Taylor, 1996; Yin, 1985; Yun, Kercher, & Swindell, 2010). However, scholars often tested the relationship between fear of crime and preventative behaviors – assuming the preventative behaviors would reduce the likelihood of victimization. Other cases studied the association between fear of crime and victimization with socioeconomic status. Meanwhile, scarce attention was given to how preventative behaviors were constructed concerning all the variables. Understanding the criminal's behaviors has been major attention in the criminal justice field. However, understanding the behaviors of individuals with victimization experience is also worth building crime prevention policy as well as understand human behaviors in general. Considering the previous literature lacked attempts to find the link between victimization, fear of crime, and behaviors as in the wholesome process of human behaviors, the current study seeks to find the relationships among the variables, which present different perspectives on one of the major criminological theories. Further, the study attempted to establish empirical evidence to support the hypothesis that which variables are collectively effective on human behaviors.

LITERATURE REVIEW

The current body of literature on criminological theories seldom includes human behaviors from at victim's perspective. Moreover, few studies examined the relationships between victimization, fear of crime, and behavior holistically. Therefore, the current study

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reviews the study on victimization, fear of crime, and behaviors in regards to limited relations.

Crime Prevention Behaviors, The Fear of Crime, and Victimization

With the similar notion of the routine activity theory which argues individuals' behavioral characteristics affects victimization (Cohen & Felson, 1979), many other researchers conduct theories more specifically focusing on crime prevention behaviors relating victimization, and possible factors that makes people adjust their behaviors. First of all, Garofalo mentioned that people's behaviors for protecting their belongings including lives, bodies, and properties as crime prevention activities, and these are divided into categories including precaution, avoidance, and defensive behavior (1981). Moreover, Ki categories these activities whether it is passive or active, so he put precaution and avoidance activities in passive and defensive behaviors in active category (2017). The 'passive' and 'active' activities are in common because latent victims think the possibility of being victims in their lives and are prepared during their daily lives. However, whether the behaviors focus on preventing highly possible circumstance or on preparing defense in case there is a crime is different. To be specific, if people adjust their life patterns to avoid certain situations, circumstances, and times with any possible dangers, those should be in the 'passive' section, and if people carry certain devices to defend themselves in case someone attempt crime against them, it should be in the 'active' category. As examples, being with guardians who can protect them, using CCTV, and carrying whistles or gas guns in bags are defensive activities (Ki, 2017).

Focusing on factors of crime prevention activities, Garofalo conducted a general model of the fear of crime and its consequences and argues that socio-economic status consequently might affect the fear of crime, and the fear of crime could consequently affect people's behaviors (1981). Moreover, in his other research, he argues that the fear of crime could be a major factor of victimization since it affects individual's crime prevention behaviors (1979). Taylor and Hale (1986) also assert that a person who is weak socially or economically fears for crime more than others in one of their three models about the predictors of fear of crime, 'indirect victimization model'. Ferraro conceptualized it as a constrained behaviors and Allen did it as self-protective behaviors (Ferraro, 1995; Allen, 2013). Ferraro insists that if a person more strongly feels

perceived danger from crimes, he or she controls his or her behaviors and becomes defensive. Moreover, he argues that the fear of crime could be an influencer of crime prevention activities but also the result of it because crime prevention activities could make people more fearful of crime (1995). Ferraro's view is similar to Garofalo's conclusions (Garofalo, 1981). Rader suggested reciprocal relations among victimization, fear of crime, and crime prevention activities, unlike previous models (Rader, 2004).

Some of the theoretical relations between crime prevention behaviors and the fear of crime and possible factors are supported with later research works. According to the studies, people who feel the fear of crime in their lives actually tend to adjust their behaviors; for example, avoiding specific location during specific time or prepare tactics to defend themselves (Barrett, Jennings, & Lynch, 2012; Liska, Sanchirico, & Reed, 1988; May, 2001). Additionally, there are studies that support that person's socioeconomic status like gender, income, educational achievement, or age are related to fear of crime. Females have more fear of crime than males (Carcach *et al*., 1995; Stafford & Galle, 1984), and age is positively related to fear of crime while income and education levels are negatively associated with fear (Ackah, 2000; Carcach *et al*., 1995; LaGrange & Ferraro, 1989; Lee & Ulmer, 2000; Skogan & Maxfield, 1981; Taylor & Hale, 1986). According to Warr and Ellison's research, past victimization experiences also affect the fear of crime and crime prevention behaviors (2000). Other researchers mentioned that the relationship between the fear of crime and past victimization experiences should be considered with variety of factors because mixed relationships were reported (Skogan & Maxfield, 1981). Race and types of crime are factors that influence the relationship (Chiricos *et al*., 1997; Rountree, 1998).

