

**DETERMINANTS OF OFFICERS' ATTITUDES TOWARD
COMMUNITY POLICING IN SOUTH KOREA**

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ABSTRACT

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The current study extends research on community policing beyond Western contexts in the course of developing a conceptual model of police officers' attitudes toward community policing in South Korea. The community policing concept was introduced to the Korean policing practices in 1999 when they attempted to change its image from one that has been characterized as brutal and violent to that of service orientation and legitimacy. During the 20th century, the Korean police served the Japanese government and the military regimes. At the end of the 20th century, the Korean police introduced the Grand Reform to bring about a shift from a colonial style of policing to a more democratic form of policing which focuses on accountability to citizens and a service orientation of the police. Community policing was one of the main policies of the Grand Reform in 1999. However, there is relatively little research on community policing in South Korea. In particular, factors relating to officers' attitudes toward community policing is unexplored empirically in South Korea. Moreover, this study collected the data across the country unlike prior research whose data mainly came from the specific area or training facilities.

With regard to the theoretical framework, the job characteristics model and expectancy motivation theory were employed to explore factors that influence officers' attitudes toward community policing. This study hypothesized that job characteristics and job satisfaction are main factors that affect officers' attitudes toward community policing.

To address the research questions, this study surveyed 421 officers in 16 police departments in Korea. The questionnaire is based on the job characteristics model, expectancy motivation theory and previous studies. Several statistical methods from a bivariate analysis to a series of structural equation modeling (SEM) (i.e., confirmatory factor analysis and structural regression model) were employed to analyze the data. A confirmatory factor analysis was conducted to measure several dimensions of job characteristics and job satisfaction as well as officers' attitudes toward community policing. The results of the confirmatory factor analysis showed that job characteristics, job satisfaction, and officers' attitudes toward community policing suggest measures with the construct validity.

In addition to the confirmatory factor analysis, the structural regression model was employed to determine the causal relationships between exogenous variables and endogenous variables. The results from the structural regression model revealed that several dimensions of job characteristics such as supervision, social network at work, and public support affect officers' attitudes toward community policing. Satisfaction with work influences officers' attitude toward community policing. Interestingly, male and non-patrol officers have more positive attitudes toward community policing than female and patrol officers. Policy implications for the successful implementation of community policing are suggested. The limitations of this study and suggested future research directions are also discussed.

This dissertation is dedicated to my wife, Sinyeun, and my children, Hyungoo (Jason) and Mingoo (Alex), for their love, endless support, and encouragement.

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TABLE OF CONTENTS

LIST OF TABLES	xi
LIST OF FIGURES	xiii
CHAPTER 1	
INTRODUCTION	1
1. Statement of Problem.....	1
2. Organization of the Study.....	10
CHAPTER 2	
LITERATURE REVIEW	12
1. Community Policing.....	12
(1) Emergence of Community Policing	12
(2) Definition of Community Policing	13
Philosophical Dimension	16
Strategic Dimension	17
Tactical Dimension	20
(3) Demographics and Individual Level Factors	22
2. Attitudes and Behavior	25
3. Officers' Job Satisfaction	26
(1) Demographics and Individual Level Factors	27
Demographics – Age, Gender, Education	27
Individual Level Factors – Years of Experience, Rank, and Job Assignment....	30
(2) Job Satisfaction and Officers' Attitudes toward Community Policing	31
4. Job Characteristics	32
(1) Organizational Culture	33
Top Management Support	33
Communications with Top Managers	35
(2) Occupational Culture	37
Nature of Work	37
Supervision	40
Social Network at Work	42
Public Support	45
5. Theoretical Framework	47
(1) Job Characteristics Model	47
(2) Expectancy Motivation Theory	50
(3) Theoretical Framework of the Study	54
CHAPTER 3	
CONTEXT OF THE STUDY: KOREAN NATIONAL POLICE	56

1. Community Policing in Korea	56
2. Differences between the American Police and the Korean Police	60
CHAPTER 4	
METHODOLOGY	64
1. Research Question.....	65
2. Hypotheses	65
(1) Job Characteristics Model	65
(2) Expectancy Motivation Theory	68
(3) Demographics and Individual Level Factors	69
3. Survey Construction	73
(1) Measuring Officers' Attitudes toward Community Policing	74
Preference for Community Policing	74
Support of Community Policing	75
Effectiveness of Community Policing	75
(2) Measuring Officers' Job Satisfaction	76
Satisfaction with Pay and Benefit	76
Satisfaction with Promotion	77
Satisfaction with Work	77
(3) Measuring Job Characteristics	77
Organizational Culture	78
Occupational Culture	78
(4) Demographics and Individual Level Factors	81
Demographics	81
Individual Level Factors	82
4. Sample	83
5. Analytic Strategy	89
(1) Confirmatory Factor Analysis	90
Explanatory Factor Analysis vs. Confirmatory Factor Analysis	90
Analytical Process of Confirmatory Factor Analyses	91
Jigsaw Piecewise Strategy	100
(2) Structural Regression Model	102
CHAPTER 5	
ANALYSES AND FINDINGS	107
1. Preliminary Statistics	107
(1) Missing Responses and Data	107
(2) Descriptive Statistics of Sample	109
(3) Bivariate Analysis	121
(4) Multicollinearity Diagnosis	132
(5) Analysis of Variance (ANOVA)	133
Job Assignment	134
Gender	135

Other Demographics and Individual Level Factors	137
2. Structural Equation Modeling.....	137
(1) Outcome of Confirmatory Factor Analysis	138
Job Satisfaction	138
Job Characteristics	142
Community Policing.....	149
(2) Results of Structural Regression Model	152
Test of Model Fit	152
Results of Analyses.....	153
3. Summary	166
CHAPTER 6	
DISCUSSION AND CONCLUSION	168
1. Discussion	168
(1) Job Satisfaction and Officers' Attitudes toward Community Policing	169
(2) Job Characteristics and Officers' Attitudes toward Community Policing	170
(3) Job Characteristics and Job Satisfaction	172
(4) Demographics, Individual Level Factors	174
(5) Measurement and Analysis	177
2. Conclusion and Policy Implications	178
3. Limitations and Future Research	181
Appendix 1. Questionnaire	186
Appendix 2. Skewness and Kurtosis	197
Appendix 3. Definitions of Measures and Descriptions of Model Variables	201
BIBLIOGRAPHY	205

LIST OF TABLES

Table 1. Differences between American police and Korean police	62
Table 2. Hypotheses Based on Job Characteristics Model	68
Table 3. Hypotheses Based on Expectancy Motivation Theory	69
Table 4. Hypothesized Impacts of Job Characteristics, Job Satisfaction, Demographics, and Individual Level Factors on Officers' Attitudes toward Community Policing	70
Table 5. Hypothesized Impacts of Demographics and Individual Level Factors on Job Characteristics	71
Table 6. Hypothesized Impacts of Demographics and Individual Level Factors on Job Satisfaction	72
Table 7. Number of Police Departments	84
Table 8. Number of Respondents in Police Departments	88
Table 9. Fit indexes and Acceptable Thresholds	99
Table 10. Demographics Characteristics of South Korean Police Officers	111
Table 11. Description of Measures and Descriptive Statistics on Job Satisfaction	114
Table 12. Description of Measures and Descriptive Statistics on Organizational Culture	116
Table 13. Description of Measures and Descriptive Statistics on Occupational Culture	117

Table 14. Description of Measures and Descriptive Statistics on Community Policing	119
Table 15. Bivariate Analysis: Spearman's Rho (ρ)	131
Table 16. A Comparison of Mean Differences (ANOVA) by Job Assignment	134
Table 17. A Comparison of Mean Differences (ANOVA) by Gender	136
Table 18. Estimates of Job Satisfaction Measurement Model	141
Table 19. Estimates of Organizational Culture Measurement Model	144
Table 20. Estimates of Occupational Culture Measurement Model	148
Table 21. Estimates of Community Policing Model	150
Table 22. Summary of Model Fit Indexes for Measurement Models	151
Table 23. Model Fit Indexes for Structural Regression Model and Acceptable Threshold Level	153
Table 24. The Standardized Regression Coefficient in Final Model	156
Table 25. Comparison between Hypotheses and Results of Analyses	166

LIST OF FIGURES

Figure 1. Conceptual Model of Officers' Attitudes toward Community Policing	10
Figure 2. Job Characteristics Model for Community Policing and Job Satisfaction	49
Figure 3. Expectancy Motivation Theory for Job Satisfaction and Community Policing.	54
Figure 4. Theoretical Framework of the Study	55
Figure 5. Examples of a Confirmatory Factor Analysis Model, a Path Model, and a Structural Regression Model	105
Figure 6. Structural Regression Model in two-step modeling approach	106
Figure 7. Measurement Model of Job Satisfaction	139
Figure 8. Measurement Model of Organizational Culture	142
Figure 9. Measurement Model of Occupational Culture	146
Figure 10. Measurement Model of Community Policing	149
Figure 11. Final Model for officers' attitudes toward community policing	155

CHAPTER 1. INTRODUCTION

1. Statement of Problem

The Korean police experienced significant challenges and struggles during the twentieth century due to the colonization of the Korean Peninsula by Japan (1910-1945), the Korean War (1950), two military coups in 1961 and 1980, and the election of a civilian president in 1993 and 1998 (Kang and Kim, 2005; Moon and Morash, 2009; Pyo, 2003). The first police unit was created in the fourteenth century¹, but a national modern police system was established in 1894 with the help of Japan (Hoffman, 1982; Kang and Kim, 2005). Japan was invited to advise the Korean government on the modernization of the police and military (Hoffman, 1982). The Korean police served citizens and focused on crime prevention until Japan colonized Korea in 1910 (Kang and Kim, 2005). After the colonization of Korea, Japan reorganized the Korean police to suppress the Korean populace and ruled the Koreans violently (Hoffman, 1982; Moon, 2004). For example, Japanese police officers were appointed to high-level positions (e.g., chiefs of police departments, chiefs of investigation divisions), and police duties were expanded to include residence and birth registration, as well as control of publication, immigration, and sanitation (Moon, 2004). Moreover, police officers were allowed by law to torture people who fought for the independence of Korea.

The Korean police became a symbol of brutality and totalitarian power (Kang and Kim, 2005). Korea was liberated from Japan when Japan surrendered in 1945. The Korean Peninsula was divided into two sectors at the 38th parallel. The Northern sector was under supervision of

¹ The first police unit was similar to the military, but the unit was responsible for crime and fire. The newly established dynasty (Lee Dynasty) needed to stabilize and control the country. They created a police unit instead of using the military (Kang and Kim, 2005).

the Soviet Union, whereas the southern sector was under the United States' control. The United States Army Government in South Korea (USAGSK) tried to remove the influence of oppressive colonial policing (Hoffman, 1982).² However, these efforts were not successful because of the Korean War, which broke out in 1950, and the emergence of a military government in 1960 (Moon and Morash, 2009). The Korean police manipulated various elections in the 1960s and served undemocratic and authoritative regimes until 1993, when a civilian candidate was elected as president through a democratic process (Kang and Kim, 2005; Moon, 2004). However, the leadership of the civilian president did not change the characteristics of the Korean police. When another civilian was elected president in 1998, the Korean police began to move forward toward reformation (Pyo, 2000). President Kim initiated the nationwide reform and the newly appointed commissioner general (chief of the Korean police), Mooyoung Lee, declared the beginning of the Grand Reform in 1999, which would include fundamental changes to the system, culture, and practice of the police (Pyo, 2003). It was the first attempt by the Korean police to acquire public support and legitimacy (Baek, 2000). The reform was composed of more than one hundred policies and programs to improve public perception of the police and police-community relations (KNPA, 2001). The most important component of the Grand Reform was the introduction of community policing. The president emphasized police accountability and legitimacy. The

² Police officers from the Detroit Police Department and the Michigan State Police trained Korean police and set up specific police operations. In addition, several high-ranking Korean police officers were sent to the United States for more elaborate training (Moon and Morash, 2009).

commissioner general decided to introduce community policing in 1999 to accomplish the Grand Reform's various goals (KNPA, 2001).³

It was a major decision for the Korean police to introduce community policing in 1999 as a tenet of the Grand Reform because it was believed that community policing would bring about fundamental changes in the organizational structure and officers' behavior, and to lead to the improvement of relationships between police and the communities (Adams, Rohe, and Arcury, 2002; Carter and Radelet, 1999; Skogan and Roth, 2004). At the end of the twentieth century, the Korean police tried to shift its public image from one of brutality and violence to one of service and legitimacy. A successful implementation of community policing would lead the Korean police to move toward democratic policing. According to Bayley (2005), democratic policing has four common characteristics: accountability to citizens, protection of human rights, wide discretion of line officers, and service orientation of the police. The introduction of community policing has contributed to a move from authoritarian policing to democratic policing because community policing influences the local context as well as police organizations (Davis, Henderson, and Merrick, 2003).

With regard to the police substation system, they were introduced by Japan in 1910 for social control and maintained by the military dictatorship until the 1990s (Hwang, 2006). The original purpose of the police substation system was to control and monitor residents and communities in order to protect the government. The Korean police reorganized the police

³ The commissioner general created the task force when he was appointed in early 1999. The task force consisted of policing scholars and police officers who studied policing in the United States and Great Britain. I participated in the task force. The task force suggested that community policing would be the most the effective way to gain public support and legitimacy.

substation system to make the substations into main posts for community policing. The police substations are used for beat meetings and other community events. The goal of police substations is to reach out to communities and serve citizens. There were 3,226 police substations throughout the country in 1999 and the police substations were merged to match the community (KNPA, 2010). Originally, there were 5-10 police substations in one community to control and monitor all residents. The Korean police re-established 573 police substations for community policing and now more than 40 percent of police officers work at police substations (KNPA, 2010).

Despite strong efforts to implement community policing by the Korean police, a comprehensive study of community policing has not yet been adequately conducted. There have been 43 studies on community policing in Korea from 1996 to 2008, but most studies introduced the concept of community policing and only 19 percent (8 studies) of them analyzed official data or surveyed police officers or citizens (Kim, 2009a). More specifically, only three studies surveyed police officers to measure officers' acceptance of community policing (Moon, 2006) or officers' role in community policing (Jaegal and Chang, 2005; Hwang and Woo, 2009). Recently, several studies focused on the officers' perception of community policing (Lee, Kim, and Lee, 2010; Lee and Lee, 2011), but these studies employed outdated data or surveyed the officers in a specific area (i.e., Seoul, the capital of South Korea).

From an academic standpoint, many studies have been conducted in Western countries, especially the United States (Goldstein, 1987; Greene, 1993; Halsted, Bromley, and Cochran, 2000; Pelfrey, 2007; Slate, Johnson, and Colbert, 2007; Zhao, Thurman, and Lovrich, 1995). Community policing has been popular around the world because it enhances police

accountability and legitimacy; it is recognized as a value-free commodity without economic and political interest (Bayley, 1994; Brodgen and Nijhar, 2005; Skolnick and Bayley, 1988). The theories and findings of research in Western countries were not examined in different societies such as Korea. Examining the theories and findings in the Korean context could lead to new policy implications. Moreover, Trojanowicz and Bucqueroux (1994) argued that police can make the initial transition to community policing within a year, but full implementation of community policing takes 10 to 15 years because community policing demands fundamental changes in police departments. It would be appropriate to study how community policing is implemented and accepted by police officers with a comprehensive approach. However, it is not possible to compare before and after the implementation of community policing due to the lack of data. This study is a cross-sectional one. The data were collected at a specific time (January, 2012) and provide a snap shot of community policing in South Korea instead of a slide-show (Devine and Wright, 1993).

Based on practical and academic reasons, the key research question in this study is **“What factors influence police officers’ attitudes toward community policing in South Korea?”** There are several reasons why this study focuses on officers’ attitudes toward community policing as a core aspect in the successful implementation of community policing. First of all, police officers are the main producers and deliverers of public safety while citizens are consumers and co-producers when they participate in community policing (Lewis, Rosenberg, and Sigler, 1999). Police officers⁴ implement community policing directly and influence

⁴ Although police administrators and investigators do not implement community policing directly, they are also key producers because they can influence patrol officers’ manner of

citizens' evaluation of community policing (Greene, 1989; Lurigo and Skogan, 1994; Skogan, 2006). Second, officers' attitudes toward community policing are closely related to their commitment to community policing (Engel and Worden, 2003; Lord and Friday, 2008; Rosenbaum, Yeh, and Wilkinson, 1994). Wycoff and Skogan (1994) conducted a three-year study of community policing in Madison, Wisconsin. They concluded that officers' positive attitudes toward community policing lead to more commitment in community policing. In addition, Lewis and his colleagues (1999) found that officers with positive attitudes toward community policing participate in specific community policing programs more actively such as Neighborhood Watch and Bicycle Patrol. Paoline, Myers, and Worden (2000) noted that officers' negative attitudes lead to the failure of community policing. Although all officers with positive attitudes toward community policing do not implement community policing successfully, one can assume that those officers with positive attitudes are more likely to conduct community policing enthusiastically. The relationship between attitude and behavior is explained in the next chapter in more detail. Another issue is the application of these findings to the Korean police. No literature on the relationships between the Korean police officers' attitudes and behavior has been found. One might assume that the Korean police officers' attitudes toward community policing are closely related to their implementation of community policing. This relationship is discussed in more detail in Chapter 6.

There are many factors that influence officers' attitudes toward community policing.

First of all, several studies focus on how job characteristics significantly affect officers' attitudes

conducting community policing. In addition, they are potential community policing officers because they can work in a patrol unit by the order of the police chief and they attend monthly meeting in which citizens participate (Kim and Woo, 2006).

toward community policing (Greene, 1990; Lurigio and Rosenbaum, 1994; Pelfrey, 2004, 2007). The job characteristics of police organizations are the mixture of the common features of an organization (organizational culture) and the unique attributes of police work (occupational culture).⁵ According to the job characteristics model developed by Hackman and Oldham (1976, 1980), job characteristics such as top management support, nature of work, and supervision influence employees' attitudes toward their task and performance. This model was originally designed in management studies, but it has been widely used as a framework to study how particular job characteristics influence job outcomes, job satisfaction, and employees' attitudes toward their tasks in various fields such as schools (Lawrence, 2001), industries (Piccolo and Colquitt, 2006), and government (Hogan and Martell, 1987). The job characteristics model has also been employed in policing (Pelfrey, 2007; Zhao, Thurman, and He, 1999). The job characteristics model is used in this study to measure the relationships between police job characteristics and officers' attitudes toward community policing. In addition, this model suggests that job characteristics affect job satisfaction. Hackman and Oldham (1976, 1980) suggested that when employees perceive their jobs' characteristics positively, they have a high level of job satisfaction. Two aspects of the job characteristics model are considered in this study: 1) job characteristics influence officers' attitudes toward community policing, and 2) job characteristics affect job satisfaction.

The job characteristics model is expanded in this study by employing expectancy motivation theory (Porter and Lawler, 1968) in order to explore the relationship between officers' job satisfaction and their attitudes toward community policing. Expectancy motivation

⁵ The organizational culture and the occupational culture are explained in the next chapter.

theory explains how officers' job satisfaction influences their attitudes toward community policing (Halsted, Bromley, and Cochran, 2000; Lilley and Hinduja, 2007; Slate, Johnson, and Colbert, 2007). Policing scholars argue that satisfied officers have positive attitudes toward community policing, while dissatisfied officers resist the implementation of community policing (Greene, 1989; Pelfrey 2004, 2007). However, several studies have indicated that the introduction of community policing increased officers' job satisfaction (Lurigo and Rosenbaum, 1994; Zhao, Thurman, and He, 1999). They suggest that when police officers adopt community policing, they have a higher level of job satisfaction than those who do not implement community policing. The relationship between job satisfaction and job performance is still in dispute among psychologists (Fisher, 2003; Landy and Conte, 2009). Judge, Thoreson, Bono, and Patton (2001) analyzed seven models of the relationship between job satisfaction and job performance. They conducted a meta-analysis on 312 samples with a population of 54,417 and found that job satisfaction and job performance are strongly correlated. By contrast, the current study does not measure how community policing influences police organizations and officers' job satisfaction.⁶ Rather, it measures which factors determine officers' attitudes toward community policing. In addition, the expectancy motivation theory suggests that job satisfaction influences their performance and their attitudes toward tasks. This study hypothesizes that job satisfaction influences officers' attitudes toward community policing, as well as that officers' attitudes toward community policing influence job satisfaction. If the former relation is

⁶ However, this study tested the bidirectional relationships between job satisfaction and officers' attitudes toward community policing, and the results were discussed in Chapter 6.

confirmed, officers' job satisfaction could be a mediator variable⁷ which accounts for the relation between the predictor and the criterion (Baron and Kenny, 1986).

Lastly, officers' demographics such as age, gender, and education are included as exogenous variables.⁸ In addition, officers' individual level factors such as rank, years of experience, number of months in the current department, and job assignment are considered as exogenous variables that influence the job characteristics and job satisfaction as well as officers' attitudes toward community policing. Studies indicate that officers' demographics and individual level factors are closely related to job characteristics, job satisfaction, and attitudes toward community policing (Krimmel and Gormely, 2003; Lilley and Hinduja, 2007; Robinette, 1982; Schafer, 2001; Skogan, 1994; Whestone, 2001).

Based on the two theories and prior research, the conceptualized model, depicted in Figure 1, outlines the relationships among key variables. This model expands the job characteristics model with the expectancy motivation theory. Demographics and individual level factors are included in this model because they influence job characteristics, job satisfaction, and officers' attitudes toward community policing. Based on the job characteristics model, this study hypothesizes that job characteristics affect job satisfaction and officers' attitudes toward community policing. Utilizing the expectancy motivation theory, this study hypothesizes that officers' job satisfaction is positively associated with their attitudes toward community policing. The following model is the framework of this study.

⁷ Officers' job satisfaction affects their attitudes toward community policing while officers' job satisfaction is influenced by the job characteristics.

⁸ Endogenous variable is a factor in a causal model whose value is determined by the states of other variables in the system



Figure 1. Conceptual Model of Officers' Attitudes toward Community Policing

2. Organization of the Study

This study emphasizes four main components: 1) officers' demographics and individual level factors, 2) job satisfaction, 3) job characteristics, and 4) officers' attitudes toward community policing. This study employs the job characteristics model as the main framework and adds expectancy motivation theory to expand the job characteristics model. Based on the job characteristics model and expectancy motivation theory, several sub-models are developed in this study in order to examine the relationships among variables. First of all, several questions are used to measure job characteristics, job satisfaction, and officers' attitudes toward community policing. Previous studies and theories are thoroughly reviewed. After the literature review, the questionnaire is developed and tested using scientific method. A series of statistical methods are exercised to gauge job characteristics, job satisfaction, and officers' attitudes toward community policing. Second, this study examines how demographics and individual level factors influence job characteristics, job satisfaction, and officers' attitudes toward community policing. Third, the relationships between the job characteristics and officers' attitudes toward

community policing are examined. Also, the relationship between job characteristics and officers' job satisfaction is measured. Lastly, this study considers how officers' job satisfaction affects their attitudes toward community policing.

In Chapter 2, the various extant studies on community policing, officers' job satisfaction, and the job characteristics are discussed. First, the background, definition, and characteristics of community policing are reviewed to provide a better understanding of how community policing is practiced in Korea. Several community policing programs are discussed in this chapter. In addition, demographics and individual level factors are considered as exogenous variables, and the literature on the relationships between these variables and officers' attitudes toward community policing are reviewed. Also, the job characteristics model and expectancy motivation theory are explained in more detail, and the applications of the two theories in this study (e.g., measurements of variables) are discussed. Chapter 3 focuses on community policing in the context of Korea and explains the differences between American policing and Korean policing. In Chapter 4, the conceptual model (Figure 1) is expanded, and an in-depth discussion of the job characteristics model and expectancy motivation theory is provided. Detailed research questions and hypothesis are also explained. In addition, the measurements of the exogenous and endogenous variables are identified. This chapter provides a methodological design. The number of participants and collection of data are presented. The analytic strategies are also discussed. The questionnaire is included in Appendix 1. The major research findings are reported in Chapter 5, and the implications of the results are discussed in both theoretical and practical terms in Chapter 6.

CHAPTER 2. LITERATURE REVIEW

There is much literature that explains the concept of community policing and the determinants of officers' attitudes toward community policing. Some studies emphasize the importance of the definition of community policing, while others focus on which factors influence the implementation of community policing. In this chapter, these areas and studies are critically reviewed. This chapter is divided into three sections, as exemplified by the conceptual framework depicted in Figure 1. The first section discusses community policing extensively. It includes historical background, definition, dimensions, and organizational structure. In addition, community policing in Korea is discussed. The second section reviews officers' job satisfaction and job characteristics. In this section, the demographics and individual level factors' influences on officers' job satisfaction and job characteristics are explained. This section sheds light on how officers' job satisfaction and job characteristics influence officers' attitudes toward community policing.

1. Community Policing

(1) Emergence of Community Policing

In the United States, police in the 1960s faced the limitations of traditional policing methods, which tended to control crimes solely by law enforcement (Goldstein, 1987). In order to overcome these limitations, progressive police administrators and policing scholars focused on non-law enforcement functions and redefining relationships between the community and the police (Goldstein, 1987). The police task force of the President's Commission on Law Enforcement and Administration of Justice in 1967 suggested new types of policing, such as community policing, team policing and problem-oriented policing (Rosenbaum and Lurigo,

1994). In the 1980s, the focal point in the reform movement was the community. Several strategies for closing the physical and psychological distance between the police and the community were suggested because increased police contact with residents in a community has a positive impact on their perception of crime and the police (Kelling and Moore, 1988; Skogan, 1994). Finally, President Clinton promised to put 100,000 additional police officers on the streets in his “State of the Union” address on January 25, 1994 (Meares, 2002). The Violent Crime Control and Law Enforcement Act (referred to as the “1994 Crime Act” in the remainder of this paper) was signed into law by President Clinton on September 13, 1994, and the expenditure of USD \$8.8 billion was authorized by Title 1, also known as the Public Safety Partnership and Community Policing Act of 1994 (Hickman and Reaves, 2001). It was the basis for the creation of the Office of Community Oriented Policing Services (COPS) (Roth, Roehl, and Johnson, 2004). Since 1995, the COPS Office has invested \$12.4 billion to help law enforcement advance the practice of community policing, and has enabled more than 13,000 state, local, and tribal agencies to hire more than 117,000 police officers and deputies (COPS, 2009). Community policing is most successful when front-line officers try to solve local problems with residents and members of the community (NIJ, 2004). In addition, community policing has been popular around the world (Skolnick and Bayley, 1988; Bayely, 1994).

(2) Definition of Community Policing

The Community Oriented Policing Office (COPS) defined community policing as “a philosophy that promotes organizational strategies, which support the systematic use of partnerships and problem-solving techniques, to proactively address the immediate conditions

that give rise to public safety issues such as crime, social disorder, and fear of crime.”⁹ However, despite the fact that there have been many debates on the definition of community policing, it has grown in popularity, and most police organizations claim to engage in community policing (Lewis et al., 1999; Moon, 2006; Rosenbaum and Lurigo, 1994). Wells and Maguire (2009) indicated that community policing has come to mean many different things to different people, and police leaders have applied their own version of community policing to their organizations. Klockars (1988) and Manning (1988) criticized the concept of community policing, arguing that it is too vaguely defined and questioning whether it can lead to substantial changes in either communities or policing.

Despite the different interpretations, several scholars have tried to define the concept of community policing and explain its characteristics clearly. For example, Goldstein (1979) suggested that community policing is a way of thinking about the police and their functions (Goldstein, 1979). It is also defined as a philosophy and an organizational strategy to enhance cooperation between a community and the police (Trojanowicz and Bucqueroux, 1990). Community policing is based on the assumption that communities and police must work together to identify and solve problems, such as crime, drugs, fear of crime, disorder, and overall neighborhood decay (Trojanowicz and Bucqueroux, 1994). Eck and Rosenbaum (1994) suggested three characteristics of community policing to distinguish community policing from other police strategies: effectiveness, equity, and efficiency. Community policing enables police to deliver non-emergency services more effectively than traditional policing, which focuses on

⁹ Community Oriented Policing Services (2012). Community Policing Defined. Retrieved from <http://www.cops.usdoj.gov/default.asp?item=36>

crime control and emergency aids. Community policing seeks to build trust between community members and the police and to achieve among community members a sense that police are fair and responsive. Lastly, community policing gives line officers wide discretion and solves non-crime related problems with citizens before the problems become crimes. It has been proved that a bottom-up *prevention* of crime approach is more efficient than a top-down *control* of crime approach (Lurigio and Rosenbaum, 1994).

Roth, Roehl, and Johnson (2004) identified four elements of community policing when they measured the trends in the adoption of community policing from 1995 to 2000: 1) partnership building, 2) problem solving, 3) crime prevention, and 4) organizational changes. Using these four factors, they surveyed 2,098 police departments. They indicated that police departments are considered to be implementing community policing if they 1) develop partnerships with the community, 2) shift from reactive responses to proactive problem solving, 3) expand prevention initiatives, and 4) experience organizational changes. According to the criteria for community policing, more than two-thirds of large agencies in areas serving populations of 50,000 or more implemented community policing, while only half of small agencies implemented community policing.¹⁰ Roth and his colleagues (2004) provided the criteria for the implementation of community policing, but their criteria did not measure the depth or extent of community policing (Maguire and Mastrofski, 2000).

Another way to understand and define community policing is to explore several dimensions of community policing. Cornder (1998) suggested that community policing could be

¹⁰ According to LEMAS 2007, all police departments serving a million or more residents implemented community policing and 60 percent of police departments serving a population of 50,000 or more had a full-time community policing unit.

understood through three dimensions: 1) a philosophical dimension, 2) a strategic dimension, and 3) a tactical dimension. His categorization has proven to be an effective way to measure officers' attitudes toward community policing (Cheurprakobkit, 2002; Palmiotto, Birzer, and Unnithan, 2000). Cordner and Biebel (2005) used several survey items related to the above dimensions when they measured officers' attitudes toward community policing. In this chapter, three dimensions of community policing are discussed for a better understanding of community policing.

Philosophical Dimension

Community policing is not a simple project or policy, but an organized philosophy or a basic reform integrated into the entire police agency (Goldstein, 1987; Sykes, 1994).

Community policing is considered an innovation of the police. Dewar and Dutton (1986) categorized the innovation into two types: incremental (simple) and radical. While incremental innovation contains a low degree of new knowledge and calls for a lower level of commitment, radical innovation includes a high degree of new knowledge and requires that major changes be made by the individual or organization. Morabito (2010) applied these concepts to criminal justice. He considers community policing to be a radical innovation because community policing is a complicated philosophy and requires different approaches to the problems of crime and disorder.

Furthermore, community policing is not a set of projects, but a creation of a new culture and process within police departments (Skogan, 2006). Community policing requires policing to change its paradigm from one of crime fighter to that of service provider (Perrott and Taylor, 1995) and requires residents in the community to participate in an active role (Goldstein, 1987).

Strategic Dimension

There are four strategies by which police organizations can successfully implement community policing: 1) provide a clear definition of community policing, 2) create a special unit for community policing, 3) decentralize administrative functions and decision-making, and 4) encourage citizen involvement.

First, it is not easy to implement community policing because the concept of community policing seems to be vague and requires the adoption of new rules and new management techniques (Goldstein, 2000). In a 1997 survey of police departments conducted by the Police Foundation, 85 percent of them reported that they had implemented community policing because they conduct foot patrols, survey citizens to measure their satisfaction, or publish newsletters on crimes and community. However, these police departments practice several kinds of activities without fully understanding community policing (Skogan, 2006). Trojanowicz and Bucqueroux (1994) suggested the “nine P’s of community policing”¹¹ and the ten principles of community policing¹² to minimize the confusion about community policing among police officers and citizens. In addition, the COPS office provides a clear definition of community policing with three key components: community partnerships, organizational transformation, and problem solving.¹³

¹¹ The nine P’s are Philosophy, Personalized, Policing, Patrols, Permanent, Place, Proactive, Partnership, and Problem solving.

¹² Philosophy and organizational strategy, commitment to community empowerment, decentralized and personalized policing, immediate and long-term proactive problem solving, ethics, legality, responsibility, and trust, expanding the police mandate, helping those with special needs, grass-roots creativity and support, internal change, and building for the future.

¹³ Community Oriented Policing Services (2012). Community Policing Defined. Retrieved from

Second, line officers resist the intrusion of civilians into their business because they are concerned that civilians do not understand police work and community troublemakers will take part in the community policing programs for their personal gain (Skogan and Roth, 2004). Rosenbaum and Wilkinson (2004) examined how several community policing programs influence policing practices by tracking the attitudes of the officers in two mid-sized cities. They found that most line officers do not change their traditional way of policing. For example, community policing is expected to reduce officers' use of coercive power because officers have a more positive relationship with the public and are more knowledgeable about the people and their community. Despite the good relationship with community members, officers did not reduce their use of coercive power (Terrill and Mastrofski, 2004). The best strategy to overcome line officers' resistance is to establish a special unit, which is composed of skilled and motivated officers, without changing officers' routine work (Rosenbaum and Wilkinson, 2004). Once officers witness that community policing has benefits for themselves, they implement community policing more actively. Moreover, several studies show that community policing officers are more satisfied with their job than other officers (Greene, 1989; Lewis et al., 1999; Pelfrey, 2007).

Third, police administrators¹⁴ resist adopting community policing because they are concerned that they might lose their control over line officers despite the fact that the administrators prefer innovation. Lurigio and Skogan (1994) examined officers' attitudes toward

<http://www.cops.usdoj.gov/Default.asp?Item=36>.

¹⁴ The police administrators with the titles of chief, superintendent, commissioner, or captain are supposed to set policy and to obtain resources from the community. In addition, they are expected to have sufficient knowledge about and control over the rank and file members of the police department (Wilson, 1968).

the Chicago Alternative Policing Strategy (CAPS), which is an example of a community policing program. They found that supervisory officers are more favorable toward community policing than line officers. In addition, Wycoff and Skogan (1994) suggested that management style is one of the factors that leads to successful implementation of community policing. Despite the importance of the police administrators' role, they are reluctant to allow line officers to participate in decision making (Wycoff and Skogan, 1994). It is necessary to systematically decentralize the organization and provide line officers with wide discretion (Skogan, 2006). In a traditional policing paradigm, police administrators try to control their subordinates because police administrators should be responsible for all of the results of policing. By contrast, in a community policing paradigm, police administrators are not responsible for all performance at their workplace; instead, line officers are given wide discretion in decision making along with greater responsibility (Schafer, 2001).

Lastly, community policing is based on the community residents' volunteer participation. However, it is difficult to encourage the community residents to participate in police work, especially in poor and socially disorganized communities (Skogan and Roth, 2004). For example, the Middletown Police Department (MPD) conducted a community survey to enhance the quality of police service, but they could not find what community residents desired due to a low level of participation and vague responses. They assembled a project team that consisted of officers and a few citizens to find out the needs of the community through frequent interactions and an in-depth interview with the residents (Reisig, 2002).

In general, residents who live in an area with high crime rates are more likely to participate in community policing programs because they need the cooperation with police

officers (Skogan, 1994, 2006). Community policing is a good way to achieve collaboration. Also, officers' attitudes toward community policing and their perception of problem solving is very important. For example, residents at community policing meetings complain more about noise, broken buildings, and physical decay than about crimes such as burglary and murder. If police officers do not regard these issues as their responsibility, community policing will fail because none of the residents will participate in community policing programs (Skogan, 2006). Officers' responses to residents' requests are essential for community policing.

Tactical Dimension

The average number of community policing programs in each police department was around ten in 1996, but it is expected to increase over time (Zhao, Lovrich, and Thurma, 1999).¹⁵ Community policing programs are diverse and are shaped by the surrounding communities or areas. Three programs were selected for this discussion according to their importance and popularity.

Foot Patrol

Foot patrol is conducted as one of community policing programs because it enables police to have closer relationships with citizens and to focus on minor crime and disorder (Kelling and Moore, 1988). Trojanowicz and Banas (1985) interviewed 60 foot patrol officers and 50 motorized officers in the Flint, Michigan police department. Foot patrol officers reported that they improved their relationship with community members, while motorized officers

¹⁵ According to LEMAS 2007, local police departments engaged in various community policing activities. For example, 38 percent of departments, employing 75 percent of officers, partnered with citizen groups, and 15 percent of departments, employing 60 percent of all officers, conducted a citizen police academy.

reported that they had difficulty communicating with individuals. Foot patrol is also associated with the reduction of public disorder such as vagrancy and vandalism (Esbensen, 1987). Corder (1994) examined the effect of foot patrol in Lexington, Kentucky. He found that foot patrol maintained public order improvements by an initial crackdown, and foot patrol led to improvements in police-community relations. Wakefield (2007) analyzed thirteen studies on foot patrol in the United States, and contended that foot patrol is a successful tactic for community policing because foot patrol addressed the expectations and needs of communities.

Citizen Participation Programs

Citizen involvement is one of the key elements in successful implementation of community policing. There are several programs that engage citizen participation, but I have chosen to explain two programs in particular because they are widely employed by police.

The beat meeting is designed to provide a forum for exchanging information between citizens and police and a venue for identifying problems in communities and seeking solutions (Skogan, 2006). Generally, the attendance rate in an area that is impoverished and has a high crime rate is lower than that in a wealthy and low-crime area (Rosenbaum, 1987). However, residents in poor and high-crime areas have a stronger incentive to attend the beat meeting. They would like to seek help from the police and reduce the fear of crime. Skogan (2006) indicated the importance of what was covered in the beat meetings and the officers' attitudes toward participants in determining future participation. If residents are satisfied with the initial beat meeting, they are likely to continue their participation in the meetings.

Another way of encouraging citizen participation is through a citizen survey. The aim of a citizen survey is to find out what citizens perceive to be problems in their communities and

measure the level of fear of crime and citizens' satisfaction with police service (Stevens, 2001). Police departments have used the results of the survey to improve the quality of police service or to develop different types of police service. For example, the Lansing, Michigan police department (LPD) surveyed 300 residents and found that residents were generally satisfied with police service, but some of them were concerned about the LPD's response to breaking and entering calls (Stevens, 2001). Based on the survey, the process and response to breaking and entering calls improved.

Collaborative Partnerships with Other Government Agencies

Community policing is concerned not only with crime, but also with non-crime issues in the community (Goldstein, 1987). Many non-crime issues in a neighborhood can be clearly identified but they cannot be solved by the police because they are related to local community dynamics (Tilley, 2004). It is necessary for police to establish new relationships with other agencies, but it is difficult due to their different priorities and rules. One of the reasons that community policing in Chicago (the Chicago Alternative Policing Strategy: CAPS) succeeded was that other governmental agencies such as the prosecutor's office, parole office, and fire departments in Chicago worked together for the successful implementation of community policing (Skogan, 2006).

(3) Demographics and Individual Level Factors¹⁶

¹⁶ Generally, studies have not distinguished between demographics and individual level factors because they are individual characteristics. However, demographics are not related job-related, while individual level factors are closely job-related. Additionally, environment level factors are associated with society. Social economic status (i.e., income) is an example of an environmental factor (Alpert, Macdonald, & Dunham, 2005). In this study, demographics and individual level factors were used.

The majority of police officers have a negative attitude toward community policing due to citizens' involvement in their police work (Skogan, 1994; Skogan and Roth, 2004), increased workload (Lord and Friday, 2008), preferences for traditional policing (Perrott and Taylor, 1995), and required changes in the organizations (Greene, 2004; Mastrofski and Ritti, 2002). However, several studies surveyed officers soon after the introduction of community policing. For example, Lord and Friday surveyed officers three years after the implementation of community policing. However, Trojanowicz and Bucqueroux (1994) suggested that ten to fifteen years would be necessary to observe noticeable changes in officers' attitudes toward community policing.

Researchers have focused on the relationship between demographic characteristics and officers' attitudes toward community policing. Women and minority officers have a positive attitude toward community policing because they are more flexible and adaptable than white and male officers (Paoline et al., 2000; Schafer, 2001). College educated officers have a more positive attitude toward community policing than those without college degrees because they are changeable and creative (Carter, Sapp, and Stephens, 1989; Weisel and Eck, 1994). College educated officers are more motivated for advancement and promotion within the organization (Paoline et al., 2000). When they conduct community policing well, they are more likely to be promoted because many police departments reward officers' good performance as it relates to community policing. Among Korean officers, there is no difference between male and female officers in terms of their attitudes toward community policing (Park, 2006). However, Hwang and Woo (2009) contended that officers' education in Korea is positively related to their attitudes toward community policing. Highly educated officers have more positive attitudes. The sample

in this study came from officers in Seoul, which is the Capital of Korea. It did not examine officers' attitudes in smaller cities or rural areas.

Age is positively associated with officers' views on community policing. Lurigio and Skogan (1994) surveyed 1,405 officers who attended the CAPS training program. They found that officers in their 50s have a more positive attitude toward community policing than those in their 40s, and that officers in their 40s have a more positive attitude than those in their 30s and 20s. However, age was not included in this study because of multicollinearity problems with years of experience. In addition, in the Korean police, age was not a significant factor that affects officers' attitudes toward community policing (Moon, 2006).

In general, years of experience is also positively associated with officers' attitudes toward community policing because more experienced officers have more positive perceptions of citizens' cooperation and greater opportunities to be assigned to beats with favorable residents than less experienced officers (Paoline et al., 2000). In addition, rank is positively associated with officers' attitudes toward community policing (Rosenbaum, Yeh, and Wilkinson, 1994; Schafer, 2001). High-ranking officers such as lieutenants or captains are more favorable to community policing than line officers.

Regarding job assignment, patrol officers have a more positive attitude toward community policing than detectives because patrol officers understand community policing correctly through the training program and have experienced citizens' favorable contacts through the implementation of community policing (Lord and Friday, 2008; Schafer, 2001; Weisel and Eck, 1994; Wycoff and Skogan, 1994). Paoline et al. (2000) found that community-policing officers reported more positive attitudes toward community policing than any other officers.

Several studies compared officers' attitudes toward community policing between patrol officers and non-patrol officers, but they did not specify the officers' job assignments, such as patrol, criminal investigation, and police administration.