Cultural Differences on Victimization, the Fear of Crime, and Crime Prevention Activities

As victimization and fear of crime become a popular research topic in many Western countries, most studies were initially conducted in the Western context. Soon after, concerning the possibility that demographic factors, like in the other fields, easily influence human behaviors, studies on the same topic were also conducted in different cultures among various ethnicities. Studies in different contexts started by comparing different racial groups such as Blacks and Caucasians and were expanded to compare different

continents (Braungart *et al*., 1980; Clemente and Kleiman, 1977; Ferraro, 1995; Walker, 1994).

As researchers expected, there are different outcomes among different cultures and ethnicities. For example, research among Chinese immigrants in the United States shows different results compared to the other groups in the same country. It shows that younger people report more crimes, income is negatively correlated, and that criminal victimization experience is positively correlated with fear of crime. Furthermore, the study also found that more acculturated Chinese immigrants report less fear of crime (Yun *et al*., 2010). Even in people who share the same ethnicity, the results are not always the same. A study that was conducted among Chinese ethnic groups has somewhat different results than the same ethnic group in the United States. This study was conducted among Chinese people living in a contemporary urban area in China, and it shows that young and educated people report a higher level of fear of crime, unlike established patterns in Western countries. However, the study also found some consistencies with Western literature; females show more fear of crime, and their victimization experiences have a positive relationship with their fear of crime (Liu *et al*., 2009). Besides the research that was conducted among Chinese ethnic groups, there is a study conducted among Korean immigrants in Chicago (Lee & Ulmer, 2000). It shows that Korean immigrants have patterns that are similar to Chinese immigrants. The length of residency in the United States has a negative relationship with fear of crime like Chinese immigrants; however, unlike other groups, females perceived less fear of crimes.

Recently, many research studies were conducted among Korean people who are in South Korea focusing on human behaviors in victimization. For example, among people in South Korea, even though the perception of foreign residents in the neighborhood was positively related to the perceived risk of crime, it had no relationship with fear of crime. However, the perception of growing populations of foreigners in the community has a significant and positive relationship with fear of crime (Roh, 2013). Another research study about neighborhood disorder, collective efficacy, and fear of crime among Korean people show that collective efficacy influences neighborhood disorder and neighborhood disorder affects fear of crime significantly (Lee *et al*., 2012).

Ki (2017) mentioned that, even though the emotional fear of crime increases the crime prevention activities among Koreans, there is no direct relationship between fear of crime and victimization. However, other studies suggest a possible relationship between fear of crime, prevention behaviors, and victimization among the South Korean population. For example, considering socioeconomic status, females report more victimization, crime prevention behaviors, and fear of crime (Yun, 2018). Age is only negatively related to both fear of crime and crime prevention behaviors. Education and environment of the surrounding area are not related to all three, but an individual's education level is positively related to fear of crime and crime prevention behaviors. Also, individuals with higher incomes are more fearful of crime and try harder to prevent crime (Ki, 2017). Yun researched about deviant behaviors (2018) and the relationship between Korean people's behaviors and victimization. According to his study, compared to the general population, people who have experienced victimization in their lives have more deviant behaviors and lifestyles. Therefore, this factor also supports a possible relationship between non-deviant behavioral factors and victimization among the South Korean population.

The Current Study

Researching the factors' influence on fear of crime and prevention activities would be an essential key because it should help prevent future victimization according to theories. Though much research has demonstrated relationships between crime prevention behaviors and fear of crimes and victimization, there is a lack of research showing how the different factors affect individuals' prevention behaviors. Thus, this study attempted to find the predictors of behavioral characteristics – target suitability and guardianship – that can cyclically affect crime and victimization in routine activity theory.

The main objective of the current study is to understand the relationship among variables of routine activities theory differently from the previous discussions in the literature. Previously, literature discussed the individuals' behaviors affected their chance of victimization. However, the current study argues that the individuals' behaviors are affected by their victimization experiences and fear of crime level. Therefore, for the study's analysis, theoretical concepts of behavioral characteristics were adopted from the routine activity theory. According to the theory, target suitability, guardianship, and motivated offenders are

the three elements that affect the likelihood of crime and victimization (Cohen & Felson, 1979). Among the elements, target suitability and guardianship were conceptualized as individuals' behavioral characteristics. First, the target suitability represented the lifestyle aspect, such as the exposure of individuals outside. Second, guardianship was characterized as protective behaviors like avoiding dangerous streets. Using the theory's behavioral concept, the current study evaluated whether individuals' socioeconomic status, victimization, and fear of crime could predict behavioral characteristics.

RESEARCH DESIGN

Data and Variables

The current study analyzes a dataset of the Korean Crime Victimization Survey (KCVS) in 2014. The survey is biannually conducted by the Korean Institute of Criminology (KIC) to understand crime and victimization in the nation. The survey consists of questions about the previous years' experience of victimization and related information. The stratification probability extraction sampling method was applied to select survey tracts and randomly selected ten households from each tract. The survey consisted of an in-person interview, and the total individual sample of the data was 15,020 within 6,984 households. It is ideal to analyze the most recent dataset. However, at the time of the research, the most recent publically available dataset was in 2014. The analysis was conducted with understanding the limitation of not using the most recent dataset.