In terms of individual level factors among Korean police officers, rank is negatively associated with officers' attitudes, unlike in the findings of prior research (Park, 2006). He explained that the dual recruitment system in Korea could lead to this result. Officers graduating from a "Police Staff Candidate Course" or "Police College" start their career at the level of lieutenant in their 20s or early 30s. Young managers have a less positive attitude toward community policing than older line officers. In addition, lower ranking officers are more likely to possess higher levels of commitment to community policing (Lee and Lee, 2011). Patrol officers in Korea have more positive attitudes toward community policing than those in other units (Moon, 2006).

2. Attitudes and Behavior

Social psychologists contended that there are close relationships between attitudes and behaviors, but it is difficult to predict the behavior by the attitude (Brannon, Cyphers, Hesse, Hesselbart, Keane, Schuman, Viccaro, and Wright, 1973; Liska, 1974). However, Ajzen and Fishbein (1977) reviewed 109 previous studies on the relationships between attitudes and behaviors and found that the attitudes about respondents' real work are related to their behaviors. For example, the question about respondents' attitude toward their job or work is more likely to be related to their behavior than the question about their attitudes toward specific issues that are not related directly to their job. Ajzen and Fishbein (1977) also noted that their findings do not

guarantee that attitude is a clear predictor for behavior because many factors influence human behavior.

Several studies attempted to fill the gap between attitude and behavior in community policing (Rosenbaum et al., 1994; Terrill and Mastrofski, 2004; Wycoff and Skogan, 1994). For example, Terrill and Mastrofski (2004) conducted a systematic observation of patrol behaviors and in-person interviews. They found that officers who have positive attitudes toward community policing are more likely to use reduced levels of physical coercion because community policing emphasizes less use of force. Officers' attitudes might influence their behavior and way of policing. Although the study employed a systematic observation of the officers at work, it was not clear whether the use of physical coercion is directly related to the implementation of community policing.

The goal of this study is to examine which factors influence officers' attitudes toward community policing. Officers with positive attitudes toward community policing may not participate in community policing actively. However, based on social psychologists' notion that attitudes and behavior are closely related, this study assumes that officers' attitudes toward community policing influence their real implementation of community policing.¹⁷ This assumption is supported by previous research. Mastrofski and his colleagues (1995) found that officers with positive attitudes toward community policing arrested only 5 percent of the suspects they encountered, compared to 17 percent arrested by officers with negative attitudes toward community policing. They insisted that officers' attitudes toward community policing influenced their implementation of community policing.

¹⁷ The relationships between officers' attitudes and behavior were discussed in the last chapter.

3. Officers' Job Satisfaction

Psychologists have insisted that job satisfaction is considered as a mediator because it is *influenced* by several factors and it also *affects* employees' behavior, attitude, and commitment (Judge and Bono, 2001; Turnley and Feldman, 2000; Yousef, 2002). Police officers who are satisfied with their job perform the work effectively, and have less job withdrawal (Crede, Chernyshenko, Stark, Dalal, Bashshur, 2007; Hoath, Schneider, and Starr, 1998). In addition, officers' job satisfaction is related to their acceptance of community policing and other innovative programs (Halsted et al., 2000; Novak et al., 2003; Pelfrey, 2007).

Many studies have focused on the relationship between demographics and job satisfaction. However, the value of demographics to the understanding of job satisfaction among police officers is limited. For example, Carlan (2007) analyzed previous studies on job satisfaction and found that the variance attributable to demographics ranged from 1 percent to 11 percent.

The following section is divided into two parts. The first part focuses on the literature about the influence of demographics and individual level factors on job satisfaction. In the second section, I review studies that examine the relationship between officers' job satisfaction and their attitudes toward community policing.

(1) Demographics and Individual Level Factors

Demographics – Age, Gender, Education

Prior research suggests that age is inversely related to job satisfaction (Brunetto and Farr-Wharton, 2003; Buzawa, Austin, and Bannon, 1994). Young officers have expectations of promotion, pay increases, and greater job responsibilities, while older officers experience

frustration from failure to be promoted or due to increased physical limitations (Robinette, 1982). They become cynical and lose their motivation as they get old. Moon, Huh, and Kim (2009) found that age is associated negatively with job satisfaction. Officers more than fifty years old reported lower levels of job satisfaction than younger officers. Officers in their 50s become cynical and lose their trust in police organizations.

Regarding gender, female officers are less satisfied with their job because they experience discrimination in police organizations (Dowler, 2005; Krimmel and Gormely, 2003). Krimmel and Gormely (2003) surveyed 175 female officers in New Jersey. They indicated that police organizations where less than 15 percent of the employees are female see those individuals experiencing increased levels of tokenism and discrimination. The feeling of tokenism and discrimination negatively affects female officers' job satisfaction. However, some studies show that gender is not associated with job satisfaction (Dantzker and Kubin, 1998; Halsted et al., 2000; Zhao et al., 1999). Buzawa (1984) surveyed 170 officers, 94 from Detroit, Michigan, and 76 from Oakland, California, and concluded that there was no statistical difference between male officers and female officers regarding job satisfaction. Bennett (1997) surveyed more than 1,000 police officers and their immediate supervisors in three Caribbean nations which have colonial experience. He found that gender does not significantly affect job satisfaction. Hwang (2008) utilized a convenient sample of police officers in South Korea and reported that gender is not a significant predictor of job satisfaction.¹⁸

¹⁸ It should be noted that the sample in the study could not represent the entire force of the Korean police.

Despite these studies' findings, it is clear that Korean female police officers are a minority in the police organization. The number of female officers has increased from 3,173 in 2002 to 6,823 in 2010 (KNPA, 2011), but still only make up 6.8 percent of the Korean police force. Based on Krimmel and Gormely (2003), we can assume that Korean female officers are less satisfied with their job due to sex discrimination.¹⁹

In terms of education, college-educated officers are expected to subscribe to broader role orientations than less educated colleagues, and college-educated officers have more positive and proactive attitudes toward citizens (Paoline et al., 2000). College-educated officers show higher levels of job satisfaction than less educated officers because they are more likely to have better communication skills and better problem solving abilities (Krimmel and Gormley, 2003; Roberg and Bonn, 2004; Sherwood, 2000). However, Zhao, He, and Lovrich (2002) surveyed 213 officers from two police departments and found that education is associated negatively with job satisfaction. College-educated officers are less likely to be satisfied with their jobs due to the bureaucratic constraints of the organizations, which may lead to officers' frustration. Dantzker (1992) also found that officers with only a high school education are more satisfied with their assignment than those with a college degree. Officers with a college degree reported low levels of satisfaction with their pay (Halsted et al., 2000). However, some studies indicated that education is not associated with job satisfaction (Dantzker, 1994; Zhao et al., 1999). Howard and his colleagues (2002) suggested that only work-home conflict influences officers' satisfaction

¹⁹ Female officers have experienced discrimination in several areas. For example, female officers are more likely to fail in the promotion when they are compared to their male cohort. In addition, many divisions such as investigation and patrol prefer male officers.

with pay, promotion, and work condition. They argued that no demographics and individual level factors affect the job satisfaction with pay and promotion.

Several studies of Korean police show that police officers' education is not associated with overall job satisfaction (Kim, 2001; Lee, 2002; Lee, 2004; Moon et al., 2009). Only one study found that education is associated positively with satisfaction with salary (Jaegal, 2002). Almost half of officers in Korea have a bachelor's degree or more (KNPA, 2011). College-educated officers in Korea do not expect that they will have privilege because of their education, which might be the reason why many studies in Korea could not find the relationship between education and job satisfaction. However, Jaegal (2002) argued that education is partially associated with job satisfaction. The relationship between education and job satisfaction is more thoroughly examined in this study because of different results in the previous studies.

Individual Level Factors – Years of experience, Rank, and Job Assignment

Rank, years of experience, and job assignment have been associated with job satisfaction (Eliason, 2006; Lilley and Hinduja, 2007). Regarding rank, the literature show mixed results. High ranking police officers are more satisfied with being a police officer compared to patrol officers (Seltzer, Alone, and Howard, 1996). However, Zhao et al. (1999) argued that rank negatively affects job satisfaction. As officers are promoted to higher rank, they experience greater stress and responsibilities, which have an adverse effect on job satisfaction (Dowler, 2005; Engel and Worden, 2003). Engel and Worden (2003) argued that as officers of higher rank progress, they experience greater stress and responsibilities, which have an adverse effect on job satisfaction. In terms of the hierarchical structure of police organizations, centralized

policing systems have more ranks than decentralized policing systems.²⁰ For Korean police, Lee (2006) found that rank is associated positively with overall job satisfaction after he surveyed 393 police officers in the Seoul Metropolitan Agency. He found that high-ranking officers report higher levels of job satisfaction than low ranking officers.

In general, years of experience is associated negatively with job satisfaction. The years officers have spent in the organization are significantly and inversely related to job satisfaction (Brunetto and Farr-Wharton, 2003; Buzawa, Austin, and Bannon, 1994; Dantzker and Kubin 1998). However, studies on Korean police have suggested that years of experience is not associated with job satisfaction (Kim, 2005a; Lee, 2004).

Job assignment also influences officers' job satisfaction (Seltzer et al., 1996; Eliason, 2006). Hoath, Schneider, and Starr (1998) examined the relationship between officers' job satisfaction and their assignments. They found that patrol officers have a lower level of job satisfaction than those in both investigation and administration. Korean police officers reported similar results. Police administrators have a high level of job satisfaction, while patrol officers have the lowest level of job satisfaction (Hwang, 2008; Lee, 2006).

(2) Job Satisfaction and Officers' Attitudes toward Community Policing²¹

²⁰ For example, the Lansing police department, a unit that serves a population of about 100,000 in Michigan, USA, has five ranks, from officer to police chief, while the Korean police have eleven ranks, from police officer to commissioner general.

²¹ In general, samples in the prior research cited in this study did not distinguish between community policing officers and other officers. For example, Pelfrey (2004, 2007) surveyed police officers in both community policing and traditional policing together. The sample in this study includes patrol officers as well as those in criminal investigation and police administration divisions.

Prior research shows that job satisfaction is associated with officers' attitudes toward community policing. Halsted and his colleagues (2000) found that officers who are satisfied with pay and benefits have positive attitudes toward community policing. They argued that officers recognize that resources such as pay and benefits come from the community that they serve. Officers might believe that their commitment to community policing is the way to reward their pay and benefits. However, they measured officers' attitudes toward community policing by assessing the degree to which officers are oriented toward service activities rather than assessing perceptions about the notion of community policing. Lilley and Hinduja (2007) suggested that officers who are satisfied with their promotion opportunities are more likely to have a positive attitude toward community policing, because they believe that their efforts will be rewarded through promotion. Pelfrey (2004, 2007) indicated that satisfaction with work positively influences officers' attitudes toward community policing. He argued that officers who are satisfied with their work have the opportunity to view the results of their efforts. Officers are more likely to engage in efforts to implement community policing when they know their efforts will be rewarded by the community. For Korean police officers, satisfaction with promotion opportunities is positively associated with officers' attitudes toward community policing (Hwang and Woo, 2009). Hwang and Woo's (2009) findings are consistent with Lilley and Hinduja's (2007) explanation that officers who are satisfied with promotion are more likely to commit the implementation of community policing.

4. Job Characteristics

Job characteristics are defined as the products of a dynamic and collective process of sense-making undertaken by members of a group or organization (Silvester, Anderson, and

Patterson, 1999). Job characteristics can be divided into two categories (Denison, 1996): organizational culture and occupational culture. Police organizations share structural factors in common with other organizations (organizational culture), and they also have their own unique characteristics (occupational culture). In this section, organizational culture and occupational culture are defined in more detail and discuss the distinguishing features of each.

(1) Organizational Culture

Organizational culture is not coupled conceptually to matters such as geography, ethnicity, or social class, but rather is grounded in organizational experiences (Van Maanen, 1979). Organizational culture is not directly influenced by individuals' interaction, but by the nature of the industry (Yaakov, 1996) or national culture (Pratt, Mohrweis, and Beaulieu, 1992).

Employees' relations with their top managers are considered to be a defining element of organizational culture rather than the occupational culture because these relationships are rooted in the values and beliefs of the organization (Denison, 1996). In managing police organizations, police managers consider the context of policing and the external environment rather than each organization's members' interaction (Nalla and Kang, 2011; Paoline, 2003).

Top Management Support

Top management support is when an organization's highest ranking executives encourage their employees and provide them with the resources they need to achieve the goals and objectives of the organization (Young and Jordan, 2008). Top management support is one of the critical elements of organizational culture that affect employees' organizational productivity (Setton, Bennett, and Liden, 1996). Rhoades and Eisenberger (2002) analyzed 70 studies and found that top management support is related to job satisfaction and performance. Employees

who perceived that they are supported by their organization or top managers are more likely to be satisfied with their job and more productive. However, it is not clear how top management support was assessed in the literature. More focus should be placed on such measurement.

Rank is one of the main factors that influence officers' perception of management support (Armeli, Eisenberger, Fasolo, and Lynch, 1998; Paoline, 2003). High-ranking officers are more likely to have a positive perception of management support (O'Malley and Hutchinson, 2007; Whestone, 2001). High-ranking officers perceive that they are supported well by their senior officers, while low-ranking officers perceive that they are not supported by their organizations (Kieley and Peek, 2002; Lewis et al., 1999). This difference may be attributable to the two groups' different views on police work. Line officers focus on their immediate duties and responsibilities, while supervisors consider various managerial methods to increase the effectiveness of the organization (Reuss-Ianni, 1983).

Years of experience is also associated with individuals' perceptions of management support. More experienced officers perceive that they are supported by their organizations because they are more likely than young and less experienced officers to be assigned to beats with cooperative residents (Morris, Shinn, and DuMont, 1999; Paoline, Myers, and Worden, 2000).

Regarding officers' job satisfaction, management support affects officers' job satisfaction positively and decreases job stress (Davey, Obst, and Sheehan, 2001). When employees perceive that they are supported by their organization, they are more likely to work hard and have a positive relationship with their colleagues (Rhoades and Eisenberger, 2002). A study

about Korean police officers indicated that officers who perceive that they are supported and protected by their organizations showed high levels of job satisfaction (Moon et al., 2009).

Management support is one of the most important factors for the successful implementation of community policing because management styles influence officers' attitudes toward community policing (Alley et al., 2002; Wycoff and Skogan, 1994). When officers are treated as internal customers through continuous support, officers are more likely to have a positive attitude toward community policing (Adams et al., 2002). Moon (2006) contended that officers who have a positive attitude toward their top management are more likely to have optimistic views on community policing.

Communication with Top Managers

Communication is one of the most important attributes of organizational culture because people interact by exchanging messages (Schall, 1983). In particular, communication with top managers is more crucial than normal communication because communication with top managers directly influences employees' behavior (Schall, 1983). Also, communication with top managers influences the atmosphere of the organizations bankruptcy or survival of the firms (D'Aveni and Macmillan, 1990). Good communication with top managers plays a role in reducing the likelihood of an organization going bankrupt or increasing its chances for surviving. When employees communicate with their top managers frequently, they are more likely to work actively.

In American policing, many local police departments do not have top managers unless they are large police departments, such as the New York or Los Angeles police departments. Literature in the United States has focused on the police chiefs of local police departments rather

than top managers (Borduak and Reiss, 1966; Skolnick, 2008). Line officers in small police departments meet their chief frequently. The police chief cannot be categorized as a top manager because the police chief is not the final authority in determining a police department's success or failure. Rather, mayors or council managers are often the top managers because they influence the appointment of the police chief, the budget of police departments, and other important things. In sum, top managers in American policing are mayors or city managers. That is the reason why only a few articles in the US have focused on this topic.

However, the chief of the Korean police force or the chiefs of state police agencies could affect line officers enormously through their directions, even though few line officers have met the top managers. Literature on the Korean police shows that communication with top managers influences officers' job satisfaction directly (Choi, 2003; Lee, 2008). Officers who perceived that top managers communicate well with them showed high levels of job satisfaction (Choi, 2003).

In addition, communication with top managers affects officers' attitudes toward community policing. Kwak (2009) surveyed 917 officers, and 72 percent of the respondents worked in the patrol or traffic division. He found that communication with top managers was positively associated with officers' attitudes toward community policing. Moreover, he interviewed 18 officers who implemented community policing. The results of the interviews revealed that officers who experienced good communication with top managers are more likely to implement community policing. The interviewees reported that their experiences of communication with top managers influenced their opinions about community policing. Their feelings of participation in decision-making led to their active implementation of community

policing. However, he surveyed officers only in Gyeongnam province, one among 16 provinces in Korea. This finding might not be applied to officers in other provinces such as Seoul and Gwangju province.

(2) Occupational Culture

While organizational culture focuses on underlying values and assumptions, occupational culture emphasizes the interactions among individuals at the surface level (Denison, 1996). Van Maanen (1975, 1979) called the occupational culture in police organizations *police culture*. He contended that police culture is formed through the interaction among supervisors and colleagues. Police culture is unique due to the specific characteristics of police work.

More specifically, police culture is strongly related to the nature of police work, which is characterized by danger and coercive power (Muir, 1977; Nalla and Kang, 2011). Unlike employees in many other organizations, police officers are exposed to dangerous situations and use coercive power to solve problems (Muir, 1977). According to the National Law Enforcement Officers Memorial Fund (2011), 162 police officers were killed in 2010 and more than 100 officers are killed annually.

Police officers also have considerable autonomy, in order to respond to unexpected situations and interact with citizens on the street (Lipsky, 1980). Danger and authority are two essential elements of their work (Skolnick, 1994). These characteristics make police culture unique from other types of organizations.

Nature of Work

Generally, the nature of all work requires employees to use their skills and abilities, and to keep learning new things on the job (Friesen and Sarros, 1989). The more skills involved, the

more meaningful the work is likely to be. Police work requires officers to use various skills and knowledge because officers are exposed to unexpected and dangerous situations (Lipsky, 1980; Muir, 1977).

Officers perceive that their work changes when community policing is implemented because community policing requires a shift of the paradigm (Rosenbaum and Wilkinson, 2004). However, a shift of the paradigm is not easy. Many officers oppose the implementation of community policing due to concerns about their workload and tasks (Adams et al., 2002; Paoline et al., 2000). Special units for community policing are organized, and the units consist of innovative officers who volunteered. Once officers witness that community policing is efficient and does not increase their workload, they begin to participate in community policing (Lurigio and Skogan, 1994; Wycoff and Skogan, 1994). However, Maguire and Gantley (2009) argued that all special units for community policing are not successful. They suggested that officers' opinions, external funding, and community interaction should be considered when special units are established.

Regarding job challenge, Boke and Nalla (2009) contended that officers' perception of job challenge is the strongest predictor of job satisfaction, trumping any other organizational characteristics such as management support, social networks at work, citizen cooperation, or loyalty. Officers' perception of job challenge affects job satisfaction positively.

Autonomy²² is another characteristic of the nature of police work. It can be defined as the degree to which the job provides substantial freedom, independence, and discretion to the

²² Autonomy in this study means officers' independence or freedom in their own work. For example, the detective's autonomy implies his or her discretion in investigative work instead of

individual in determining the procedures to be used in carrying out duties and responsibilities (Hackman and Oldham, 1980). Officers who perceived that they had wide autonomy were more likely to have positive attitudes toward community policing and showed high levels of job satisfaction (Lurigo and Rosenbaum, 1994; Zhao et al., 1999).

Community policing gives line officers wide autonomy and solves non-crime-related problems with citizens before the problems become crimes (Lurigo and Rosenbaum, 1994). Rosenbaum and Wilkinson (1994) found that community policing officers reported greater autonomy than non-community policing officers. However, some officers reported that they had less autonomy and independence because they were required to attend community meetings and address every citizen complaint (Lord and Friday, 2008).

Studies of the Korean police suggest that autonomy in their positions is positively associated with officers' attitudes toward community policing (Hwang and Woo, 2009; Moon, 2006). For example, patrol officers who had wide discretion spent more time in implementing community policing and reported that they supported community policing. Moon (2006) compared officers in urban police departments and rural police departments to measure their autonomy. He found that officers in rural police departments had more positive attitudes toward community policing than those in municipal police departments because they had greater autonomy than urban police officers.

In general, employees with more autonomy are more satisfied with their job than those with less autonomy (Eisenberger, Cummings, Armeli, and Lynch, 1997). Autonomy influences officers' satisfaction with their job, supervisors, and colleagues. Officers who perceive that they

the detective's views on autonomy for community policing work.

have greater autonomy are more satisfied with their work, supervisors, and colleagues. Zhao and his colleagues (1999) concluded that autonomy is the strongest factor influencing officers' job satisfaction.

Officers who perceived that they were engaged in a project from start to finish and that their work was significant had a more positive attitude toward community policing (Rosenbaum and Wilkinson, 1994). Officers' involvement is an important factor in the successful implementation of community policing. Pelfrey (2007) contended that when officers had an opportunity to witness the outcomes of their efforts, they were more likely to have a positive attitude toward community policing. However, this study focused only on officers in rural areas.

Employees care about their work when they perceive that their jobs are significant and help many people. Traditional policing does not provide officers with opportunities to perceive that their jobs (e.g., patrol) affect many people (McGarrell et al., 2003). When officers are dispatched and detectives investigate the case, only people who are related to the case are influenced by police officers' work.

However, community policing enables police officers to feel they have contributed to the improvement of communities. Police officers who implement community policing perceive that their work helps many people in their communities. When officers believe that their work is important and improves communities, they have a more positive attitude toward community policing (Lord and Friday, 2008).

Supervision²³

²³ In this study, only officers' direct supervisors are included. Top managers are discussed in the sections on top management support and communication with top managers. Supervisors work

Supervisors' attitudes toward their employees affect organizational performance directly (Eisenberger, Huntington, Hutchison, and Sowa, 1986; Rhoades and Eisenberger, 2002). Rank is an important factor in police organizations as well as in the private sector. Several studies on the supervision of police have indicated that supervisors affect their subordinates' behavior enormously (Allen, 1982; Engel, 2000; Muir, 1977). For example, line officers are more likely to be interested in community policing when their supervisor's priority is on the implementation of community policing (Engel and Worden, 2003).

Patrol officers have negative attitudes toward their direct supervisors and upper-level managers (Crank and Caldero, 1991). They perceive that managers try to control patrol officers' behavior such as their use of coercive power or interaction with citizens, without understanding the dangerous and uncertain situations that patrol officers encounter daily. Crank (1997) suggested that patrol officers' involvement in decision making and in-depth dialogue between them and their supervisors could resolve these conflicts.

In terms of community policing, officers' views on their supervisors influence their attitudes toward community policing (Wilkinson and Rosenbaum, 1994). Officers who have positive views about their supervisors are more likely to have a positive attitude toward community policing. Moreover, when officers perceive that their supervisor's priority is on community policing, they implement community policing more actively, spending more time implementing it in order to achieve their supervisor's priority (Engel and Worden, 2003).

Research on the Korean police suggests that officers' satisfaction with their supervisors is positively associated with their attitudes toward community policing (Hwang and Woo, 2009).

with line officers in the same police departments, while top managers work at the headquarters. Physically, top managers work at a different location, unlike supervisors.

Officers who are satisfied with the supervision they receive are more likely to have positive attitudes toward community policing than those who are not satisfied with their supervision. Korean police officers' performance and behaviors are significantly influenced by their supervisors because supervisors' evaluation affects line officers' promotion enormously, as well as their potential to transfer to other positions (Lee, 2004).

Social Network at Work²⁴

Social network, which is interchangeably used with social capital, refers to the value of social relations (Coleman, 1980). A social network at work is defined as the range of individuals' relationships in the organizations (Haley-Lock, 2007). Social networks at work influence how individuals objectively and subjectively experience their employment (Haley-Lock, 2007).

Several studies on police organizations in the United States have contended that employees' social networks at work affect the successful implementation of police work (Manning 1988; Weisburd, McElroy, and Hardyman, 1988; Witte, Travis, and Langworthy, 1990). Officers who have a good relationship with their supervisors and colleagues are more likely to work actively and have positive attitudes toward community policing (Lurigo and Skogan, 1994). Social networks at work are crucial for the implementation of community policing because they enable officers to communicate with each other (Wilson and Bennett, 1994).

²⁴ In this section, sworn officers' relations with civilian personnel are not discussed. Only four thousand civilian personnel (4 percent of police manpower) in Korean police and most of them work at the national headquarter. Their tasks are mainly related to techniques. Personnel management, budget, and issue of some certification are handled by sworn officers. Officers in local police departments do not have an opportunity to work with civilian personnel.

Social networks at work are positively associated with officers' job satisfaction (Boke and Nalla, 2009). Officers who have a large social network at work are more likely to be satisfied with their job. Haley-Lock (2007) examined social networks at work with *tie closeness*, which involves the extent of emotional intimacy among employees. She found that 60 percent of the respondents have close or very close relationships in their networks, and *tie closeness* is positively associated with overall job satisfaction as well as satisfaction with promotion opportunities.

In general, Korean police officers have a positive social network (Moon et al., 2009). Police administrators show a higher level of social networking than patrol officers. Moon and his colleagues also suggested that social networks at work influence job satisfaction significantly. Officers whose social networks at work are strong are more satisfied with their job than those whose networks are not. However, this study measured social networks with survey questions that captured officers' attitudes about trust in the organization and information sharing.

In terms of community policing, Park (2006) reported that social networks at work are negatively associated with officers' attitudes toward community policing. Officers who have close relationships with many colleagues are less likely to have a positive attitude toward community policing. They focus on internal work relations, but they are not interested in establishing relationships with communities.

In this sense, the social network at work could be interpreted negatively, as "the code of silence." The code of silence can be defined as the informal prohibition against reporting colleagues' corruption and misconduct (Klockars and Kutnjak Ivković, 2003). Although many police officers reported that they do not accept the code of silence, they also perceived that

whistle blowing is not worth it (Klockars, Kutnjak Ivković, and Haberfeld, 2004). No study on the effect of the code of silence on community policing has been found in this literature review, but one study did examine how community policing influences the code of silence. Community policing decreased officers' abuse of authority and corruption (Weisburd, Greenspan, and Hamilton, 2000). Moreover, officers reported that community policing reduces the code of silence because community policing enables officers to have good relationships with citizens. Social network at work in this study will measure its positive rather than its negative aspects because the literature indicated that the code of silence is influenced by community policing.

Another aspect of a social network at work could be a police union. Polzin and Brockman (2002) contended that it is difficult to implement community policing in strongly unionized police departments because union leaders are reluctant to accept changes in their ways of practicing policing. When police officers are united well by union or other informal organizations, they are more likely to oppose the implementation of community policing because officers perceive that community policing leads to huge changes in their organizations. In general, the introduction of community policing is related to officers' work conditions such as changes in shifts or the creation of special units. The police chief negotiates with the union leaders of the police department to implement community policing (Polzin and Brokman, 2002). The participation of union leaders and line officers in the decision making process from the beginning is essential for the successful implementation of community policing. For example, police leaders of the Motor City police department (MCPD) did not negotiate with union leaders regarding community policing, nor did they make efforts to explain why community policing would be good for the organization and its line officers (Schafer, 2002). As a result, community

policing was not successfully implemented due to officers' resistance or passive participation. In sum, negotiation with union leaders is a crucial factor in the successful implementation of community policing.²⁵

Job feedback affects officers' job satisfaction because job feedback helps employees to achieve their growth needs and leads to job satisfaction (Oldham, Hackman, and Stepina, 1978). It can be defined as direct and clear information about the effectiveness of his or her performance (Hackman and Oldham, 1980). Job feedback can be obtained from the work itself, supervisors, and colleagues (Hackman and Oldham, 1976). Oldham and his colleagues (1978) surveyed 6,930 employees in 56 organizations and found that employees perceived that feedback from colleagues is more important than feedback from work itself or supervisors.

Job feedback positively influences officers' attitudes toward community policing (Lord and Friday, 2008). The more feedback from their colleagues officers receive, the more they report a positive attitude toward community policing. Officers reported that job feedback helped to remove barriers to implementing community policing and led to their positive attitude toward community policing (Ford, Weissbein, and Plamondon, 2003). In addition, officers who receive job feedback frequently are more likely to be satisfied with their supervisors and colleagues (Lurigo and Skogan, 1994; Zhao et al., 1999).

Public Support

Organizations make efforts to ensure public support because public support enables the organizations to legitimize themselves (Levitt and March, 1988; Zucker, 1977). Officers'

²⁵ The Trade Union and Labor Relations Adjustment Act prohibits the establishment of police unions and collective bargaining. There is no union in the Korean police. Police unions are not considered in this study.

general perception of public support is influenced not only by their individual interaction with citizens, but also the police organization's experience in society (Lim, Teo, and See, 2000). Police organizations' relations with the public affect officers' perceptions of public support (Yates and Pillai, 1996).

In general, citizens do not approach police officers because they are intimidated by officers' coercive power (Skolnick, 1994). Potential dangers from police work cause police officers to have suspicious attitudes toward citizens (Skolnick, 1994). In addition, police officers perceive that citizens do not trust police (Yim and Schafer, 2009). Citizens' reluctance to approach police officers and police officers' suspicion of citizens lead to officers' isolation from the public. Korean police officers are not an exception. Police officers believe that citizens are suspicious of police (Moon and Zager, 2007). In addition, they have negative perceptions of public support (Moon and Zager, 2007). Interestingly, more experienced officers in both the United States and Korea are more likely to have a positive attitude toward public support because they may be assigned to beats whose residents are more likely to cooperate with police (Moon and Zager, 2007; Paoline et al., 2000). Seniority is the critical variable that influences officers' perceptions of public support. In this study, years of experience is included to examine whether seniority influences officers' perception of organizational culture, job satisfaction, and attitudes towards community policing.

In addition, officers' perceptions of public support are directly associated with their attitudes toward community policing and job satisfaction. Officers who believed that they were perceived favorably by citizens reported positive attitudes toward community policing and high levels of job satisfaction (Boke and Nalla, 2009; Lord and Friday, 2008; Yim and Schafer, 2009).

Greene (1989) surveyed 210 Philadelphia officers. He found that officers' experiences of public support positively influenced both their attitudes toward community policing and their job satisfaction.

5. Theoretical Framework

The job characteristics model is the main frame of this study. The job characteristics model examines how job characteristics influence officers' attitudes toward community policing as well as their job satisfaction. Expectancy motivation theory is employed to expand the job characteristics model. The job characteristics model does not explain the relations between officers' job satisfaction and their attitudes toward community policing, while expectancy motivation theory focuses on these relations. In addition, expectancy motivation theory enables the exploration of the various aspects of job satisfaction. Job satisfaction is not uni-dimensional, but multi-dimensional.

(1) Job Characteristics Model

Hackman and Oldham (1976) contended that job characteristics influence employees' satisfaction and their performance or productivity. They criticized the traditional notion that organizational productivity or performance is influenced by the relationship between the people who do the work and the jobs they perform. They argued that the traditional approach to improving organizational productivity, which focuses on selecting and training employees, is not effective because the real problem in organizational performance is due to employees who are "over- rather than *under*-qualified" for the work (Hackman and Oldham, 1980, p. 27). Hackman and Oldham (1980) theorized that employees' job satisfaction increases when they perceive that their work is meaningful and they are responsible for the outcome. In addition, employees'

attitudes toward their tasks depend on how they perceive their job. In sum, job characteristics such as top management support and supervision influence employees' job satisfaction as well as their attitudes toward their tasks.

Police organizations have two different aspects of job characteristics. They have their own characteristics, such as uncertainty, danger, and coercive authority, which emerge uniquely from the organizational setting (Crank, 2004; Paoline et al., 2000). Despite such characteristics that are unique to police work, police organizations also share broad and general characteristics with other organizations (Crank, 2004). The latter are defined as organizational culture and the former as occupational culture (Denison, 1996).

Organizational culture is not influenced by officers' direct interactions, such as their relationships with their immediate supervisors (Pratt et al., 1992). Rather, it is affected by the relationships between top managers and line officers because the relationships are rooted in organizational values and beliefs (Denison, 1996). For example, line officers' immediate supervisors could change officers' shifts, working hours, and assignments in a given police department. These changes are unique characteristics of that particular police department, but they do not influence other police departments. However, top managers can alter the general work conditions of all police departments. Such changes would then be common characteristics among police departments instead of unique characteristics of a specific police department. Top managers are found in the centralized policing system (Denison, 1996; Jiao, 2001; Moon, 2006). For example, the chief of the headquarters in Korea influences all police departments around the country.

In a police organization, organizational culture can be divided into two parts: top management support and communication with top managers (Adams et al., 2002; Choi, 2003; D'Aveni and Macmillan, 1990). The job characteristics model suggests that top management support and communication influence officers' attitudes toward community policing as well as their job satisfaction. The positive perceptions of organizational culture lead to officers' high levels of job satisfaction and their positive attitudes toward community policing. However, it is difficult to measure the organizational culture. For example, communication with top management was assessed by officers' perceptions about decision making within the agency (Adams et al., 2002).

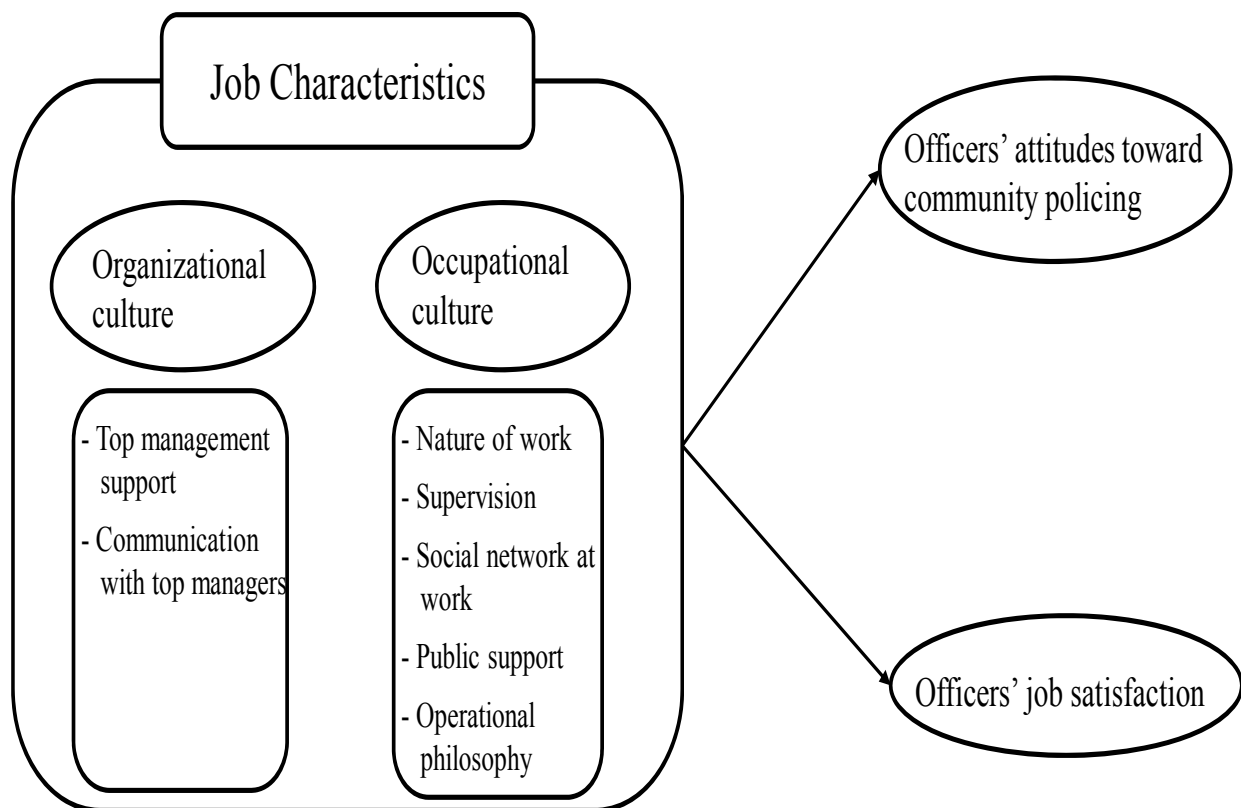


Figure 2. Job Characteristics Model for Community Policing and Job Satisfaction

Organizational culture can be found in centralized policing systems, while occupational culture can be discovered in both centralized and decentralized policing system.²⁶ Occupational culture comes from the unique characteristics of a police organization and its tasks and thus can be called police culture (Denison, 1996; Van Maanen, 1975, 1979). Many scholars have studied occupational culture and found that it is composed of several dimensions (Chan, 1997; Muir, 1977; Skolnick, 1994). Although there has been no consensus on which dimensions of police tasks and organizations constitute the occupational culture, several common factors can be drawn from prior research. Based on the literature review in the previous section, nature of work, supervision, social network at work, and public support are considered to be the primary elements of occupational culture (Chan, 1997; Crank, 1997; Moon and Zager, 2007; Witte, 1990).

According to the job characteristics model, it is assumed that nature of work, supervision, social network at work, and public support affect officers' attitudes toward community policing and their job satisfaction. More detailed hypotheses are discussed in the next chapter. Figure 2 explains how the job characteristics model is employed in this study. Based on this model, it is hypothesized that several elements of occupational and organizational culture influence officers' attitudes toward community policing and their job satisfaction.

(2) Expectancy Motivation Theory

Expectancy motivation theory proposes that a person will decide to behave in a certain way or have particular attitudes toward their tasks because they are satisfied with their

²⁶ Organizational culture is related to common values of organizations. In centralized policing systems, police departments can share common values because they are directed by headquarters and police officers are transferred among all police departments in the country. However, police departments in the decentralized policing systems do not have opportunities to share common values because they are independent and police officers are not transferred.

expectations (for rewards, etc.) (Porter and Lawler, 1968). Vroom (1964) hypothesized that employee's job performance is a function of the interaction between their satisfaction and ability. Porter and Lawler (1968) presented a theoretical treatment of motivation to perform. They contended that motivated or satisfied employees are more likely to make efforts to improve their performance or positive attitude toward their tasks. Heneman and Schwab (1972) suggested that employees who are satisfied with their salary, promotion, and work conditions decide to work more enthusiastically and have positive attitude toward their tasks. The fulfillment of employees' expectation is one of the important factors that influence employees' performance and determine their attitudes toward the tasks.

Erez and Isen (2000) examined which factors play a role in employees' motivation or satisfaction in the expectancy motivation theory. They conducted the experiment on students. One group of students was given a gift certificate and the other group was not. At the first stage, both groups were asked to solve easy anagrams. There was little difference. However, there were significant differences between the two groups when more difficult anagrams were given to them. The groups who received rewards were more likely to solve the problems. Essentially, the conclusion was that employees make the greatest efforts to perform their job or have a more positive attitude toward their tasks if they are satisfied with their rewards or expect to receive rewards (Dubrin, 2008).

Over the past fifty years, expectancy motivation theory has been applied in many fields such as education (Friedman, Cox, and Mahe, 2008; Schmitt and Son, 1981), healthcare (O' Sullivan, McGee, and Keegan, 2008; Seybolt and Pavett, 1979), and the private sector (Fudge and Schlacter, 1999; Sloof and Praag, 2008). Expectancy motivation theory is also applied in

policing (DeJong, Mastrofski, and Parks, 2001; Johnson, 2009; Mastrofski, Ritti, and Snipes, 1994). For example, Johnson (2009) employed expectancy motivation theory to measure the relationship between officers' satisfaction and their drug arrest productivity. He found that officers who were satisfied with their promotion opportunities produced the most drug arrests. Although this research applied expectancy motivation theory to policing, he surveyed officers in only rural areas. Mastrofski et al. (1994) indicated that expectancy motivation theory is useful to predict officers' enforcement of driving under the influence (DUI) laws. Officers who were satisfied with the rewards for DUI arrests had high arrest rates. However, this study did not examine real numbers of DUI arrests and depended instead on an officers' survey. It would be more reasonable if the authors surveyed officers' general attitudes toward DUI arrests. DeJong and her colleagues (2001) measured the relationships between officers' motivation and community policing using the expectancy motivation theory. They found that officers' satisfaction with salary or promotion are significant factors that influence officers' implementation of community policing. In addition, they found that expectancy motivation theory is useful to measure the relationship between officers' satisfaction and their attitudes toward community policing.

In general, many studies have measured overall job satisfaction as endogenous or exogenous variables in the United States and Korea (Dowler, 2005; Kim, 2001; Krimmel and Gormely, 2003; Lee, 2002; Lee, 2004; Moon et al., 2009; Roberg and Bonn, 2004; Sherwood, 2000). However, officers' job satisfaction should be measured particularly rather than as part of a general measurement of the workforce because police work is different from other kinds of work (Zhao et al., 1999). Also, expectancy motivation theory suggests that several aspects of

satisfaction or expectation influence their attitudes toward the tasks (Heneman and Schwab, 1972; Porter and Lawler, 1968). Prior research indicates that officers' satisfaction can be divided into three types: 1) satisfaction with pay and benefits (Dantzker, 1994; Halsted et al., 2000), 2) satisfaction with promotion (Benett, 1997; Brunetto and Farr-Wharington, 2003), and 3) satisfaction with work (Dantzker and Rubin, 1998; Zhao et al., 1999). In addition, these three aspects of job satisfaction are consistent with the job descriptive index, which has been widely employed in various studies (Smith et al, 1969; Zhao et al., 1999).²⁷

Expectancy motivation theory suggests that officers' job satisfaction affects their attitudes toward their tasks. Officers' job satisfaction is measured by three factors (i.e., pay/benefits, promotion, and work). Figure 3 explains the application of expectancy motivation theory in this research. Measurements of officers' job satisfaction and more detailed hypotheses based on expectancy motivation theory are discussed in the next chapter. It is hypothesized that officers who are satisfied with their job have a more positive attitude toward community policing.

²⁷ The job descriptive index was first introduced in 1969 to measure several aspects of job satisfaction (Smith, Kendall, and Hulin, 1969). It is a scale that has been employed in many fields, including police work.

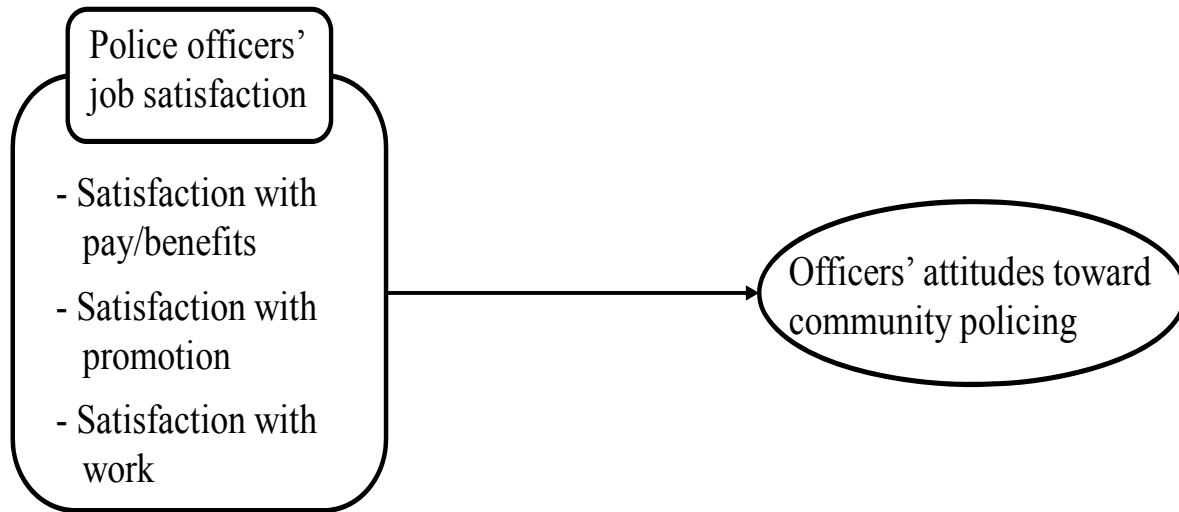


Figure 3. Expectancy Motivation Theory for Job Satisfaction and Community Policing

(3) Theoretical Framework of the Study

The study combined the job characteristics model and expectancy motivation theory to explore officers' attitudes toward community policing. Three main elements of the study were job characteristics, officers' job satisfaction, and officers' attitudes toward community policing. Figure 4 showed how the variables were related to each other according to the job characteristics model and expectancy motivation theory. The job characteristics variables such as top management support, nature of work, supervision, and public support were drawn from the job characteristics model. The job characteristics model suggests that these variables influence officers' attitudes toward community policing as well as their job satisfaction. Officers' job satisfaction is the common variable between the job characteristics model and expectancy motivation theory. However, expectancy motivation theory expands the dimensions of job satisfaction and suggests that officers' job satisfaction with factors such as pay/benefits and promotion affects their attitudes toward community policing.

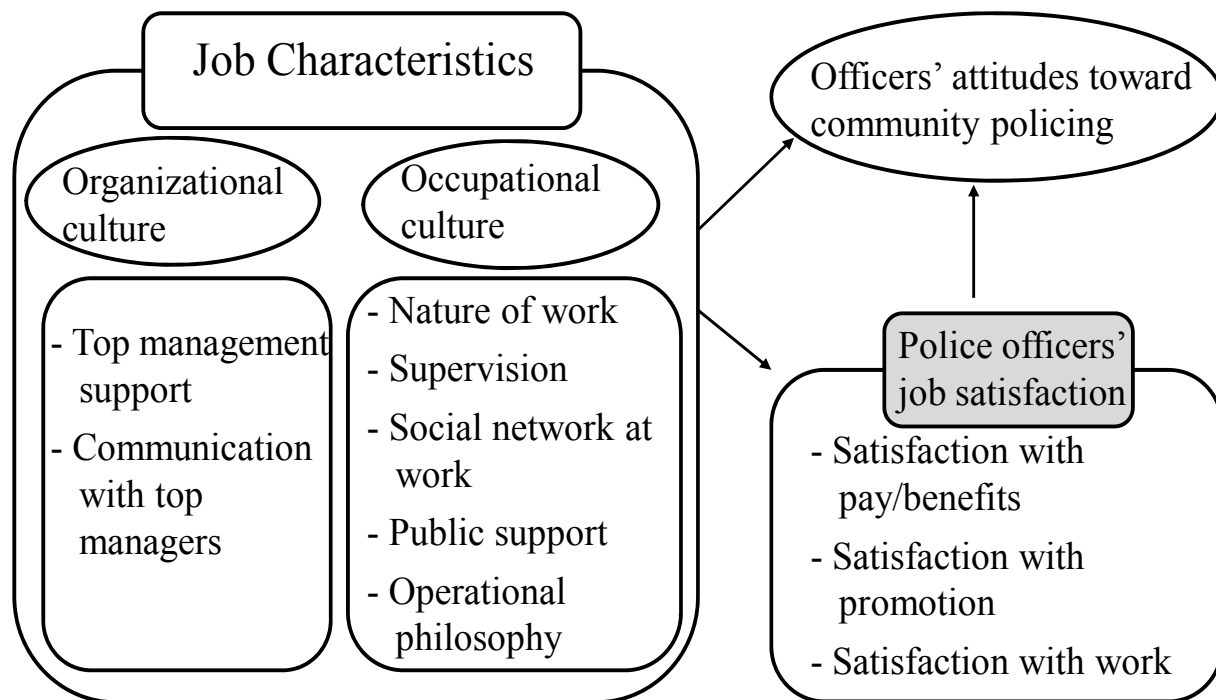


Figure 4. Theoretical Framework of the Study

CHAPTER 3. CONTEXT OF THE STUDY: KOREAN NATIONAL POLICE

1. Community Policing In Korea

As discussed briefly above, twentieth-century police history in Korea resembles the experiences of most former colonies; the police strongly served state interests instead of the community (Moon, 2004; Nalla and Kang, 2011). The Korean police have conducted the Grand Reform to remove a colonial police bureaucratic culture, and the Grand Reform has changed police organizations (Pyo, 2003).

Community policing was introduced in 1999 as a tenet of the Grand Reform (Baek, 2000). The Korean police have used police substations²⁸ to implement community policing. A police substation is a branch office of a police department. Generally, local police departments have five to fifteen police substations. Police substations are directed by local police departments. Each police substation has its own precinct and patrols the assigned area. Patrol officers work at police substations and they contact citizens by visiting their homes (Hwang, 2008). In general, twenty to forty officers work at the police substations. Officers are organized into three squads that cover two shifts per day. The chief of a police substation is a lieutenant or captain. The chief's rank depends on the size of the substation and the number of officers assigned to it. Each police substation has several offices and a conference room because patrol officers work at the police substation.

Meetings with community members are held at police substations because of the convenience of the substation locations and citizens' familiarity with them (KNPA, 2002). One

²⁸ Police substations originated during the Japanese occupation of Korea in 1910. Police substations were used to watch citizens and detect anti-Japanese activities (Hwang, 2008).

of the goals of the substation meeting is to improve the relationship between the community and its police force (Baek, 2000). There were 20,088 community meetings with 155,600 citizens in 2003 (KNPA, 2004). These meetings are similar to the beat meetings in the United States. Patrol officers on duty at the time, a few team members from other shifts, detectives from police departments, and the chief of the police substation attend the meeting. Sometimes, the chief of the police department attends the meeting to receive opinions directly from residents. The meetings are customized to the characteristics of the community. For example, police substations in cities hold meetings on weekends because many residents work on weekdays. The topics are crimes related to businesses or building security. Police substations in rural areas focus on issues related to rural matters deriving from greater isolation. Police officers make efforts to encourage community members to attend the meetings. A sign indicating the date and location of the next meeting is attached to patrol cars. Local media such as cable TV channels or newspapers announce the details of the meeting in advance. Each police substation reports the results of their meetings to local police departments as well as to the community. When the issues are related to those of adjacent police substations, the meetings are merged by local police departments.

Another program relating to community policing is the citizen police academy. It is a six-week program conducted at all local police departments, and certificates are given to citizens who complete the program (KNPA, 2004). The objective of the academy is not to train an individual to be a police officer but to produce informed citizens (KNPA, 2004). Participants receive three hours of training one evening each week. They are taught the basics of criminal law, criminal procedure law, patrol tactics, and many other subjects. They participate in a ride-

along with an officer and meet various officers such as patrol officers and detectives. The class size depends on local police departments but the general class size is around 30. Citizens interested in the academy must complete a written application and obtain permission from their local police department.

The Korea National Police Agency has conducted a citizen survey twice per year since the Grand Reform in 1999. The aim of the citizen survey is to find out what citizens perceive to be problems in their communities and measure the level of citizens' satisfaction with police service (KNPA, 2002). Foot patrol has been encouraged more since the introduction of community policing (Jaegal and Chang, 2005). One result of this was that a citizen foot patrol was organized and members conducted foot patrols with officers (KNPA, 2004).

Community policing requires local police departments to connect with other agencies in order to solve problems in the community because many problems cannot be solved by the local police alone (Tilley, 2004). The Korean police created special units which consist of local fire departments, cities, schools, and prosecutors for community policing (KNPA, 2002). The members meet every month to discuss and solve problems in the community. As discussed above, the results of meetings with community members in police substations are reported to local police departments. Community members raise many issues in these meetings. Some issues can be handled by police but others cannot be solved without other agencies' cooperation. For example, 598 areas are designated as "hot spots" based on the results of the meetings and crime statistics (KNPA, 2010). Cities have decided to rebuild the devastated buildings in these areas and fire departments have focused more on fire hot spots. Schools in these areas hire more security guards. These decisions were made by special units created by the police (KNPA, 2010).

Many police departments in Korea have made efforts to implement community policing. Jaegal and Chang (2005) surveyed 94 local police departments among 233 police departments in Korea. More than half of local police departments reported that they actively conduct community policing. Police officers and citizens assess these efforts positively. Choi (2006) surveyed 511 patrol officers and 434 citizens. He reported that more than one-third of patrol officers and citizens perceived that community policing is effective for the prevention of crime, while only fifteen percent of them perceived that community policing is ineffective. Despite the positive assessment of community policing, Kim and Woo (2006) indicated that community policing in Korea has several problems, such as a vague shared concept of community policing and low levels of citizen participation. In this study, citizen participation was not measured directly, but officers' perceptions of public support and citizen cooperation were examined to find how officers perceive citizen participation and support.

In sum, several community policing programs have been widely conducted in Korea. The police substation system is used well to conduct community policing. According to KNPA (2008), community policing programs such as police substation meetings and citizen surveys were conducted well even though they originated in the United States. In terms of research on community policing in Korea, studies focused on officers' attitudes toward the specific community policing program instead of on general attitudes toward community policing in a specific area or within police departments (Kim, 2009a). This study did not examine the officers' attitudes toward the specific community policing programs because some programs (e.g., the citizen police academy) are not implemented in all local police departments. Instead, their general attitudes toward community policing were measured around the country.

2. Differences between the American Police and the Korean Police

Most research on job characteristics in policing has focused on American police (Crank, 2004; Paoline et al., 2000; Reuss-Ianni, 1983). Several studies indicated that the Korean police force is different from the American police in terms of organizational structure including department size and the policing system (Hong and Kim, 2003; Hwang, 2008; Lee, 2006; Moon, 2006).

First, while the structures of police organizations in the United States are flat and decentralized (Langworthy, 1986), the Korean police organizations are very hierarchical and centralized with a central headquarters, 16 regional police agencies (state police), and 244 police departments (Hoffman, 1982; Moon, 2006; Nalla and Kang, 2011). The Korea National Police Agency provides all policing services throughout the country. Local police departments are not independent of the national police. The three levels of the Korean police hierarchy (i.e., police headquarters, state police agency, and local police department) enable the chief of the Korean police to have a direct impact on all police officers. Patrol officers on the street in Korea can be affected by top managers who never meet them. However, American police officers are generally influenced by their immediate supervisors, who generally have personal contact with them. In this sense, a supervisor is different from a top manager. A supervisor is an officer who monitors his/her subordinates directly. A top manager is an officer who makes decisions that affect the entire police organization. According to this definition of supervisor, the American police do not have a top manager because their system is decentralized. Even the chief of a police department in the United States does not influence other police departments. However, top managers in the centralized policing system control all police departments in the country.

Officers' attitudes toward top managers can be measured in the centralized policing systems of countries such as Austria, China, Slovenia and Korea (Nalla et al., 2007; Reichel, 2008). It is not a unique characteristic of police organizations. It can be found in the private sector (Bantel and Jackson, 1989; Dong, Neufeld, and Higgins, 2009) as well as in governments (Chen and Gant, 2001; Rodgers and Hunter, 1992).

Second, department size is an important consideration in job characteristics (Crank, 1989). Small departments are likely to rely on personal and informal relationships among officers, while large departments rely more on official rules (Crank, 1989; Greene, Alpert, and Styles, 1992). The average number of sworn officers in each police department in the United States is 45 (Reaves, 2007), while 341 sworn police officers on average work at police departments in Korea (KNPA, 2010). In addition, 74 percent of local police departments in the United States have fewer than 25 sworn officers (Reaves, 2007). The minimum number of sworn police officers in police departments in Korea is 112. There are twelve police departments which have more than 700 sworn officers, although none of them have more than 1,000 officers (KNPA, 2010).

Lastly, there are different job characteristics between centralized policing systems and decentralized policing systems (Alarid and Wang, 1997; Jiao, 2001). Jiao (2001) contended that the localized American police system leads to strong local control of police, while a centralized policing system makes police officers focus on the central government rather than their communities. The chief of the Korean police is appointed by the president, and chiefs of state police agencies and local police departments are appointed by the chief of Korean police instead of governors or mayors. Local governments in Korea do not control police departments. The

Korean police are more likely to share common cultural traits with other organizations than the American police because the Korean police force is not localized. Police departments in the United States have their own cultures because they reflect the characteristics of their jurisdiction. Local governments in the US wield enormous influence over their local police departments, from the appointment of officers (including the chief) to budget-setting. Police officers in the United States are required to have good local relations, and police departments have tailor-made schemes to reflect local circumstances (Laycock, 2001; Wilson, 1968). Table 1 shows how American policing differs from Korean policing.

Table 1. Differences between American police and Korean police

	American police	Korean police
Structure	Flat	Hierarchical
Policing system	Decentralized	Centralized
Size	Small (45 sworn officers) ^a	Large (341 sworn officers) ^a

^a Average Number of sworn officers in police department

It is difficult to distinguish between organizational culture and occupational culture in flat, decentralized, and small-sized organizations (Johnson, Koh, and Killough, 2009). In these organizations, organizational and occupational cultures cannot be detected easily because they are totally mixed. However, large and hierarchical organizations enable us to distinguish between organizational and occupational cultures because the organizational culture is related to the national or societal level (Johnson et al., 2009). In this sense, it is easier to distinguish them in the Korean police force than in the American police force because Korean police departments are larger and more hierarchical organizations than those in the United States.

This study is not a comparative study, therefore thorough comparisons of community policing between the United States and Korea are not provided. The reason for the brief comparison of policing in the United States and in Korea is to see whether the findings of prior research can be applied to the Korean police. The majority of studies in community policing has been based on American policing that is decentralized, flat, and of a smaller scale. The findings of prior research have not been applied to the Korean police comprehensively. This study examines whether theories and prior research mainly conducted in the United States can be applied to the Korean police with its different structures, policing system, and size. In general, organizational culture can be more easily identified in the centralized policing system than in the decentralized policing system. In this study, organizational culture was included in order to explore officers' attitudes toward community policing in the centralized policing system and to reflect the characteristics of the Korean police.

CHAPTER 4. METHODOLOGY

1. Research Question

Following up on the theoretical frames of the job characteristics model and the expectancy motivation theory, this chapter specifies a series of research hypotheses to be tested. A detailed outline of the methodological procedures including a description of the sample and measurement of variables is also discussed in this chapter. In addition, this chapter provides a brief overview and justification of the analytic strategies that were employed in this study. A more detailed explanation about the analytic strategies is offered in the next chapter with the analysis of data. The job characteristics model and expectancy motivation theory have not been applied to the Korean police. In addition, studies that combine the job characteristics model and expectancy motivation theory have been found neither in Asian countries nor in Western countries. This study tested the job characteristics model and expectancy motivation theory in a causal frame in which job characteristics and job satisfaction influence officers' attitudes toward community policing. In addition, job satisfaction is considered a mediator between job characteristics and officers' attitudes toward community policing. It is expected that job characteristics affect job satisfaction, and this eventually influence officers' attitudes toward community policing. Lastly, demographics and individual factors are considered as exogenous variables in the frames. Previous studies indicate that demographics and individual factors influence job characteristics, job satisfaction, and officers' attitudes toward community policing.

The main research question is “**What factors influence police officers' attitudes toward community policing in South Korea?**” The job characteristics model and expectancy motivation theory are major foci of this study, thus yielding two principal hypotheses. First,

based on job characteristics model, officers who have positive perceptions of the job characteristics are likely to have positive attitudes toward community policing. There are positive relationships between job characteristics and officers' attitudes toward community policing. Second, expectancy motivation theory suggests that officers who are satisfied with their job are likely to have more positive attitude toward community policing than those who are not satisfied with their job. According to previous studies, this study hypothesized that officers' demographics and individual level factors influence officers' attitudes toward community policing.

2. Hypotheses

(1) Job Characteristics Model

As discussed above, job characteristics can be divided into organizational culture and occupational culture (Denison, 1996). Organizational culture includes common characteristics among organizations. Generally, organizational culture is affected by the relationships between top managers and line officers because the relationships are rooted in the values and beliefs of organizations (Denison, 1996). In this sense, top management support and communication with top managers are considered to be aspects of organizational culture (Armeli et al., 1998; Schall, 1983). Top management support affects employees' satisfaction and productivity (Eisenberger, 2002; Setton et al., 1996). Officers' positive perceptions of top management support leads to increased job satisfaction and positive attitudes toward community policing (Adams et al., 2002; Alley et al., 2002). Communication with top managers is also an important element in the job characteristics model. More frequent communication with top managers increases officers' job

satisfaction and their implementation of community policing (Choi, 2003; D'Aveni and Macmillan, 1990; Kwak, 2009).

Another aspect of the job characteristics is an occupational culture which focuses on the unique characteristics of an organization (Denison, 1996). The occupational culture consists of nature of work, supervision, social network at work, and public support (Chan, 1997; Crank, 1997; Moon and Zager, 2007; Witte, 1990). First, the nature of work in policing is generally considered complex, significant, and dangerous (Friesen and Sarros, 1989; Lipsky, 1980; Lurigo and Rosenbaum, 1994). Officers' assessment of their work is associated with their job satisfaction and attitude toward community policing (Eisenberger et al., 1997; Lord and Friday, 2008; Zhao et al., 1999). Second, officers' attitudes toward their supervisors are positively associated with their job satisfaction and community policing (Engel and Worden, 2003; Wilkinson and Rosenbaum, 1994). Officers who have positive views of their supervisors show high levels of job satisfaction and enthusiasm for community policing. Third, social network at work is important in a police organization. Officers who have close relationships with their colleagues report that they are satisfied and eager to implement community policing (Boke and Nalla, 2009; Wilson and Bennett, 1994). Fourth, officers' perceptions of public support affect their job satisfaction and implementation of community policing, although police perceive that citizens do not trust police (Lord and Friday, 2008; Moon and Zager, 2007; Yim and Schafer, 2009). Officers who believe that they are supported by the public and that citizens are cooperative show high levels of job satisfaction and a positive attitude toward community policing.

Based on the job characteristics model and previous studies, the following relationships are hypothesized. The relationships are divided into two parts: job characteristics → officers' attitudes toward community policing, and job characteristics → officers' job satisfaction.

Job Characteristics influences Officers Attitude toward Community Policing

H1a: Officers who have positive perception of top management support are likely to have positive attitudes toward community policing.

H1b: Officers who perceive communication with top managers positively are likely to have positive attitudes toward community policing.

H1c: Officers who believe their work is important, complex, and dangerous are likely to have positive attitudes toward community policing.

H1d: Officers with positive attitude toward their supervisors are likely to have positive attitudes toward community policing.

H1e: Officers who have close relationships with their colleagues are likely to have positive attitudes toward community policing.

H1f: Officers who perceive the public support positively are likely to have positive attitudes toward community policing.

Job Characteristics influences Officers' Job Satisfaction

H1g: Officers who have positive perception of top management support are likely to be satisfied with pay/benefit, promotion, and work.

H1h: Officers who perceive communication with top managers positively are likely to be satisfied with pay/benefit, promotion, and work.

H1i: Officers who believe their work is important, complex, and dangerous are likely to be satisfied with pay/benefit, promotion, and work.

H1j: Officers with positive attitude toward their supervisors are likely to be satisfied with pay/benefit, promotion, and work.

H1k: Officers who have close relationships with their colleagues are likely to be satisfied with pay/benefit, promotion, and work.

H11: Officers who perceive the public support positively are likely to be satisfied with pay/benefit, promotion, and work.

Table 2. Hypotheses Based on Job Characteristics Model

Exogenous Variables	CP	Job Satisfaction		
		Pay/Benefit	Promotion	Work
<i>Job Characteristics</i>				
Top Management Support	+	+	+	+
Communication with Top Managers	+	+	+	+
Nature of Work	+	+	+	+
Supervision	+	+	+	+
Social Network at Work	+	+	+	+
Public Support	+	+	+	+
<i>Job Satisfaction</i>				
Pay/Benefit	+			
Promotion	+			
Work	+			

* CP: officers' attitudes toward community policing

(2) Expectancy Motivation Theory

Expectancy motivation theory suggests that satisfied employees have positive attitudes toward their tasks and make efforts to improve their performance (Porter and Lawler, 1968). A measurement of job satisfaction should be divided into several aspects rather than relying on a single, one-dimensional scale (Zhao et al., 1999). The job descriptive index is designed to measure employees' satisfaction with their jobs and has been used in many different settings including public organizations (Dantzker, 1994). In addition, the job descriptive index is recognized as an appropriate measurement for officers' job satisfaction because it has been

widely tested and validated (Zhao et al., 1999). The index measures several aspects of job satisfaction: pay/benefit, promotion, and work (Smith et al., 1969). Based on the job descriptive index and previous studies, officers' job satisfaction is divided into three aspects; 1) satisfaction with pay/benefit, 2) satisfaction with promotion, and 3) satisfaction with work.

The following relationships are hypothesized:

Officers' Job Satisfaction influences Officers' Attitudes toward Community Policing

H2a: Officers who are satisfied with their pay/benefit are likely to have positive attitude toward community policing.

H2b: Officers who are satisfied with promotion are likely to have positive attitude toward community policing.

H2c: Officers who are satisfied with work are likely to have positive attitude toward community policing.

Table 3. Hypotheses Based on Expectancy Motivation Theory

Exogenous Variables	CP
<i>Job Satisfaction</i>	
Pay/Benefit	+
Promotion	+
Work	+

* CP: officers' attitudes toward community policing

(3) Demographics and Individual Level Factors

To date, much of the research in policing has tested the explanatory power of officers' demographics and individual level factors on the endogenous variables (Moon and Zager, 2007; Lord and Friday, 2008; Lurigo and Rosenbaum, 1994; Zhao et al., 1999). Based on the literature review, the following relationships are hypothesized.

Demographics and Individual Level Factors influence Officers' attitudes toward Community Policing

H3a: Female officers are likely to have positive attitudes toward community policing.

H3b: Aged officers are likely to have positive attitudes toward community policing.

H3c: College educated officers are likely to have positive attitudes toward community policing.

H3d: Experienced officers are likely to have positive attitudes toward community policing.

H3e: Officers who have worked in the current department for a longer period are likely to have positive attitudes toward community policing.

H3f: Low ranking officers are likely to have positive attitudes toward community policing.

H3g: Patrol officers are likely to have positive attitudes toward community policing.

Table 4. Hypothesized Impacts of Demographics and Individual Level Factors on Officers' Attitudes toward Community Policing

Exogenous Variables	CP
<i>Demographics and Individual Level</i>	
Gender (0: male, 1: female)	+
Age	+
Education	+
Years of Experience	+
No of Months in the Current Department	+
Rank	-
Job Assignment (0: patrol, 1: non-patrol)	-

* CP: officers' attitudes toward community policing

Demographics and Individual Level Factors influence Job Characteristics

H3h: Male officers are likely to have positive perceptions of top management support, communication with top managers, nature of work, supervision, social network at work, and public support.

H3i: Older officers are likely to have positive perceptions of top management support, communication with top managers, supervision, social network at work, and public support.

H3j: College educated officers are likely to have positive perceptions of top management support, communication with top managers, supervision, and public support.

H3k: Experienced officers are likely to have positive perceptions of top management support, communication with top managers, supervision, social network at work, and public support.

H3l: Officers who have worked in the current department for a longer period are likely to have positive perceptions of top management support, communication with top managers, nature of work, supervision, social network at work, and public support.

H3m: High ranking officers are likely to have positive perceptions of top management support, communication with top managers, nature of work, supervision, social network at work, and public support.

H3n: Non-Patrol officers are likely to have positive perceptions of top management support, communication with top managers, supervision, social network at work, and public support.

Table 5 indicates the hypotheses about the relationships between demographics and individual level factors and job characteristics

Table 5. Hypothesized Impacts of Demographics and Individual Level Factors on Job Characteristics

Exogenous Variables	Job Characteristics					
	TMS	CTM	NW	SUP	SNW	PS
<i>Demographics and Individual Level</i>						
Gender (0: male, 1: female)	-	-	-	-	-	-
Age	+	+		+	+	+
Education	+	+			+	+
Years of Experience	+	+	+	+	+	+
No of Months in the Current Department	+	+	+	+	+	+
Rank	+	+	+	+		+
Job Assignment (0: patrol, 1: non-patrol)	+	+		+	+	+

TMS = Top Management Support, CTM = Communication with Top Managers, NW = Nature of Work, SUP = Supervision, SNW = Social Network at Work, PS = Public Support

Demographics and Individual Level Factors influence Job Satisfaction

H3o: Male officers are likely to be satisfied with pay/benefit, promotion, and work.

H3p: Young officers are likely to be satisfied with pay/benefit, promotion, and work.

H3q: College educated officers are likely to be satisfied with pay/benefit.

H3r: Less-experienced officers are likely to be satisfied with pay/benefit, promotion, and work.

H3s: Officers who have worked in the current department for a longer period are likely to be satisfied with pay/benefit, promotion, and work.

H3t: High ranking officers are likely to be satisfied with pay/benefit, promotion, and work.

H3u: Non-Patrol officers are likely to be satisfied with pay/benefit, promotion, and work.

Table 6 indicates the hypotheses about the relationships between demographics and individual level factors and job satisfaction

Table 6. Hypothesized Impacts of Demographics and Individual Level Factors on Job Satisfaction

Exogenous Variables	Job Satisfaction		
	Pay/Benefit	Promotion	Work
<i>Demographics and Individual Level</i>			
Gender (0: male, 1: female)	-	-	-
Age	-	-	-
Education	+		
Years of Experience	-	-	-
No of Months in the Current Department	+	+	+
Rank	+	+	+
Job Assignment (0: patrol, 1: non-patrol)	+	+	+

A series of research hypotheses were specified above. Although some hypotheses are not directly related to officers' attitudes toward community policing, they are included because those relationships (e.g., job characteristics and job satisfaction, demographics/ individual level and job satisfaction) influence officers' attitudes toward community policing indirectly as well as directly.

3. Survey Construction

A survey is a good tool for accurate generalizations about the population of interest (Singleton and Straits, 2004). Survey construction is a creative and critical process in research (Maxfield and Babbie, 2007). There is a choice between the open-ended (free-response) question and the closed-ended (fixed-choice) question. The greatest advantage of the open-ended question is the freedom the respondents have, but it is difficult to interpret and categorize respondents' answers (Singleton and Straits, 2004). The closed-ended question enhances standardization by creating the same frame for all respondents (Singleton and Straits, 2004). The closed-ended question was employed in this study. The goal of this study was to measure respondents' attitudes. The open-ended question is appropriate when respondents' opinions on sensitive issues are measured (Neuman, 2006). Second, the majority of the respondents have general knowledge of community policing. If the majority of the respondents do not know the topic, the open-ended question is a better choice (Singleton and Straits, 2004). Lastly, the open-ended question is useful when respondents are highly motivated in the study (Hagan, 2006). It is not clear whether police officers were highly motivated to participate in this study. Thus, it was better to employ the closed-ended question for this study.

Another issue for the instrumentation is the response format. The simplest response format is the choice of a 'yes' or 'no' answer (Singleton and Straits, 2004). However, this makes it difficult to measure respondents' attitudes. Likert scaling is a common way of measuring attitudes (Neuman, 2006). In this study, five-point categories were employed, ranging from strongly disagree (1) to strongly agree (5). A response of "not sure" or "unclear" would be (3).

(1) Measuring Officers' Attitudes toward Community Policing

Three dimensions were used to measure officers' attitudes toward community policing: officers' preference for community policing, their support of community policing, and their belief in the effectiveness of community policing. Cordner and Biebel (2005) argued that the three dimensions can be used as one endogenous variable. Confirmatory factor analysis was conducted to check whether the dimensions loaded as one variable.

Preference for Community Policing

Community policing is a philosophy and a paradigm shift rather than a simple project or policy (Goldstein, 1987; Sykes, 1994). It is crucial for police officers to understand and prefer the philosophy of community policing for its implementation to be successful. Preference for the philosophy of community policing is one of the variables for officers' attitudes toward community policing (Lewis et al., 1999). Lewis and his colleagues (1999) employed three questions to measure how officers understand the philosophy of community policing. These questions were administered to Korean police by Moon (2006). He found that only two

questions were effective to measure Korean police officers' understanding of the philosophy of community policing.²⁹

In this study, two questions were used to measure this dimension (i.e., preference for community policing): 1) "Officers need to work with neighborhood residents, civic groups, other government agencies, and the local business" and 2) "Officers need to try to solve non-crime problems."

Support of Community Policing

Officers' support for and commitment to community policing are determined by their attitudes toward community policing (Ford, Weissbein, and Plamondon, 2003; Nalla and Kang, 2011). In addition, officers' attitudes toward community policing can be measured by their support for community policing (Wycoff and Skogan, 1994). Officers' support for community policing is also used to measure their attitudes toward community policing (Ford et al., 2003; Wilson and Bennett, 1994). In this study, two questions were employed to measure officers' support for community policing. One question measured how Korean police officers supported community policing in 2008 (Nalla and Kang, 2011). The questions were "I think we should increase the emphasis placed on community policing" and "I support community policing programs."

Effectiveness of Community Policing

When officers perceive that community policing is implemented effectively, they have a positive attitude toward community policing (Lord and Friday, 2008). Lurigo and Skogan

²⁹ Four-point Likert scales ranging from 1 (strongly disagree) to 4 (strongly agree) were used as response options. Explanatory factor analysis was conducted and two questions were loaded to measure the concept.

(1994) emphasized the officers' perception of community policing's effectiveness because their perception influences the successful implementation of community policing. Two questions were employed to measure officers' perception of community policing's effectiveness in responding to citizens' concern and crime: 1) "Community policing improves the relationship between police and citizens in my district" and 2) "Community policing is useful for crime prevention in my district."

(2) Measuring Officers' Job Satisfaction

As discussed above, the job descriptive index (JDI) was employed to measure officers' job satisfaction. Kinicki, McKee-Ryan, Schriesheim, and Carson (2002) analyzed 152 studies employing the JDI. A meta-analysis was conducted and the results showed that the JDI had acceptable estimates of internal consistency and test-retest reliability. It indicated that the JDI measured the concept of job satisfaction successfully (the constructive validity).

In this study, satisfaction with pay, promotion, and work conditions was measured. General satisfaction was included in the work conditions scale because general job satisfaction is related to work conditions (Dantzker, 1994). However, general satisfaction may include pay/benefits, promotion or other factors in the job. The confirmatory factor analysis was employed to examine whether these questions measured "work condition" appropriately.

Satisfaction with Pay and Benefits

The JDI suggests three questions to measure satisfaction with pay and benefits. These questions were employed to measure officers' satisfaction with pay and benefits in many studies (Greene, 1989; Halsted et al., 2000; Lurigo and Skogan, 1994; Wilson and Bennett, 1994; Wycoff and Skogan, 1994). In addition, they were employed to examine Korean police officers'

job satisfaction (Nalla and Kang, 2011). The three questions were 1) “I am satisfied with my overall level of pay,” 2) “I am satisfied with the benefits I receive,” and 3) “I am satisfied with my chances for salary increases.”

Satisfaction with Promotion

Four questions were employed to measure officers’ satisfaction with promotion opportunities. Halsted and his colleagues (2000) indicated that opportunities for promotion are important to officers’ satisfaction. If officers perceive that opportunities for promotion are fair, they will be satisfied. In addition, performance appraisal is closely related to promotion (Lilley, 2002). The questions about performance appraisal were 1) “Officers who do well on the job stand a fair chance of being promoted,” 2) “I am satisfied with my chances for promotion,” 3) “Officers’ performance is evaluated accurately,” and 4) “I am satisfied with officers’ performance appraisal.”

Satisfaction with Work

Dantzker (1994) reviewed job satisfaction literature in policing and revised the questions about satisfaction with work in the JDI. These questions were employed to measure officers’ satisfaction with work in several studies (Dantzker, 1998; Halsted et al., 2000; Pelfrey, 2004; Rosenbaum, Yeh, and Wilkinson, 1994; Zhao et al., 1999). Four questions were employed in this study: 1) “Overall, I am satisfied with my job,” 2) “I am satisfied with the workload,” 3) “I am satisfied with the work environment,” and 4) “I am satisfied with my position.”

(3) Measuring Job Characteristics

Job characteristics are divided into two parts in this study: organizational culture and occupational culture. Organizational culture includes top management support and

communication with top managers. Occupational culture includes nature of work, supervision, social network at work, and public support. This section explains how organizational culture and occupational culture are measured.

Organizational Culture

Zeitz, Johannesson and Ritchie's (1997) organizational culture index is used to measure top management support and communication with top managers in the private sector. The survey asks managers and employees about their cultural conceptions. It was employed to measure the innovation of Taiwanese government employees (Yang and Rosenblatt, 2008) and also to examine the organizational culture of Malaysian government employees (Fei and Rainey, 2003). In addition, the index was employed to measure police organizational culture in Korea (Nalla and Kang, 2011), as well as in Slovenia (Nalla, Rydberg and Mesko, 2011) and the United States (Boke and Nalla, 2009).

Four questions were employed in this study to measure officers' perceptions of top management support: 1) "Top managers in this organization follow up on suggestions for improvement," 2) "Top managers set clear goals for quality improvement," 3) "Top managers try to plan ahead for changes that might affect our performance," and 4) "Top managers support officers well for the quality improvement."

Another three questions measured officers' perceptions of communication with top managers: 1) "Top managers do a good job of communicating with officers," 2) "Top managers give praise and recognition for outstanding performance," and 3) "Top managers in this organization follow up on suggestions for improvement."

Occupational Culture

Several studies indicated that occupational culture is shaped by the nature of the work being performed and employees' interaction with supervisors and colleagues (Chan, 1996; Crank, 2004; Paoline, 2003; Van Maanen, 1975). In this study, occupational culture was measured by four factors: nature of work, supervision, social network at work, and public support.

Regarding nature of work, Hackman and Oldham's (1980) job diagnostic survey was employed. This survey has been used to measure employees' work attitudes and motivation. It has been tested among many organizations and has been proven to be a reliable and valid method by which to measure these concepts (Lee-Ross, 1998). Hackman and Oldham's (1980) job diagnostic survey has also been employed in policing (Lord and Friday, 2008; McGarrell et al., 2003; Rosenbaum and Wilkinson, 1994; Zhao et al., 1999). Five questions were used to measure officers' perceptions of nature of work: 1) "The job requires me to use a number of complex or high-level skills," 2) "The job gives me considerable opportunity for independence and freedom in my work," 3) "My job is dangerous and risky," 4) "My job is relatively significant in the organization," and 5) "My job may affect a lot of other people according to my work performance."

As described above, supervision is different from top management. The term "supervisor" in this study indicates officers' direct managers. This could be a beat sergeant for patrol officers or a lieutenant for detectives. Officers contact their supervisors daily. However, top managers are decision makers and very high-ranking officers. In general, American police officers do not have top managers in their police department from an organizational culture perspective. Mayors or city managers can function as top managers. Unlike the US policing system, the Korean police agency has top managers in its organization. The commissioner

general and chiefs of the state police agency are top managers due to the Korean policing system's centralization. The commissioner general can affect all police officers in Korea even though officers do not meet the commissioner general daily.

There are distinctly different words in the Korean language for supervisors (*gamdokja*) and top managers (*jihuibu*). These words were used when the questionnaire was translated into the Korean language. Four questions were employed to measure officers' perceptions of supervision: 1) "My supervisor gives credit to people when they do a good job," 2) "My supervisor rewards being cooperative and a good team player," 3) "My supervisor shows complete trust in officers' ability to perform their tasks well," and 4) "Supervisors often let me know how well they think I am performing."

Social network at work focuses on officers' relations with their colleagues. In this study, the positive aspects of relations with their colleagues were considered. Civilians generally work at the national headquarters and only rarely at local police departments. "Coworker" in this study meant sworn officers. Social network at work was measured by four questions using Zeitz et al.'s (1997) index: 1) "Officers in my department enjoy working with their coworkers," 2) "Coworkers in my department are like a family," 3) "There are no serious conflicts between coworkers," and 4) "Coworkers often let me know how well they think I am performing."

Officers' perceptions of public support were measured by four questions that come from Parks et al.'s (1998) study, "Project on Policing Neighborhoods" (POPEN), and Nalla et al.'s (2011) research. The POPEN survey provides an in-depth description of how the police and the community interact with each other in a community policing environment. Officers' perception of citizens' trust is an important factor in public support (Parks et al., 1998). When officers

perceive that citizens trust them, officers feel that they are supported (Parks et al., 1998). One question was drawn from the POPN survey conducted by Parks and his colleagues (1998) in Indianapolis and St. Petersburg and measured officers' perception of citizens' trust: "Citizens trust police officers."

Nalla and his colleagues (2011) measured officers' perceptions of public support in Slovenia. They employed three questions: 1) "Citizens generally cooperate with police officers," 2) "Citizens would often provide information about a crime if they knew something," and 3) "Citizens are willing to work with police officers to try to solve neighborhood problems." The factor analysis indicated that these questions measured the concepts well.

(4) Demographics and Individual Level Factors

Demographics and Individual level factors are used as an exogenous variable that affects officers' attitudes toward community policing, job satisfaction, and job characteristics. Age, gender, and education are demographics. Years of experience, rank, job assignment, and entry level are individual level factors.

Demographics

Gender was measured by two categories: 1) male and 2) female. Age was measured by four categories: 1) 20-29 years old, 2) 30-39 years old, 3) 40-49 years old, and 4) 50 years old or more. Education refers to the highest educational level that officers completed. A high school diploma is a minimum requirement for Korean police officers. The lowest category of this variable is high school diploma and the highest category is Masters of Arts or more. The doctoral degree is merged into the Masters of Arts category because only 74 officers have a Ph.D.

(KNPA, 2010). In sum, education was measured by four categories: high school diploma, associate degree, Bachelor of Arts, and Master of Arts/Science or higher.

Individual Level Factors

Years of experience was measured by five categories: 1) 0-4 years, 2) 5-9 years, 3) 10-14 years, 4) 15-19 years, and 5) 20 years or more. Number of months of service in the current department was measured by seven categories: 1) 0-6 months, 2) 7-12 months, 3) 13-18 months, 4) 19-24 months, 5) 25-30 months, 6) 31-36 months, and 7) 37 months or more. There are eleven ranks in the Korean police: police officer, senior police officer, sergeant, lieutenant, captain, superintendent, senior superintendent, superintendent general, senior superintendent general, chief superintendent general, and commissioner general (from the lowest to the highest). The survey was conducted at local police departments. The chief of the police department is the senior superintendent. The superintendent general, senior superintendent general, chief superintendent general, and commissioner general work at the state police agencies or national headquarters. In this survey, only eight ranks were measured. However, no distinction was made between patrol officers (the lowest rank) and senior patrol officers. They were combined into one category. In addition, because there is only one senior superintendent at each police department (this position's rank is equivalent to the chief of a police department), it was combined with the superintendent category. Regarding job assignment, nine divisions are established at local police departments: 1) general affairs, 2) police administration, 3) patrol, 4) traffic, 5) criminal investigation, 6) public security, 7) intelligence, 8) national security, and 9) foreign security. Police departments in large cities have nine divisions, but those in small cities or rural areas have 4-6 divisions depending on the workloads. This study surveyed various police departments in

geographies ranging from large cities to rural areas. Similar divisions were combined into one category: 1) general affairs or police administration, 2) patrol or traffic, 3) criminal investigation, 4) public security or intelligence, and 5) national security or foreign security.

4. Sample

The data for the present study came from a survey of police officers in South Korea. The English language questionnaire was translated into Korean and reviewed by three Korean scholars who teach criminology and criminal justice in the United States and four Korean police officers who are fluent in English and Korean. They were asked to complete the questionnaire as if they were real subjects in the study. After they completed the questionnaire, they were asked to compare the questionnaire with the English version. They reviewed the questionnaire in terms of the cultural and semantic nuances of Korean speakers (Biemer and Lyberg, 2003).

Three Korean scholars also respectively back-translated the questionnaire from English to Korean, and the three back-translated questionnaires were compared with the original English version. After this procedure, a few changes were made in the questionnaire.

As stated previously, the number of sworn officers in each police department varies from 112 to 937 but the average number is 341 (KNPA, 2010). Thus, most police departments in Korea have 200 to 400 sworn officers. In the United States, 652 police departments—five percent of all police departments—hire only one sworn officer, while large police departments such as the New York police department may have more than 35,000 officers (Reaves, 2007).

The Korean police is centralized and controlled by the central government. When the population in a specific area increases enormously, the government increases the number of police officers in that area by transferring officers from nearby police departments or by hiring

new officers. However, when the number of police officers in a given department exceeds 1,000, the government splits the police department to maintain a manageable number of police officers in each police department.

According to the Presidential Decree on Police Organization (1991, revised 2010), police departments are classified into three categories: first, second, and third degree. Police departments in the first degree are located in large cities, and police departments in the second degree are located in small to mid-sized cities. Police departments in rural areas are classified as third degree. Table 7 shows the number of police departments in each category.

Table 7. Number of Police Departments

Total	The first degree (Large cities)	The second degree (Small to mid-sized cities)	The third degree (Rural areas)
244	131	39	74

Several studies on police in Korea surveyed police officers who trained at Korea National Police University (KNPU) or the Police Comprehensive Academy (PCA) because it enabled researchers to collect a national sample without visiting all local police departments (Seo, 1997; Lee 2002, 2008). However, officers who train at KNPU or PCA are not selected randomly. Instead, they are selected by their qualification and by decision of their supervisors. For example, when officers get promoted to higher ranks or transferred to different positions, they are required to take specific training courses. The chance of being selected for the study is not equal among police officers, and it may lead to biased results (Singleton and Straints, 2004).