The data includes questions on subjects' socioeconomic status, including demographics, victimization experiences, fear of different types of crime, behavioral characteristics, and more. The original dataset was recoded and reconstructed into a fit format for the analysis. Individuals' socioeconomic status includes their location of residence (major city=1, province=0), gender(female=1, male=0), age (from 14 to 100), marital status(have spouse=1, others=0), occupation (professional/administrative=1, others=0), disability status(yes=1, no=0), foreign status(yes=1, no=0), one-person household(yes=1, no=0), an education level(college and more=1, others=0). Though household income level was initially included, it was disregarded because the variable only represents the total household income, not the individual level. Most of the socioeconomic variables

were recoded into dummy variables (0 or 1) for the use of predictors in the regression model.

In 2014, the administrative division in South Korea was mainly split into seven major cities and nine provinces. Generally, those major cities have a population of more than one million and include various city-related industries. For the convenience of the analysis, the residence division of the respondents was recoded into a binary variable. The subjects who lived in the major cities were 6,335 individuals or 42.2% of the total respondents. Gender (N=7,945, 52.9%) and age were included as binary and continuous variables, respectively. The age range was from 14 to 100 years old, an average of 48.33(SD=18.4). The three categories of marital status (1=single, 2=has spouse, 3=widowed or divorced) were recoded into binary (1=having spouse, 0=others), with 64.8% of the sample population having spouses. The category of occupation was originally divided into 10 different values (1=professional/administrative, 2=office job, 3=service/marketing, 4=agricultural/forestry/fishery, 5=mechanic, 6=labor work, 7=military, 8=housewife/househusband, 9=student, 10=others).

It is generally understood that occupation is mostly related to individuals' income. However, it is also difficult to determine which occupation is related to lower-level income based solely on the profession type. Thus, the current study selected the most likely higher-income jobs – professional/administrative (N=492, 3.3%) – to represent the occupation binary value. The education level that was divided into seven different categories, ranging from No Education to Graduate School (0–6) was recoded into college education (N=5,592, 37.2%) and others. Also, disability status (N=270, 1.8%), foreign status (N=45, .3%), and one-person household (N=1,560, 10.4%) were recoded into dichotomous variables.

The victimization information in KCVS forms eight major categories: fraud, robbery, trespassing, damage to property, assault, threat, theft, and sexual crime. The victimization rate was 3.8% (N=566), including all types of victimization. The types of victimization were coded into two different categories– personal/household and property/violent. Personal victimization includes victimizations of individuals such as fraud, robbery, theft, assault, threat, and sex crimes, whereas household victimization consists of trespassing and damage of property. The victimization rate of each type is 2.9%(N=441) and 1.4%(N=97). The household victimization is over the total number of households

Table 1: Descriptive Statistics of Variables (N=15,020)

Variables Socioeconomic Status	Label	Code	N (Mean)	% (SD)
Residence	Major City	1	6,335	42.2
Gender	Female	1	7,945	52.9
Age (14-100)			(48.33)	(18.4)
Marital Status	Having Spouse	1	9,735	64.8
Occupation	Professional/Administrative	1	492	3.3
Education Level	College Educated and More	1	5,592	37.2
Disability Status	Yes	1	270	1.8
Foreign Status	Yes	1	45	.3
Single-person Household	Yes	1	1,560	10.4
Victimization				
Personal	Yes	1	441	2.9
Household[a]	Yes	1	97	1.4
Property	Yes	1	493	3.3
Violent	Yes	1	73	.5
Total	Yes	1	566	3.8

[a]Household related variables: N=6,984.

(N=6,984). The other category of victimization is whether the victimization involved property or violent damage. Property victimization consists of fraud, robbery, trespassing, and damage to property (N=493, 3.3%). Assaults, threats, and sex crimes were coded into violent victimization (N=73, .5%).

The KCVS survey attempts to measure the different levels of the types of crime to fear – theft, robbery, assault, fraud, sex crimes, damage of property, trespassing, and stalking. A five-item Likert scale represented the eight fear of crime questions from Never(1) to Very Much(5). As the victimization classification, the fear was categorized into fear of personal/household and property/violent victimizations. Fear of personal victimization was constructed into six questions, including stalking (α=.93). Fear of trespassing and damage to property victimization built the household fear of crime index with Alpha level .93. Even though household victimization is not included in the analysis model because the data is at the household level, all types of fear of crime were measured at the individual level.

Fear of property- and violent-crime victimization were constructed with 3 and 4 measures each. Fear of property victimization includes fear of theft, fraud, and property damage, whereas fear of violent victimization consists of robbery, assault, sex crimes, and stalking.