Stratified random sampling was employed for this study. Stratified random sampling can minimize sampling error because it enables researchers to select a sample from a homogenous subset of the population (Hagan, 2006; Maxfield and Babbie, 2007).

In this study, sixteen police departments were selected randomly with an even distribution across Korea in terms of the degree of police department. Captain Sungmoo Hong conducted the survey for this study. He is a police officer and stayed at Michigan State University for six months as a visiting scholar. He is not only familiar with survey methodology and the process of survey administration but also surveyed police officers on another study conducted in 2009. Sixteen police departments was the maximum number that he could visit because of scheduling issues. Six police departments were chosen in the first degree. Five in the second and five in the third were selected randomly. In order to conduct a random selection, a number was assigned to each of the three groups. For example, for the first-degree police departments, numbers 1 to 131 were assigned, and six of them were randomly selected in front of several students. After the random selection, I contacted the chief of each police department and explained the purpose of this study.

We received permission from the chiefs of police departments under the condition that the name of the police department not be revealed. Fortunately, sixteen police departments' chiefs allowed us to conduct the survey. All sixteen randomly-chosen police departments agreed to participate in the survey. Sungmoo Hong visited the police departments and surveyed the police officers at their regular briefing meeting with an explanation of the purpose of this study.

The questionnaires were distributed at the regular meeting. Police officers routinely meet once a week or every other week at their police department. These morning meetings last about

an hour. Off-duty patrol officers, detectives, and police administrators are required to attend the meeting, which is held three times on consecutive days at the auditorium because patrol officers work in three different shifts. The goal of the meeting is to disseminate orders from the Korean police headquarters and to receive training on various procedures. These meetings are a good opportunity for patrol officers to assemble at the police department. The number of officers in the meeting depends on the size of the police department. In general, one-quarter to one-third of the officers attend the meeting, which translates to approximately 30 (the third degree) to 100 (the first degree) officers attending the meeting.

All police officers including the police chief are required to attend the regular meeting. Patrol officers attend when they are off-duty and officers who work at the police department can choose which date of the three meetings they prefer to attend. In addition, the survey administrator randomly visits the police department during one of three meetings. For the purposes of this study, each meeting may be considered a random sampling because all police officers in a police department had the same opportunity to be chosen to take the survey. These meetings do not require specific officers to attend one meeting over another. Therefore, each officer had an equal possibility of attending the meeting at which the survey was administered.

However, Kim Jong-il, North Korea's dictator, died of a heart attack on December 17, 2011, while travelling by train to an area outside Pyongyang (BBC News, 2011). South Korean police were placed on high alert after Kim's death. Some regular meetings were cancelled or the numbers of officers who attended the meeting decreased because many police officers had to stay in their positions.

The survey was conducted for two weeks in January in 2012. A total of 649 questionnaires were distributed and 421 officers in sixteen police departments responded to the survey. The response rate was 64.9 percent. The rate ranged from 42.1 percent (Gyeonggi F) to 78.2 percent (Seoul A). Table 8 shows the response rate in each police department. The names of the provinces were shown in the table, but the sixteen departments were anonymous.

There are several reasons why sixteen departments were selected. First, structural equation modeling requires large sample sizes that exceed 200 samples (Kline, 2005). The survey was conducted in sixteen police departments and 421 officers responded to the questionnaire. Second, the survey administrator could survey only sixteen police departments due to time constraints. As discussed above, all police departments have a meeting in the morning on weekdays. The survey administrator could survey one or two police departments per day. He had to use his vacation for the survey because this survey was not officially conducted by the Korean police. He had a maximum of two weeks' vacation. Sixteen police departments were the maximum that he could survey using his own time.

The survey was anonymous, so potential respondents were instructed not to provide their names on the questionnaires. Further, each questionnaire had a cover letter that informed the potential respondents about the study and its purpose. It also explained that their participation was voluntary, that they could withdraw at any time, and that, by returning the questionnaire, they agreed to participate in the study. The survey administrator created an atmosphere in which those who did not want to participate in the project could freely exercise their rights. They were informed about the study, the risks and benefits of participating in the project, their rights to refuse to participate, and how to exercise these rights. If they decided to participate in the survey,

they were instructed to put the filled-out questionnaire in the envelope, seal it, and put it in the box in the room. If they decided not to participate, they were instructed to place the blank questionnaire in the envelope, seal it, and put it in the same box. The cover letter also provided a contact name and address for any officer who had questions about the study.

Table 8. Number of Respondents in Police Departments

Police Department	No of Distributed Questionnaires	No of Respondents	Response ³⁰ Rate
Seoul A (1)	87	68	78.2
Seoul B (1)	27	20	74.1
Gwangju C (1)	63	46	73.0
Gyeonggi D (1)	82	50	61.0
Gyeonggi E (1)	30	20	66.7
Gyeonggi F (1)	19	8	42.1
Gyeonggi G (2)	32	20	62.5
Gyeonggi H (3)	45	31	68.9
Gangwon I (2)	29	21	72.4
Gyeongnam J (2)	28	17	60.7
Gyeongnam K (2)	30	20	66.7
Gyeongnam L (3)	19	10	52.9
Gyeongbuk M (3)	49	31	63.3
Jeonbuk N (2)	35	20	57.1
Jeonnam O (3)	21	10	47.6
Chungbuk P (3)	53	30	56.6
Total	649	421	64.9%

* The number in the parenthesis means the degree of police department (e.g., 1 is the first degree police department)

³⁰ Response rates ranged from 42.1 % to 78.2 % with an average of 64.9%. To make sure there was no discrepancy among the response rate, a bivariate analysis was conducted. The Pearson correlation coefficient indicated that there was no significant relationship between response rate and number of police officers and the size of jurisdiction. The general characteristics of the police departments, such as number of police officers and the size of jurisdiction, had no impact on response rate.

This study did not ask respondents to submit personal information such as their name and officer registration number. The respondents had the opportunity to stop filling out the questionnaires at any time, and the survey was kept confidential and anonymous. If they chose not to participate in the survey, it was due to their personal choice.

5. Analytic Strategy

First, Spearman's Rho (ρ) was employed to determine the existence of relationships among variables which are ordinal level data.³¹ Also, analysis of variance (ANOVA) was conducted to compare mean difference among several groups such as rank and job assignment. Second, structural equation modeling (SEM) was employed to test the hypotheses empirically. SEM consists of path analysis, confirmatory factor analysis, and a structural regression model (Kline, 2005). The confirmatory factor analysis and structural regression model were conducted in the study. A confirmatory factor analysis (CFA) was conducted first because it enabled the researchers to evaluate the construct validity of each latent variable. Based on the results of CFA, a structural regression model was employed to examine the relationships among variables.

CFA allows one to assess measurement properties of sets of indicators of unobserved constructs, while exploratory factor analysis (EFA) does not suffice for complex questions or dimensions (Brown, 2006; Gau, 2010). A comparison between CFA and EFA is discussed in the next section. Several modification indexes were calculated to examine the overall quality of models; the Chi-square (χ^2) statistics, adjusted Chi-square (χ^2) statistics, root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), weighted root

³¹ More specific reasons were provided in the next chapter.

mean square residual (WRMR), non-normed fit index (NNFI), and comparative fit index (CFI). Lastly, the structural regression model was conducted to discover the relationships among variables. All direct and indirect effects of variables in the models were examined and all paths were tested simultaneously. Fit indexes were used to evaluate the overall fit and quality of the model. The structural regression model allowed the researchers to investigate structural relationships among latent variables³² to test the hypothesized models.

(1) Confirmatory Factor Analysis

Factor analysis attempts to determine which sets of observed variables share common variance-covariance characters that define theoretical constructs of factors (Schumacker and Lomax, 2010). Researchers assume that some factors from the observed variables are responsible for the shared variance-covariance in the model. They collect data on observed variables and employ factor analysis to either explore which variables relate to factors or confirm that a set of variables define those constructs or factors (Schumaker and Lomax, 2010). More specifically, there are two types of factor analysis: exploratory and confirmatory factor analysis. While exploratory factor analysis attempts to discover the nature of the constructs influencing a set of responses, confirmatory factor analysis tests whether a specified set of constructs are influencing responses in a predicted way. The two techniques of factor analysis are compared in this section. In addition, I explain why confirmatory factor analysis is selected in this study.

Explanatory Factor Analysis vs. Confirmatory Factor Analysis

Exploratory factor analysis (EFA) could be described as orderly simplification of interrelated measures. EFA, traditionally, has been used to explore the possible underlying

³² These are also referred to as unobserved variables.

factor structure of a set of observed variables without imposing a preconceived structure on the outcome (Child, 2006). The term EFA refers to a set of procedures that include centroid, principal components, and principal axis factor analysis that differ in the statistical criteria used to derive factors (Kline, 2005). EFA helps us determine what the factor structure looks like according to how participants respond. It is essential to determine underlying constructs for a set of measured variables (Hurley et al., 1997). However, the research has little direct influence on the correspondence between indicators and factors because all of the observed variables in EFA are allowed to correlate with every factor (Kline, 2005). In addition, EFA may be appropriate for scale development (Hurley et al., 1997), but the scales in this study were already employed in previous studies.

Confirmatory factor analysis (CFA) allows the researcher to test the hypothesis that a relationship between the observed variables and their underlying latent constructs exists (Kline, 2005). Moreover, CFA enables researchers to specify and test measurement models that are more a priori (Hurley et al., 1997). Articles appearing in the major organizational research journals have concluded that the use of CFA is steadily increasing, while the use of EFA is declining because of the weakness of EFA and the strength of CFA in the above (Brannick, 1995; Stone-Romero, Weaver and Glenar, 1995). Therefore, the current study mainly employed a series of CFA to examine the research hypotheses and test measurement models.

Analytical Process of Confirmatory Factor Analysis

Although structural equation modeling is a family of techniques that address different kinds of hypotheses, it follows the processes of ‘model specification,’ ‘model identification,’

“model estimation,” “model assessment,” and “model respecification” (Kline, 2005; Schumaker and Lomax, 2010). Each stage of these processes is described below.

Specification³³

Model specification involves using all of the available relevant theory and developing a theoretical model (Schumaker and Lomax, 2010). Prior to any data collection or analysis, the researcher specifies a model that should be confirmed with variance-covariance data (Schumaker and Lomax, 2010). It means that available information is used to decide which variables to include in the theoretical model and how these variables are related. The measurement model can be specified in terms of exogenous notation (i.e., X variables) or in terms of endogenous notation (i.e., Y variables). Model specification could be represented as the formula below.

$$\begin{aligned}x &= \Lambda_x \xi + \delta \\y &= \Lambda_y \eta + \epsilon\end{aligned}$$

In this formula, x represent the directly measured exogenous variables, Λ_x (lambda) is the coefficient of the impact of the latent on the observed variables, ξ (xi) is the latent construct, and δ (delta) is the error of measurement. Y represents the observed endogenous variables, and η (eta) is the latent construct of endogenous variables (Byrne, 1998). The measurement error terms are independent of each other and of the factors (Kline, 2005). A measurement correlation reflects the assumption that the two indicators measure something in common that is not represented in the model. It has already been specified which directly observed variables served as the measures for each of the constructs in the models in this study. The conceptual model of

³³ Observed variables are variables that are measured in the study and rectangles are used to represent them. A latent variable is an unobserved and hypothetical construct and an ellipse instead of a circle is used in the diagram to represent the latent variable.

this research was provided in Chapter 1 and a more detailed explanation and model was described in Chapter 2.

Identification

Model identification depends on the designation of parameters as fixed, free, or constrained (Schumaker and Lomax, 2010). Once the model is specified and the parameter specifications are indicated, the parameters are combined to form one and only one Σ (model-implied variance-covariance matrix). The CFA measurement model should meet two conditions to be identified: 1) the number of free parameters must be less than or equal to the number of observations and 2) every factor must have a scale (Kline, 2005). The parameters of CFA measurement models are counted as the total number of variances and covariances of the factors and of the measurement errors plus direct effects on the indicators from the factors.

Traditionally, there are three levels of model identification. They depend on the amount of information in the variance-covariance matrix to estimate the parameters of the model (Schumaker and Lomax, 2010). First, a model is under-identified (or not identified) if one or more parameters may not be uniquely determined because there is not enough information. Second, a model is just-identified if all of the parameters are uniquely determined because there is just enough information. Parameters are identified without any additional information. Lastly, a model is over-identified when there is more information than necessary to identify it.

Every latent variable must have a scale (Kline, 2005). That is, since latent variables are not directly measured, they require a measurement scale to calculate estimates of effects that involve them. Thus, the latent construct is measured by the estimated effect of the latent construct to the measured variable that is theoretically related to the construct. For example,

‘satisfaction with pay and benefits’ latent construct was measured from the questions about satisfaction with overall level of pay, the benefits that respondents receive, and their opportunities for salary increase. Each latent construct is also examined whether it is identified.

Estimation

Unstandardized estimates in CFA are unanalyzed associations and factor loadings (Kline, 2005). Unanalyzed associations either between a pair of factors or measurement errors are covariances. Factor loadings are interpreted as unstandardized regression coefficients that estimate the direct effects of the factors on the indicators. The frequently used estimation methods in CFA are those that assume multivariate normality, including maximum likelihood (ML), generalized least square (GLS), and unweighted least squares (ULS) (Kline, 2005).

Maximum likelihood (ML) is employed to estimate the measurement models because it calculates the estimates of all model parameters at once, while multiple regression requires a separate analysis for each endogenous variable (Kline, 2005). Maximum likelihood assumes multivariate normality of endogenous variables and exogenous variables that are continuous (Kline, 2005). The skewness and kurtosis of the variables will be tested in Chapter 5 as a univariate descriptive statistics. In addition, since the observed variables in the models are ordinal in nature, additional steps such as polychoric correlation matrix are necessary.

Assessment

Once the parameter estimates are obtained for a specified SEM model, the model fit should be examined. There are two types of assessment, the component model fit and the entire model fit (Schumacker and Lomax, 2010). The component fit indicates the fit of individual elements within the model (Bollen, 1989; Wilson, 2001). To assess the component fit, several

parameter estimates including the variance of the latent construct, squared multiple correlations, and various covariance matrices were examined in this study. When the component fit was statistically significant or acceptable, the entire model fit was considered.

The entire model fit emphasizes model fit criteria. Unlike many statistical procedures that have a single, most powerful fit index (e.g., F test in ANOVA), SEM has an increasingly large number of model fit indexes. Many of these measures are based on a comparison of the model-implied covariance matrix Σ to the sample covariance matrix S.

Hoyle and Panter (1995) suggested that researchers report several fit indexes. The results of seven fit measures were selected for this study in order to assess the model fit. They are the Chi-square (χ^2) statistics, adjusted Chi-square (χ^2) statistics, Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Weighted Root Mean Square Residual (WRMR), Non- Normed Fit Index (NNFI), and Comparative Fit Index (CFI).

First, the Chi-square (χ^2) goodness of fit is statistically significant, indicating rejection of the hypothesis that the covariance pattern for the measurement model specified approximates the observed covariance matrix (Schumacker and Lomax, 2010). The Chi-square (χ^2) statistics for a just-identified model equals zero and has no degrees of freedom. For overidentified models, the number of degrees of freedom is positive and the value of the Chi-square (χ^2) statistics may be positive (Kline, 2005). If the chi-square is not significant, the model is regarded as acceptable. That is, the observed covariance matrix is similar to the predicted covariance matrix—the matrix

predicted by the model. However, the Chi-square (χ^2) statistic is sensitive to sample size. In a large sample size, small or insubstantial differences between the covariance matrices of the specified measurement model and the observed variables will result in statistical significance and the rejection of the null hypothesis (Kline, 2005). Hu and Bentler (1999) indicated that the Chi-square (χ^2) may be statistically significant although the other model fit statistics fall within an acceptable range. To reduce the sensitivity of the Chi-square (χ^2) statistics, the adjusted Chi-square (χ^2) statistics is suggested. This is a measure of absolute fit that takes degrees of freedom into consideration by dividing the Chi-square (χ^2) value by the degrees of freedom (Kline, 2005).

$$\text{Adjusted Chi-square} = \chi^2 / df$$

The third index is Root Mean Square Error of Approximation (RMSEA). This is based on residuals resulting from comparing the model-specified covariance matrix with the observed matrix. A good fit is indicated by values less than .10, and a very good fit is less than .05 (Muthen and Muthen, 2010). This measure is calculated as

$$RMSEA = \sqrt{\frac{(\chi^2 - df)}{df (N - 1)}}$$

Standardized Root Mean Square Residual (SRMR) is a measure of average standardized covariance residuals or the difference between observed covariances and those implied or specified by the model (Joreskog and Sorbom, 1996). When the fit of the model is perfect, the SRMR equals zero. As the average discrepancy between the observed and predicted covariances

increases, so does the value of the SRMR (Kline, 2005). SRMR is obtained from the following (Hu and Bentler, 1998):

$$SRMR = \sqrt{\left[2 \sum_{i=1}^p \sum_{j=1}^i \left\{ \left(s_{ij} - \hat{\sigma}_{ij} \right) / s_{ii} s_{jj} \right\}^2 \right] / p(p+1)}$$

where s_{ij} is a sample covariance between variables i and j , $\hat{\sigma}_{ij}$ is the model-implied covariance between the two, s_{ii} and s_{jj} are sample standard deviations for variables i and j , and p is the number of variables in the model analysis.

Weighted Root Mean Square Residual (WRMR)³⁴ is a suitable measure for models where sample statistics have widely disparate variances (Muthen and Muthen, 2010). It is defined as

$$WRMR = \sqrt{\sum_r^e \frac{(s_{rj} - \hat{\sigma}_r)^2 / v_r}{e}}$$

where e is the number of sample statistics. s_r and $\hat{\sigma}_r$ are elements of the sample statistics and model-estimated vectors, respectively. v_r is an estimate of the asymptotic variance of s_r . Yu (2002) recommends that a model with a WRMR of less than 1.0 indicates good fit.

³⁴ WRMR is only available in Mplus.

Bentler and Bonnett (1980) extended the work by Tucker and Lewis (1973) and developed the Non-normed Fit Index (NNFI), which is also known as the Tucker-Lewis Index (TLI). NNFI is appropriate for use with maximum likelihood estimation. It is a comparative fit index that indicates how much the specified or implied model is an improvement over a zero factor model (Kline, 2005). Specifically, NNFI measures relative improvement standardized by degrees of freedom of the implied model over the independence, zero factor, or null baseline model. It is defined as

$$NNFI = \frac{(\chi_i^2 / df_i) - (\chi_t^2 / df_t)}{(\chi_i^2 / df_i) - 1}$$

where χ_i^2 is the chi-square of the independence model, which is the baseline model, and χ_t^2 is the chi-square of the target model which is hypothesized. Values of the NNFI can fall outside the range of 0 -1 and the standard generally used for good fit is $>.08$ ³⁵ (Hooper, Coughlan, and Mullen, 2008).

The Comparative Fit Index (CFI), which is an improved variation of the Bentler Fit Index (BFI), is a relative noncentrality index (Hu and Bentler, 1995). The CFI can be interpreted as the reduction of the lack of fit, as indicated by the noncentrality Chi-square (χ^2), between the measurement model and the baseline model. It is calculated as

³⁵ Hooper and his colleagues suggested that NNFI has lower cut off criteria than CFI because NNFI is sensitive to sample size.

$$CFI = \frac{(\chi^2 / df_i) - (\chi^2 / df_t)}{\chi^2 - df_i}$$

The interpretation of the CFI and NNFI are similar (Kline, 2005). A CFI >.9 is considered a good fit (Kline, 2005).

Table 9. Fit Indexes and Acceptable Thresholds

Fit Indexes	Acceptable Thresholds Levels	Description
Chi-square	P value (p>.05)	Sensitive to sample size
Adjusted Chi-square	Range from 2.0 to 5.0 (Tabachnick and Fidell, 2007)	Adjust for sample size
Root Mean Square Error of Approximation (RMSEA)	Values less than .10 (Muthen and Muthen, 2010)	Values less than .03 represent good fit
Standardized Root Mean Square Residual (SRMR)	Less than .08 (Hu and Bentler, 1995)	Easier to interpret due to its standardized nature
Weighted Root Mean Square Residual (WRMR)	Less than 1.0 (Yu, 2002)	
Non- Normed Fit Index (NNFI)	Values greater than .80 (Hooper, Coughlan, and Mullen, 2008)	Sensitive to sample size Values can fall outside of the range 0 -1
Comparative Fit Index (CFI)	Values greater than .90 (Kline, 2005)	0 – 1 range

This study considered individual parameters of the model and examined whether the sign of the parameter agreed with what was expected from the theoretical model and whether the parameters are explainable or understandable. The individual parameters should make sense and they should be statistically significant (Bollent, 1989). Moreover, the parameters should be within an expected range of values. For example, variances should not have negative values and

correlations should not exceed 1 (Schumaker and Lomax, 2010). Table 9 explains fit indexes and their acceptable thresholds with the description.

Respecification

The respecification is generally considered to be a difficult task since the number of constructs, their relations to the indicators, and patterns of unanalyzed associations among measurement error terms are all candidates for modification (Kline, 2005). However, allowing modification indices to drive the process might change the results, but some modifications can be made locally that can substantially improve model fits (Hu and Bentler, 1999). Thus, the current study used several model fit indices as guidelines to include or exclude variables. In addition, modification was conducted with theoretical backgrounds. When the indicators fail to have substantial loadings on the factors, researchers need to check whether the indicators are originally specified to measure the right factor. Sometimes the indicators may measure a factor in the model other than the designated factor. Another possibility is that some of the original factors may have too many indicators that measure the different aspects of the factors. They should be split into more homogenous sub-factors (Kline, 2005). Raykov and Marcoulides (2006) emphasized the importance of theory in the models. They suggested that the parameter estimates in the final analyses should have the right sign and magnitude as predicted or expected by available theory and previous studies.

Jigsaw Piecewise Strategy

Anderson and Gerbing (1988) provided guidance for researchers on the use of structural equation modeling. They suggested that a two-step modeling approach employing a series of nested models and sequential chi-square difference tests, and this approach enables researchers

to build a measurement model that has the best fit from a content and statistical standpoint. However, Fornell and Yi (1992) contended that a two-step modeling approach cannot be done in practice and that the assumptions of this approach are not logical. The two-step approach makes four assumptions: 1) theory and measurement are independent, 2) results of analysis specifications can be generalized to other specifications, 3) the estimators have desirable statistical properties, and 4) the statistical test in one step is independent of the test in the other. Fornell and Yi (1992) also indicated that theory will always guide measurement and it suggests what to measure. This study was also based on theories, and the questions in this study came from theories and previous studies. Accordingly, a two-step approach could not be implemented in this study. In addition, the fact that the theory is loosely or implicitly specified does not eliminate its existence or role in affecting measurement properties in analysis (Fornell and Yi, 1992).

As a remedy for a one-step or two-step approach, Bollen (2000) provided the jigsaw piecewise strategy. This strategy is somewhat like a jigsaw puzzle, where we fit pieces of the model individually and then together until we find a coherent whole. It is similar to the separate factor analysis method in that pieces of the model are examined prior to the whole model. The whole model was divided into officers' job satisfaction, job characteristics (organizational and occupational culture), and officers' attitudes toward community policing based on theories and previous studies. This approach fits the strategies that were employed in this study. Although this process does not empirically test uni-dimensionality among all the constructs together, it can establish uni-dimensionality with the combination of components that are divided by theories or previous studies (Wilson, 2001).

In general, CFA estimates all variables together. However, the estimation should be based on theory or prior research (Kline, 2005). This study combined two theories to explore factors that influence officers' attitudes toward community policing. When two or more theories are employed, CFA is conducted separately in order to test theories accurately (Cabrera, Castañeda, Nora, and Hengstler, 1992). In this study, CFA estimated variables based on each theory. After CFA, a structural regression model was conducted to examine all hypotheses.

(2) Structural Regression Model³⁶

A structural regression model is the synthesis of the path and measurement models (Kline, 2005). The specification of this model enables researchers to test the hypotheses about direct and indirect causal effect. It is similar to the path model, but involves latent variables because it incorporates a measurement model (Kline, 2005). Although structural regression modeling resembles confirmatory factor analysis, it tests the plausibility of hypothetical assertions about explanatory relationships among the latent dimensions (Raykov and Marcoulides, 2006). The structural regression model can be defined by two matrices and three vectors (Byrne, 1998). These include one matrix of coefficients relating exogenous latent variables to endogenous latent variables (Γ), one matrix of coefficients relating endogenous latent variables to other endogenous latent variables (B), one vector of latent exogenous variables (ξ), one vector of latent endogenous

³⁶ It is also known as the “hybrid model” (Kline, 2005), but Raykov and Marcoulides (2006) suggest that this model be referred as structural regression model because it postulates specific explanatory relationships among constructs.

variables (η), and one vector of residual errors associated with the endogenous latent variables (ζ).³⁷ The structural regression model is defined as

$$\eta = B\eta + \Gamma\xi + \zeta$$

where η (eta) is an $m \times 1$ vector of latent endogenous variables, B (beta) is an $m \times n$ matrix of coefficients that relates the m endogenous factors to one another. Γ (gamma) is an $m \times n$ matrix of coefficients that relates the n exogenous factors to the m endogenous factors, and ξ (xi) is an $n \times 1$ vector of latent exogenous variables. ζ (zeta) is an $m \times 1$ vector of residuals representing errors in the equation relating η and ξ (Byrne, 1998). In the special case where $B = 0$, one obtains the multivariate multiple regression model

$$\eta = \Gamma\xi + \zeta$$

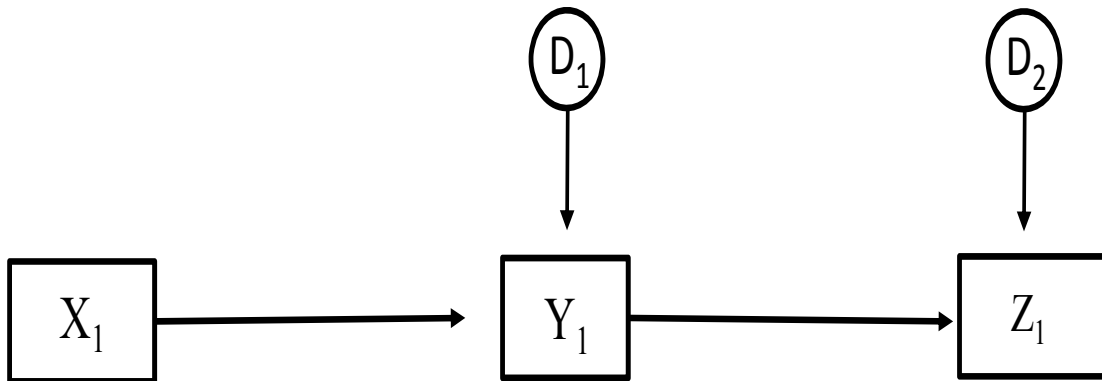
Figure 5 illustrates the basic features of the path model, the confirmatory model, and the structural regression model. The path model uses a single measure of each construct. The observed exogenous variable X_1 in the path model is assumed to be measured without error. However, this assumption usually is violated in practice (Kline, 2005). The confirmatory factor analysis model is desirable because it implies multi-indicator measurement, but it assumes that all associations among the factors are unanalyzed (Kline, 2005). Unlike the path model, all of the observed variables in the structural regression model have measurement error terms, and it also has a structural component (Raykov and Marcoulides, 2006). The structural regression

³⁷ These residual terms represent errors in the equation in the prediction of endogenous factors from exogenous factors; they are typically referred to as **disturbance** to distinguish them from errors of measurement associated with the observed variables.

model can be defined as a path model with latent variables instead of observed variables (Kline, 2005).

Figure 5. Examples of a Confirmatory Factor Analysis Model, a Path Model, and a Structural Regression Model

a) Path Model



b) Confirmatory Factor Analysis Model

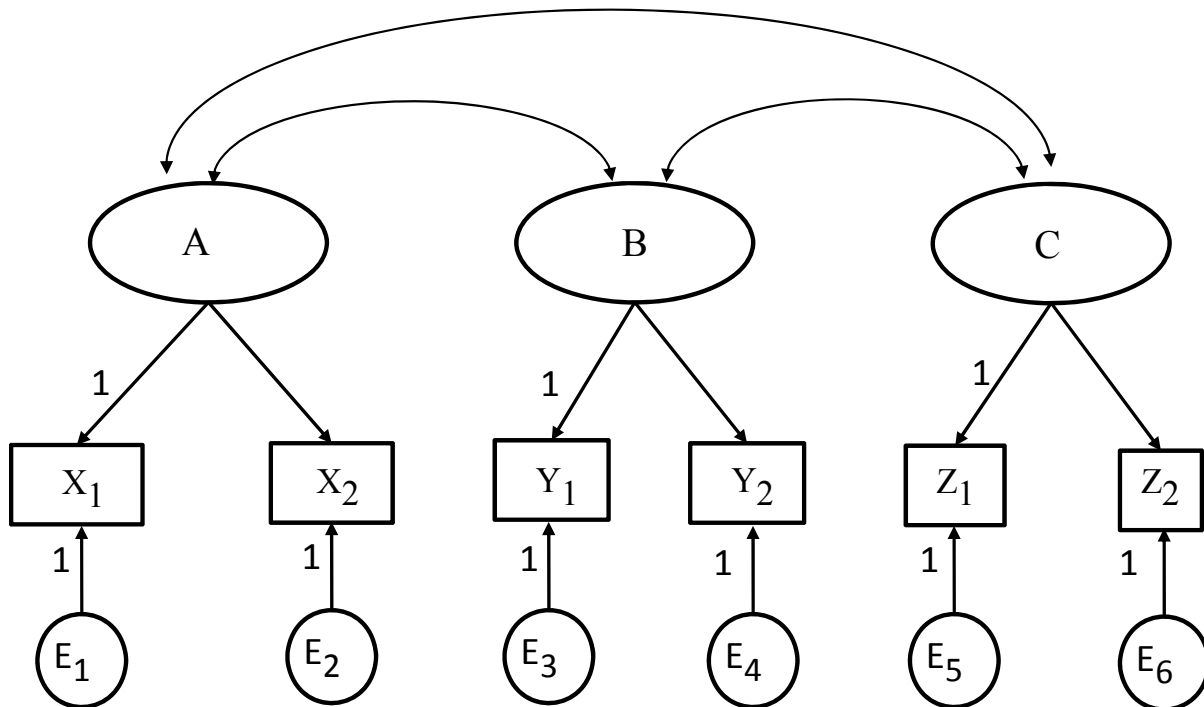
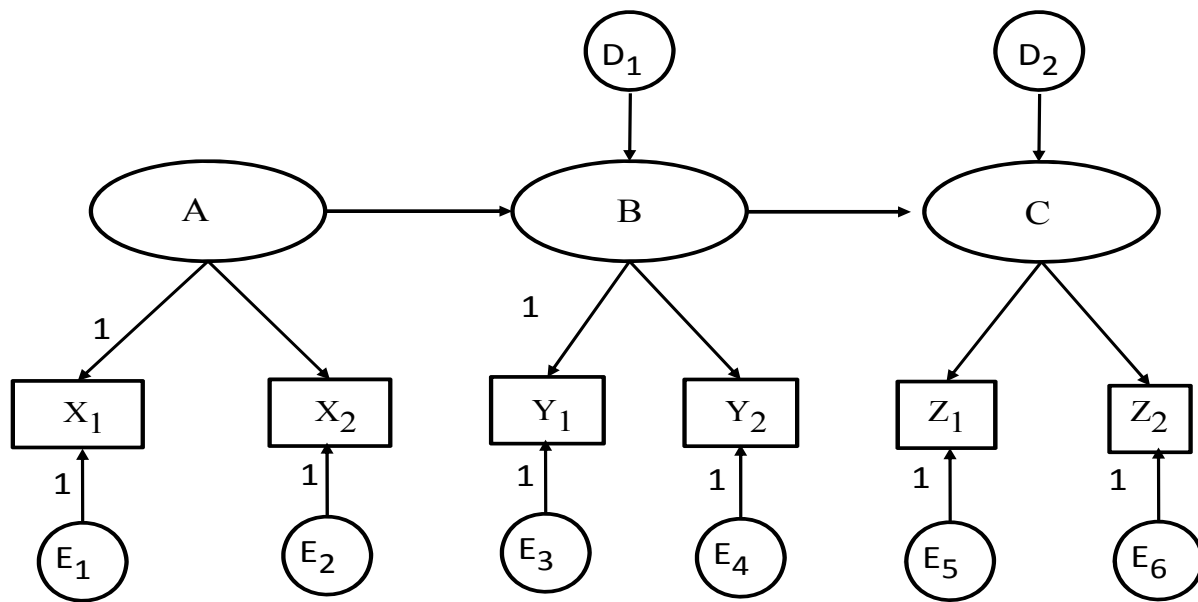


Figure 5. Examples of a Confirmatory Factor Analysis Model, a Path Model, and a Structural Regression Model (Cont'd)
c) Structural Regression Model



In the previous section, job satisfaction, organizational culture, and occupational culture were measured by the confirmatory factor analyses. The endogenous variable in this study, officers' attitudes toward community policing was also measured. The structural relationships among these latent variables were measured in the next chapter by employing the structural regression model.

Kline (2005) suggested that Anderson and Gerbing (1988)'s two-step modeling approach³⁸ could be useful for the structural regression model. In a one-step modeling approach,

³⁸ As described above, the two-step modeling approach is not suitable for the measurement model because this approach's four assumptions are not logical (see Fornell and Yi, 1992). However, Kline (2005) applied this model to the structural regression model. The main criticism is of the measurement model. Kline's (2005) main idea is to separate a confirmatory factor analysis from a structural regression model. In this study, the two-step modeling approach was not used in the measurement model. Instead, this approach was employed in the structural regression model.

the measurements and the structural components are analyzed simultaneously in a single analysis. When the overall fit of the structural regression model is poor, it is difficult to precisely localize the source of the poor model fit. In a two-step modeling approach, the CFA model is analyzed in order to determine whether it fits the data. If the fit of the CFA model is poor, the analysis will not go further because the fit of the structural regression model may be worse. Once the measurement model is acceptable, the researcher can analyze the relations among latent variables. The final stage is to compare the fits of the original structural regression model and those with different structural models. Figure 6 explains the structural regression model in the two-step modeling approach.

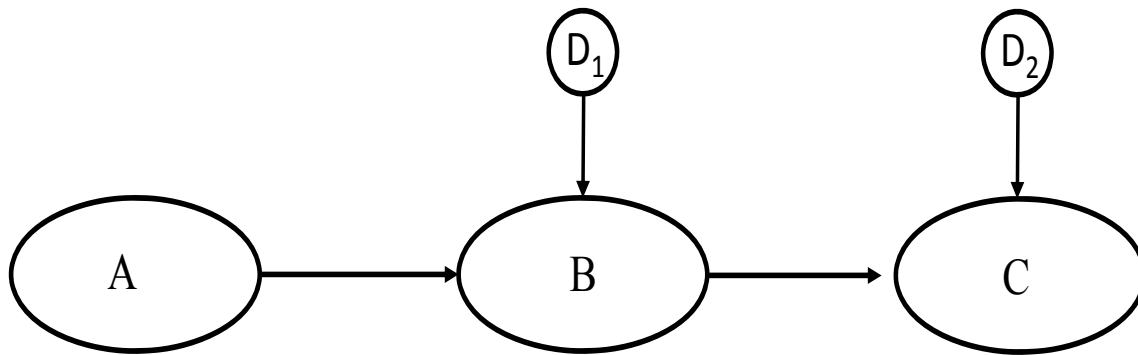


Figure 6. Structural Regression Model in two-step modeling approach

CHAPTER 5. ANALYSES AND FINDINGS

This chapter presents major findings on officers' attitudes toward community policing. First, the descriptive statistics of exogenous and endogenous variables are presented. These particular statistics allow researchers to provide general characteristics of the sample and the distributions of the both exogenous and endogenous variables. Second, the results of bivariate analyses (i.e., correlation analysis) are presented to examine the bivariate relationships among all variables included in the current study. Finally, the results of the confirmatory factor analysis (CFA) are presented, followed by the results of the structural regression model.

1. Preliminary Statistics

(1) Missing Responses and Data

Missing data are a recurring problem that can cause bias or lead to inefficient analyses (Horton and Kleinman, 2007). The causes of such incomplete data are numerous. For example, respondents may not have answered, or may have omitted, an item by mistake or intentionally (Hippel, 2007). Rubin (1976) classified missing data as missing at random (MAR), missing completely at random (MCAR), or neither by a distinction of the type of missing data. Both MAR and MCAR require that the variable with missing data be unrelated to whether or not a particular person has missing data on that variable. For example, if those with less education are more likely to have missing data on the education variable, the data cannot be MAR or MCAR. The difference between MAR and MCAR is whether the missing variables in the data set are associated with a particular reason (Rubin, 1976). MCAR occurs when respondents skip the specific question by mistake. If depressed people are less inclined to report their income due to

their low income, it is MAR. The questions in this study did not include any sensitive questions. The missing data in this study can be classified as MCAR.

The non-response rates varied on questions. For example, all 421 officers answered several questions such as “I am satisfied with my overall level of pay” and “I am satisfied with the benefits I receive.” However, more than 20 officers did not answer those questions such as “My job may affect a lot of other people according to my work performance” and “Coworkers often let me know how well they think I am performing.” The average number of missing responses was 21.22, or about 5 percent of the whole sample.

There are several different alternatives for handling missing data. First of all, a variable with missing data can be dropped. This is no great loss if the variables had little effect on dependent variable(s) anyway (Schafer and Graham, 2002). Second, dropping subjects (i.e. listwise deletion of missing data) would be an alternative for dropping cases. Particularly if the missing data is limited to a small number of subjects, those cases from the analysis could be eliminated. The remaining cases, however, may not be representative of the population. In addition, listwise deletion could result in a substantial reduction in sample size (Schafer and Graham, 2002). Lastly, imputation is the substitution of some value for missing data. Multiple imputation is considered a useful strategy for dealing with data sets with missing values instead of filling in a single value for each missing value (Schafer, 1999). Multiple imputation has a three-step process. First, impute missing values using an appropriate model and do this step several times (usually five times). Based on imputation, five complete data sets were produced in this study. Finally, perform the desired analysis on each data set using standard complete-data methods (Rubin, 1976).

Until recently, listwise deletion was the most common way of dealing with missing data in SEM because complete data were required on all variables in the analysis—any cases with missing data on one or more of the variables were eliminated from the analysis (Enders, 2001). However, researchers have begun to use data estimation techniques when there are missing data among the variables in a structural model. Multiple imputation (MI) and full information maximum likelihood (FIML) are the two most common approaches to missing data analysis. Graham, Olchowski, and Gilreath (2007) compared the two methods and recommended MI for SEM because MI produces better estimators for missing data with several imputations than FIML. In this study, MI was employed to handle missing data except demographic and individual level factors.

(2) Descriptive Statistics of Sample

As discussed above, one of the goals of the current study was to examine how officers' individual characteristics, including rank, years of service, and job assignment, influence their job satisfaction and their attitude toward community policing. In addition, this study examined the relations between job characteristics and job satisfaction. Descriptive statistics demonstrated general sample characteristics, and ratios of gender, age, rank, and other characteristics in the sample were compared with those of the entire police force.

The subjects of this study were 392 male and 29 female police officers from 16 police departments in Korea. Table 4 includes the general characteristics of the sample. The majority of the respondents had a Bachelor's degree or more (47.3 percent). Education was originally measured as a categorical variable with four different education levels (high school, associate degree, Bachelor of Arts, and Master of Arts/Science or more), but only four officers, or 1

percent of the sample, reported that they had a Master's degree or more. These were combined with those who reported having a Bachelor of Arts. Approximately 37 percent of the officers were 30 to 39 years old, and almost 29 percent of the officers were between 40 and 49 years old. More than one-quarter of the officers were less than 30 years old, while only about 8 percent of the officers were 50 years or older. In terms of years of experience, the typical officers in the sample had less than 5 years of experience (34.3 percent) or more than 20 years of experience (25.4 percent). Officers with 5-9 years of experience and 10-14 years of experience in service accounted for about 14 percent and 16 percent, respectively. The number of months of experience in their current departments was originally measured with seven scales (See appendix 1), but these were collapsed into four because scale 19-24 months and scale 25-30 months had a small number of respondents (n = 27 and 17, respectively). Almost 38 percent of respondents had worked more than 18 months in their current position, while about 24 percent of the officers had been transferred to their current position within the previous 6 months. According to the "Rule of Personnel Management, Assignment, and Transfer of Police Officer" (2010), officers who get promoted should be transferred to different police departments. In addition, the commissioner general, chiefs of regional police agencies (state police), or chiefs of police departments can transfer officers when necessary. Also, officers can request transfer, but they should provide the reasons for wanting to transfer. With regard to rank, police officer (the lowest rank) or senior patrol officer accounted for 48 percent of the respondents. Two thirds (66.4 percent) of the officers were line officers (police officer, senior patrol officer, or sergeant), compared to 34 percent who were managers or supervisors (lieutenant, captain or higher³⁹).

³⁹ The questionnaire included 'superintendent' in the rank variable, but only 2 officers reported

Finally, 39 percent of the officers reported that they worked at the patrol or traffic division.

Others worked in the investigation division, the police administration division, public security, or intelligence.

Table 10. Demographic Characteristics of South Korean Police Officers (N=421)

Survey items	N	% ^a (Sample)	% ^b (Population)	t-value
Gender				.07
1 = Male	392	93.1	93.2	
2 = Female	29	6.9	6.8	
Education				1.95
1 = High school	91	21.7	35.1	
2 = Associate Degree	130	31.0	16.6	
3 = Bachelor of Arts or more	199	47.3	48.3	
Age				-12.86 ^{**}
1 = less than 30	113	26.8	7.2	
2 = 30 – 39	156	37.1	31.0	
3 = 40 – 49	120	28.5	40.9	
4 = more than 50	32	7.6	20.9	
Years of Experience				-6.96 ^{**}
1 = less than 5 years	137	34.3	18.5	
2 = 5 – 9	57	14.2	8.6	
3 = 10 – 14	65	16.3	20.1	
4 = 15 – 19	39	9.8	19.4	
5 = more than 20	102	25.4	40.3	
Months of Experience in the Current Position				
1 = less than 6 months	101	24.4	N/A	
2 = 7 – 12	79	19.1	N/A	
3 = 13 – 18	78	18.8	N/A	
4 = more than 18	156	37.7	N/A	

that their rank was superintendent or higher. This item was combined with ‘captain’.