Trespassing was not included in the fear of either property or violent crimes because it is difficult to determine whether the trespassing victimization involved the violent elements. All fear latent variables present a higher level of Cronbach's Alpha (α>.80) indicated a reasonable level. The original question items were regressed to a standardized score (Mean=0, SD=1) using factor analysis.

The behavioral variables were constructed by applying the routine activities/lifestyle theoretical approach. Because the current study focuses on individual behavioral characteristics, the questions related to personal behaviors were selected to improve the target suitability and guardianship latent variables. Target suitability comprises easy accessibility to a target and the target's level of exposure. Therefore, the five questions on the five-item Likert scale (Never to Always)[1] related to the trait of target suitability constructed a standardized score (α=.60). The capable guardian of the theory is mostly who or what can provide surveillance over the situation to deter the motivated offender (Cohen & Felson, 1979). The

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[1]"How much do you use of public transportation in daily life"; "How oftendo you come home after 10 PM at night"; "How many times do you come home drunk"; "Do you wear fancy clothes or accessories when you go out"; "Do you use expensive brands of products in daily life"

Table 2: Latent Variables and Attributes (standardized)

Variables	Min.	Max.	N of Items	Cronbach's Alpha
Fear of Crime				
Personal	-1.45	3.46	6	.93
Household	-1.39	3.02	2	.81
Property	-1.46	3.34	3	.85
Violent	-1.38	3.43	4	.88
Behavioral Variables				
Personal Target Suitability	-1.53	3.34	5	.60
Personal Guardianship	-1.43	3.46	5	.83

personal guardianship in this study considers the individual as a capable guardian that changes behavioral aspects – such as avoiding dangerous streets and going out at night – ultimately related to manipulating the surroundings to increase the level of guardianship. The five related questions[2] were also on a five-item Likert scale, with answers from Never to Always (α=.83). The behavioral variables were also standardized for the model analysis (Mean=0, SD=1).

Analytic Strategy

The primary focus of the study is to determine the predictors for individual's behavioral characteristics that have been proven to be elements of crime and victimization (Garofalo, 1979; Ferraro, 1995; Allen, 2013; Giblin, 2008; Giblin *et al*., 2012; Guerette & Santana, 2010; Tewksbury & Mustaine, 2003). Before the analysis, the full regression model, t-test, and correlation analysis were conducted to determine whether the independent variables were fit for the model analysis as well as to understand the details of statistical relationships between the variables. Because the higher socio-economic status was coded into binary format, we conducted the independent-samples t-test with the behavioral characteristics as dependent variables. We also coded different types of victimization variables into binary and performed a t-test for those variables. Otherwise, the fear and behavioral variables were constructed into a continuous standardized score. For those continuous variables, we conducted a correlation analysis to examine the relationship between the variables. Because age was a continuous variable, we also performed a correlation analysis to

see the relationship between age and behavioral characteristics.

After the preliminary investigation of the variables, we analyzed three multiple linear regression (MLR) models on an individual's behavioral characteristics. The first model included socioeconomic variables only as independent variables and the behavioral characteristics – target suitability and guardianship – as dependent variables. Second, the victimization variables were added to examine and to understand the dynamics of the estimates on behavioral characteristics. Lastly, the full model included the socioeconomic status, victimization, and fear of crime variables to understand how all the variables affect an individual's behavioral characteristics. The behavioral variables were tested separately with two different dependent variables – target suitability and guardianship.

RESULTS

Based on the previous literature, the current study selected eight socioeconomic variables that may affect behavioral differences. The preliminary analysis presented that the behavioral characteristics statistically differed, mostly depending on the individual socioeconomic status. First, respondents who lived in major cities presented a higher level of target suitability (M=.218, SD=1.00) than the rest of the province (M=-.152, SD=.99) (t[13607]=-22.52, p=.000), whereas the guardianship level in the major city was also higher (M=.050, SD=.97) than the rest of the province (M=-.108, SD=-.11) (t[15018]=-9.93, p=.000). Respondents living in the major city appear to have higher target suitability as well as guardianship than the province in general. Gender has been a key role in the behavioral characteristics included in previous studies (Carcach *et al*., 1995; Stafford & Galle, 1984, Ackah, 2000;

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[2]"Bringing self-defense tools", "With someone at night", "Avoid dangerous looking streets", "Avoid schedule at night", "Not taking taxi alone at night"

Carcach *et al*., 1995; LaGrange & Ferraro, 1989; Lee & Ulmer, 2000; Skogan & Maxfield, 1981; Taylor and Hale, 1986, Chiricos *et al*., 1997; Rountree, 1998). Female respondents were less risky because of their appearance and presented a lower level of target suitability (M=-.112, SD=.99) than males (M=.136, SD=1.02) (t[14696]=15.10, p=.000). Also, females showed more protective behaviors and also had a higher level of guardianship (M=.274, SD=.274) than males(M=-.395, SD=-.39) (t[15008]=-45.48, p=.000). The third socioeconomic status was the age distribution. Generally, younger age groups risk more than older ones and are less careful in terms of their behavior (Ackah, 2000; Carcach *et al*., 1995; LaGrange & Ferraro, 1989; Lee & Ulmer, 2000; Skogan & Maxfield, 1981; Taylor and Hale, 1986).

Like the previous literature, the correlation results confirmed that the older respondents displayed a lower level of target suitability (r[15020]=-.498, p=.000). However, the guardianship level also became lower when they were older (r[15020]=-.119). The target vulnerability becomes lower with older age groups, lowering the guardianship level. The result also indicated that if the respondents had a spouse, the target suitability (t[9315]=21.30, p=.000) was lower(M=-.130, SD=.92) than other statuses(M=.251, SD=1.11) while the guardianship level (t[10442]=3.60, p=.000) was also lower (M=-.062, SD=.95) than others (M=-.002, SD=.99). Nevertheless, the guardianship level between the two groups was both close to the average and presented little differences.

Whereas most of the socioeconomic variables of the behavioral characteristics displayed significance, the occupation status presented different results. The target suitability level of professional/administrative jobs was significantly higher (M=.319, SD=.88) than other occupations (M=-.006, SD=1.01) (t[535]=-8.01, p=.000). However, the guardianship level revealed an insignificant difference (t[15018]=1.03, p=.305). Moreover, the college-educated respondents presented a higher level of target suitability (M=.482, SD=.95) than other populations (M=-.279, SD=.94) (t[15018]=-47.92, p=.000). In terms of guardianship level, college-educated respondents presented a slightly higher level (M=.010, SD=.98) than others (M=-.071, SD=.95) (t[11453]=-4.98, p=.000).

Following the recent studies related to behavioral differences, the status of disability, foreign, and single-person households were included in the analysis model. The respondents with disabilities presented a significantly lower level of target suitability (M=-.798, SD=.78) than others (M=.019, SD=1.00) (t[285]=16.94, p=.000). The results imply that the limitation of accessibility in public may restrict behavioral boundaries, which led to a lower level of target suitability. Also, the guardianship level of a disability was lower (M=-.261, SD=.94) than the others (M=-.037, SD=.97) (t[15018]=3.78, p=.000).

Previous studies often discussed race (Chiricos *et al*., 1997; Rountree, 1998), and, recently, victimization literature discovered that being foreigner producers some mixed results on fear and behavioral characteristics. In this result, foreign status presented similar results with gender in both target suitability (t[44]=7.30, p=.000) and guardianship (t[15018]=-2.13, p=.033). Target suitability of the foreign population presented a significantly lower level (M=-.760, SD=.70) than the native population (M=.007, SD=1.01). Meanwhile, foreign respondents displayed a higher level of guardianship (M=.266, SD=1.11) than the Korean population (M=-.042, SD=.97). Lastly, because the recent victimization and fear studies' attention goes to single-person households, the group differences presented significant results in both target suitability (t[1886]=12.06, p=.000) and guardianship (t[1968]=1.99, p=.000). Living alone in a single-person household presented significantly lower levels of target suitability (M=-.303, SD=1.07) than other family statuses (M=.040, SD=1.00) as well as a lower level of guardianship (M=-.086, SD=.94) than the others (M=-.036, SD=.97).

In sum, socioeconomic groups with a higher level of target suitability were living in major cities, male, younger, unwed, in professional/administrative jobs, college-educated, not disabled, not a foreigner, and not single-person households. Also, a higher level of guardianship was presented in groups who were residents of a major city, female, younger, unwed, college-educated, not disabled, a foreigner, and not a single-person household. The results may suggest that population groups with active social relationships such as those living in major cities and having professional/administrative jobs presented a relatively higher level of target suitability. The guardianship level tended to follow the patterns of target suitability except for gender and foreign status. Female and foreign populations have also presented higher levels of protective behaviors in previous studies (Carcach, *et al*., 1995; Stafford & Galle, 1984). The two behavioral