Table 10. Demographic Characteristics of South Korean Police Officers (N=421) (Cont'd)

Survey items	N	% ^a (Sample)	% ^b (Population)	t-value
Rank				6.44 ^{**}
1 = Police officer ^c or Senior patrol officer	200	47.6	62.7	
2 = Sergeant	49	18.8	20.2	
3 = Lieutenant	106	25.2	11.4	
4 = Captain or higher	35	8.4	5.7	
Job Assignment				1.23
1 = Patrol or traffic	161	38.5	42.0	
2 = Non patrol ^d	258	61.5	58.0	

^a Missing cases are excluded (i.e., valid percent).

^b Korean Police Annual Report (KNPA, 2011) ^c Lowest rank

^d It includes Criminal Investigation, General affairs or police administration(2.4%), Public security or intelligence (41.5%)

Table 10 also provides the percentage of the whole population in the variables except the number of months in the current position. The percentage of gender in the sample was equal to that in the total population. Although the ratio of respondents with a high school diploma or associate degree was different from that of the entire police force, the percentage of officers with a Bachelor's degree was similar to that of the entire police force (47.3 percent and 48.3 percent, respectively). In terms of age, the distribution of the sample was different from the total population. Officers who were less than 40 years old were oversampled in this study. They accounted for 63.9 percent in the sample, compared to 38.2 percent in the entire police force. Years of experience also indicated that there were different ratios between the sample and the total population. For example, approximately 25 percent of respondents in the sample had worked more than 20 years, but in the entire Korean police force, forty percent of the officers

have worked more than 20 years. With regard to rank, the sample showed that 33.6 percent of the officers were lieutenant, captain, or higher, while only 17.1 percent of officers in the police were those ranks. Job assignment indicated that the ratio of the sample was similar to that of the total population. Specifically, the percentage of officers in criminal investigation was almost the same between the sample and the entire police force (17.7 percent and 18 percent, respectively).

A One-Sample T-Test was conducted to compare the mean score of a sample to a population value. The results indicated that age, years of experience, and rank in the sample were different from those of the entire police population. It means that the results of this study should be interpreted cautiously when we generalize the findings of this study. This issue is discussed at the end of the study in more detail.

Police officers' job satisfaction is presented in Table 11. Responses from the five-point Likert scale are collapsed into three categories of Strongly Agree/Agree, Not Sure, and Strongly Disagree/Disagree in order to compare responses to individual questions in each dimension of organizational characteristics.⁴⁰ The reason for collapsing these into three categories instead of using the original five categories is to compare officers' positive and negative responses more clearly. However, some variables are explained with five categories when necessary.

An overview of the percentage of the respondents on various items representing satisfaction with pay and benefits suggested that about half of them disagreed with the statement. Only a third of the respondents reported that they were satisfied with pay and benefits. The composite mean score for items in satisfaction with pay and benefit ranged from 2.65 to 2.78.

⁴⁰ Although the variables were collapsed into three categories to compare officers' perceptions clearly, the original variables, which had five points, were used in the CFA and structural regression models.

Police officers perceived that their salaries were lower than other public servants' even though they work at night and on holidays (Yoon, 2010). A police officer claimed that officers' constitutional rights were violated and they were discriminated against due to their low salaries, but the Constitutional Court of Korea determined that there is no discrimination against police officers (Lee, 2009). Despite the Constitutional Court's decision, the Korea National Police Agency has tried to increase salaries (KNPA, 2010).

Table 11. Description of Measures and Descriptive Statistics on Job Satisfaction (N=421)

Survey items ^a	SD/D ^b	Not Sure	SA/A ^c	Mean/SD
Satisfaction with Pay and Benefit				
I am satisfied with my overall level of pay.	57.2	9.5	33.3	2.65/1.11
I am satisfied with the benefits I receive.	51.8	16.2	32.0	2.72/1.06
I am satisfied with my opportunities for salary increases.	49.0	18.5	32.5	2.78/1.11
Satisfaction with Promotion				
Officers who do well on the job stand a fair opportunity of being promoted	33.9	20.5	45.6	3.10/1.10
I am satisfied with my chances for promotion.	36.1	23.7	40.2	3.02/1.04
Officers' performance is evaluated fairly.	41.0	28.9	30.1	2.83/1.02
I am satisfied with officers' performance appraisal.	31.5	30.3	38.2	3.04/1.00
Satisfaction with Their Work				
Overall, I am satisfied with my job.	19.9	16.3	63.8	3.48/.95
I am satisfied with the workload.	26.2	15.0	54.8	3.32/1.01
I am satisfied with the work environment.	40.7	16.4	42.9	3.00/1.07
I am satisfied with my position.	24.3	18.4	57.3	3.33/.99

^a 1=Strongly Disagree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly Agree

^b Combine 1=Strongly Disagree and 2= Disagree (percentage)

^c Combine 4=Agree and 5=Strongly Agree (percentage)

Responses to questions relating to satisfaction with promotion suggested that for the most part officers' perceptions were either negative or at best ambivalent. For example, 30.1 percent of all respondents felt that officers' performance was evaluated fairly, while 41.0 percent disagreed (8 percent of them strongly disagreed) and 28.9 percent were unsure. The composite mean scores for items in satisfaction with promotion ranged from 2.83 to 3.10. Interestingly, although officers were not satisfied with promotion, pay, and benefits, they were satisfied with their jobs. More than 60 percent of the respondents reported that they were satisfied with their job, while almost 20 percent disagreed.⁴¹ Overall, the descriptive statistics on job satisfaction showed that officers were satisfied with their work itself, but they were not satisfied with the system of promotion or pay and benefits.

Police officers' perceptions on various questions relating to organizational culture, which includes top management support and communication with top managers, are presented in Table 12. Responses to questions relating to top management support showed that a majority of the respondents' perceptions were either negative or at best ambivalent. Only one-quarter of the respondents agreed that the top managers support officers well, while almost half of them disagreed with the statement. The questions relating to communication with top managers also suggested that officers have a negative or ambiguous perception of communication with top managers. More specifically, a majority of the officers did not agree that top managers did a good job of communicating with officers (44.9 percent)⁴², nor that they recognized officers for

⁴¹ It should be noted that only 7 percent of respondents strongly agreed with the statement, "Overall, I am satisfied with my job."

⁴² Eleven percent of them strongly disagreed, while three percent strongly agreed.

outstanding performance (35.9 percent), as compared to those who were unsure (27.9 percent and 25.3 percent, respectively). In addition, almost half of the respondents perceived that top managers did not follow up on suggestions for improvement.

Table 12. Description of Measures and Descriptive Statistics on Organizational Culture (N=421)

Survey items ^a	SD/D ^b	Not Sure	SA/A ^c	Mean/SD
Regarding Top Management Support				
Top managers set clear goals for quality improvement.	40.2	29.2	30.6	2.85/1.00
Top managers try to plan ahead for changes that might affect our performance.	42.7	29.0	28.3	2.81/1.00
Top managers support officers well for the quality improvement	48.3	26.3	25.4	2.68/1.02
Regarding Communication with Top Managers				
Top managers do a good job of communicating with officers.	44.9	27.9	27.2	2.74/1.05
Top managers give praise and recognition for outstanding performance.	35.9	25.3	38.8	2.97/1.08
Top managers in this organization follow up on suggestions for improvement.	44.8	31.2	24.0	2.71/.98

^a 1=Strongly Disagree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly Agree

^b Combine 1=Strongly Disagree and 2= Disagree (percentage)

^c Combine 4=Agree and 5=Strongly Agree (percentage)

Table 13 presented descriptive statistics on occupational culture that included nature of work, supervision, social network at work, and public support. Regarding nature of work, the respondents had ambivalent or positive perceptions of the nature of police work. More than half of the respondents felt that their job was dangerous and relatively significant. In addition, 64.5 percent of the respondents perceived that their job affected a lot of other people. In terms of the complexity and independence of the work, 38.8 percent of the respondents reported that their job

required complex and high level skills, while 38.7 percent of the respondents disagreed with the statement.

Table 13. Description of Measures and Descriptive Statistics on Occupational Culture (N=421)

Survey items ^a	SD/D ^b	Not Sure	SA/A ^c	Mean/SD
Regarding Nature of Work				
The job requires me to use a number of complex or high-level skills.	38.7	22.5	38.8	3.00/1.08
The job gives me considerable opportunity for independence and freedom in my work.	36.6	25.1	38.3	2.97/1.01
My job is dangerous and risky.	29.9	18.2	51.9	3.25/1.05
My job is relatively significant in the organization.	11.7	23.3	65.0	3.62/.84
My job may affect a lot of other people according to my work performance.	12.0	23.5	64.5	3.60/.84
Regarding Supervision				
My supervisor gives credit to people when they do a good job.	17.9	19.9	62.2	3.48/.95
My supervisor rewards being cooperative and a good team player.	18.5	21.5	60.0	3.46/.96
My supervisor shows complete trust in officers' ability to perform their tasks well.	17.1	21.9	61.0	3.48/.96
Supervisors often let me know how well they think I am performing well.	18.2	21.5	60.3	3.47/.99
Regarding Social Network at Work				
Officers in my department enjoy working with their coworkers.	7.6	11.7	80.7	3.87/.82
Coworkers in my department are like a family.	12.4	20.5	67.1	3.65/.94
There are no serious conflicts between coworkers.	8.9	10.6	80.5	3.81/.80
Coworkers often let me know how well they think I am performing well.	12.0	23.5	64.5	3.60/.88

Table 13. Description of Measures and Descriptive Statistics on Occupational Culture (N=421)
(Cont'd)

Survey items ^a	SD/D ^b	Not Sure	SA/A ^c	Mean/SD
Regarding Public Support				
Citizens generally cooperate with police officers.	52.5	19.9	27.6	2.69/1.00
Citizens trust police officers.	50.6	27.8	21.6	2.65/.94
Citizens would often provide information about a crime if they knew something.	48.6	30.5	20.9	2.65/.92
Citizens are willing to work with police officers to try to solve neighborhood problems.	46.4	30.6	23.0	2.71/.93

^a 1=Strongly Disagree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly Agree

^b Combine 1=Strongly Disagree and 2= Disagree (percentage)

^c Combine 4=Agree and 5=Strongly Agree (percentage)

With regard to supervision, over half of the respondents (62.2 percent)⁴³ felt that their supervisor gave credit to people when they did a good job. In addition, a majority of the respondents reported that the supervisor rewarded anyone for being a good team player (60 percent) or showed complete trust in officers' ability to perform their tasks well (61 percent). Slightly more than sixty percent of the respondents received feedback from their supervisors.

Interestingly, police officers in Korea have established a good social network at work, despite being transferred to different police departments or positions frequently. Forty-four percent of the sample changed their position within a year. However, they enjoyed working with their coworkers (80.7 percent)⁴⁴ and felt that coworkers were like a family (67.1 percent). Only nine percent of the respondents reported that there were serious conflicts with coworkers.

⁴³ Only 7 percent of them strongly agreed with this question.

⁴⁴ Only 11 percent of them strongly agreed with this question.

Nearly half of the officers perceived that citizens did not trust police officers. A majority of the officers perceived that citizens did not cooperate with police officers (52.5 percent) or did not trust police officers (50.6 percent). This finding was consistent with Moon's (2004) conclusion that citizens had a negative image of police because the police had served authoritarian regimes in the 1970s and 1980s.

Table 14 shows that officers in the sample had a positive attitude toward community policing. Approximately 80 percent of the officers agreed that officers need to work with the community, and about 64 percent of them reported that officers need to try to solve non-crime problems. The results indicate that more than 70 percent of the respondents supported community policing, while less than 10 percent of them did not support community policing programs. In addition, they perceived that community policing improves the relationship between police and citizens (78.5 percent), and that community policing is a useful tool to prevent crimes (76.9 percent).⁴⁵

Table 14. Description of Measures and Descriptive Statistics on Community Policing (N=421)

Survey items ^a	SD/D ^b	Not Sure	SA/A ^c	Mean/SD
Regarding Officers' Attitudes toward Community Policing				
Officers need to work with neighborhood residents, civic groups, other government agencies, and the local business.	7.9	12.7	79.4	3.87/.87
Officers need to try to solve non-crime problems	21.2	16.2	63.6	3.49/1.04

⁴⁵ However, only 11 to 18 percent of respondents strongly agreed with the questions about community policing, even though at least 63.6 percent reported that they agree with community policing.

Table 14. Description of Measures and Descriptive Statistics on Community Policing (N=421)
(Cont'd)

Survey items ^a	SD/D ^b	Not Sure	SA/A ^c	Mean/SD
I think we should increase the emphasis placed on community policing.	9.7	16.5	73.8	3.77/.87
I support community policing programs.	9.9	17.0	73.1	3.74/.84
Community policing improve the relationship between police and citizens in my district.	7.8	13.7	78.5	3.82/.81
Community policing is useful for the crime prevention in my district.	8.1	15.0	76.9	3.82/.83

^a 1=Strongly Disagree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly Agree

^b Combine 1=Strongly Disagree and 2= Disagree (percentage)

^c Combine 4=Agree and 5=Strongly Agree (percentage)

Lastly, the distribution of each variable was also examined in order to check multivariate normality among the variables. That is, estimation procedures that are widely used in SEM and bivariate analysis assume normal distributions for continuous variables (Kline, 2005; Raykov and Marcoulides, 2006). Skewness and kurtosis are two ways to examine the distributions of the individual variables (Walker and Maddan, 2008). Univariate skewness and kurtosis coefficients are 0 when they are normally distributed. If a distribution is such that one side is different from the other, it is skewed. In skewed distributions, there is no point that can be drawn in the polygon where it could be divided into two similar parts. The kurtosis is the extent to which cases are piled up around the measure of central tendency or in the tails of distributions (Walker and Maddan, 2008). Although there are few guidelines about how much non-normality is problematic, Kline (2005) suggests that data sets with absolute values of a univariate skew index greater than 3.0 could be described as extremely skewed and absolute values of the

univariate kurtosis index over 10.0 might be extreme kurtosis. The absolute values of a kurtosis value greater than 20.0 may indicate a more serious problem (Kline, 2005). Thus, the current study calculated skewness and kurtosis of each variable using PASW (Predictive Analytics SoftWare) Statistics 18.0, which is the new version of SPSS (Statistical Package for the Social Sciences). The results confirmed that absolute values of skewness and kurtosis fell within the acceptable range of 2.0 for skewness and 10.0 for kurtosis ($|\text{skewness}| < 1.41$, $|\text{kurtosis}| < 2.62$). The survey item that had greater than an acceptable range of skewness and kurtosis was “There are no serious conflicts between coworkers.” The reason that this question had the highest score of skewness and kurtosis is that 69 percent of respondents answered that they agree with this question. The other question with a high score of skewness and kurtosis ($|\text{skewness}| < 1.31$, $|\text{kurtosis}| < 2.54$) was, “Officers in my department enjoy working with their coworkers.” Almost 65 percent of respondents selected the “agree” scale. They were negatively skewed because the tail of the graph pointed to the negative end of the scale. This means that the tail on the left side of the distribution was longer than the right side and the majority of the values lay to the right of the mean.

(3) Bivariate Analysis⁴⁶

Before conducting a multivariate analysis, a bivariate analysis was conducted to examine the bivariate relationships between primary independent and dependent variables. In particular,

⁴⁶ In general, studies employing the structural equation modeling did not conduct the bivariate analysis (e.g., Gibbs, Giever, and Higgins, 2003; Higgins, 2002; Piquero and Rosay, 1998). This does not mean that the bivariate analysis is not necessary. Rather, the bivariate analysis is essential in the SEM because the path analysis is based on the correlation (Kline, 2005). Akdogan (2009) conducted the bivariate analysis before the employment of the SEM because it was necessary to examine basic relations among variables.

the current study employed Spearman's Rho (ρ) because the variables are nominal or ordinal level data. Spearman's Rho (ρ) estimates the existence of a relationship through statistical significance (Walker and Maddan, 2008). In addition to Spearman's Rho, multicollinearity problems were checked. Multicollinearity occurs when two or more predictors in the model are correlated and provide redundant information about the response.

To conduct a bivariate analysis, the mean scores for each concept were calculated based on prior research. For example, based on prior research (Halsted et al., 2000; Nalla and Kang, 2011), satisfaction with pay and benefits was measured by three questions in the survey. Interrelationships among these three items and their latent constructs were examined using a confirmatory factor analysis (CFA), and the results from CFA were described in the next section.

Table 15 displays the results of Spearman's Rho (ρ). In this study, since gender and job assignment were dichotomized variables, male and patrol served as a reference group in the analysis. As demonstrated in the table, all three main hypotheses were supported fully or partially by the bivariate analysis. First, the results from the bivariate analysis confirmed that job characteristics (top management support, communication with top managers, nature of work, supervision, social network at work, and public support) were positively associated with officers' attitudes toward community policing (H1a, H1b, H1c, H1d, H1e, and H1f). As explained in Chapter 2, the job characteristics of police are classified into two categories, organizational culture and occupational culture (Denison, 1996). Organizational culture consists of top management support and communication with top managers (Schall, 1983; Setton et al., 1996). The Spearman's Rho(ρ) indicated that officers' perceptions of top management support were positively associated with their attitudes toward community policing (Spearman's $\rho = .32, p < .01$).

That is, officers who perceived that top managers encourage and support officers well might have a more positive attitude toward community policing. In addition, officers' perceptions of communication with top managers were significantly correlated with their attitudes toward community policing (Spearman's $\rho = .31, p < .01$). Officers who reported that they communicate well with top managers had a more positive attitude toward community policing.

Based on prior research (Chan, 1997; Denison, 1996; Hackman and Oldham, 1980), the current study included several aspects of the occupational culture of South Korean police agencies such as the nature of the work, supervision, social network at work, and public support. The results from the bivariate analysis indicated that officers' perceptions of the nature of police work is positively associated with their attitudes toward community policing (Spearman's $\rho = .31, p < .01$). Officers who perceived that their work was complex, dangerous, and significant might have a more positive attitude toward community policing than those who do not. Officers' perceptions of supervision were also positively associated with their attitudes toward community policing (Spearman's $\rho = .40, p < .01$). The association between officers' perceptions of supervision and their attitudes toward community policing was consistent with the expected direction. Officers' positive views on supervisors are related to their attitudes toward community policing (Wilkinson and Rosenbaum, 1994). Officers' social network at work was positively associated with their attitudes toward community policing (Spearman's $\rho = .38, p < .01$). Officers who have good relations with their coworkers might have a more positive attitude toward community policing. This particular finding was consistent with prior research on the topic. For example, Ford and his colleagues (2003) argued that the positive relationships among officers enable them to overcome obstacles for the implementation of community policing and

lead to officers' positive attitudes toward community policing. Regarding public support, officers' perceptions of public support were correlated with their attitudes toward community policing (Spearman's $\rho = .32$, $p < .01$). Officers who perceived that they were supported by the public might have a more positive attitude toward community policing. These findings are consistent with previous studies (Boke and Nalla, 2009; Greene, 1989; Lord and Friday, 2008).

For officers' job satisfaction, officers' satisfaction with pay and benefits was positively associated with their attitudes toward community policing (Spearman's $\rho = .25$, $p < .01$). In addition, officers' satisfaction with promotion was positively correlated with their attitudes toward community policing (Spearman's $\rho = .27$, $p < .01$). Officers' satisfaction with work conditions was also found to be significantly and positively associated with their attitudes toward community policing (Spearman's $\rho = .30$, $p < .01$). The hypotheses H2a, H2b, H2c were supported by the bivariate analysis.

Based on the results, it can be argued that officers who are satisfied with their job (including salary, benefit, and promotion) express a higher level of positive attitude toward community policing or vice versa. Although the Spearman's Rho (ρ) supported the hypotheses, caution must be exercised when drawing conclusions about cause and effect relationships because Spearman's Rho (ρ) does not equal causation (Walker and Maddan, 2008). It is incorrect to conclude that one must be the cause of another simply because two variables are correlated. In this sense, we cannot conclude that officers' job satisfaction influences their attitudes toward community policing. Some studies (e.g., Halsed et al., 2000; Lilley and Hinduja, 2007) have suggested that officers' job satisfaction influences their attitudes toward community policing, while other studies (e.g., Greene, 1989; Hoath et al., 1998) have argued that the

implementation of community policing increased officers' job satisfaction. The causal relationship between officers' job satisfaction and their attitudes toward community policing is discussed in the next chapter.

In terms of demographics and individual level factors, years of experience was associated with officers' attitudes toward community policing (Spearman's $\rho = .12$, $p < .05$). More experienced officers have a more positive attitude toward community policing. There was a significant relationship between the job assignment and officers' attitudes toward community policing. The literature suggested that patrol officers had a more positive attitude toward community policing than those in investigation or other assignments (Lord and Friday, 2008; Schafer, 2001). However, the relationship in this study was the opposite of the expectation. Officers in investigation or police administration had a more positive attitude toward community policing than patrol officers (Spearman's $\rho = .14$, $p < .01$). Age, gender, education, and number of months in the current position did not have statistically significant relationships with officers' attitudes toward community policing. H3d was supported, while H3g was reversely supported. Other hypotheses (H3a, H3b, H3c, H3e, H3f, and H3g) were not supported in this analysis.

In addition to the primary variables of this study (officers' attitudes toward community policing), the bivariate analysis also showed relationships among some other variables that are included in the analysis. More specifically, as shown in Table 9, officers' satisfaction with pay and benefits had a statistically significant relationship with top management support (Spearman's $\rho = .43$, $p < .01$), communication with top managers (Spearman's $\rho = .34$, $p < .01$), nature of work (Spearman's $\rho = .13$, $p < .05$), supervision (Spearman's $\rho = .31$, $p < .01$), social network at work (Spearman's $\rho = .18$, $p < .01$), and public support (Spearman's $\rho = .32$, $p < .01$).

Regarding satisfaction with promotion, officers' satisfaction with promotion had a statistically significant relationship with top management support (Spearman's $\rho = .53$, $p < .01$), communication with top managers (Spearman's $\rho = .49$, $p < .01$), nature of work (Spearman's $\rho = .24$, $p < .01$), supervision (Spearman's $\rho = .41$, $p < .01$), social network at work (Spearman's $\rho = .29$, $p < .01$), and public support (Spearman's $\rho = .34$, $p < .01$). Officers' satisfaction with promotion was more strongly associated with job characteristics variables than satisfaction with pay and benefits because promotion is more closely related to job characteristics than pay and benefits (Brunetto and Farr-Wharton, 2003).

Officers' satisfaction with work showed results similar to that of officers' satisfaction with promotion.⁴⁷ Officers' satisfaction with promotion was positively associated with top management support (Spearman's $\rho = .51$, $p < .01$), communication with top managers (Spearman's $\rho = .46$, $p < .01$), nature of work (Spearman's $\rho = .29$, $p < .01$), supervision (Spearman's $\rho = .35$, $p < .01$), social network at work (Spearman's $\rho = .32$, $p < .01$), and public support (Spearman's $\rho = .26$, $p < .01$).

Regarding demographics and individual level factors, it is interesting to observe the relationships between gender and satisfaction with pay and benefits. Female officers were more satisfied with their pay and benefits (Spearman's $\rho = .14$, $p < .05$). Kim (2005b) argued that women in Korea have lower expectations than men because they compare themselves to other women, whereas men compare themselves to other men. According to the Korean Statistical

⁴⁷ The two variables are positively associated with each other ($r = .53$, $p < .01$), but they do not have multicollinearity problems. The multicollinearity problems were checked in the later part of this section with using tolerance and VIF (Variance Inflation Factor).

Information Service,⁴⁸ 70 percent of Korean men were employed in 2010, compared to 47 percent of women. When female officers compare their pay and benefits with other women, they may feel that they receive more salary than other women. Another interesting association is the relationship between job assignment and satisfaction with pay and benefits (Spearman's $\rho = .13$, $p < .05$). With regard to job assignment, non-patrol officers had higher levels of satisfaction with pay and benefits than patrol officers. This result might come from the recent salary increase for non-patrol officers. Age, education, years of experience, months in the current position, and rank were not significantly associated with officers' satisfaction with pay and benefits.

In terms of satisfaction with promotion, age was negatively associated with officers' satisfaction with promotion (Spearman's $\rho = -.12$, $p < .05$). Younger officers have higher levels of satisfaction with promotion than older officers. Robinette (1982) indicated that older officers have experienced frustration from their failure to be promoted, which leads to low levels of satisfaction with promotion. The promotion process is very competitive in the Korean police force and occurs once a year. There are two tracks for promotion, a written test and the promotion committee. Officers can choose either the written test or the promotion committee. The written test, consisting of multiple-choice items in several subjects such as criminal law and police activities, is of the job knowledge type. Officers with high scores are promoted. The promotion committee consists of high-ranking officers who evaluate officers' performances against specific criteria and select the officers to be promoted. Only one or two officers out of ten gets promoted. Many officers fail to get promoted and the accumulation of experience may

⁴⁸ Korean Statistical Information Service (2012). Economically Active Population Survey. Retrieved from www.kosis.kr.

influence their satisfaction with promotion. Wing (1981) indicated that officers complain that the promotion procedure or test is arbitrary, ambiguous, discriminatory, and invalid, even though the procedure and test are implemented fairly and supervised by outsiders, because only a few officers are selected for promotion.

Interestingly, female officers had higher levels of satisfaction with work (Spearman's $\rho = .13$, $p < .01$). The Korea National Police Agency has improved facilities and developed policies for female officers. Female officers can get maternity leave (three months paid in full, and nine months paid at a quarter of one's annual salary). The improved work conditions for female officers may lead to a higher level of satisfaction with work. Hypotheses H3o, H3p, and H3 u were partially supported, but other hypotheses H3q, H3r, H3s, H3t were not supported in this analysis.

Officers' perception of top management support was strongly correlated with communication with top managers (Spearman's $\rho = .74$, $p < .01$). Top management support had a statistically significant relationship with nature of work (Spearman's $\rho = .40$, $p < .01$), supervision (Spearman's $\rho = .44$, $p < .01$), social network at work (Spearman's $\rho = .37$, $p < .01$), public support (Spearman's $\rho = .45$, $p < .01$), and occupational philosophy (Spearman's $\rho = .18$, $p < .01$). In addition, it had a significant relationships with gender (Spearman's $\rho = .12$, $p < .05$) and job assignment (Spearman's $\rho = .12$, $p < .05$). Female officers and non-patrol officers had more positive perceptions of top management support. Female officers may feel that they are more supported by top managers than male officers because of improvements in their work conditions and facilities. These improvements are made by top managers. Regarding job assignment, non-patrol officers had more positive perceptions of top management support than patrol officers.

Recently, the Korea National Police Agency increased the salary of detectives and officers in police administration to balance with patrol officers.⁴⁹ Top managers' decision to raise non-patrol officers' salary might have led to this result.

Communication with top managers had a statistically significant relationship with nature of work (Spearman's $\rho = .32$, $p < .01$), supervision (Spearman's $\rho = .48$, $p < .01$), social network at work (Spearman's $\rho = .35$, $p < .01$), and public support (Spearman's $\rho = .43$, $p < .01$). It was also correlated with gender (Spearman's $\rho = .10$, $p < .01$) and job assignment (Spearman's $\rho = .11$, $p < .05$). This result indicated that female officers and non-patrol officers could have more opportunities to communicate with top managers. The Korean police have celebrated Female Officers' Day (July 1), and the representatives of female officers have regular meetings with top managers to discuss their status in the organization.

Officers' perception of the nature of the work had a statistically significant relationship with supervision (Spearman's $\rho = .39$, $p < .01$), social network at work (Spearman's $\rho = .28$, $p < .01$), and public support (Spearman's $\rho = .25$, $p < .01$). It also had a statistically significant relationship with age (Spearman's $\rho = .20$, $p < .01$), gender (Spearman's $\rho = .11$, $p < .05$), years of experience (Spearman's $\rho = .20$, $p < .01$), and rank (Spearman's $\rho = .18$, $p < .01$). Older, female, more experienced, and high-ranking officers have more positive perceptions of the nature of the work.

Officers' perception of supervision had a statistically significant relationship with social network at work (Spearman's $\rho = .52$, $p < .01$), public support (Spearman's $\rho = .29$, $p < .01$), and

⁴⁹ In general, patrol officers were better paid to encourage many officers to work in the patrol division.

occupational philosophy (Spearman's $\rho = .28, p < .01$). Also, it had a statistically significant relationship with job assignment (Spearman's $\rho = .15, p < .01$). Non-patrol officers have a more positive attitude toward their supervisors than patrol officers. In general, patrol officers are more controlled by their supervisors than other officers, although they work outside (Lee, 2006). For example, the Korean police usually conduct the designated patrol and supervisors check whether patrol officers conducted it appropriately. Social network at work had a statistically significant relationship with public support (Spearman's $\rho = .28, < .01$).

Bivariate relationships reported here, however, should be closely examined in the multivariate analyses to see their relative relationships and directions after controlling for the effects of other predictions and measuring latent variables.

Table15. Bivariate Analysis: Spearman's Rho (ρ) (N= 421)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1.CP	1																
2.SATPB	.25**	1															
3.SATPR	.27**	.54**	1														
4.SATW	.30**	.49**	.53**	1													
5.TMS	.32**	.43**	.53**	.51**	1												
6.CTM	.31**	.34*	.49**	.46**	.74**	1											
7.NW	.31**	.13**	.24**	.29**	.40**	.32**	1										
8.SUP	.40**	.31**	.41**	.35**	.44**	.48**	.39**	1									
9.SNW	.38**	.18**	.29**	.32**	.37**	.35**	.28**	.52*	1								
10.PS	.32**	.32	.34*	.26	.45	.43	.25**	.29	.28*	1							
11.Age	.06	-.09*	-.12*	-.03*	-.01*	.00	.20*	.00	.03	-.03	1						
12.Sex	-.02	.14	.07	.13	.12	.10	.11*	.05	.01	.07	-.13**	1					
13.Edu	-.06*	-.02	.03	-.01	.03	.06	-.10*	-.03	-.05	.00	-.26**	.21**	1				
14.Yrs	.12	-.05	-.08	.03	.06	.05	.20*	.06	.06	.00	.87**	-.15**	-.34**	1			
15.Mts	-.08	-.09	.01	.03	-.03	-.01	.09*	-.06	-.07	-.07	.20**	.08	-.04	.12*	1		
16.Rank	.09*	.04*	.01	.09	.10*	.03*	.18*	.07*	.01	-.03	.52**	.01	.04	.58**	.16**	1	
17.JA	.14	.13	.04	.02	.12	.11	.03	.15	.04	.02	-.07	.04	.02	.03	-.15	.11*	1

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

Note: CP = Community Policing, SATPB = Satisfaction with Pay and Benefit, SATPR = Satisfaction with Promotion, SATW = Satisfaction with Their Work, TMS = Top Management Support, CTM = Communication with Top Managers, NW = Nature of Work, SUP = Supervision, SNW = Social Network at Work, PS = Public Support, Mts = Number of Months in the current position, JA = Job Assignment.

(4) Multicollinearity Diagnosis

Multicollinearity is a statistical phenomenon in which two or more predictor variables in a regression analysis are highly correlated (Walker and Maddan, 2008). Bollen (1989) indicated that the simple bivariate correlation between explanatory variables is not sufficient for determining the extent of collinearity. When exogenous variables are correlated with each other, there is multicollinearity. A high degree of it can be a problem, because the variables that are strongly correlated can influence significance tests, standardized coefficients, and unstandardized coefficients (Walker and Maddan, 2008). Sometimes multicollinearity problems occur because what appear to be separate variables actually measure the same thing (Kline, 2005). Mansfield and Helms (1981) indicated that the variance inflation factor (VIF) and tolerance are very effective tools to detect multicollinearity problems. O'Brien (2007) suggested that a multicollinearity problem may exist if the tolerance is less than .02 and/or VIF is above 5. The formula for tolerance and VIF is as follows:

$$\text{Tolerance (i)} = 1 - R_i^2, \text{ VIF (i)} = 1/\text{tolerance}^{50}$$

All exogenous variables in this study were checked for multicollinearity problems. PASW (Predictive Analytics SoftWare) Statistics 18.0 was used for multicollinearity diagnosis. The results indicated that all variables except age and years of experience did not have multicollinearity problems. The value of tolerance and VIF for age and years of experience were .20, 5.0 and .17, 5.81, respectively. Many studies include years of experience when years of experience and age have multicollinearity problems because years of experience is more closely related to the organization than age (Buzawa et al., 1994; Nalla and Kang, 2011). When

⁵⁰ R_i^2 is the coefficient of determination of a regression of explanator i on all other explanators.

the age variable was excluded from the analysis, the value of tolerance and VIF for years of experience was .42 and 2.37, respectively.

Bivariate analysis reported here, however, should be closely examined in the confirmatory factor analyses and the structural regression model to see their relative relationships after measuring the latent construct of variables and controlling for the effects of other predictors.

(5) Analysis of Variance (ANOVA)

ANOVA is generally employed when three or more samples are compared (Walker and Maddan, 2008). Although ANOVA lacks a direct way to distinguish between observed measures and underlying constructs, it could be used to compare several group means (Kline, 2005). ANOVA was conducted in this study as a preliminary statistical analysis before a series of structural equation modeling was employed.

For the one-way ANOVA, the dependent variables were constructed based on prior research and theories. That is, the average scores of each item were calculated to represent satisfaction with pay and benefits, satisfaction with promotion, satisfaction with work, top management support, communication with top managers, supervision, social network at work, public support, and officers' attitudes toward community policing. For example, satisfaction with pay and benefits was combined with three items. However, the construct validity of each variable is assessed through CFA models in the next section.⁵¹ Eta-Squared (η^2) is used in order to measure the strength of the relationship between the independent and dependent variables. It is calculated as

⁵¹ The tables in the section titled "Outcome of Confirmatory Factor Analysis" provide more detailed information.

$$\eta^2 = SS_{\text{between}} / SS_{\text{total}}$$

where SS_{between} is the sum of squares between groups and SS_{total} is the sum of squares of within groups and squares of between groups.

Job Assignment

Mean differences in officers' job satisfaction, job characteristics, and attitudes toward community policing by job assignment are presented in Table 16. Findings suggested that non-patrol administration (mean = 2.82) had higher levels of job satisfaction with pay/benefits than patrol officers (mean = 2.55). There were no statistically mean differences between patrol officers and non-patrol officers in terms of satisfaction with promotion and satisfaction with work.

Table 16. A Comparison of Mean Differences (ANOVA) by Job Assignment (N=421)

Variable ^a	Job Assignment		F	Eta Squared
	Patrol or traffic	Non-patrol		
Satisfaction with Pay/Benefits	2.55/.98 ^b	2.82/.97	7.61 ^{**}	.03
Satisfaction with Promotion	2.95/.91	3.03/.88	.78	.00
Satisfaction with Work	3.26/.83	3.29/.87	.15	.00
Top Management Support	2.65/.89	2.87/.94	5.53 [*]	.01
Communication with Top Managers	2.68/.88	2.89/.95	4.88 [*]	.01
Supervision	3.30/.90	3.57/.83	9.04 ^{**}	.02
Social Network at Work	3.70/.69	3.76/.79	.59	.00
Public Support	2.65/.81	2.69/.79	.18	.00
Officers' Attitudes toward Community Policing	3.62/.80	3.82/.68	7.26 ^{**}	.03

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

^a 1=Strongly Disagree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly Agree ^b Mean/SD

Regarding job characteristics, non-patrol officers had less negative perceptions of top management support and communication with top managers. Compared to patrol officers (mean=3.30) who had few positive perceptions of supervision, non-patrol officers (mean=3.57) appeared positive. Interestingly, although all officers had positive attitudes toward community policing, non-patrol (mean = 3.82) showed more positive attitudes toward community policing than patrol officers (mean = 3.62). Prior research indicated that officers who conduct community policing have more positive attitudes toward community policing because they experienced improved relationships with community members (Lord and Friday, 2008; Schafer, 2001). However, the results of ANOVA in this study showed the opposite direction. Despite the Korean police force's efforts to improve relationships with the public through the Grand Reform, citizens do not trust police yet (Choi, 2011). This means that officers who conduct community policing are more likely to face unpleasant or hostile encounters with citizens. These experiences might lead to this result. In terms of Eta –Squared (η^2), only 2 or 3 % of variance in satisfaction with pay/benefits, supervision, and officers' attitudes toward community policing could be explained by job assignment.

Gender

Table 17 indicates that female officers had some positive satisfaction with pay/benefits while male officers felt more negatively about pay/benefits. There was no statistically significant difference in satisfaction with promotion. However, female officers (mean = 3.70) were satisfied with work than male officers (mean = 3.26). Regarding job characteristics, female officers had more positive or at least ambivalent perceptions. In particular, there were statistically significant differences in top management support and communication. Female

officers seem to perceive that they are supported by top managers and communicate with top managers well. Finally, female officers (mean = 3.69) had less positive attitudes toward community policing than male officers (mean = 3.74), but the difference was not statistically significant.

Regarding the strength of the relationship (Eta –Squared: η^2), only 1 or 2 % of variance in satisfaction with pay/benefits, satisfaction with work, top management support, and communication with top managers could be explained by job assignment.

Table 17. A Comparison of Mean Differences (ANOVA) by Gender (N=421)

Variable ^a	Job Assignment			Eta Squared
	Male	Female	F	
Satisfaction with Pay/Benefits	2.68/.98 ^b	3.23/.80	8.64 ^{**}	.02
Satisfaction with Promotion	2.98/.90	3.24/.79	2.11	.00
Satisfaction with Work	3.26/.85	3.70/.80	7.41 ^{**}	.02
Top Management Support	2.76/.92	3.18/.81	5.56 [*]	.01
Communication with Top Managers	2.78/.92	3.16/.97	4.26 [*]	.01
Supervision	3.46/.87	3.63/.82	1.01	.00
Social Network at Work	3.73/.74	3.75/.84	.02	.00
Public Support	2.65/.79	2.87/.84	1.82	.00
Officers' Attitudes toward Community Policing	3.74/.74	3.69/.57	.17	.00

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

^a 1=Strongly Disagree, 2=Disagree, 3=Not sure, 4=Agree, 5=Strongly Agree ^b Mean/SD

Other Demographics and Individual Level Factors

Mean differences by other demographics and individual level factors were conducted. Regarding years of experience, only community policing had a statistically significant mean difference. More experienced officers had more positive attitudes toward community policing than less experienced officers. In general, more experienced officers have more positive perceptions of citizens' cooperation and a greater chance of being assigned to a better precinct (Paoline et al., 2000). Other variables such as satisfaction with promotion and top management support were not statistically significant.

In officers' education, rank, and number of months in the current position, there were no statistically significant differences on any variables. Based on the results of the ANOVA, job assignment and gender are statistically significant variables that influence officers' satisfaction, job characteristics, and their attitudes toward community policing.

2. Structural Equation Modeling

Structural equation modeling (SEM) is a statistical methodology used by social, behavioral, and educational scientists as well as biologists and economists (Raykov and Marcoulides, 2006). SEM explicitly takes into account measurement error and typically contains latent variables. The core SEM techniques are path analysis, confirmatory factor analysis, and structural regression model. In this study, the confirmatory factor analysis and the structural regression model were employed because the two techniques allow for the measure and analysis of the latent variables (Kline, 2005).⁵²

⁵² Path analysis is the original SEM technique and concerns structural models with observed variable (Raykov and Marcoulides, 2006). Path analysis is useful for research that uses a single

(1) Outcome of Confirmatory Factor Analysis

Appendix 3 shows the definitions and measures of variables included in the model. As discussed above, satisfaction with pay and benefits was measured by three questions. “Overall Pay” is observed by the question, “I am satisfied with my overall level of pay.” In the next section, a measurement model was tested to evaluate the construct validity of each latent variable using confirmatory factor analysis (CFA).⁵³

Job Satisfaction

A job satisfaction model was tested to estimate three types of satisfaction. Figure 7 provides a graphical representation of this model (E in the variable means a measurement error⁵⁴). The indicators of “satisfaction with pay and benefit (SATPB)” are “overall pay,” “benefits,” and “salary increase” (See Appendix 3 for more detailed information about the variables). The indicators of “satisfaction with promotion (SATPR)” are “promotion opportunity,” “promotion chance,” “fair evaluation,” and “performance appraisal.” The last indicator in job satisfaction is “satisfaction with their work (SATW).” It is measured by “overall satisfaction,” “workload,” “work environment,” and “position.”

measure of each variable; however, this study measured the variables of more than three questions (Kline, 2005). Path analysis was not employed in this study.

⁵³ A confirmatory factor analysis applied to the polyserial correlation matrix was done with an unweighted least square solution. The Mplus structural equation modeling software was used to compute the polyserials and the factor analysis.

⁵⁴ For example, $A \rightarrow X \leftarrow E$, when X is an observed variable that is presumed to measure A, a latent variable; E is variance in X unexplained by A (Kline, 2005).