Table 3:   Analysis of Socioeconomic Status and Behavioral Indicators

Variables					
Socioeconomic Status	**Mean**		*df*	*T*	**Sig**
Residence	City	Province			
Target Suitability	.218	-.152	13607	-22.52	.000
Guardianship	.050	-108	15018	-9.93	.000
Gender	Female	Male			
Target Suitability	-.112	.136	14696	15.10	.000
Guardianship	.274	-.395	15008	-45.48	.000
Age (correlation)					
Target Suitability	(-.498)				.000
Guardianship	(-.119)				.000
Marital Status	Have Spouse	Others			
Target Suitability	-.130	.251	9315	21.30	.000
Guardianship	-.062	-.002	10442	3.60	.000
Occupation	Professional Administrative	Others			
Target Suitability	.319	-.006	535	-8.01	.000
Guardianship	-.085	-.040	15018	1.03	.305
Education Level	College and more	Others			
Target Suitability	.482	-.279	15018	-47.92	.000
Guardianship	.010	-.071	11453	-4.98	.000
Disability Status	Yes	No			
Target Suitability	-.798	.019	285	16.94	.000
Guardianship	-.261	-.037	15018	3.78	.000
Foreign Status	Yes	No			
Target Suitability	-.760	.007	44	7.30	.000
Guardianship	.266	-.042	15018	-2.13	.033
Single-person Household	Yes	No			
Target Suitability	-.303	.040	1886	12.06	.000
Guardianship	-.086	-.036	1968	1.99	.000

characteristics are not opposite variables; they should be interoperated in each analysis context.

We performed the second primary analysis of the independent t-test of victimization on the behavioral characteristics to estimate the differences. Regardless of the type of victimization, the results were the same: groups with victimization experiences displayed a higher level of target suitability and guardianship. The most considerable mean differences both in target suitability (.266) and guardianship (.435) wherein those with violent victimization experience. Unlike the general assumption, the population with victimization experiences presented a higher level of target suitability.

The last preliminary analysis was between fear of crime and behavioral characteristics. All types of fear of crime and two behavioral characteristics had a positive relationship, indicating that a higher level of fear of crime is related to a higher level of target suitability and guardianship(p=.000). The most robust statistical relationship between the variables was with fear of violent crime (r=.154) and target suitability and guardianship (r=.0573; p=.000). The fear and guardianship levels are associated with the previous research (Barrett, Jennings, & Lynch, 2012; Liska, Sanchirico, & Reed, 1988; May 2001), whereas the target suitability displayed unexpected results – individuals with a higher level of fear presented a higher level of target suitability. This analysis may imply

Table 4:   T-Test of Victimization Experience and Behavioral Indicators

Variables					
Victimization	Mean		*df*	*T*	Sig
Personal	Yes	No			
Target Suitability	.175	-.000	466	-3.59	.000
Guardianship	.208	-.486	15018	-5.50	.000
Property	Yes	No			
Target Suitability	.095	.001	529	-2.14	.033
Guardianship	.145	-.047	15018	-4.35	.000
Violent	Yes	No			
Target Suitability	.269	.003	15018	-2.24	.025
Guardianship	.392	-.043	72	-3.24	.002
Total	Yes	No			
Target Suitability	.118	.000	614	-2.84	.005
Guardianship	.177	-.045	15018	-5.478	.000

Table 5:   Correlation Between Fear of Crime and Behavioral Indicators

Variables		
Fear of Crime	Target Suitability	Guardianship
Personal	.149[**]	.565[**]
Household	.104[**]	.500[**]
Property	.129[**]	.512[**]
Violent	.154[**]	.573[**]
Behavioral Variables		
Target Suitability	1	.130[**]
Guardianship	.130[**]	1

[**]p< 0.01 level, [*] p < 0.05.

that the target suitability is not related to one's high level of fear or victimization experience. Also, the two behavioral variables were positively correlated (r=.130, p=.000).

The primary statistical analysis explained the group differences within socioeconomic status on individuals' behavioral characteristics as well as relationships between victimization, fear, and behaviors. To estimate which variable constructs the behavioral characteristics, we applied MLR models to target suitability and guardianship. First, we analyzed the target suitability as the dependent variable. We analyzed Model 1, which used socioeconomic status variables as predictors, and found a significant regression equation (F[9,15010]=713.47, p<.000) with an R^2 of .300, which explains why the model has 30.0 % of the variation. According to the results, living in the

city (B=.224, p<.000), having a professional/administrative job(B=118, p<.000), and being college-educated (B=.335, p<.000) increased the level of target suitability – traits highly related to social activeness. However, being female (B=-.169, p<.000), being older (B=-.021, p<.000), having a spouse (B=-.103, p<.000), having a disability (B=-.419, p<.000), and being a foreigner (B=-.963, p<.000) were the negative predictors of target suitability. The negative predictors were generally associated with limited social activeness, such as physical restriction due to age or disability and language and cultural barriers from being a foreigner.

Further, to understand if other elements affect the behavioral characteristics, Model 2 and Model 3 included victimization experience and fear of crime. Having included the victimization experience, Model 2

Table 6: **Multiple Linear Regression Analysis on Target Suitability**

Variables	Model1			Model2			Model3		
	B	**SE**	**β**	**B**	**SE**	**β**	**B**	**SE**	**β**
Socioeconomic Status									
(Constant)	.975	.027		.973	.027		.972	.027	
Residence [City]	.224	.014	.109**	.222	.014	.109**	.206	.014	.101**
Gender [Female]	-.169	.014	-.084**	-.170	.014	-.084**	-.208	.014	-.103**
Age	-.021	.000	-.385**	-.021	.000	-.385**	-.020	.000	-.370**
Marital Status [Have Spouse]	-.103	.018	-.049**	-.104	.018	-.049**	-.111	.018	-.053**
Occupation [Professional /Administrative]	.118	.039	.021**	.119	.039	.021**	.120	.039	.021**
Education Level [College Edu.]	.335	.016	.160**	.335	.016	.160**	.335	.016	.160**
Disability Status	-.419	.052	-.055**	-.420	.052	-.055**	-.425	.052	-.056**
Foreign Status	-.963	.127	-.052**	-.955	.127	-.052**	-.951	.126	-.051**
1-person Household	-.033	.028	-.010	-.036	.028	-.011	-.040	.027	-.012
Victimization									
Personal				.252	.088	.042**	.219	.087	.037**
Property				-.110	.076	-.019	-.117	.075	-.021
Violent				-.218	.132	-.015+	-.225	.131	-.016+
Fear of Crime									
Personal							-.139	.101	-.132
Household							-.088	.021	-.083**
Property							.145	.049	.139**
Violent							.194	.072	.184**
R^2		.300			.300			.312	
Adjusted R^2		.299			.300			.311	
F-statistics		713.47**			536.47**			425.47**	

**p< 0.01 level, *p < 0.05, + p < 0.07.

also presented the significant regression equation ($F[12,15007]=536.21$, p<.000). However, the R^2 of Model 2 was insignificantly increased, the same as in Model 1 (R^2=.300). Although personal victimization was a significant predictor of (B=.252, p<.000) of target suitability, little coefficient differences in the overall variables were displayed throughout the model compared to Model 1. Including all predictor variables, Model 3 was analyzed and indicated the significance in the model with .312 of R^2. The explanatory variance of Model 3 increased about 1.2% more than Model 1, implying the additional explanatory variance was small from the fear of crime predictors ($F[16,15003]=425.47$, p<.000).In detail, fear of property (β=.139, p<.000) and violent (β=.184, p<.000) crimes were positive

predictors of target suitability, whereas fear of household crimes (β=-.083, p<.000) had negative effects. According to the results, individuals with a higher level of fear of property and violent crimes were more likely to have a higher level of target suitability. This fact may be explained by the fame of the original routine activity theory. Because target suitability is explained in terms of lifestyle, there may be a relationship between individuals' activeness associated with socioeconomic status and the level of fear of crime. Individuals who are more active in society inevitably expose themselves more – having a higher level of target suitability – and thus have a higher level of fear. Besides the additional explanation, the variance change was insignificant, and it is safe to interpret that

the results of the full model on target suitability confirmed that the target suitability was constructed mostly on socioeconomic status.

We analyzed the same three models using guardianship as the dependent variable to evaluate the predictors of guardianship. With predictors of socioeconomic status, Model 1 was analyzed and resulted in the significant regression equation with R^2 of .144(F[9,15010]=225.745, p<.000). The explanatory variance of the model is 14.4%. The positive predictors of guardianship were living in a city (B=.118, p<.000), being female (B=.693, p<.000), being younger (B=-.007, p<.000), having a spouse (B=.080, p<.000), having professional/administrative jobs (B=.046,

p<.000), and being college-educated (B=.037, p<.05). The status of having a disability, foreigners, and single-person households were not statistically significant in the model. Unlike target suitability, not all variables presented significant results, and the explanatory variance is lower by socioeconomic status. Most of the socioeconomic predictors increasing guardianship level in the study (such as being female, younger, and living in cities) were proven to have associations, which approved the previous assumptions.

Model 2 added the victimization experience variables to test if a difference occurs in the explanatory variance and the estimates of predictors. However, the R^2 of Model 2 analysis was

Table 7: Multiple Linear Regression on Guardianship

	Model1			Model2			Model3		
Variables	**B**	**SE**	**β**	**B**	**SE**	**β**	**B**	**SE**	**β**
Socioeconomic Status									
(Constant)	-.182	.028		-.190	.028		-.158	.024	
Residence [City]	.118	.015	.061**	.118	.015	.060**	.041	.013	.021**
Gender [Female]	.693	.015	.358**	.691	.015	.357**	.499	.013	.258**
Age	-.007	.001	-.135**	-.007	.001	-.133**	-.003	.000	-.063**
Marital Status [Have Spouse]	.080	.020	.040**	.079	.020	.039**	.035	.016	.017*
Occupation [Professional /Administrative]	.046	.042	.009**	.046	.042	.009**	.044	.035	.008
Education Level [College Edu.]	.037	.017	.019*	.037	.017	.019*	.039	.014	.019*
Disability Status	-.029	.055	-.004	-.029	.055	-.004	-.049	.047	-.007
Foreign Status	.093	.134	.005	.098	.134	.006	.098	.113	.006
1-person Household	.000	.029	.000	-.006	.029	-.002	-.034	.025	-.011
Victimization									
Personal				.086	.093	.015	.000	.078	.000
Property				.055	.080	.010	-.037	.068	-.007
Violent				.263	.140	.019+	.117	.118	.008
Fear of Crime									
Personal							.339	.090	.336**
Household							.123	.019	.122**
Property							-.112	.044	-.112*
Violent							.183	.065	.181*
R^2		.144			.145			.396	
Adjusted R^2		.144			.145			.396	
F-statistics		281.04**			212.68**			615.20**	