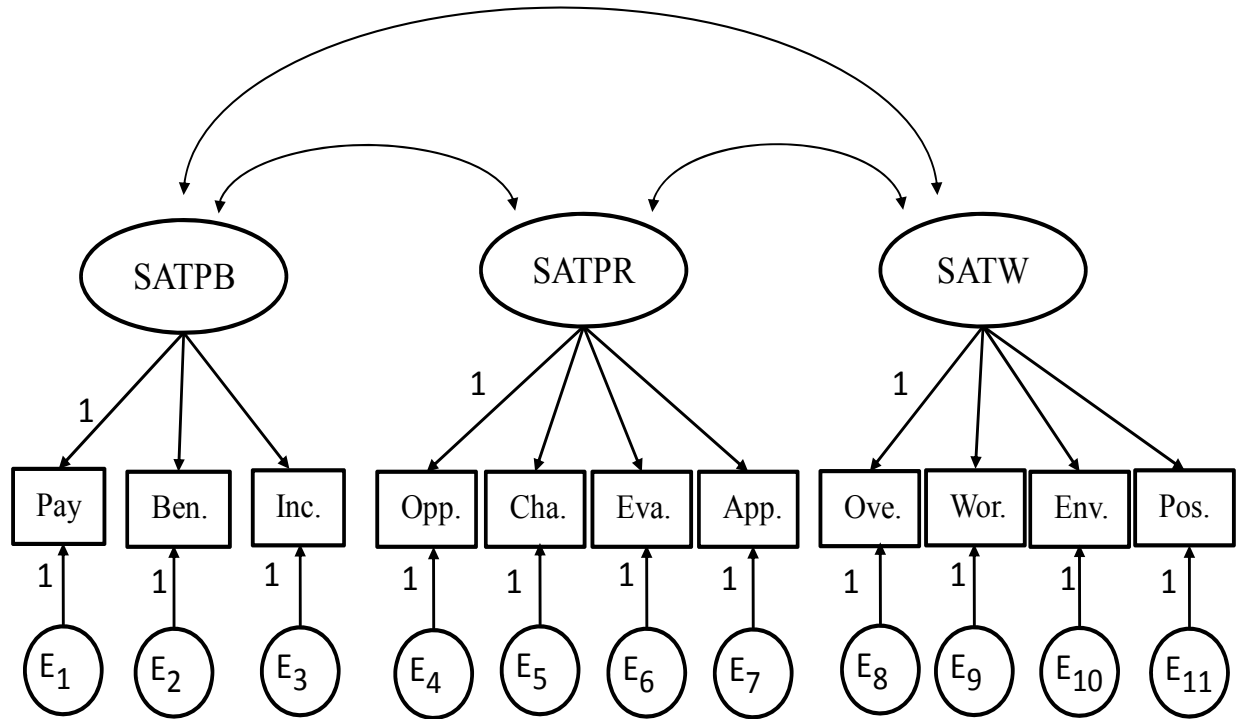


Figure 7. Measurement Model of Job Satisfaction

The model in figure 7 can be decomposed into its related equations as

$$\text{Pay } (x_1) = 1.00 \text{ SATPB } (\xi_1) + \delta_1$$

$$\text{Ben } (x_2) = \lambda_{21} \text{SATPB } (\xi_1) + \delta_2$$

$$\text{Inc } (x_3) = \lambda_{31} \text{SATPB } (\xi_1) + \delta_3$$

$$\text{Opp } (x_4) = 1.00 \text{ SATPR } (\xi_2) + \delta_4$$

$$\text{Cha } (x_5) = \lambda_{52} \text{SATPR } (\xi_2) + \delta_5$$

$$\text{Eva } (x_6) = \lambda_{62} \text{SATPR } (\xi_2) + \delta_6$$

$$\text{App } (x_7) = \lambda_{72} \text{SATPR } (\xi_2) + \delta_7$$

$$\text{Ove } (x_8) = 1.00 \text{ SATW } (\xi_3) + \delta_8$$

$$\text{Wor } (x_9) = \lambda_{93} \text{SATW } (\xi_3) + \delta_9$$

$$\text{Env } (x_{10}) = \lambda_{10,3} \text{SATW } (\xi_3) + \delta_{10}$$

$$\text{Pos } (x_{11}) = \lambda_{11,3} \text{SATW } (\xi_3) + \delta_{11}$$

Note: SATPB = Satisfaction with Pay and Benefit, Pay = overall pay, Ben = Benefits, Inc. = Salary Increase, SATPR = Satisfaction with Promotion, Opp. = promotion opportunity, Cha. =

promotion chance, Eva. = fair evaluation, App. = performance appraisal, SATW = Satisfaction with Their Work, Ove. = overall satisfaction, Wor. = workload, Env.= work environment, Pos.= position.

Table 18 shows the results of confirmatory factor analysis on job satisfaction. The latent construct for SATPB was statistically significant at the level .01 ($z = 8.69$).⁵⁵ Three observed variables for this latent variable (satisfaction with pay and benefits) were loaded well. Factor loadings were .83 (overall pay), .91 (benefits), and .75 (salary increase). The R-square output indicated that benefits (.84) explained more variance of the latent variable than other indicators such as overall pay (.69) and salary increase (.56). SATPR was well loaded by four indicators: promotion opportunity (.83), promotion chance (.82), fair evaluation (.83), performance appraisal (.73). It was also statistically significant at the level .01 ($z = 7.31$). The R-square output indicated that four indicators (promotion opportunity, promotion chance, fair evaluation, and performance appraisal) explained a similar amount of variance of the latent variable (.69, .68, .68, and .53 respectively).

Lastly, four indicators were well loaded to measure SATW. Factor loadings were .77 (overall satisfaction), .83 (workload), .78 (work environment), and .77 (position). It was statistically significant at the level .01 ($z = 7.93$). Workload (R-square = .69) explained a greater amount of variance of SATW than overall satisfaction (.59), work environment (.61), and position (.59).

⁵⁵ An unstandardized estimate divided by its standard error may be evaluated as a Z statistic, so values that exceed +1.96 or fall below -1.96 are significant below $p = .05$ and values that exceed +2.59 or fall below -2.59 are significant below $p = .01$.

Table 18. Estimates of Job Satisfaction Measurement Model

<u>Component fit</u>	Standardized Factor Loadings	Z-ratio	R-square	Construct Variance	Z-ratio
<i>Satisfaction with pay and benefit (SATPB)</i>				10.92	8.69
Overall Pay ^a	.83		.69		
Benefit	.91	21.12	.84		
Salary Increase	.75	17.14	.56		
<i>Satisfaction with promotion (SATPR)</i>				11.35	7.31
Promotion Opportunity ^a	.83		.69		
Promotion Chance	.82	19.91	.68		
Fair Evaluation	.83	19.88	.68		
Performance Appraisal	.73	16.30	.53		
<i>Satisfaction with their work(SATW)</i>				7.67	7.93
Overall Satisfaction ^a	.77		.59		
Workload	.83	14.67	.69		
Work Environment	.78	13.95	.61		
Position	.77	13.54	.59		
<u>Model Fit</u>					
Chi-Square (P value)	84.26 (.000)				
Adjusted Chi-square	2.05		WRMR	.90	
RMSEA	.05		NNFI	.97	
SRMR	.04		CFI	.98	

^a Served as the scale for the latent construct

Note: RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual, WRMR = Weighted Root Mean Square Residual, NNFI = Non- Normed Fit Index, CFI = Comparative Fit Index.

The Chi-square was statistically significant ($\chi^2 = 84.26$, $p < .01$), but other component fit of this model was good. Adjusted Chi-square (2.05), RMSEA (.05), SRMR (.04), WRMR (.90), NNFI (.97), and CFI (.98) were acceptable. Overall, the results from CFA confirmed that the measurement model of job satisfaction had an acceptable higher level of construct validity among observed variables and their latent structures.

Job Characteristics

The job characteristics component of the survey was divided into two models: an organizational culture model and an occupational culture model. Figure 8 represents the organizational culture model. “Top management support (TMS)” was measured by three indicators: “clear goals,” “plan ahead,” and “manager support.” The three indicators were well loaded. The factor loadings were over .50. “Communication with top managers (CTM)” was measured by “good communication,” “praise,” and “follow suggestions.”

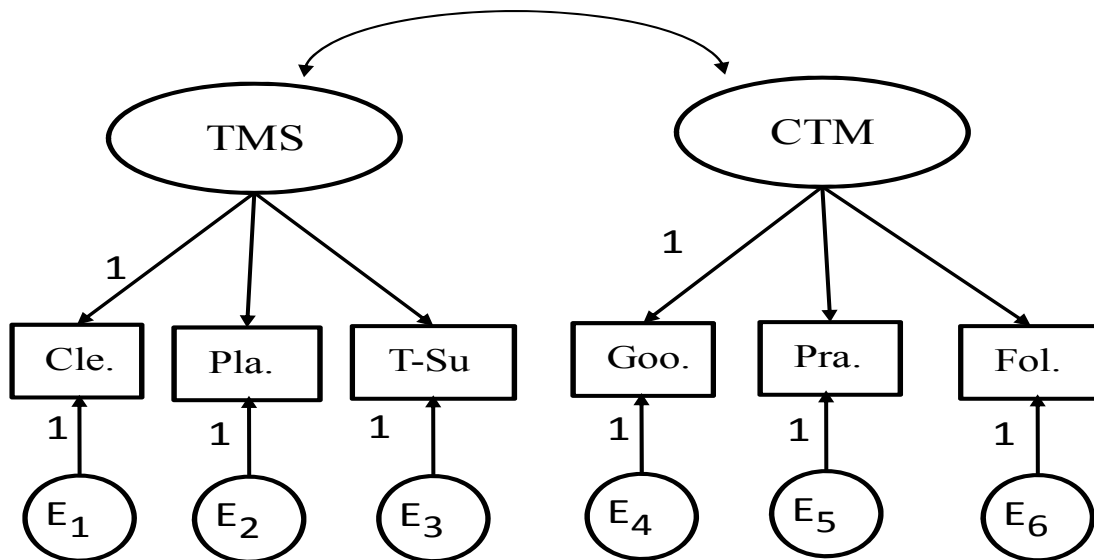


Figure 8. Measurement Model of Organizational Culture

The equations in the measurement model of organizational culture were defined as

$$\text{Cle } (x_1) = 1.00 \text{ TMS } (\xi_1) + \delta_1$$

$$\text{Pla } (x_2) = \lambda_{21} \text{ TMS } (\xi_1) + \delta_2$$

$$\text{T-Su } (x_3) = \lambda_{31} \text{ TMS } (\xi_1) + \delta_3$$

$$\text{Goo } (x_4) = 1.00 \text{ CTM } (\xi_2) + \delta_4$$

$$\text{Pra } (x_5) = \lambda_{52} \text{ CTM } (\xi_2) + \delta_5$$

$$\text{Fol } (x_6) = \lambda_{62} \text{ CTM } (\xi_2) + \delta_6$$

Note: TMS = Top Management Support, Cle. = clear goals, Pla. = plan ahead, T-Su = manager support, CTM = Communication with Top Managers, Goo. = good communication, Pra. = praise, Fol. = follow suggestion.

The results of confirmatory factor analysis on organizational culture model were shown in Table 19. This model fit was statistically significant ($\chi^2 = 20.16, p < .01$). TMS and CTM were well measured by each of the three indicators. The latent construct for TMS ($z = 10.28$) and CTM ($z = 10.63$) were statistically significant at the level .01. The factor loadings for clear goals, plan ahead, and manager support were .83, .89, and .86 respectively. The R-square output indicated that plan ahead (.78) and manager support (.75) explained more variance of the latent variable than clear goals (.68). CTM was measured by three indicators. Factor loadings were .82 (good communication), .85 (praise), and .78 (follow suggestions). The R-square output indicated that praise (.73) explained more variance of the latent variable than other indicators such as good communication (.68) and follow suggestions (.61).

RMSEA (.06) fell within an acceptable range. SRMR (.02), WRMR (.55), NNFI (.98), and CFI (.98) were also acceptable. In sum, the results of the measurement model indicated that this model was acceptable with great levels of construct validity among observed variables and their latent structures.

As described above, another aspect of job characteristics was occupational culture. Occupational culture has four latent variables: 1) Nature of Work (NW), 2) Supervision (SUP), 3) Social Network at Work (SNW), and 4) Public Support (PS). All latent variables except Nature of Work (NW) were well measured. Originally, NW was measured by five questions which came from Hackman and Oldham's (1980) survey questionnaire and Skolnic's (1994) research. The question, "My job is dangerous and risky (Skolnic, 1994)," was not loaded. The factor loading score was .03. This question was excluded from the model and CFA was conducted again.

Table 19. Estimates of Organizational Culture Measurement Model

<u>Component fit</u>					
	Standardized Factor Loadings	Z-ratio	R-square	Construct Variance	Z-ratio
<i>Top Management Support (TMS)</i>				9.32	10.28
Clear Goals ^a	.83		.68		
Plan Ahead	.89	19.41	.78		
Manager Support	.86	17.38	.75		
<i>Communication with Top Managers (CTM)</i>				9.99	10.63
Good					
Communication ^a	.82		.68		
Praise	.85	20.69	.73		
Follow Suggestions	.78	18.26	.61		
<u>Model Fit</u>					
Chi-Square (P value)	20.16 (.01)				
Adjusted Chi-square	2.52		WRMR	.55	
RMSEA	.06		NNFI	.98	
SRMR	.02		CFI	.98	

^a Served as the scale for the latent construct

Note: RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual, WRMR = Weighted Root Mean Square Residual, NNFI = Non- Normed Fit Index, CFI = Comparative Fit Index.

Table 20 indicates the results of CFA. First, NW was measured by four indicators, which were complex (factor loading = .67), independent (.62), significant (.64), and affect (.59). The latent construct for NW was statistically significant at the level .01 ($z = 6.47$). The R-square output indicated that the four indicators (complex, independent, significant, and affect) explained similar amounts of variance of the latent variable (.45, .38, .41, and .34, respectively).

SUP was measured by credit, team player, supervisor trust, and supervisor feedback. The factor loading scores of the indicators were over .50, ranging from .75 (credit) to .87 (supervisor trust). The factor loading score of team player and supervisor feedback was .82. The latent construct for SUP was statistically significant at the level .01 ($z = 5.05$). Supervisor trust (R-square = .75) explained more amount of variance of SUP than credit (.57), team player (.67), and supervisor feedback (.66).

Four indicators measured SNW successfully without losing any questions. The factor loading scores were .84 (enjoy), .88 (family), .80 (no-conflict), and .68 (coworkers feedback). The latent construct for SNW was statistically significant at the level .01 ($z = 4.14$). The R-square output indicated that family (.78) explained more variance of the latent variable than other indicators such as enjoy (.71), no-conflict (.64), and coworkers feedback (.46).

Lastly, PS was measured by four indicators. The factor loading scores of four indicators were above .50 (cooperative = .84, citizen trust = .84, provide information = .66, and work together = .68). Also, the latent construct for PS was statistically significant at the level .01 ($z =$

4.39). Cooperative (R-square = .70) and citizen trust (.71) explained more amounts of variance of PS than provide information (.66) and work together (.46).

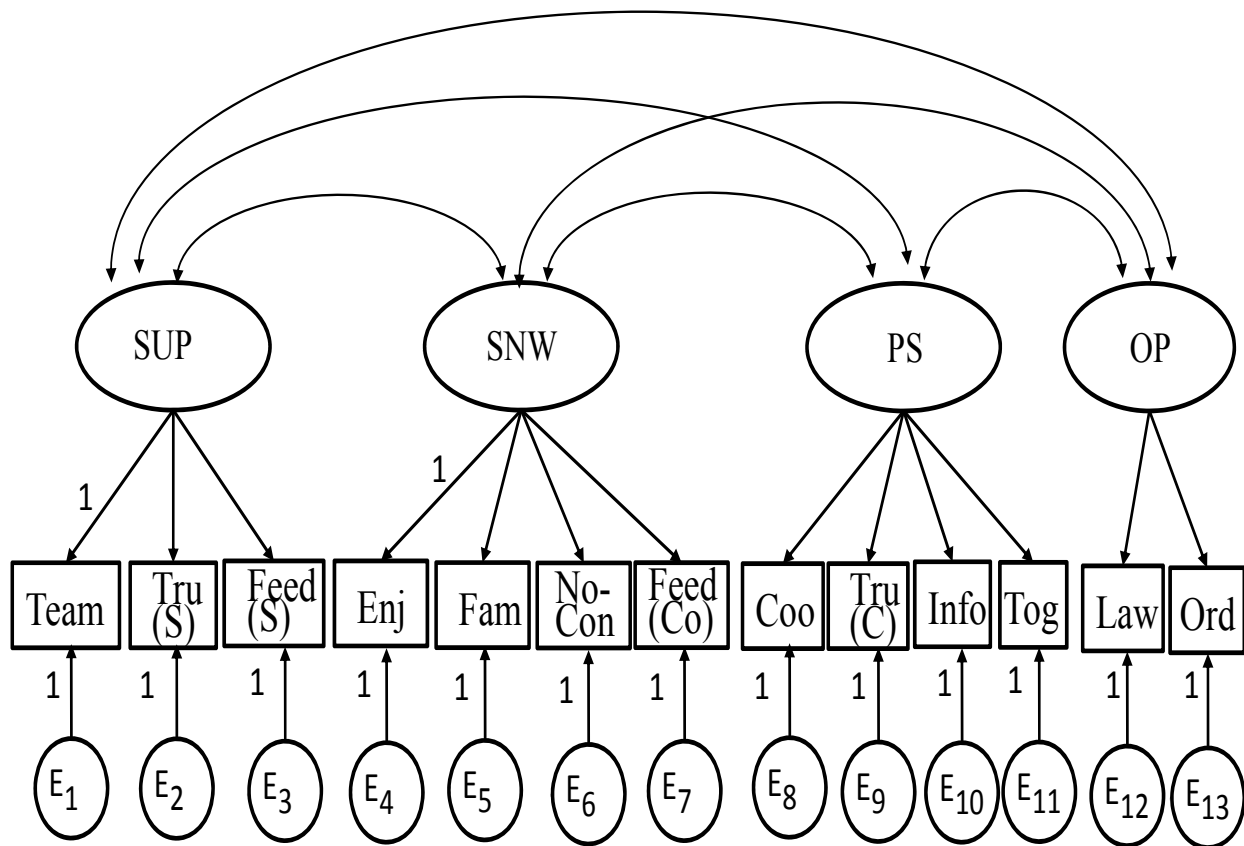


Figure 9. Measurement Model of Occupational Culture

The measurement model of occupational culture can be decomposed into its related equations as

$$\text{Com. } (x_1) = 1.00 \text{ NW } (\xi_1) + \delta_1$$

$$\text{Ind. } (x_2) = \lambda_{21} \text{ NW } (\xi_1) + \delta_2$$

$$\text{Sig. } (x_3) = \lambda_{31} \text{ NW } (\xi_1) + \delta_3$$

$$\text{Aff. } (x_4) = \lambda_{41} \text{ NW } (\xi_1) + \delta_4$$

$$\text{Cre. } (x_5) = 1.00 \text{ SUP } (\xi_2) + \delta_5$$

$$\text{Team. } (x_6) = \lambda_{62} \text{ SUP } (\xi_2) + \delta_6$$

$$\text{Tru (S). (x}_7\text{)} = \lambda_{72}\text{SUP } (\xi_2) + \delta_7$$

$$\text{Feed (S). (x}_8\text{)} = \lambda_{82}\text{SUP } (\xi_2) + \delta_8$$

$$\text{Enj. (x}_9\text{)} = 1.00 \text{ SNW } (\xi_3) + \delta_9$$

$$\text{Fam. (x}_{10}\text{)} = \lambda_{10,3}\text{SNW } (\xi_3) + \delta_{10}$$

$$\text{No-con. (x}_{11}\text{)} = \lambda_{11,3} \text{ SNW } (\xi_3) + \delta_{11}$$

$$\text{Feed (Co). (x}_{12}\text{)} = \lambda_{12,3} \text{ SNW } (\xi_3) + \delta_{12}$$

$$\text{Coo. (x}_{13}\text{)} = 1.00 \text{ PS } (\xi_4) + \delta_{13}$$

$$\text{Tru (C). (x}_{14}\text{)} = \lambda_{14,3}\text{PS } (\xi_4) + \delta_{14}$$

$$\text{Info. (x}_{15}\text{)} = \lambda_{15,3} \text{ PS } (\xi_4) + \delta_{15}$$

$$\text{Tog. (x}_{16}\text{)} = \lambda_{16,3} \text{ PS } (\xi_4) + \delta_{16}$$

Note: NW = Nature of Work, Com = Complex, Ind = Independent, Sig. = Significant, Aff. = Affect,

SUP = Supervision, Cre. = Credit, Team = team player, Tru (S) = supervisor trust, Feed (S) = supervisor feedback, SNW = Social Network at Work, Enj. = Enjoy, Fam. = Family, No-Con. = No-conflict, Feed (Co) = Coworkers feedback, PS = Public Support, Coo. = Cooperative, Tru (C). = Citizen trust, Info. = Provide information, Tog. = Work together.

Regarding entire model fit, the Chi-square was statistically significant ($\chi^2 = 20.16, p < .01$), but other component fit of this model was good. If model fit indexes except the Chi-square (χ^2) fall within an acceptable range, the model is acceptable (Hun and Bentler, 1999). RMSEA (.07), SRMR (.05), WRMR (1.00), NNFI (.90), and CFI (.91) fell within an acceptable range. The occupational culture was well measured except for one question (“My job is dangerous and risky”), which was related to nature of work. Although this question was not loaded in the confirmatory factor analysis, it was employed in the structural regression model as an exogenous variable because danger and risk are key characteristics of police work (Lipsky, 1980; Skolnic, 1994).

Table 20. Estimates of Occupational Culture Measurement Model

<u>Component fit</u>	Standardized Factor Loadings	Z-ratio	R-square	Construct Variance	Z-ratio
<i>Nature of Work (NW)</i>				7.06	6.47
Complex ^a	.67		.45		
Independent	.62	11.43	.38		
Significant	.64	8.69	.41		
Affect	.59	7.68	.34		
<i>Supervision (SUP)</i>				7.10	5.05
Credit ^a	.75		.57		
Team Player	.82	18.40	.67		
Supervisor Trust	.87	15.61	.75		
Supervisor Feedback	.82	14.35	.66		
<i>Social Network at Work (SNW)</i>				6.40	4.14
Enjoy ^a	.84		.71		
Family	.88	17.47	.78		
No-Conflict	.80	14.52	.64		
Coworkers Feedback	.68	12.02	.46		
<i>Public Support (PS)</i>				10.85	4.39
Cooperative ^a	.84		.70		
Citizen Trust	.84	15.56	.71		
Provide Information	.66	11.75	.44		
Work Together	.68	12.21	.46		
<u>Model Fit</u>					
Chi-Square (P value)	302.83 (.000)				
Adjusted Chi-square	2.68		WRMR	1.00	
RMSEA	.07		NNFI	.90	
SRMR	.05		CFI	.91	

^a Served as the scale for the latent construct

Note: RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual, WRMR = Weighted Root Mean Square Residual, NNFI = Non- Normed Fit Index, CFI = Comparative Fit Index.

Community Policing

The specification of Officers' Attitudes toward Community Policing (CP) measurement model included six indicators: 1) Residents, 2) Non-Crime Problems, 3) Increase CP, 4) Support CP, 5) Improve Relationships, and 6) Crime Prevention (See Appendix 3 for more detailed information about the variables). All six indicators were well loaded. The factor loading scores were .62 (residents), .70 (non-crime problem), .84 (increase CP), .92 (support CP), .89 (improve relationship), and .74 (crime prevention). The factor loadings of all variables were statistically significant at level .01 (Non-crime problem: $z = 8.59$, Increase CP = 9.83, Support CP = 9.56, Improve relationship = 9.81, Crime prevention = 8.07). Figure 10 shows the measurement model of community policing.

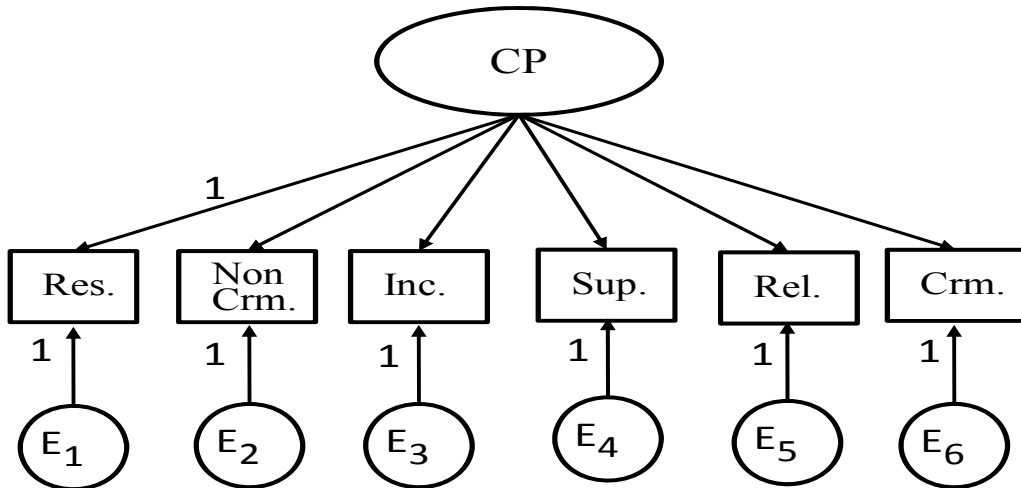


Figure 10. Measurement Model of Community Policing

The measurement model of community policing was defined as

$$\text{Res } (y_1) = 1.00 \text{ CP } (\eta_1) + \varepsilon_1$$

$$\text{Non-Crm } (y_2) = \lambda_{21}\text{CP } (\eta_1) + \varepsilon_2$$

$$\text{Inc } (y_3) = \lambda_{31}\text{CP } (\eta_1) + \varepsilon_3$$

$$\text{Supp } (y_4) = \lambda_{41}\text{CP } (\eta_1) + \varepsilon_4$$

$$\text{Rel } (y_5) = \lambda_{51}\text{CP } (\eta_1) + \varepsilon_5$$

$$\text{Crm } (y_6) = \lambda_{61}\text{CP } (\eta_1) + \varepsilon_6$$

Note: CP = officers' attitudes toward community policing, Res. = Residents, Non Crm. = non-crime problems, Inc. = increase community policing, Supp. = support community policing, Rel. = improve relationships, Crm. = crime prevention.

Increase CP ($R^2 = .84$), support CP (.92), and improve relationships (.89) explained

higher amount of variance of the latent construct than residents (.62), non-crime problem (.70), and crime prevention (.74).

Table 21. Estimates of Community Policing Model

<u>Component fit</u>	Standardized Factor Loadings	Z-ratio	R-square	Construct Variance	Z-ratio
<i>Officers' Attitudes Toward Community Policing (CP)</i>				4.34	7.47
Residents ^a	.62		.39		
Non-Crime Problem	.70	8.59	.50		
Increase CP	.84	9.83	.71		
Support CP	.92	9.56	.84		
Improve Relationships	.89	9.81	.79		
Crime Prevention	.74	8.07	.54		
<u>Model Fit</u>					
Chi-Square (P value)	18.85 (.03)				
Adjusted Chi-square	2.09		WRMR	.38	
RMSEA	.06		NNFI	.98	
SRMR	.02		CFI	.99	

^a Served as the scale for the latent construct

Note: RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual, WRMR = Weighted Root Mean Square Residual, NNFI = Non- Normed Fit Index, CFI = Comparative Fit Index.

The component fit of this specification was good and the entire model fit indexes except the Chi-square were acceptable. Adjusted Chi-square (2.09), RMSEA (.06), SRMR (.02), WRMR (.38), NNFI (.98), and CFI (.99) fell within an acceptable range.

Overall, the measurement models for job satisfaction, organizational culture, occupational culture, and officers' attitudes toward community policing had high levels of construct validity among observed variables and their latent structures. Only one question was excluded from the occupational culture measurement model. Other questions were well loaded to measure each latent variable. Table 22 summarizes model fit indices for each model and shows that model fit indices were within acceptable ranges.

Table 22. Summary of Model Fit Indexes for Measurement Models

	Job Satisfaction	Organizational Culture	Occupational Culture	Officers' Attitudes toward Community Policing
Chi-Square (P value)	84.26 (.00)	20.16(.01)	302.83(.000)	18.85 (.03)
Adjusted Chi-Square	2.05	2.52	2.68	2.09
RMSEA	.05	.06	.07	.06
SRMR	.04	.02	.05	.02
WRMR	.90	.55	1.00	.38
NNFI	.97	.98	.90	.98
CFI	.98	.98	.91	.99

Note: RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual, WRMR = Weighted Root Mean Square Residual, NNFI = Non- Normed Fit Index, CFI = Comparative Fit Index.

(2) Results of Structural Regression Model

Test of Model Fit

When a structural regression model was conducted, the component fits, such as factor loadings, were more than .05, and the latent construct for each variable was statistically significant. However, several model fit indices were out of acceptable ranges. For example, NNFI (.80) and CFI (.82) were less than .90. The initial model was not acceptable. The model was re-estimated with correlating job satisfaction variables because these variables are theoretically related to each other.⁵⁶ The three job satisfaction variables were drawn from expectancy motivation theory. The variable of satisfaction with pay/benefits was correlated with satisfaction with promotion, and satisfaction with promotion was correlated with satisfaction with work.

After the modification, the model indexes except the Chi-square for the structural regression model were acceptable.⁵⁷ Table 23 provides the model fit indices for the structural regression model and acceptable thresholds level. The Chi-square was statistically significant, but the Adjusted Chi-square was 2.06.⁵⁸ Other fit indices fell within acceptable range (RMSEA = .05, SRMR = .05, WRMR = .46, NNFI = .90, CFI = .92).

⁵⁶ The latent constructs of job satisfaction were allowed to correlate with each other as the modification.

⁵⁷ The modification indices in a theta-delta matrix for all the observed and latent variables in the final variables were on the lower side (less than 4.0). So it is the final model since there was no need to add or delete any observed or latent variable from the final model (i.e., saturated model).

⁵⁸ The Chi-square (χ^2) statistic is sensitive to sample size. Hu and Bentler (1999) suggest the adjusted Chi-square (χ^2) statistics to reduce the sensitivity of the Chi-square (χ^2) statistics.

Table 23. Model Fit Indexes for Structural Regression Model and Acceptable Threshold Level

	Structural Regression Model	Acceptable Thresholds Level
Chi-Square (P value)	1675.77 (.000)	P value (p.<05 or p.<01)
Adjusted Chi-Square	2.06	2.0 – 5.0
RMSEA	.05	Less than .10
SRMR	.05	Less than .08
WRMR	.46	Less than 1.0
NNFI	.90	Greater than .90
CFI	.92	Greater than .90

Note: RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual, WRMR = Weighted Root Mean Square Residual, NNFI = Non- Normed Fit Index, CFI = Comparative Fit Index.

Results of Analyses

Figure 10 shows the final full model for evaluating officers' attitudes toward community policing in Korea through various correlates of demographics, individual level factors, officers' satisfaction, and several job characteristics. Sex, Edu, Yrs, Mts, Rank, JA, and Danger are the observed variables and others are the latent variables.

In particular, this study employed the conventional significant level at the .10 (i.e., alpha value). Although the conventional significant level of .05 is required for most criminal justice research, especially theoretical model testing, the significance level of .10 has been employed for many policy-related analyses (see McGarrell and Hipple, 2007). Since statistical power and statistical significance are directly related to each other, when a less stringent level of significance is chosen, it makes it easier to reject the null hypothesis and achieve statistical significance (Lipsey, 1990). More specifically, the current study was more concerned about

Type I error. Type I error occurs when a researcher rejects a null hypothesis that is true, and Type II error occurs when the researcher fails to reject the null hypothesis that is false (Bachman and Paternoster, 2004). The amount of Type I error that we are willing to risk is the significance level of a test of statistical significance. Generally, .05 level of statistical significance is used to test a hypothesis (Weisburd and Britt, 2003). This means a .95 probability of a correct statistical conclusion when the hypothesis is true. The significant level of .05 is used in many studies but it is not an absolute criteria. In basic research or theory testing, researchers can be more conservative about accepting new facts, but in policy relevant research, the criterion may be lenient, such as .10 level of statistical significance, in order to avoid the rejection of promising interventions (Lipsey, 1990; McGarrell and Hipple, 2007). Although this study is related to testing theories, it also aims to provide Korean police with useful policy implications for the successful implementation of community policing. The significant level of .10 is the cut-off criteria for the study. Based on these models, there were twenty-five significant relationships among the variables at .10, .05, or .01. Non-significant relations were dropped. The final full model displays only significant standardized coefficients ($p < .01$, $p < .05$, or $p < .10$).

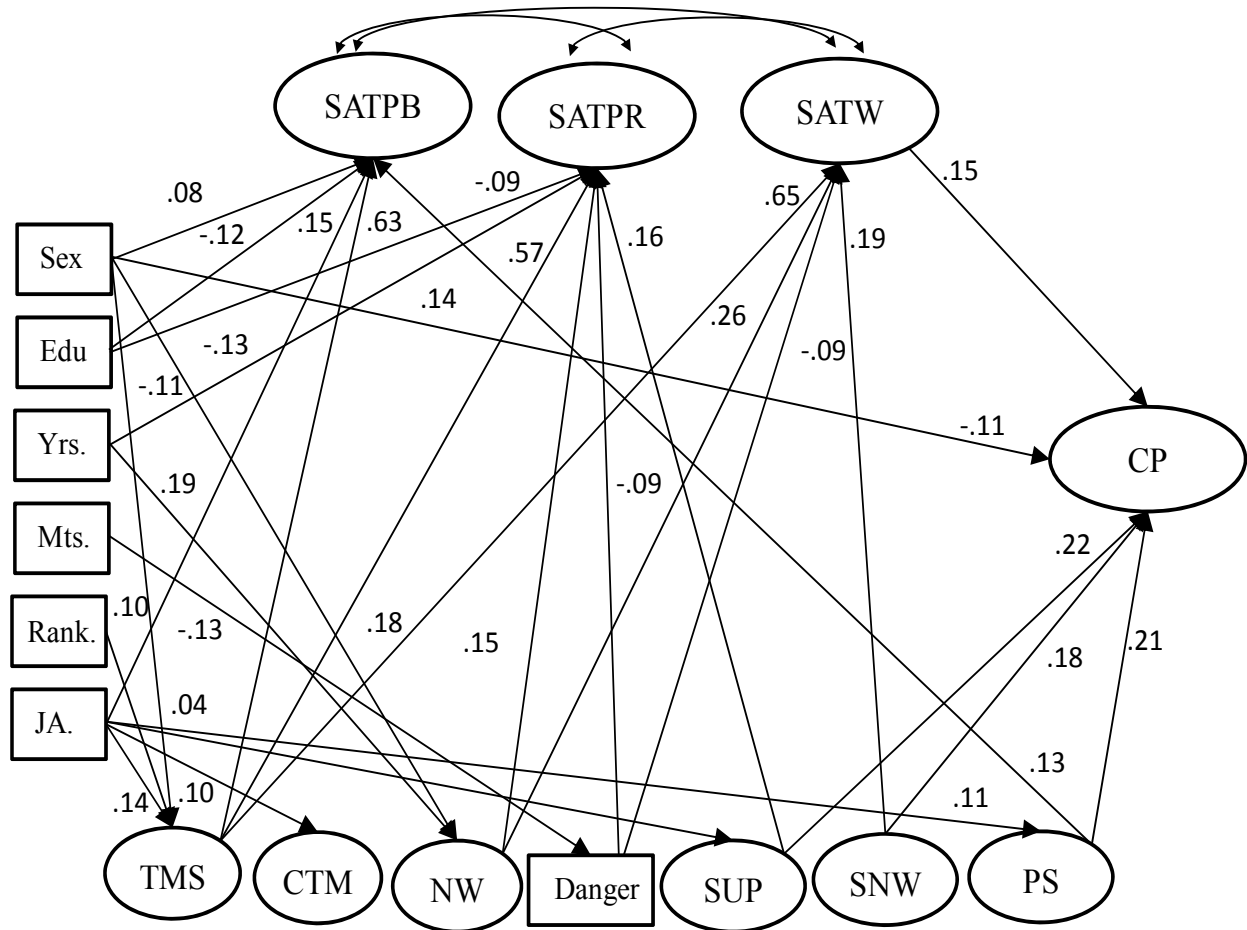


Figure 11. Final Model for officers' attitudes toward community policing (N=421).

Note: CP = Community Policing, SATPB = Satisfaction with Pay and Benefit, SATPR = Satisfaction with Promotion, SATW = Satisfaction with Their Work, TMS = Top Management Support, CTM = Communication with Top Managers, NW = Nature of Work, SUP = Supervision, SNW = Social Network at Work, PS = Public Support, Mts = Number of Months in the current position, JA = Job Assignment.

Table 24 also reported the results of a full test of the hypothesized models. The predictors explained 25 percent of the variance in officers' attitudes toward community policing ($R^2 = .25$). It indicates that 75 percent of the variance could be explained other factors that are not discussed in this study. However, R^2 in this study is acceptable when it is compared to other

studies. Greene (1989)'s study explains 24% of variance ($R^2=.24$), but Lewis et al.,(1999)'s study shows that only 6% of variance was explained by the variables used. R^2 in this study is higher than studies in Korea. For example, Hwang and Woo (2009)'s study explains 11 percent of variance and R^2 of Moon (2006)'s study is .15.

Table24. The Standardized Regression Coefficient in Final Model (N= 421)

EV	CP	SAT PB	SAT PR	SAT W	TM S	CT M	NW	DAN GER	SUP	SN W	PS
Sex^a	-.11 [*]	.08 ⁺	-.03	.07	.06	.06	.14 [*]	-.05	.05	-.03	.02
Edu	-.01	-.12 [*]	-.09 ⁺	-.03	-.02	.07	.02	-.16 ^{**}	-.05	-.03	-.01
Yrs	.06	-.08	-.13 [*]	.01	.03	.15 [*]	.19 [*]	.01	.02	.01	-.02
Mts	-.04	.02	.06	.04	-.03	.02	.09	-.13 [*]	-.05	-.03	-.06
Rank	-.01	.04	-.03	-.03	.10 ⁺	-.03	.08	.04	-.06	-.04	.04
JA^b	.07	.15 ^{**}	-.01	-.06	.14 [*]	.10 [*]	.03	-.03	.18 ^{**}	.03	.11 [*]
SAT PB	.01										
SAT PR	.02										
SAT W	.15 [*]										
TMS	.06	.63 ^{**}	.57 [*]	.65 [*]							
CTM	-.13	-.25	-.11	-.14							
NW	.09	.02	.15 [*]	.26 ^{**}							
Danger	.01	-.02	-.09 [*]	-.09 [*]							
SUP	.22 ^{**}	-.02	.16 [*]	.02							
SNW	.18 [*]	.01	.04	.19 ^{**}							
PS	.21 ^{**}	.13 [*]	.04	-.04							

⁺ p<.10, *p<.05, ** p<.01

^a 0 = male, 1 = female

^b 0 = patrol officer, 1 = non patrol officer (i.e., investigation or police administration)

Note: EV = Exogenous Variables CP = Community Policing, SATPB = Satisfaction with Pay and Benefit, SATPR = Satisfaction with Promotion, SATW = Satisfaction with Their Work, TMS = Top Management Support, CTM = Communication with Top Managers, NW = Nature of Work, SUP = Supervision, SNW = Social Network at Work, PS = Public Support, Mts = Number of Months in the current position, JA = Job Assignment.

Demographics and Individual Level Factors

A. Influence on Officers' Attitudes toward Community Policing

Only gender was a statistically significant variable that influences officers' attitudes toward community policing among demographics and individual level factors ($\beta = -.11, p < .05$) (H3a). Male officers had more positive attitudes toward community policing than female officers. This result runs counter to prior research (Paoline et al., 2000; Schafer, 2001). In general, women and minority officers are more favorable to community policing. However, no research on the Korean police found a relationship between gender and officers' attitudes toward community policing. This study indicated that male officers were more favorable to community policing than female officers. Residents in Korea prefer male officers over female officers because they perceive that male officers can protect their community better and provide service enthusiastically (Kim, 2009b). This perception negatively influences female officers' attitudes toward their works (Kim, 2009b). It should be noted that more thorough and systematic research is required to examine the relationship between gender and officers' attitudes toward community policing.

B. Influence on Job Satisfaction

Several demographics and individual level factors are statistically significant. First of all, gender, education, and job assignment influence officers' satisfaction with pay/ benefits.

Consistent with bivariate analysis, female officers reported higher levels of satisfaction with pay and benefits than male officers ($\beta = .08, p < .05$). Literature in the United States has suggested that female officers have lower levels of job satisfaction due to the tokenism and discrimination (Dowler, 2005; Krimmel and Gormely, 2003), while Kim (2005b) argued that female officers are more likely to be satisfied with their job because they have lower levels of expectation.

Generally, there is a large male–female income difference in Korea. The national female-to-male earnings ratio was 70 percent (Kim, 2011). The KNPA has achieved pay equity and there is no discrimination against female officers in terms of pay and benefits. The pay equity policy might lead to female officers' higher levels of satisfaction with pay and benefits because they witness that other women in several fields experience discrimination.

Education was negatively associated with officers' attitudes toward community policing ($\beta = -.16, p < .05$) (H3q). More-educated officers were less likely to be satisfied with their pay/benefits, consistent with Halsted et al.'s (2000) research. They argued that college-educated officers are less satisfied with their salary because it does not meet their expectations. However, the results of this study contradict Jaegal's (2002) study that education is positively associated with pay/benefits. This study suggests that even though half of the officers in Korea have a BA or higher degree, they are still less satisfied with their salary than those with lower levels of education. In addition, job assignment was significantly related to satisfaction with pay/benefits ($\beta = .15, p < .01$) (H3u). Non-patrol officers (i.e., officers in investigation or police administration) were more likely to be satisfied with pay and benefits than patrol officers, consistent with the results of bivariate analysis.

Second, education and years of service were negatively related to officers' satisfaction with promotion. Less-educated officers had higher levels of satisfaction with promotion than more-educated ones ($\beta = -.09, p < .10$) (H3q). Also, years of experience was negatively associated with officers' satisfaction with promotion ($\beta = -.13, p < .05$) (H3r). Less experienced officers were more satisfied with promotion than more experienced officers. In general, officers become cynical as they witness injustice and fail to earn promotion (Buzawa et al., 1994; Dantzker and Kubin, 1998). The Korean police are not exceptional. This study indicates that years of experience is inversely related to officers' satisfaction with promotion. It is interesting that none of the demographic and individual factors was significantly associated with satisfaction with work.

C. Influence on Job Characteristics

Rank and job assignment were positively associated with officers' perceptions of top management support. High-ranking officers had more positive perceptions of top management support than line officers ($\beta = .10, p < .10$) (H3m). This is consistent with previous studies (Armeli et al., 1998; O'Malley and Hutchinson, 2007; Whestone, 2001). High-ranking officers and line officers had different views on management and organization (Reuss-Ianni, 1983). High-ranking officers perceived that they were more supported by top managers than low-ranking officers. In addition, non-patrol officers were more likely to perceive that top managers supported rank and file officers ($\beta = .14, p < .01$) (H3n), consistent with bivariate analysis. However, gender, education, years of experience, and number of months in the current position were not significantly associated with top management support.

Regarding communication with top managers, years of experience and job assignment were statistically significant factors that influenced officers' perception of communication with top managers. More experienced officers were more likely to perceive that top managers try to communicate with line officers ($\beta = .15, p < .05$) (H3k). In the Korean police, top managers prefer to meet experienced officers because they can provide more practical suggestions, although top managers also have meetings with newly hired officers (KNPA, 2010). Non-patrol officers had more positive perceptions of communication with top managers than patrol officers ($\beta = .10, p < .05$) (H3n).

In terms of nature of work, female officers were more likely than male officers to perceive that their work was complex, independent, and significant ($\beta = .14, p < .05$) (H3h). Years of experience was also positively associated with nature of work ($\beta = .19, p < .05$) (H3k). However, education, number of months in the current position, rank, and job assignment did not influence officers' perception of nature of work. It should be noted that "danger" was included in nature of work, but it was not loaded well. The relationships between the "danger" variable (observed) and demographics were examined. The results indicate that education and number of months in the current position were statistically significant. Interestingly, less-educated officers were more likely to perceive that their work was dangerous than those with high levels of education ($\beta = -.16, p < .01$) (H3j). Generally, officers with high levels of education have more chances to work in offices, while less-educated officers in the Korean police are more likely to work outside. Number of months in the current position was negatively associated with danger ($\beta = -.13, p < .05$) (H3l). When officers are transferred to a new position or department, they might feel that their new duty is dangerous.

In supervision, only job assignment was statistically significant among demographics and individual level factors. Non-patrol officers had more positive perceptions of supervision than patrol officers ($\beta = .18, p < .01$) (H3n). Non-patrol officers have more frequent contact with their supervisors, which might have led to this result. None of the demographics and individual factors was significantly associated with social network with work. Lastly, non-patrol officers had more positive perceptions of public support than patrol officers ($\beta = .11, p < .05$) (H3n).

Job Characteristics

A. Influence on Officers' Attitudes toward Community Policing

Supervision, social network at work, and public support were positively associated with officers' attitudes toward community policing. First, officers with positive perceptions of supervision had more positive attitudes toward community policing ($\beta = .22, p < .01$) (H1j). Literature indicates that supervision has a positive impact on officers' attitudes toward community policing (Kwak, 2009; Moon, 2006; Wilkinson and Rosenbaum, 1994; Wycoff and Skogan, 1994). In general, officers' attitudes and behaviors are affected by their supervisors and managers (Allen, 1982; Engel, 2000; Muir 1977). More specifically, officers who have positive relationships with supervisors have more positive attitudes toward community policing because their supervisors' priority is the successful implementation of community policing (Wilkinson and Rosenbaum, 1994). The supervisors' priority could influence officers' attitudes and behavior. In addition, the supervisors' priority is influenced by top managers because the Korean police are centralized. Top managers in the Korean police have the authority to appoint, promote, and transfer supervisors. Community policing in Korea was the top managers' priority when they introduced it as one of the most important reforms in 1999. However, their priorities

have moved from community policing to other issues such as the prevention of school violence and the protection of minorities (KNPA, 2007). For example, the KNPA established one-stop support centers in police departments to protect victims of sex crimes and abused elderly citizens (KNPA, 2007). In addition, police have decreased foot patrol due to the shortage of officers and the introduction of sophisticated techniques such as IDS⁵⁹ (KNPA, 2009). In 2011, the Anti-Corruption & Civil Rights Commission (ACRC)⁶⁰ officially requested that police should strengthen community policing to protect citizens from crime more effectively (Choi, 2011).

Second, officers with good relations with their colleagues were more likely to have positive attitudes toward community policing ($\beta = .18, p < .05$) (H1k). This is consistent with prior research (Lurigio and Skogan, 1994; Wilson and Bennett, 1994). However, Park (2006) argued that social network at work had a negative impact on officers' attitudes toward community policing in Korea. This study supports the literature in Western countries rather than Korea. Lastly, public support was positively associated with officers' attitudes toward community policing ($\beta = .21, p < .01$) (H1f). Officers who perceive that they receive support and trust from public have more positive attitude toward community policing.

The results of structural regression model suggest that supervision ($\beta = .22$) and public support ($\beta = .21$) are more important factors that influence officers' attitudes toward community policing than other variables such as gender and satisfaction with work.

⁵⁹ IDS (Immediate Dispatch System) uses satellite tracking to allocate the closest, most appropriate patrol cars to the call or crime scene (KNPA, 2009).

⁶⁰ The ACRC is the independent government organization to prevent corruption in the public sector and to protect people's rights from illegal and unfair administrative practices through the administrative appeals system.

B. Influence on Job Satisfaction

Regarding satisfaction with pay/benefits, top management support and public support were statistically significant. Officers who perceived that their top managers performed well were more likely to be satisfied with their work and overall conditions ($\beta = .63, p < .01$) (H1g). This is consistent with Rhoades and Eisenberger's (2002) findings that officers' perception of support from their top managers increases their satisfaction with the job. Korean police maintain eleven ranks, from police officer (i.e., lowest rank) to the commissioner general (chief of Korean police). It is very difficult for line officers to deliver their messages to police leaders due to this very hierarchical structure. Police leaders have made efforts to communicate with line officers by opening their cell phone numbers and email addresses to all police officers. In addition, police leaders have meetings with line officers frequently and the results of these meetings are distributed to police officers in the intranet which only police officers can access. Line officers' main requests or key topics in the meetings are usually related to their pay and benefits. Line officers witness that police leaders contact politicians and policy makers in order to raise salary and benefits. Salary and benefits have risen for several years due to police leaders' efforts, even though officers are not fully satisfied with salary and benefits.

In addition, officers who perceived that they were supported by the public were more likely to be satisfied with pay and benefits ($\beta = .13, p < .05$) (H1l). Police leaders have emphasized the importance of public support to raise salary and benefits because politicians and policy makers are influenced by public opinion. Officers feel that public support for police might have led to an increase in salary and benefits in recent years. However, more than half of

the respondents reported that they had a negative attitude toward citizens, while less than 30 percent of them perceived that they were supported by citizens.

Second, top management support, supervision, nature of work, and danger were statistically significant factors that affected satisfaction with promotion. Officers who had positive perceptions of top management support or supervision were more likely to be satisfied with promotion [$(\beta = .57, p < .05)$ (H1g) $(\beta = .16, p < .05)$ (H1j), respectively]. According to the “Police Officers Act” (1982, revised 2010), top managers and supervisors have the authority to promote officers. Also, officers with positive perceptions of their work were more satisfied with promotion $(\beta = .15, p < .05)$ (H1i). When officers feel that their work is independent, complex, and significant, they are more likely to be satisfied with their work. It is interesting that danger was negatively associated $(\beta = -.09, p < .05)$ (H1i).

Lastly, top management support was positively related to satisfaction with work $(\beta = .65, p < .01)$ (H1g).⁶¹ Nature of work and danger were also statistically significant factors $(\beta = .26, p < .01)$ (H1i) $(\beta = -.09, p < .05)$ (H1i). It should be noted that social network at work was positively associated with satisfaction with work $(\beta = .19, p < .01)$ (H1k). Officers with good relations with their colleagues had higher levels of satisfaction with work.

Job Satisfaction and Officers Attitudes toward Community Policing

Officers’ satisfaction with work influenced their attitudes toward community policing $(\beta = .15, p < .05)$ (H2a). Officers who were satisfied with their work and overall conditions were more likely to have a positive attitude toward community policing. Satisfaction with pay/benefits

⁶¹ Interestingly, top management support was not significantly associated with officers’ job satisfaction in Slovenia’s centralized policing system (Nalla et al., 2011).

and promotion were not statistically significant. Lilley and Hinduja (2007) indicated that officers believe that their efforts for the implementation of community policing will be rewarded through promotion. They argued that satisfaction with promotion influences officers' attitudes toward community policing. However, this study did not support this notion.

Influence of Community Policing on Job Satisfaction

This study hypothesized that officers' job satisfaction influences their attitudes toward community policing because the expectancy theory suggests that employees' satisfaction affects their attitudes toward their tasks and performance, which is further supported by previous studies (Greene, 1989; Pelfrey 2004, 2007). However, some studies argued that the introduction of community policing or officers' positive attitudes toward community policing lead to the increase in officers' satisfaction (Lurigo and Rosenbaum, 1994; Zhao et al., 1999). That is, there might be a reciprocal relationship between officers' attitudes toward community policing and individual officers' levels of job satisfaction. To test such bidirectional relationships, a multiple indicators and multiple causes (MIMIC) model was also employed. MIMIC is a useful approach to decide which factors are effect indicators that influence endogenous variables in the model (Kline, 2005).

The results of the MIMIC model indicated that officers' satisfaction with pay/benefits, promotion, and work were set as endogenous variables. The model fit indices indicated that this model was not acceptable because CFI (.82) and NNFI (.79) were not greater than .90. In addition, Pearl (2012) suggested that comparison of variance would be a useful method to decide

causality in structural equation modeling.⁶² The R^2 of officers' attitudes toward community policing was .25, while R^2 of officers' job satisfaction with pay/benefit, promotion, and work were .01, .01, and .02, respectively. These analyses confirm that officers' job satisfaction influences their attitudes toward community policing, but it did not support the notion that officers' attitudes toward community policing affect their job satisfaction.

3. Summary

Table 25 compares hypotheses in this study and the results on officers attitudes toward community policing. Bivariate analysis, ANOVA, and structural regression model were conducted in this study.

Table 25. Comparison between Hypotheses and Results of Analyses

Exogenous Variables	Hypotheses	Results		
		Bivariate Analysis	ANOVA	Structural Regression
<i>Demographics and Individual Level</i>				
Gender ^a	+			-
Age	+			
Education	+			
Years of Experience	+	+	+	
No of Months in the Current Department	+			
Rank	-			
Job Assignment ^b	-	+	+	

⁶² He also warned that causal effects in observational studies can only be substantiated from a combination of data and untested, theoretical assumptions, not from the data alone.

Table 25. Comparison between Hypotheses and Results of Analyses (Cont'd)

Exogenous Variables	Hypotheses	Results		
		Bivariate Analysis	ANOVA	Structural Regression
<i>Job Characteristics</i>				
Top Management Support	+	+		
Communication with Top Managers	+	+		
Nature of Work	+	+		
Supervision	+	+		+
Social Network at Work	+	+		+
Public Support	+	+		+
<i>Job Satisfaction</i>				
Pay/Benefit	+	+		
Promotion	+	+		
Work	+	+		+

^a 0 = male, 1 = female ^b 0 = patrol, 1 = non-patrol

The results revealed that gender, years of experience and job assignment are important variables that influence officers' attitudes toward community policing. However, gender and job assignment contradicted our expectations. The bivariate analysis indicated that all job characteristics are significant, but the structural regression model suggested that supervision, social network at work, and public support are crucial in officers' attitudes toward community policing. This is similar to job satisfaction. According to the bivariate analysis, all three aspects of job satisfaction influence officers' attitudes toward community policing. Only satisfaction with work was a statistically significant variable in the structural regression model.

CHAPTER 6. DISCUSSION AND CONCLUSION

1. Discussion

The purpose of this study is to test the job characteristics model and the expectancy theory for directional accuracy and ability to explain officers' attitudes toward community policing. This research also seeks to discover the relationships among job characteristics, job satisfaction, and officers' attitudes toward community policing. More specifically, this study attempts to address one main question: **What factors influence police officers' attitudes toward community policing in South Korea?** To answer this question, the literature of community policing, job satisfaction, and job characteristics, including organizational and occupational culture, was reviewed. As depicted in Figure 1, this model accounts for the influence of job characteristics and job satisfaction on officers' attitudes toward community policing. In addition, this study examined how demographics and individual level factors influence job characteristics, job satisfaction, and officers' attitudes toward community policing. Moreover, the relationships between job characteristics and job satisfaction were estimated. Although the job characteristics model does not focus on employees' job satisfaction, it is very crucial to understand job characteristics and job satisfaction, especially in policing, because job satisfaction influences officers' performance significantly (Greene, 1989; Zhao et al., 1999). The expectancy motivation theory was also employed to examine these relationships. The confirmatory factor analysis and structural regression models were employed to measure the concepts accurately and discover the complicated relationships among the concepts. This study makes significant contributions to the current knowledge on the topic. Specifically, the study has improved our understanding of community policing by: 1) identifying the determinants of

officers' attitudes toward community policing; 2) discovering the relationships among the determinants clearly; and 3) improving the job characteristics model and expectancy motivation theory in the policing context. In addition, this study is the first empirical study to apply the job characteristics model and expectancy motivation theory in Korea, which has a centralized policing system. The findings in this study were compared with those of previous studies, which were mainly implemented in Western countries, as well as with those in countries that have centralized police organizations. In this section, the relationships among variables, measurement, and analyses are discussed.

(1) Job Satisfaction and Officers' Attitudes toward Community Policing

The results from the bivariate analysis and the series of structural equation modeling (i.e., confirmatory factor analyses and structural regression model) reveal that officers' job satisfaction influences officers' attitudes toward community policing. The bivariate analysis suggests that officers who are satisfied with pay/benefits, promotion, and work are more likely to have a positive attitude toward community policing. These findings are interpreted in light of theoretical insight drawn from Porter and Lawler (1968), DeJong et al. (2001), and Mastrofski et al. (1994). However, the results of the structural regression model indicate that only satisfaction with work has statistically significant relations with officers' attitudes toward community policing. Satisfaction with pay/benefits and promotion do not affect officers' attitudes toward community policing.

Expectancy motivation theory suggests that job satisfaction influences employees' (officers') performance and their attitudes toward tasks such as community policing. This theory has origins in management and was first applied to police organizations in the United States,

which has a decentralized policing system. The findings in this research partially confirmed that expectancy motivation theory could be applied to the Korean police, which is a centralized system. Bayley (1990) explained the differences between centralized policing systems and decentralized policing systems. The police departments in a centralized policing system have little autonomy and officers are transferred frequently to other departments. He indicated that some policies in a centralized policing system might not work in a decentralized policing system due to the large discrepancies between the systems. The different policing system in Korea might account for the partial confirmation of expectancy motivation theory.

In addition, this study shows that job satisfaction influences officers' attitudes toward community policing, but the opposite direction is not supported. That is, officers who are satisfied with their work have more positive attitudes toward community policing. However, officers' positive attitudes toward community policing do not affect their job satisfaction.

(2) Job Characteristics and Officers' Attitudes toward Community Policing

The results of the bivariate analysis fully support the hypotheses that job characteristics influence officers' attitudes toward community policing. Officers' positive perception of job characteristics leads to their positive attitude toward community policing. However, the structural regression model indicates that supervision, social network at work, and public support have statistically significant relationships with officers' attitudes toward community policing. Top management support, communication with top managers, and nature of work are not statistically significant factors in officers' attitudes toward community policing.

The job characteristics model is partially supported in this study. First, the results show how important supervisors' roles are in the implementation of community policing.

Supervision⁶³ is the most influential factor in officers' attitudes toward community policing. In general, supervisors in an organization encourage employees to achieve their goals and provide them with resources in order to complete the objective of the organization (Young and Jordan, 2008). Supervisors in the police force are different from leaders of other organizations in terms of performance monitoring, rewards and discipline, and collaboration with outsiders (Mastrofski, 2006). In addition, Korean police supervisors are more powerful and influential than those in the United States because police leaders in Korea have the authority to promote, assign, and transfer officers across the country (Kim and Park, 2009). Engel and Worden (2003) indicated that line officers are influenced by their supervisors and leaders. If their supervisors prioritize the implementation of community policing, they spend more time in conducting community policing. Line officers in Korea are also severely influenced by their supervisors due to the centralized policing system, because the centralized policing adopts a top-down approach (Bayley, 1990; Kim, 2011). Thus, it is reasonable to assume that if their supervisors understand and prioritize the implementation of community policing, officers spend more time conducting community policing. In other words, supervisors' intention to implement community policing is very important and can influence line officers' attitudes toward community policing.

Another interesting finding in this study is that social network at work positively affects officers' attitudes toward community policing. Officers' close relations with their colleagues lead to positive attitudes toward community policing. Generally, Korean police officers have strong ties to each other. The survey in this study reveals that more than 60% of Korean officers have good relations with their colleagues.

⁶³ The standardized coefficient of supervision is higher than any other variables ($\beta = .22$).

Regarding public support, officers' perception of public support is critical for the successful implementation of community policing because it is based on the assumption that police and citizens work together to produce justice (Trojanowicz and Bucqueroux, 1994). Officers' perception of public support influences their attitudes towards community policing directly (Lord and Friday, 2008; Nalla and Boke, 2009). The results of this study reinforced this public support thesis, suggesting that officers who perceive that citizens trust, provide information to, and work with officers express positive attitudes toward community policing in Korea. This is consistent with research findings in decentralized policing systems (Greene, 1989; Yim and Schafer, 2009). In addition, this is a dramatic change, in light of the history of the Korean police force, which served the Japanese government and military regimes until a civilian was elected president in 1993. The officers have begun to recognize the importance of public support, and two decades later, public support has become a critical element of community policing.

(3) Job Characteristics and Job Satisfaction

Officers' perceptions of job characteristics affect their job satisfaction as well as their attitudes toward community policing (Hackman and Oldham, 1980). The results of the bivariate analysis fully support the job characteristics model. Officers' perceptions of top management support, communication with top managers, nature of work, supervision, social network at work, and public support are statistically significantly associated with their job satisfaction in terms of pay/benefits, promotion, and work.

However, the results of the structural regression model partially confirm the relationships between job characteristics and job satisfaction. It should be noted that top management support

is the most influential factor in job satisfaction. Top management support influences all three aspects of job satisfaction and the standardized regression coefficient is much higher than that of any other variables. Davey and his colleagues (2001) indicated the positive function of officers' perception of top management support, which increases job satisfaction and decreases job stress.⁶⁴

Unlike top management support, supervision influences only officers' satisfaction with promotion. As discussed above, supervisors are different from top managers in the centralized Korean policing system. Supervisors are responsible for monitoring line officers, while top managers are responsible for the operational success and the performance of the organization. The different responsibilities between supervisors and top managers might lead to some differences. In addition, top management support has a more substantive relationship to satisfaction with promotion than supervisors. This result reflects that top managers are more powerful than supervisors in promotion.

Regarding nature of work and danger, they affect officers' job satisfaction with promotion and work. When officers perceive that their work is independent, complex, and significant, they are more satisfied with promotion and work. However, officers' job satisfaction with promotion and work decrease when officers feel that their work is dangerous. This study indicates that although danger is one of the main characteristics of police work, it affects satisfaction with promotion and work negatively.

According to this study's survey, officers have negative perceptions of public support. Half of the officers reported that citizens do not trust police. However, the structural regression

⁶⁴ In this study, job stress was not measured.

model suggests that public support affects job satisfaction with pay/benefits. Officers in Korea recognize that any salary increase is strongly influenced by public opinion. The central government decides officers' salaries due to the centralized policing system, and the decision is affected by public influence.

Interestingly, communication with top managers does not influence any aspect of job satisfaction, while top management support affects all aspects of job satisfaction significantly. Police leaders including top managers have made efforts to communicate with line officers by meetings or email. However, this study reveals that these efforts are not directly associated with officers' job satisfaction.

In terms of indirect relationships, top management support, nature of work, and social network are statistically significant factors that influence officers' attitudes toward community policing indirectly. First of all, top management support is the most important factor because it influences three aspects of job satisfaction significantly and satisfaction with work affects officers' attitudes toward community policing. Although top management does not influence officers' attitudes toward community policing directly, it can affect officers' attitudes toward community policing indirectly by increasing officers' satisfaction with work. In addition, nature of work is crucial because it influences officers' attitudes toward community policing indirectly.

(4) Demographics and Individual Level Factors

Officers' Attitudes toward Community Policing

The results of the bivariate analysis and ANOVA suggest that years of experience and job assignment are statistically significant variables that affect officers' attitudes toward community policing. More experienced officers have more positive attitudes toward community policing

due to the seniority system. It is generally considered that patrol officers have more positive attitudes toward community policing, but this study reveals that non-patrol officers have more positive attitudes. That is, officers who conduct community policing have less positive attitudes toward community policing.

The structural regression model indicates that only gender is an important variable. Contrary to the hypothesized direction, however, male officers have more positive attitudes toward community policing. Rank and education are not statistically significant factors in any analysis in this study. Officers' rank does not influence their attitudes toward community policing. Previous studies suggested that education is positively associated with officers' attitudes toward community policing (Carter et al., 1989; Schafer, 2001), but that is not supported in this study.

Officers' Job Satisfaction

According to the bivariate analysis, officers' satisfaction with pay/benefits is influenced by gender and job assignment. Female and non-patrol officers have higher levels of satisfaction with pay/benefits than male and patrol officers. In addition, female officers are more likely to be satisfied with their work than male officers. The Korean government has implemented gender equity policies and improved the status of women in the organization. For example, the "Women's Development Act" was legislated in 1995 and the Ministry of Gender Equality and Family was established in 2005 (Shin, 2006). The KNPA is a part of the central government

(Won and Pascall, 2004). There are several policies in the Korean police to improve female officers' status.⁶⁵ These efforts might account for this result.

The results of the structural regression model show that gender, job assignment, education, and years of experience are important variables. The results on gender and job assignment are consistent with the bivariate analysis. Education is negatively associated with satisfaction with pay/benefits and promotion. Less-educated officers are more satisfied with pay/benefits and promotion than those with higher levels of education. Zhao and his colleagues (2002) argued that officers with a high school diploma are more satisfied with their job than college-educated officers because officers with a high school diploma have lower expectations of rewards for their work. This interpretation might be applied to the Korean police.

Similar to prior research in the United States, this study indicates that years of experience is negatively associated with satisfaction with promotion. Promotion is very competitive in the Korean police force and occurs once a year. Only one out of ten to twenty officers, depending on the rank, are promoted annually. As officers fail to get promoted, they become cynical and less satisfied with promotion opportunities. Many officers complain that the promotion procedure is unfair and ambiguous.

Job Characteristics

The bivariate analysis shows that gender and job assignment have statistically significant relationships to job characteristics. Female officers have more positive perceptions of top management support, communication with top managers, and nature of work than male officers.

⁶⁵ The flexible work time for pregnant officers, promotion quarter for female officers, and the celebration of Female Officers' Day (July 1) are some examples.

The representatives of female officers have regular meetings with top managers to discuss female officers' work conditions and other issues (KNPA, 2009).

Non-patrol officers have more positive perceptions of top management support, communication with top management, and supervision. Non-patrol officers, such as police administrators, have more chances to meet or communicate with top managers. Moreover, they contact their supervisors more frequently than patrol officers.

The structural regression model also indicates that job assignment is an important factor that influences officers' perceptions of top management support, communication with top managers, supervision, and public support. Again, non-patrol officers have more positive perceptions than patrol officers. The most substantive relationship in job characteristics is that between years of service and nature of work. Although experienced officers are not satisfied with promotion, they perceive that their work is independent and significant. In the Korean police, experienced officers are respected and their autonomy is guaranteed by supervisors.

(5) Measurement and Analyses

This study provides several statistically valid measurement models. First, officers' attitudes toward community policing were measured successfully. The questions drawn from prior research assessed officers' attitudes toward community policing appropriately. In addition, this study confirmed that the job descriptive index (JDI) was a good measurement of job satisfaction. That is, prior research in the United States and other Western countries showed that the JDI is an excellent tool to measure employees' job satisfaction in policing (Dantzker, 1994; Zhao et al., 1999) and management (Kinicki et al., 2002). The results of the confirmatory factor

analysis indicate that the questions of the JDI measured several aspects of officers' job satisfaction successfully.

The job characteristics in this study were divided into six aspects based on the job characteristics model and prior research (Hackman and Oldham, 1980; Parks et al., 1998; Zhao et al., 1999). Five aspects of job characteristics (top management support, communication with top managers, supervision, social network at work, and public support) were well measured by confirmatory factor analysis. However, the question about danger was not loaded well in nature of work. This question was excluded from the nature of work variable, but was used in the structural regression model as a separate exogenous variable because danger and risk are key characteristics of police work (Skolnick, 1994).

The analysis also improved prior research by employing several statistical techniques. More specifically, the structural regression model revealed complicated relations among observed and latent variables. It allowed testing hypotheses about direct and indirect causal effects. In addition, related variables were correlated in the model and they were based on theories and prior research. This procedure enhanced the model fit indexes as well as standardized coefficients.

2. Conclusion and Policy Implications

The primary concern of this study was to discover the factors that influence officers' attitudes toward community policing and provide policy implications for the successful implementation of community policing. The results indicate that the job characteristics model and expectancy motivation theory are partially applicable to the Korean police. Regarding the job characteristics model, supervision, social network at work, and public support affect officers'

attitudes toward community policing. In addition, several job characteristics influence officers' satisfaction with pay/benefits, promotion, and work. Top management support is the most significant factor that influences all three aspects of job satisfaction.

In terms of expectancy motivation theory, three aspects of job satisfaction are completely measured in this study. The bivariate analysis fully supports the theory, but the structural regression analysis partially buttresses the theory. Only satisfaction with work affects officers' attitudes toward community policing. It can be concluded that the job characteristics model and expectancy motivation theory can be applied to the Korean police, but these theories are supported only partially.

Even though many demographics and individual level factors do not significantly influence officers' attitudes toward community policing, gender and job assignment are crucial factors that affect officers' attitudes toward community policing. Contrary to the hypotheses and prior research, the results revealed that male and non-patrol officers have more positive attitudes toward community policing.

The first general policy implication drawn from this research is that overall, supervisors should prioritize community policing with full support in order to improve police relationships with the public. The Anti-Corruption & Civil Rights Commission suggested the implementation of community policing because citizens still distrust police and believe that the police are corrupt (Choi, 2011). In addition, this study indicates that supervision is the most significant factor for the implementation of community policing. It is necessary to train supervisors to implement community policing successfully. The Korean police have focused on training line officers, but this study suggests that supervisors should understand community policing completely. In

addition, officers' relationships with colleagues are very critical for the successful implementation of community policing. The Korean police have been concerned about the negative aspects of close relationships among officers, such as the code of silence. This study indicates that close relationships with colleagues enhance officers' attitudes toward community policing. Also, it is essential for the Korean police to gain trust among citizens. If officers recognize that citizens trust them and would like to work with police officers, community policing would be conducted more actively and successfully.

Second, the significance between job satisfaction and officers' attitudes toward community policing suggests that police leaders need to consider officers' job satisfaction with their work for the successful implementation of community policing. Merely increasing pay is not enough to encourage officers to conduct community policing. Scholars in the United States have indicated that officers' job satisfaction has several dimensions (Wilson and Bennett, 1994; Zhao et al., 1999). This is also true in the Korean police. Three aspects of officers' job satisfaction were clearly measured in this study. Officers' satisfaction with work is an important factor that influences officers' attitudes toward community policing. Top management support affects satisfaction with work significantly. More specifically, top managers' continuous support can increase officers' satisfaction with work, in turn leading to officers' positive attitudes toward community policing. However, top managers, including the commissioner generals⁶⁶, have been changed frequently. Continuous support from top managers cannot be expected. For example, the commissioner generals in the late 1990s and early 2000s supported community policing, but the commissioner generals in the late 2000s or early 2010s began to prioritize other

⁶⁶ The highest ranking officer in the Korean police.

policies such as zero tolerance policing (KNPA, 2009), school violence (KNPA, 2010), and the protection of women and children (KNPA, 2011). A fixed tenure system for top managers including the commissioner general can guarantee continuous support and might lead to successful implementation of community policing.

Lastly, demographics and individual level factors are significant in officers' attitudes toward community policing, job satisfaction, and job characteristics. This study reveals that female and patrol officers have less positive attitudes toward community policing. It is necessary to focus on female and patrol officers. More incentive should be provided to them. For example, special promotion for community policing was introduced in 1999 in order to encourage patrol officers to conduct community policing actively. However, some officers who failed to get promoted questioned the fairness of this policy because the criteria for the promotion and the evaluation of officers' performance on community policing were not clear. Also, non-patrol officers raised the issue of equity. They argued that the special promotion for community policing was a privilege for patrol officers. It was abolished in 2008 due to conflicts among officers and the unclear criteria for the performance appraisal of community policing. It is worth reconsidering the special promotion for community policing as an incentive for patrol officers. In addition, police leaders might need to take steps to enhance female and patrol officers' morale, perhaps by fulfilling their expectations or having regular meetings with these officers.

3. Limitations and Future Research

This study has explored officers' attitudes toward community policing, job characteristics, and job satisfaction beyond Western contexts in the course of developing the job characteristics

model with expectancy motivation theory in the Korean police. The study is limited due to the sample collection, measurement, and research method.

First, the data was collected from a survey among police officers in 16 police departments across the country. Studies on Korean police usually have surveyed officers who trained at the Korea National Police University or the Police Comprehensive Academy because researchers could collect national samples easily (Seo, 1997; Lee, 2008). In addition, Lee (2002) argued that a sampling design is not necessary because the sample and population in the research tend to be identical. He assumed that the sample could represent the Korean police because the Korean police have a highly centralized police system. The assumption that a sample in one or several police stations can represent the population in a centralized police system, however, is not the case in the current study. Although stratified sampling was employed to select samples to represent the population, the sample is partially different from the population in terms of age, years of experience, and rank (see Table 6). For example, younger and less experienced officers were slightly overrepresented in the study sample versus older and more experienced officers when compared to the general population. We should exercise caution in interpreting the relationship between years of experience and other variables. In future research, it is recommended to encourage more experienced officers to participate in surveys or interviews.

Although the sample was collected from around the country and departments were randomly selected, it might not represent the Korean police perfectly. In terms of sample size, Krejcie and Morgan (1970) suggested the optimal sample size given a population size. According to their suggestion, 383 officers in this study would be appropriate at a 95 percent confidence level and a 5 percent margin of error. The sample size in this study was 421 officers,

but it indicated that there were discrepancies between the sample and the population in terms of age, years of experience, and rank. If a 99 percent confidence level and 5 percent margin of error were chosen, 659 officers should have been surveyed. However, it should be noted that the population size is not the only factor to be considered in determining sample size. Research design, hypotheses, the width of confidence level, anticipated effect size, and sample size in past studies should be reviewed to determine the appropriate sample size (Lenth, 2001). This study was originally planned to collect more than 1,000 officers to increase the confidence level and decrease the margin of error. However, it was impossible to collect more cases due to the death of North Korean dictator Kim Jong-il in December 2011. Some regular meetings were cancelled or the numbers of officers who normally attended the meetings decreased because many officers had to work in the field as a result of this unexpected situation.

Second, the questionnaires were designed according to the job characteristics model, the expectancy motivation theory, and previous studies in the United States or other Western countries. Job satisfaction and officers' attitudes toward community policing were successfully measured, but job characteristics were partially measured. For example, the question about danger was not loaded to measure nature of work. Danger is one of the characteristics of American policing (Skolnick, 1994). Fifty-six law enforcement officers were feloniously killed in the line of duty in 2010 in the United States (Department of Justice, 2011), while no officer was killed in the field in 2009 and 2010 in Korea (KNPA, 2011). These different situations might account for this result. In terms of data characteristics, a five-point Likert scale was employed to measure job characteristics, job satisfaction, and attitudes toward community policing. Also, age, years of experience, and number of months in the current position were

measured by several categories. Each scale does not have equal intervals between values. It should be admitted that the data in this study is less powerful than interval or ratio level data.

Third, the questions came from a Western context that is based on individualism, while Korean society has been inculcated by collectivism for several hundred years. Collectivism influences police organizations, operations, and officers' behavior enormously in China, Korea, and Japan (Jiao, 2001). Morash and her colleagues (2008) suggested that collectivism affects Korean police officers' stress directly. However, collectivism is not considered here because this study is not a comparative study. Rather, this study examined officers' attitudes toward community policing in the Korean police using the job characteristics model and expectancy motivation theory which were originally developed in the United States. Further consideration of the Korean context (e.g., collectivism and centralized policing system) would provide clearer measurement of job characteristics and enable researchers to understand job characteristics in the Korean police. For a future study, inclusion of more questions that reflect the Korean context is highly recommended.

Finally, this study examined officers' attitudes toward instead of their behavior in community policing. Attitude is not an exact predictor of behavior even though there are close relationships between attitudes and behaviors and attitudes influence behaviors in many cases (Ajzen and Fishbein, 1977; Brannon et al., 1973). This study does not suggest that officers with positive attitudes toward community policing always spend much time in implementing community policing or conduct community policing more successfully. Officers with negative attitudes toward community policing might implement community policing enthusiastically due to reasons such as rewards and fear of discipline. The survey is not enough to discover which

factors influence officers' attitude toward community policing and their real behaviors to implement community policing. The research methods that the Project on Policing Neighborhoods (PPON) employed would provide a more accurate measurement of officers' attitudes and behaviors. The researchers in the PPON conducted systematic observation of patrol officers and patrol supervisors. The researchers recorded all activities of officers and supervisors. In addition, they interviewed patrol officers and supervisors about training and knowledge, experience, perceptions of their beats and organizational environment, and beliefs about the police role (Mastrofki et al., 1996; McCuskey et al., 1999). For future research, a systematic observation and an in-depth interview of police officers should be considered to discover which factors are crucial to the successful implementation of community policing.

APPENDIX 1:
QUESTIONNAIRE

QUESTIONNAIRE ON JOB SATISFACTION, ORGANIZATIONAL CHARACTERISTICS AND COMMUNITY POLICING IN SOUTH KOREA

Dear officers,

The aim of this research is to examine officers' job satisfaction, organizational characteristics, and general attitude toward community policing. More specifically, we try to find out how job satisfaction and organizational characteristics influence officers' attitudes toward community policing.

Please fill the questionnaire by marking your answers on the survey sheet. The survey administrators do not know the names of the respondents who choose to participate in the study nor do the surveys have any identification marks. All responses are completely anonymous and will not be used in any way that may identify the participant. Your privacy will be protected to the maximum extent allowable by law. Please return the filled - in survey sheets in the enclosed envelope to the survey administrators at Michigan State University.

Participation in this survey is voluntary. This survey will take about 20 minutes to complete. If you have agreed to respond to the survey, you may refuse to participate in certain procedures, answer certain questions, or discontinue your participation at any time without penalty or loss of benefits. In addition, if you feel that combinations of information could easily identify you, you can refuse to answer any questions that are concerned. You indicate your voluntary agreement to participate by completing and returning this questionnaire. To keep this survey anonymous, please do not write any identifiable information on the form. We do not foresee any identifiable risks or benefits to you for responding to this survey. However, we believe that by participating in this study, we hope to gain a better understanding of several aspects of the Korean police such as job satisfaction, organizational characteristics, and community policing.

The data will be kept with the principal investigator at MSU for a period of 1 year. Data files will be stored on investigators' computers with password access. These computers are located in the investigators' offices with lock and key located at Michigan State University.

If you have questions about the study please feel free to call Professor Mahesh Nalla, School of Criminal Justice at MSU (Tel: 517 355 2197; e-mail: nalla@msu.edu) who is the responsible project investigator or contact Wook Kang (Tel: 517 899 2880; e-mail: kangwook@msu.edu) or Sungmoo Hong (piaceree@gmail.com) who are survey administrators.

Sincerely,
Mahesh Nalla, Ph.D.
Wook Kang
School of Criminal Justice
560 Baker Hall, East Lansing, Michigan 48824, U.S.A.

PART I. BACKGROUND INFORMATION

1. Age: A. 20-29 years old B. 30-39 years old C. 40-49 years old D. 50 or more
2. Number of years of experience:
A. 0- 4 years B. 5- 9 years C. 10-14 years D. 15 – 19 years E. 20 years or more
3. Number of months of experience in the current department:
A. 0- 6 months B. 7- 12 months C. 13-18 months D. 19 – 24 months E. 25-30 months
F. 31-36 months G. 37 months or more
4. Your Gender is: A. Male B. Female
5. Education:
A. High school B. Associate degree C. Bachelor of Arts D. Master of Arts/Science or more
6. What is your rank?
A. Patrol officer or Senior patrol officer B. Sergeant C. Lieutenant
D. Captain E. Superintendent or more
7. Your position is: A. Non-supervisory B. Supervisory
8. In which department, do you currently work?
A. General affairs or police administration
B. Patrol or traffic
C. Criminal investigation
D. Public security or intelligence
E. National security or foreign security
F. Other _____
9. Where is your work place now?
A. Police office or police box B. Police station
C. Riot police or special agency
D. Local police agency or Subsidiary facilities (Police University, etc)
E. National Police Agency F. Other _____
10. How did you become a police officer?
A. Exam for low-ranking police officer
B. Police Comprehensive Academy
C. National Police University D. Other _____
11. If you work at local police department, what is the level of your police department?
A. The first degree (Big city)

- B. The second degree (Medium size city)
- C. The third degree (Small town/rural area)

PART II

In the following sections we would like your views on job satisfaction, organizational characteristics, and community policing. Please answer the following questions by writing a number that best expresses your personal view: 1 (Strongly Disagree), 2 (Disagree), 3 (Not sure or unclear), 4 (Agree), and 5 (Strongly Agree).

Satisfaction with Pay/Benefit

12. I am satisfied with my overall level of pay.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

13. I am satisfied with the benefits I receive.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

14. I am satisfied with my opportunities for salary increases.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

Satisfaction with Promotion

15. Officers who do well on the job stand a fair opportunity of being promoted.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

16. I am satisfied with my chances for promotion.

Strongly	Not sure	Strongly
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Disagree 1	Disagree 2	Unclear 3	Agree 4	Agree 5
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17. Officers' performance is evaluated fairly.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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18. I am satisfied with officers' performance appraisal.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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Satisfaction with Work

19. Overall, I am satisfied with my job.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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20. I am satisfied with the workload.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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21. I am satisfied with the work environment.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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22. I am satisfied with my position.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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Top Management Support

23. Top managers set clear goals for quality improvement.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

24. Top managers try to plan ahead for changes that might affect our performance.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

25. Top managers support officers well for the quality improvement.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

Communication with Top Managers

26. Top managers do a good job of communicating with officers.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

27. Top managers give praise and recognition for outstanding performance.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

28. Top managers in this organization follow up on suggestions for improvement.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

Nature of Work

29. The job requires me to use a number of complex or high-level skills.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

30. The job gives me considerable opportunity for independence and freedom in my work.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

31. My job is dangerous and risky.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

32. My job is relatively significant in the organization.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

33. My job may affect a lot of other people according to my work performance.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

Supervision

34. My supervisor gives credit to people when they do a good job.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

35. My supervisor rewards being cooperative and a good team player.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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36. My supervisor shows complete trust in officers' ability to perform their tasks well.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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37. Supervisors often let me know how well they think I am performing.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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Social Network at Work

38. Officers in my department enjoy working with their coworkers.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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39. Coworkers in my department are like a family.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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40. There are no serious conflicts between coworkers.

Strongly		Not sure		Strongly
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Disagree 1	Disagree 2	Unclear 3	Agree 4	Agree 5
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41. Coworkers often let me know how well they think I am performing well.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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Public Support

42. Citizens generally cooperate with police officers.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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43. Citizens trust police officers.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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44. Citizens would often provide information about a crime if they knew something.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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45. Citizens are willing to work with police officers to try to solve neighborhood problems.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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Operational Philosophy

46. Police officer's primary job is to enforce laws.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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47. Police officer's primary job is to conduct aggressive policing.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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48. Police officer's primary job is to conduct selective enforcement.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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49. Police officer's primary job is to maintain order.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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Officers' Attitudes toward Community Policing

50. Officers need to work with neighborhood residents, civic groups, other government agencies, and the local business.

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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51. Officers need to try to solve non-crime problems

Strongly Disagree 1	Disagree 2	Not sure Unclear 3	Agree 4	Strongly Agree 5
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52. I think we should increase the emphasis placed on community policing.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

53. I support community policing programs.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

54. Community policing improve the relationship between police and citizens in my district.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

55. Community policing is useful for the crime prevention in my district.

Strongly Disagree	Disagree	Not sure Unclear	Agree	Strongly Agree
1	2	3	4	5

Thank you for your time and assistance in filling out this survey.