**p< 0.01 level, *p < 0.05, + p < 0.07.

.145(F[12,15007]=212.68, p<.000), with a 0.1% increase variance from Model 1. The addition of victimization variables had almost no effect on the previous model, whereas the additional variables were not statistically significant in general. Only violent victimization experience was scarcely significant (B=.263, p<.07). Whereas Model 2 proved that the victimization experiences were not predictors of guardianship, Model 3 with fear of crime predictors increased the explanatory variable about 25%, with a variance close to 40% (F[16,15003]=615.20, p<.000). In Model 3, the estimates of socioeconomic variables were generally decreased, and occupation became a statistically insignificant predictor. Three types of fear of crime – personal (β=.336, p<.000), household (β=.122, p<.000), and violent (β=.181, p<.000) – were positive predictors of higher levels of guardianship, whereas fear of property victimization was a negative predictor (β=-.112, p<.000). Although the fear of property crime presented questionable results on guardianship, the reason may relate to the level of seriousness of the crime. Considering that property crimes are relatively less serious because there is no or less physical contact and in-person threats. This reason may affect the relationship differently compared to the other variables. According to these results, the level of guardianship is majorly predicted by individuals' fear of crime level, not by either socioeconomic status or victimization experience.

SUMMARY AND CONCLUSION

The current study aimed to determine predictors of behaviors related to crime and victimization using theoretical concepts from the routine activity theory. Behavioral characteristics were measured using target suitability and guardianship as the dependent variables for the analysis. There were three categories of predictors in the analysis – individuals' socioeconomic status, victimization experience, and fear of crime. According to the results, target suitability was strongly related to socioeconomic status (living in a city, being male, not having a spouse, having professional/ administrative jobs, or being college-educated). In contrast, victimization experience and fear of crime had little or no association. However, guardianship was more likely associated with fear of crime level, whereas there was no statistically significant association with victimization experience.

The model analysis of the study concluded unexpected results apart from the previous literature. Unlike most of the references, victimization experience

was not the main predictor of either target suitability or guardianship. It was initially assumed that victimization was related to the level of fear of crime. However, the model analysis proved that victimization and fear level were not statistically related. Based on the results, it is evident that individuals with an active societal position with more interactions, such as living in a city and being a younger age, are more likely to have a higher level of target suitability regardless of their victimization experience and fear of crime. This result logically explains that socioeconomic status is highly related to individuals' everyday lives, and societal activeness is not a set of selectable factors but mostly inevitable. Even though individuals experienced victimization or had a high level of fear of crime, it would be difficult to change their everyday lifestyle to protect themselves from further victimization. Moreover, the analysis results on the predictors of guardianship level presented additional explanations indicating that fear of crime is a major predictor of guardianship behaviors. These results suggest that individuals' protective behaviors are based on their fear level irrespective of their victimization experience. Since these findings are unseen from the previous literature, this study presents a different perspective on human behaviors in a criminological theory.

The present study will be beneficial to the current literature in various respects. First, using national survey data, the study was able to determine the predictors of behavioral characteristics without the risk of compromising data using combined datasets. Second, the study found that actual factors affect individuals' behaviors rather than assuming and measuring the relationships between socioeconomic status, victimization, and fear of crime. Third, the research also extends to the Eastern context with various elements related to victimization, as in the synthesized model analysis. Lastly, this study can be used in the future to improve the theoretical framework because it discovered that the behavioral elements – known as independent variables in the routine activity theory – are influenced by the dependent variables as well. This cyclic concept must be more focused on future studies in the field to understand the process of crime and victimization accurately.

However, there are also limitations to the study. The number of subjects with victimization experience is meager (total victimization experience is 3.8%). Therefore, it is difficult to achieve more sophisticated results from the statistical analysis. Also, the present

study analyzed behavioral characteristics in terms of the personal level. Because the dataset included household-level data, further study could analyze the level of target suitability and guardianship. Moreover, not all behavioral characteristics were predicted by the variables. The results imply that approximately 30% of target suitability and about 40% of guardianship were predictable from socioeconomic status and fear of crime level, which indicates the rest of the variance can be explained by other unknown factors. Future studies could include these considerations for further understanding of human behaviors related to victimization, fear of crime, and other variables.

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