APPENDIX 2:
SKEWNESS AND KURTOSIS

Table A. Description of Skewness and Kurtosis on Job Satisfaction (N=421)

Survey items	Skewness	S.E of Skewness	Kurtosis	S.E. of Kurtosis
Satisfaction with Pay and Benefit				
I am satisfied with my overall level of pay.	.24	.12	-1.24	.24
I am satisfied with the benefits I receive.	.17	.12	-1.14	.24
I am satisfied with my opportunities for salary increases.	.19	.12	-1.02	.24
Satisfaction with Promotion				
Officers who do well on the job stand a fair opportunity of being promoted	-.29	.12	-.95	.24
I am satisfied with my chances for promotion.	-.15	.12	-.98	.24
Officers' performance is evaluated fairly.	.01	.12	-.85	.24
I am satisfied with officers' performance appraisal.	-.24	.12	-.75	.24
Satisfaction with Their Work				
Overall, I am satisfied with my job.	-.81	.12	-.11	.24
I am satisfied with the workload.	-.72	.12	-.56	.24
I am satisfied with the work environment.	-.10	.12	-1.18	.24
I am satisfied with my position.	-.68	.12	-.48	.24

Table B. Description of Skewness and Kurtosis on Organizational Culture (N=421)

Survey items	Skewness	S.E of Skewness	Kurtosis	S.E. of Kurtosis
Regarding Top Management Support				
Top managers set clear goals for quality improvement.	-.02	.12	-.87	.25
Top managers try to plan ahead for changes that might affect our performance.	.12	.12	-.78	.25
Top managers support officers well for the quality improvement	.18	.12	-.81	.25

Regarding Communication with Top Managers

Top managers do a good job of communicating with officers.	.09	.12	-.84	.25
Top managers give praise and recognition for outstanding performance.	-.21	.12	-.93	.25
Top managers in this organization follow up on suggestions for improvement.	.10	.12	-.73	.25

Table C. Description of Skewness and Kurtosis on Occupational Culture (N=421)

Survey items	Skewness	S.E of Skewness	Kurtosis	S.E. of Kurtosis
Regarding Nature of Work				
The job requires me to use a number of complex or high-level skills.	.00	.12	-.99	.25
The job gives me considerable opportunity for independence and freedom in my work.	-.21	.12	-.99	.25
My job is dangerous and risky.	-.36	.12	-.89	.25
My job is relatively significant in the organization.	-.74	.12	.39	.25
My job may affect a lot of other people according to my work performance.	-.74	.13	.36	.25
Regarding Supervision				
My supervisor gives credit to people when they do a good job.	-.83	.12	-.12	.25
My supervisor rewards being cooperative and a good team player.	-.73	.12	-.05	.25
My supervisor shows complete trust in officers' ability to perform their tasks well.	-.81	.12	.17	.25
Supervisors often let me know how well they think I am performing well.	-.74	.12	-.01	.25
Regarding Social Network at Work				
Officers in my department enjoy working with their coworkers.	-1.3	.12	2.53	.25
Coworkers in my department are like a family.	-.89	.12	.67	.25
There are no serious conflicts between coworkers.	-1.41	.12	2.62	.25

Coworkers often let me know how well they think I am performing well.	-.85	.12	.68	.25
Regarding Public Support				
Citizens generally cooperate with police officers.	.28	.12	-.96	.25
Citizens trust police officers.	.29	.12	-.66	.25
Citizens would often provide information about a crime if they knew something.	.22	.12	-.66	.25
Citizens are willing to work with police officers to try to solve neighborhood problems.	.18	.12	-.74	.25

Table D. Description of Skewness and Kurtosis on Community Policing (N=421)

Survey items	Skewness	S.E of Skewness	Kurtosis	S.E. of Kurtosis
Regarding Officers' Attitudes toward Community Policing				
Officers need to work with neighborhood residents, civic groups, other government agencies, and the local business.	-1.26	.12	2.22	.25
Officers need to try to solve non-crime problems	-.79	.12	-.11	.25
I think we should increase the emphasis placed on community policing.	-.99	.12	1.19	.25
I support community policing programs.	-1.00	.12	1.22	.25
Community policing improve the relationship between police and citizens in my district.	-1.26	.12	2.32	.25
Community policing is useful for the crime prevention in my district.	-1.13	.12	1.84	.25

APPENDIX 3:
DEFINITIONS OF MEASURES AND DESCRIPTIONS OF MODEL VARIABLES

Table . Definitions of Measures and Descriptions of Model Variables

Latent Variable	Observed Variable	Survey Items
<i>Job Satisfaction (SAT)</i>		
<i>Satisfaction with Pay and Benefit (SATPB)</i>	Overall Pay	I am satisfied with my overall level of pay.
	Benefit	I am satisfied with the benefits I receive.
	Salary Increase	I am satisfied with my opportunities for salary increases.
<i>Satisfaction with Promotion (SATPR)</i>	Promotion Opportunity	Officers who do well on the job stand a fair opportunity of being promoted
	Promotion Chance	I am satisfied with my chances for promotion.
	Fair Evaluation	Officers' performance is evaluated fairly.
	Performance Appraisal	I am satisfied with officers' performance appraisal.
<i>Satisfaction with Their Work (SATW)</i>	Overall Satisfaction	Overall, I am satisfied with my job.
	Workload	I am satisfied with the workload.
	Work Environment	I am satisfied with the work environment.
	Position	I am satisfied with my position.
<i>Organizational Culture (ORC)</i>		
<i>Top Management Support (TMS)</i>	Clear Goals	Top managers set clear goals for quality improvement.
	Plan Ahead	Top managers try to plan ahead for changes that might affect our performance.
	Manager Support	Top managers support officers well for the quality improvement
<i>Communication with Top Managers (CTM)</i>	Good Communication	Top managers do a good job of communicating with officers.
	Praise	Top managers give praise and recognition for outstanding performance.
	Follow	Top managers in this organization follow up on

	Suggestion	suggestions for improvement.
<i>Occupational Culture (OCC)</i>		
<i>Nature of Work (NW)</i>	Complex	The job requires me to use a number of complex or high-level skills.
	Independent	The job gives me considerable opportunity for independence and freedom in my work.
	Danger	My job is dangerous and risky.
	Significant	My job is relatively significant in the organization.
	Affect	My job may affect a lot of other people according to my work performance.
<i>Supervision (SUP)</i>	Credit	My supervisor gives credit to people when they do a good job.
	Team Player	My supervisor rewards being cooperative and a good team player.
	Supervisor Trust	My supervisor shows complete trust in officers' ability to perform their tasks well.
	Supervisor Feedback	Supervisors often let me know how well they think I am performing.
<i>Social Network at Work (SNW)</i>	Enjoy	Officers in my department enjoy working with their coworkers.
	Family	Coworkers in my department are like a family.
	No-conflict	There are no serious conflicts between coworkers.
	Coworkers Feedback	Coworkers often let me know how well they think I am performing well.
<i>Public Support (PS)</i>	Cooperative	Citizens generally cooperate with police officers.
	Citizen Trust	Citizens trust police officers.
	Provide Information	Citizens would often provide information about a crime if they knew something.
	Work Together	Citizens are willing to work with police officers to try to solve neighborhood problems.
<i>Officers' Attitudes</i>	Residents	Officers need to work with neighborhood residents, civic groups, other government agencies, and the local

<i>toward Community Policing (CP: Endogenous variable)</i>		business.
	Non-Crime Problems	Officers need to try to solve non-crime problems
	Increase CP	I think we should increase the emphasis placed on community policing.
	Support CP	I support community policing programs.
	Improve Relationships	Community policing improve the relationship between police and citizens in my district.
	Crime Prevention	Community policing is useful for the crime prevention in my district.

BIBLIOGRAPHY

BIBLIOGRAPHY

- Adams, R.E., Rohe, W.M. & Arcury, T.A. (2002). Implementing community-oriented policing: organizational change and street officer attitudes. *Crime and Delinquency*, 48 (3), 399 – 430.
- Akdogan, H. (2009). *Understanding and Preventing Police Use of Excessive Force: An Analysis of Attitudes Toward Police Job Satisfaction and Human Rights Laws*. Unpublished dissertation. East Denton, TX: University of North Texas.
- Alarid, L.F., & Wang, H. (1997). Japanese management and policing in the context of Japanese culture. *Policing: An International Journal of Police Strategies & Management*, 20 (4). 600 – 608.
- Allen, D. N. (1982). Police Supervision on the Street: An Analysis of Supervisor/ Officer Interaction during the Shift. *Journal of Criminal Justice*, 10, 91-109.
- Alpert, G. P., Macdonald, J. M., & Dunham, R. G. (2005). Police Suspicion and Discretionary Decision Making During Citizen Stops. *Criminology*, 43, 407–434.
- Anderson, J.C., & Gerbing, D.W. (1988). Structural Equation Modeling in Practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411-423.
- Armeli, S., Eisenberger, R., Fasolo, P., & Lynch, P. (1998). Perceived Organizational Support and Police Performance: The Moderating Influence of Socioemotional Needs. *Journal of Applied Psychology*, 83, 288-297.
- Ayers, R.M. (1995). The police occupational culture in Anglo-American societies. In W.G. Bailey (2nd eds.). *Encyclopedia of Police Science* (pp. 472-480). New York: Garland.
- Baek, H. (2000). *The analysis of police reform*. Seoul, Korea: Police Science Institute.
- Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal*, 10, 107–124.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bayley, D. (1990). *Patterns of Policing: A Comparative International Analysis*. New Brunswick, NJ: Rutgers University Press.

Bayley, D. (1994). International differences in community policing. In D. P. Rosenbaum (Eds.), *The Challenge of Community Policing: Testing the Promises* (pp. 278-283). Thousand Oaks, CA: Sage.

Bayley, D. (2005). *Changing the Guard: Developing Democratic Police Abroad*. Oxford, UK: Oxford University Press.

Benett, R.C. (1997). Job satisfaction among police constables: A comparative study in three developing nations. *Justice Quarterly*, 14(2), 295-323.

Biemer, P. P., & Lyberg, L. E. (2003). *Introduction to Survey Quality*. New Jersey: John Wiley & Sons.

Boke, K., & Nalla, M.K. (2009). Police organizational culture and job satisfaction: A comparison of law enforcement officers' perceptions in Two Midwestern States in the U.S. *Journal of Criminal Justice and Security*, 6, 55-73.

Bollen, K.A. (1989). *Structural equations with latent variables*. New York: John Wiley & Sons.

Bollen, K.A. (2000). Modeling strategies: In search of the holy grail. *Structural Equation Modeling*, 7, 74 – 81.

Borduak, D.J., & Reiss, A.J. (1966). Command, Control, and Charisma: Reflections on Police Bureaucracy. *American Journal of Sociology*, 72 (1), 68-76.

Brannick, M. T. (1995). Critical comments on applying covariance structure modeling. *Journal of Organizational Behavior*, 16, 201 - 214.

Brodgen, M., & Nijhar, P. (2005). *COP: National and International Models and Approaches*. Portland: Willan Publishing.

Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: Guilford.

Brunetto, Y. & Farr-Wharton, R. (2003). The commitment and satisfaction of lower-ranked police officers: Lessons for management. *Policing: An International Journal of Police Strategies & Management*, 26 (1), 43-63.

Buzawa, E. (1984). Determining patrol officer job satisfaction: The role of selected demographic and job – specific attitudes. *Criminology*, 22 (1), 61-81.

Buzawa, E., Austin, T., & Bannon, J. (1994). The role of selected sociodemographic and job-specific variables in predicting patrol officer job satisfaction: A reexamination ten years later. *American Journal of Police*, 13 (2), 51-75.

Byrne, B.M. (1998). *Structural Equation Modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates.

Cabrera, A.F., Castañeda, M.B., Nora, A., & Hengstler, D. (1992). The Convergence between Two Theories of College Persistence. *Journal of Higher Education*, 63 (2), 143-164.

Carlan, P. (2007). The search for job satisfaction: A survey of Alabama policing. *American Journal of Criminal Justice*, 32, 74-86.

Carter, D.L. & Radelet, L.A. (1999) *The Police and the Community (6th Ed)*. Upper Saddle River, NJ: Prentice-Hall.

Chan, J. (1996). Changing police culture. *British Journal of Criminology*, 36, 109-134.

Chan, J. (1997). *Changing police culture: Policing in a multicultural society*. Cambridge: Cambridge University Press.

Chang, D., Chae, G., & Kim, M. (2010). A Study of Service Encounter Type between Business Education Service and Students' Satisfaction and Loyalty in Korean Universities. *Journal of Korean Business Administration*, 23, (2), 813-831.

Chen, Y., & Gant, J. (2001). Transforming local e-government services: the use of application service providers. *Government Information Quarterly*, 18 (4), 343-355.

Cheurprakobkit, S. (2002). Community policing: training, definitions and policy implications. *Policing: An International Journal of Police Strategies & Management*, 25 (4), 709 - 725.

Child, D. (2006). *The essentials of factor analysis (3rd Ed)*. New York: Continuum International.

Choi, C. (2011). *Protection of Citizens in Public Sectors*. Seoul, Korea: Anti-Corruption & Civil Rights Commission.

Choi, P. (1985). *Plans for 21st Century Policing*. Kyungi, Korea: Police Science Institute.

Choi, E. (2006). An analysis on the fixation of the district policing: Focused on the efficient operation of patrol division. *Korean Association of Public Safety and Criminal Justice Journal*, 23, 313-343.

Choi, H. (2003). Theoretical Study about Organizational Culture and Job Satisfaction of Police. *Journal of Korean Police*, 6, 367- 386.

Chung, M. (2011, November 15th). Problems of Officers from a 'Police Staff Candidate Course' or 'Police University'. *Hankookilbo*, 2A.

Clark, R.V. (1997). *Problem-oriented policing and the potential contribution of criminology*. Washington, DC: National Institute of Justice.

COPS. (2009). Office of community oriented policing services. Retrieved from <http://www.cops.usdoj.gov>.

Cordner, G.W. (1998). Community policing: Elements and effects. In G.P. Alpert and A Piquero (Eds.), *Community Policing: Contemporary Readings* (pp. 45-62). Prospect Heights, IL: Waveland Press

Cordner, G., & Biebel, E. P. (2005). Problem-Oriented Policing In Practice. *Criminology & Public Policy*, 4, 155–180.

Crank, J. (1989). Civilianization in Small and Medium Police Departments in Illinois, 1973-1986. *Journal of Criminal Justice*, 17, 167-177.

Crank, J. P. (1997). Celebrating Agency Culture: Engaging a Traditional Cop's Heart in Organizational Change. In Q. C. Thurman & E. McGarrell (Eds.), *Community policing in a rural setting* (pp. 61-70). Cincinnati, Ohio: Anderson.

Crank, J. P., & Caldero, M. (1991). The Production of Occupational Stress in Medium-sized Police Agencies: A Survey of Line Officers in Eight Municipal Departments. *Journal of Criminal Justice*, 19, 339-349.

Crank, J. P. (1997). Celebrating Agency Culture: Engaging a Traditional Cop's Heart in Organizational Change. In Q. C. Thurman & E. McGarrell (Eds.), *Community policing in a rural setting* (pp. 49-57). Cincinnati, Ohio: Anderson.

Crank, J. P. (2004). *Understanding Police Culture* (2nd Eds). Cincinnati, OH: Anderson.

Crede, M., Chernyshenko, O.S., Stark, S., Dalal, R.S., & Bashshur, M. (2007). Job satisfaction as mediator: An assessment of job satisfaction's position within the nomological. *Journal of Occupational and Organization Psychology*, 80, 515-538.

Dantzker, M.L. (1992). An issue for policing – educational level and job satisfaction: A research note. *American Journal of Police*, 12 (2), 101 – 118.

Dantzker, M.L. (1993). An Issue for Policing-Educational Level and Job Satisfaction: A Research Note. *American Journal of Police*, 12(2), 101-118.

- Dantzker, M.L., & Kubin, B. (1998). Job satisfaction: The gender perspective among police officers. *American Journal of Criminal Justice* 23, 19-31.
- D'Aveni, R.A., & Macmillan, I.C. (1990). Crisis and the Content of Managerial Communications: A Study of the Focus of Attention of Top Managers in Surviving and Failing Firms. *Administrative Science Quarterly*, 35, 634-657.
- Davey, J.D., Obst, P.L., & Sheehan, M.C. (2001). Demographic and workplace characteristics which add to the prediction of stress and job satisfaction within the police workplace. *Journal of Police and Criminal Psychology*, 16, 29-39.
- Davis, R., Henderson, N., & Merrick, C. (2003). Community policing: variations on the western model in the developing world. *Police Practice and Research*, 4 (3), 285-300.
- Denison, D.R. (1996). What is the Difference between Organizational Culture and Organizational Climate? A Native's Point of View on a Decade of Paradigm Wars. *Academy of Management Review*, 21 (3), 619-654.
- Department of Justice. (2011). Uniform Crime Report: Law Enforcement Officers Killed and Assaulted, 2010. Washington, D.C.: Department of Justice.
- Devine, J.A., & Wright, J.D. (1993). *The greatest of evils: Urban poverty and the American Underclass*. Hawthorne, NY: Aldine de Gruyter.
- Dewar, R., & Dutton, J. (1986). The adoption of radical and incremental innovations: An empirical analysis. *Management Science*, 32, 1422-1322
- Dong, L., Neufeld, D., & Higgins, C. (2009). Top management support of enterprise systems implementations. *Journal of Information Technology*, 24, 55-80.
- Dowler, K. (2005). Job satisfaction, burnout, and perception of unfair treatment: the relationship between race and police work. *Police Quarterly* 8, 476-489.
- Duhart, D. T. (2001). *Violence in the work place, 1993-99*. Washington, D.C.: Bureau of Justice Statistics.
- Dunham, R. B., Smith, F. J., & Blackburn, R. S. (1977). Validation of the Index of Organizational Reaction with the JDI, the MSQ, and Faces Scales. *Academy of Management Journal*, 20(3), 420-432
- Earley, P. C., & Gibson, C. B. (1998). Taking stock in our progress on individualism-collectivism: 100 years of solidarity and community. *Journal of Management*, 24, 265- 304.

- Eck, J.E., & Rosenbaum, D.P. (1994). The new police order: Effectiveness, equity, and efficiency in community policing. In D.P. Rosenbaum (Eds.), *The challenge of community policing: Testing the promises* (pp. 3-23). Thousand Oaks, CA: Sage.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived Organizational Support. *Journal of Applied Psychology*, 71, 500-507
- Eliason, S. L. (2006). Factors influencing job satisfaction among state conservation officers. *Policing: An International Journal of Police Strategies & Management*, 29 (1), 6-18.
- Enders, C.K. (2001). A primer on maximum likelihood algorithms available for use with missing data. *Structural Equation Modeling*, 8, 128-141.
- Engel, R.S. (2001). Supervisory styles of patrol sergeants and lieutenants. *Journal of Criminal Justice*, 29, 341-355.
- Engel, R.S., & Worden, R.E. (2003). Police officers' attitudes, behavior, and supervisory influences: an analysis of problem solving. *Criminology*, 41 (1), 131-166.
- Esbensen, F. (1987). Foot Patrols: Of What Value? *American Journal of Police*, 6, 45-65.
- Fei, T.L., & Rainey, H.G. (2003). Total quality management in Malaysian government agencies: conditions for successful implementation of organizational change. *International Public Management Journal*, 6 (2), 145-172.
- Filley, A. C., & House, R. J., & Kerr, S. (1976). *Managerial process and organizational behavior*. Glenview, IL: Scott Foresman.
- Filstad, C., & Gottschalk, P. (2010). Collectivism versus individualism in police cultures. *International Journal of Human Resources Development and Management*, 10 (2), 117 – 135.
- Fisher, C. (2003). Why do lay people believe that satisfaction and performance are correlated? Possible sources of a commonsense theory. *Journal of Organizational Behavior*, 24 (6), 753-777.
- Ford, J.K. (2002). Organizational change and development: Fundamental principles, core dilemmas, and leadership challenges in the move toward a community-policing strategy. In M. Morsh and J.K. Ford (Eds.), *The move to community policing: Making change happen* (pp. 126-151). Thousand Oaks, CA: Sage.
- Ford, J. K., Weissbein, D. A., & Plamondon, K. E. (2003). Distinguishing organizational from strategy commitment: Linking officers' commitment to community policing to job behaviors and satisfaction. *Justice Quarterly*, 20(1), 159-183.

- Fornell, C., & Yi, Y. (1992). Assumptions of the Two-Step Approach to Latent Variable Modeling. *Sociological Methods & Research*, 20, 291-320.
- Friesen, D., & Sarros, J.C. (1989). Sources of burnout among educators. *Journal of Organizational Behavior*, 10 (2), 179-188.
- Gau, J.M. (2010). Basic principles and practices of structural equation modeling in criminal justice and criminology research. *Journal of Criminal Justice Education*, 21 (2), 136-151.
- Gibbs, J., Giever, D., & Higgins, G.E. (2003). A Test of Gottfredson and Hirschi's General Theory Using Structural Equation Modeling. *Criminal Justice and Behavior*, 30, 441-458.
- Goldstein, H. (1977). *Policing a Free Society*. Cambridge, MA: Ballinger.
- Goldstein, H. (1979). Improving policing: A problem oriented approach. *Crime & Delinquency*, 25, 236-258.
- Goldstein, H. (1987). Toward community-oriented policing: Potential, basic requirements, and threshold questions. *Crime & Delinquency*, 33, 6–30.
- Graham, J.W., Olchowski, A.E., & Gilreath, T.D. (2007). How Many Imputations are Really Needed? Some Practical Clarifications of Multiple Imputation Theory. *Prevention Science*. 8 (3), 206-213.
- Greene, J.R. (1989). Police Officer Job Satisfaction and Community Perceptions: Implications for Community – Oriented Policing. *Journal of Research in Crime and Delinquency* 26, 168-183.
- Greene, J. R. (1998). The road to community policing in Los Angeles: A case study. In G. P. Alpert & A. Piquero (Eds.), *Community policing: Contemporary readings* (pp. 123–158). Prospect Heights: Waveland Press.
- Greene, J. R. (2000). Community policing in America: changing the nature, structure, and function of the police. *Criminal Justice* 2000, 299-370.
- Greene, J.R. (2004). Community policing and organization change. In W.G. Skogan (Eds.), *Community Policing: Can it work?* (30-53). Belmont, CA: Wadsworth/Thomson.
- Greene, J.R., Alpert, G.P., & Styles, P. (1992). Values and Culture in Two American Police Departments: Lessons from King Arthur . *Journal of Contemporary Criminal Justice*, 8, 183-207.
- Gujarati, D. N. (2002). *Basic econometrics* (4th ed.). New York: McGraw-Hill
- Hackman, J. R., & Oldham, G. R. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology*, 60, 159-170.

Hackman, J.R., & Oldham, G.R. (1976). Motivation through the design of work: test of a Theory. *Organizational Behavior and Human Performance*, 16, 250-279.

Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison-Wesley Publishing Company.

Hagan, F. E. (2006). *Research methods in criminal justice and criminology* (7th Ed.). Boston, MA: Allyn and Bacon.

Haley-Lock, A. (2007). Up close and personal: employee networks and job satisfaction in a human service context. *Social Service Review*, 81, 683-707.

Hall, J., & Neitz, M. J. (1993). *Culture: Sociological perspectives*. Englewood Cliffs, NJ: Prentice Hall.

Halsted, A.J., Bromley, M.L., & Cochran, J.K. (2000). The effects of work orientations on job satisfaction among sheriffs' deputies practicing community oriented policing. *Policing: An International Journal of Police Strategies & Management* 23 , 82-104.

Han, J., & Ling, L. M., 1998. Authoritarianism in the hypermasculinized state: Hybridity, patriarchy, and capitalism in Korea. *International Studies Quarterly*, 42, 53–78.

Hayduk, L., Cummings, G. G., Boadu, K., Pazderka-Robinson, H., & Boulianne, S. (2007). Testing! Testing! One, two three – Testing the theory in structural equation models! *Personality and Individual Differences*, 42, 841-50.

He, N., Zhao, J., & Lovrich, N. (2005). Community policing: A preliminary assessment of environmental impact with panel data on program implementation in U.S. cities. *Crime & Delinquency*, 51, 295-317.

Hickman, M.K., & Reaves, B.A. (2001). Community Policing in Local Police Departments, 1997 and 1999. *Bureau of Justice Statistics Special Report*, 1-11.

Higgins, G.E. (2002). General Theory of Crime and Deviance: A Structural Equation Modeling Approach. *Journal of Crime & Justice*. 25 (2), 71-96.

Hippel, Paul T. (2007). Regression with missing y's: an improved strategy for analyzing multiple imputed data, *Sociological Methodology*, 37, 83-117.

Hoath, D.R., Schneider, F.W., & Starr, M.W. (1998). Police job satisfaction as a function of career orientation and position tenure: Implications for selection and community policing. *Journal of Criminal Justice* 26, 337-347.

Hoffman, V. (1982). The development of modern police agencies in the Republic of Korea and Japan: A paradox. *Police Studies* 5, 3-16.

Hogan, E.A., & Martell, D.A. (1987). A confirmatory structural equations analysis of the job characteristics model. *Organizational Behavior and Human Decision Processes*, 39 (2), 242-263.

Hong, S., & Kim, W. (2003). A comparison between Korean police and American Police. *Journal of Korean Social Science*, 16, 1-20.

Hooper, D., Coughlan, J. and Mullen, M. R (2008). Structural Equation Modeling: Guidelines for Determining Model Fit. *Electronic Journal of Business Research Methods* 6 (1), 53 – 60.

Horton, N.J., & Kleinman, K.P. (2007). Much Ado About Nothing: A Comparison of Missing Data Methods and Software to Fit Incomplete Data Regression Models. *American Statistician*, 61, 79-90.

Howard, W., Donofrio, H., Boles, J.S. (2002). Inter-domain work-family, family-work conflict and police work satisfaction. *Policing: An International Journal of Police Strategies and Management*, 27, 380-395.

Hoyle, R. H., & Panter, A. T. (1995). Writing about structural equation modeling. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 158-171). Thousand Oaks, CA: Sage.

Hsieh, A.T., & Hsieh, S.H. (2010). Dangerous work and name disclosure, *Journal of Criminal Justice*, 38 (4), 410-418.

Hu, L.T., & Bentler, P.M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76-99). Thousand Oaks, CA: Sage.

Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to under parameterized model misspecification. *Psychological Methods*, 3, 424–453.

Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6 (1), 1-55.

Hui, C. H., Yee, C., & Eastman, K. L. (1995). The Relationship between Individualism - Collectivism and Job Satisfaction. *Applied Psychology*, 44, 276–282.

Hurley, A. E., Scandura, T. A., Schriesheim, C. A., Brannick, M. T., Seers, A., Vandenberg, R. J., & Williams, L. J. (1997). Exploratory and confirmatory factor analysis: Guidelines, issues, and alternatives. *Journal of Organizational Behavior*, 18, 667-683.

- Hwang, E. (2006). *A Multilevel test of fear of crime: The effect of social conditions, perceived community policing activities, and perceived risks of victimization in a megalopolis*. Unpublished dissertation. East Lansing, MI: Michigan State University.
- Hwang, E. (2008). Determinants of job satisfaction among South Korean police officers: The effect of urbanization in a rapidly developing nation. *Policing: An International Journal of Police Strategies & Management*, 31 (4), 694-714.
- Hwang, U., & Woo, Y. (2009). Factors Affecting Supportive Attitudes and Field Activities of Community Oriented Policing among Police Officers. *Journal of Korean Police*, 8 (1), 3-40
- Jacobs, J.B., & Cohen, J. (1978). The Impact of Racial Integration on the Police. *Journal of Police Science and Administration*, 6(2), 168-183.
- Jaegal, D. (2002). Determinants of job satisfaction among public employees in Korea. *Journal of Korean Public Administration*. 36 (4), 263 – 280.
- Jaegal, D., & Chang, S. (2005). The role of police for the successful implementation of community policing. *Korean Association of Public Safety and Criminal Justice Journal*, 20, 415-447.
- Jiao, A. Y. (1995). Community Policing and Community Mutuality: A Comparative Analysis of American and Chinese Police Reforms. *Police Studies: International Review of Police Development*, 18, 69-91.
- Jiao, A. Y. (2001). Police and Culture: A Comparison between China and the United States, *Police Quarterly*, 4, 156-185.
- Johnson, S.D., Koh, H.C., & Killough, L.N. (2009). Organizational and Occupational Culture and the Perception of Managerial Accounting Terms: An Exploratory Study Using Perceptual Mapping Techniques. *Contemporary Management Research*, 5 (4), 317-342.
- Joreskog, K. G., & Sorbom, D. (1996). LISREL 8: User's reference guide. Chicago: Scientific Software
- Judge. T.A. & Bono, J.E. (2001). Relationship of core self-evaluations traits- self-esteem, generalized self efficacy, locus of control, and emotional stability - with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology* 86, 80-92.
- Judge, T. A., Thoresen, C.J., Bono, J.E., & Patton, G.K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127 (3), 376–407.

- Kang, W., & Kim, S. (2005). *Korean Police History*. Kyungi, Korea: Korea National Police University Press.
- Katz, D., & Kahn, R.L. (1966). *The Social Psychology of Organization*. New York, NY: Wiley.
- Kelling, G.L., & Moore, M.H. (1988). From political to reform to community: The evolving strategy of police. In J.R. Greene and S.D. Mastrofski (Eds.), *Community Policing: Rhetoric or reality* (pp. 3-26). New York, NY: Praeger.
- Kieley, J.A., & Peek, G.S. (2002). The Culture of the British Police: Views of Police Officers. *The Service Industries Journal* 22, 167 – 183.
- Kim, B. (2001). A study on the job satisfaction among rank and file police officers in Korea. *Korean Association of Public Safety and Criminal Justice Journal*, 11, 39-69.
- Kim, C., & Woo, J. (2006). The implications and limitations of community policing. *Korean Association of Public Safety and Criminal Justice Journal*, 23, 347-370.
- Kim, D. (2011). The effectiveness of Police leaders' order. *Hangyere*, 873, 52-61.
- Kim, S. (2005a). Individual-Level factors and organizational performance in government organizations. *Journal of Public Administration Research and Theory*, 15 (2), 245-261.
- Kim, S. (2005b). Gender differences in the job satisfaction of public employees: A study of Seoul metropolitan government, Korea. *Sex Roles*, 52, 667-681.
- Kim, S. (2009a). A Content Analysis of Community-Oriented Policing Researches in Korea. *Journal of Korean Police Studies*, 8 (4), 35 – 62.
- Kim, T. (2009b). ANOVA Analysis on the Role Perception by Work Characteristics of Female Police Office. *Journal of Korean Contents*, 9 (10), 360-367.
- Kim, U. (1994). Individualism and collectivism: Conceptual clarification and elaboration. In Kim, U., Triandis, H.C., Kagitcibasi, C., Choi, S., & Yoon, G (Eds.). *Individualism and collectivism: Theory, methods and applications* (pp. 19 - 40). Thousand Oaks, CA: Sage.
- Kim, Y., & Park, E (2009). A study on actual analysis about the case of Fiedler's situation analysis pattern in leadership of police. *Journal of Korean Police Studies*, 8 (2), 31-62.
- Kim, Y. (2011, May 17th). Male–female income difference in Korea. *Yonhap-news*. 1A.

Kinicki, A. J., McKee-Ryan, F.M., Schriesheim, C.A., & Carson, K.P. (2002). Assessing the construct validity of the Job Descriptive Index: A review and meta-analysis. *Journal of Applied Psychology*, 87(1), 14-32.

Kirkman, B.L., & Shapiro, D.L. (2001). The Impact of Cultural Values on Job Satisfaction and Organizational Commitment in Self-Managing Work Teams: The Mediating Role of Employee Resistance. *Academy of Management Journal*, 44(3). 557-569.

Kline, R. B. (2005). *Principles and practices of structural equation modeling*. (2nd Ed.). New York: The Guilford Press.

Klockars, C.B. (1988). The rhetoric of community policing. In J.R. Greene and S.D. Mastrofski (Eds.), *Community Policing: Rhetoric or reality* (pp. 239-258). New York, NY: Praeger.

Klockars, C. B., & S. Kutnjak Ivković (2003). Measuring Police Integrity. In Piquero, A. R., Greene, J.R., & M. J. Hickman (Eds.). *Police Integrity and Ethics* (pp. 3-20). Wadsworth Publishing.

Klockars, C.B., Kutnjak Ivković, S., & Haberfeld, M.R. (2004), *The Contours of Police Integrity*. Newbury Park, CA: Sage.

Kohn, M.L. (1987). Cross-national research as an analytic strategy. *American Sociological Review*, 52, 713-731.

Korea National Police Agency (KNPA). (2001). *Vision for police in the 21st century*. Seoul, Korea: KNPA.

Korea National Police Agency (KNPA). (2002). *Korean Police Annual Report*. Seoul, Korea: KNPA.

Korea National Police Agency (KNPA). (2004). *Korean Police Annual Report*. Seoul, Korea: KNPA.

Korea National Police Agency (KNPA). (2006). *Korean Police Annual Report*. Seoul, Korea: KNPA.

Korea National Police Agency (KNPA). (2009). *Korean Police Annual Report*. Seoul, Korea: KNPA.

Korea National Police Agency (KNPA). (2010). *Korean Police Annual Report*. Seoul, Korea: KNPA.

- Korean National Police Agency (KNPA). (2012). Ranks and Roles. Retrieved from <http://www.police.go.kr/eng/index.jsp>
- Krejcie, R.V., & Morgan, D.W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610.
- Krimmel, J.T., & Gormley, P.E. (2003). Tokenism and job satisfaction for policewomen. *Criminal Justice Periodicals*, 28 (1), 73-88.
- Kwak, H. (2009). *Performance evaluation of community policing: The application of Balanced Score Card (BSC)*. Unpublished dissertation. Kyungnam, Korea: Youngnam University.
- Landy, F.J., & Conte, J.M. (2009). *Work in the 21st Century: An Introduction to Industrial and Organizational Psychology* (3rd Ed). San Francisco, CA: Wiley-Blackwell: San Francisco.
- Langworthy, R.H. (1986). *The structure of police organizations*. New York: Praeger.
- Lawrence, R.M. (2001). *The application of Hackman and Oldham's job characteristic model to perceptions community music school faculty have towards their job*. Unpublished Dissertation: University of North Texas.
- Laycock, G. (2001). *Research for Police: Who Needs It?* Washington D.C.: U.S. Department of Justice.
- Lee, C., Kim, J.M., & Kim, J.G. (2010). Officer's perception of organizational arrangements and preventive policing practice: An open-system approach to South Korean police departments. *Policing: An International Journal of Police Strategies & Management*, 33 (3), 410-430.
- Lee, C., & Lee, C. (2011). Factors affecting Strategy Commitment to Community-Oriented Policing (COP) among South Korean Police Officers. *Policing: An International Journal of Police Strategies & Management*, 34 (4), 713 - 734.
- Lee, S. (2002). A study on the relationship between training and job satisfaction of the police. *Korean Association of Public Safety and Criminal Justice Journal*, 14, 135-157.
- Lee, S. (2004). The impact on the job satisfaction of subordinate to transformational leadership of police chief. *Korean Association of Public Safety and Criminal Justice Journal*, 17, 261-288.
- Lee, S.K. (2006). *A study on the effect of organizational culture of the police on the job satisfaction*. Unpublished Dissertation, Seoul, Korea: Dongguk University.
- Lee, K. (2008). A study on the effects of job-related attitudes on the intention to leave in rank and file police officers. *Journal of Korea Security Science*, 16, 189-28.

- Lee-Ross, D. (1998). The reliability and rationale of Hackman and Oldham's Job Diagnostic Survey and Job Characteristics Model among seasonal hotel workers. *International Journal of Hospitality Management*, 17 (4), 391 – 406.
- Lenth, R.V. (2001). Some practical guidelines for effective sample size determination. *American Statistician*, 55 (3), 187-193.
- Levitt, B., & March, J. G. (1988). Organizational Learning. *Annual Review of Sociology*, 14, 319-340.
- Lewis, S., Rosenberg, H., & Sigler, R.T. (1999). Acceptance of Community Policing among Police Officers and Police Administrators. *Policing: An International Journal of Police Strategies & Management* 22, 567-588.
- Lilley, D., & Hinduja, S. (2007). Police officer performance appraisal and overall satisfaction. *Journal of Criminal Justice*, 35, 137-150.
- Lim, V.K., Teo, T., & See, S.K. (2000). Perceived job image among police officers in Singapore: Factorial dimensions and differential effects. *Journal of Social Psychology*, 140(6), 740–750.
- Lipsey, M. W. (1990). *Design sensitivity: Statistical power for experimental research*. Thousand Oaks, CA: Sage publication.
- Lipsky, M. (1980). *Street-Level Bureaucracy: Dilemmas of the Individual in Public Services*. New York: Russell Sage.
- Love, K., & Singer, M. (1988). Self-Efficacy, Psychological Well-Being, Job Satisfaction and Job Involvement: A Comparison of Male and Female Police Officers. *Police Studies: The International Review of Police Development*, 11, 98-102.
- Lurigo, A.J., & Rosenbaum, D.P. (1994). The impact of community policing on police personnel: A review of the literature. In D.P.Rosenbaum (Eds.), *The challenge of community policing: Testing the promises* (pp. 147-165). Thousand Oaks, CA: Sage.
- Lurigio, A.J., & Skogan, W.G. (1994). Winning the hearts and minds of police officers: an assessment of staff perceptions of community policing in Chicago. *Crime & Delinquency*, 40, 315-330.
- Maguire, E., & Mastrofski, S.D. (2000). Patterns of Community Policing in the United States. *Police Quarterly* 3, 4-45.

- Maguire, E., Shin, Y., Zhao, J., & Hassell, K. (2003). Structural Change in Large Police Agencies During the 1990s. *Policing: An International Journal of Police Strategies & Management* 26, 251-275.
- Maguire, E., & Gantley, M. (2009). Specialist and Generalist Models. In E. Maguire and W. Wells (Eds.), *Implementing Community Policing: Lessons From 12 Agencies* (pp. 45-56). Washington D.C.: Office of Community Oriented Policing Services.
- Manning, P.K. (1988). Community policing as a drama of control. In J.R. Greene and S.D. Mastrofski (Eds.), *Community Policing: Rhetoric or reality* (pp. 27-46). New York, NY: Praeger.
- Mansfield, E.R., & Helms, B.P. (1982). Detecting Multicollinearity. *American Statistician*, 36(3), 158-160.
- Mastrofski, S.D., Ritti, R., & Snipes, J.B. (1994). Expectancy Theory and Police Productivity in DUI Enforcement, *Law & Society Review*, 28 (1), 113-148.
- Mastrofski, S.D., Worden, R. E., & Snipes, J.B. (1995). Law enforcement in a time of community policing. *Criminology*, 33, 539-563.
- Mastrofski, S.D., Snipes, J.B., & Supina, A.E. (1996). Compliance on demand: The public response to specific police requests. *Journal of Research in Crime and Delinquency*, 3, 269-305.
- Mastrofski, S.D., & Ritti, R. (2000). Making sense of community policing: A theory-based analysis. *Police Practice and Research*, 1(2), 183-210.
- Mastrofski, S.D. (2006). Police Organization and Management Issues for the Next Decade. Washington. D.C.: National Institute of Justice Police Research Planning Workshop.
- Mason, E. S. (1995). Gender differences in job satisfaction. *Journal of Social Psychology*, 135, 143-147.
- Maxfield, M. G., & Babbie, E. (2007). *Research methods for criminal justice and criminology* (5th Ed.). Belmont, CA: Wadsworth Thomson Learning.
- McGarrell, E.F., London, R., & Benitez, S. (2003). Getting to know your employees better. In QC. Thurman & E.F. McGarrell (2nd Eds.), *Community Policing: In a rural setting* (pp. 71-80). Thousand Oaks, CA: Sage.
- McGarrell, E. F. & Hipple, N. K. (2007). Family group conferencing and re-offending among first-time juvenile offenders: The Indianapolis experiment. *Justice Quarterly*, 24, 221-246.

- McCulskey, J.D., Mastrofski, S.D., & Parks, R.B. (1999). To acquiesce or rebel: Predicting citizen compliance with police requests. *Police Quarterly*, 2, 389-416.
- Meares, T.L. (2002). Praying for Community Policing. *California Law Review* 90, 1593-1634.
- Metcalfe, B., & Dick, G. (2000). Is the Force Still with You? Measuring Police Commitment. *Journal of Managerial Psychology*, 15(8), 812-832.
- Moon, B. (2004). The politicization of police in South Korea: A critical review. *Policing: An International Journal of Police Strategies & Management*, 27 (1), 128-136.
- Moon, B. (2006). The Influence of Organizational Socialization on Police Officers' Acceptance of Community Policing. *Policing: An International Journal of Police Strategies & Management* 29, 704-722.
- Moon, B., & Morash, M. (2009). Policing in South Korea: Struggle, Challenges, and Reform. In M.S. Hinton and T. Newburn, *Policing Developing Democracies* (pp. 101-118). New York: Routledge.
- Moon, B., & Zager, L.J. (2007). Police officers' attitudes toward citizen support: Focus on individual, organizational and neighborhood characteristic factors. *Policing: An International Journal of Police Strategies & Management*, 30 (3), 484-497.
- Moon, Y.S., Huh, Y. H., & Kim, H.S. (2009). A study on police officers' perception on social capital and job satisfaction. *Korean Association of Public Safety and Criminal Justice Journal*, 35, 99-136.
- Moorman, R. H., & Blakely, G. L. (1995). Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior*, 16, 127-142.
- Morabito, M.S. (2010). Understanding community policing as an innovation: Patterns of adoption. *Crime & Delinquency*, 56 (4), 564-587.
- Morash, M., Kwak, D., Hoffman, V., Lee, C., Cho, S., & Moon, B. (2008). Stressors, coping resources and strategies, and police stress in South Korea. *Journal of Criminal Justice*, 36, 231-239.
- Morris, A., Shinn, M., & DuMont, K. (1999). Contextual factors affecting the organizational commitment of diverse police officers: A levels of analysis perspective. *American Journal of Community Psychology*, 27, 75-105.
- Muir, W.K. (1977). *Police: Street Corner Politicians*. Chicago: University of Chicago Press.

Muthén, L.K., & Muthén, B.O. (2010). *Mplus User's Guide* (6th Ed). Los Angeles, CA: Muthén & Muthén.

Nalla, M. K., Meško, G., Lobnikar, B., Dobovšek, B., Pagon, M., Umek, P., & Dvoršek, A. (2007). A Comparison of Officers' Perceptions of Police Organisational Climate in Large, Midsize, and Small Cities in Slovenia. In G. Meško and B. Dobovšek (Eds.), *Policing in Emerging Democracies: Critical Reflections* (pp. 102-126). Ljubljana, Slovenia: University of Maribor.

Nalla, M.K. (2009). Democratic policing: a comparison of police officers' perceptions of their role and functions in transitional societies. *Journal of Criminal Justice and Security*, 11 (4), 420-535

Nalla, M.K., & Kang, W (2011). Organizational Climate, Perceived Citizen Support, and Job Satisfaction of Police Officers: Findings from the Post-Grand Reform Era in South Korea. *Policing: An International Journal of Police Strategies & Management*, 34 (2), 326-346.

Nalla, M.K., Rydberg, J., & Meško, G. (2011). Organizational Factors, Environmental Climate, Occupational Role and Job Satisfaction of Police Officers in Slovenia. *European Journal of Criminology*, 8(2), 144-156.

Nalla, M.K., & Boke, K. (2011). What's in a Name? Organizational, Environmental, and Cultural Factors on Support for Community Policing in Turkey and the U.S. *European Journal on Criminal Policy and Research*, Online First (June 22nd)

Neuman, W.L. (2006). *Social research methods: Qualitative and Quantitative approaches* (6th Ed.). Boston, MA: Pearson Education.

NIJ. (2004). *Community Policing Beyond the Big Cities*. Washington, DC: U.S. Department of Justice.

Novak, K.J., Alarid, L.F., & Lucas, W.L. (2003). Exploring officers' acceptance of community policing: Implications for policy implementation. *Journal of Criminal Justice*, 31, 57-71.

Oldham, C. R., Hackman, j . R., & Stepina, L P. (1978). *Norms for the job diagnostic survey*. Technical Report No. 16. New Haven, CO: Yale University Press.

Oliver, W.M. (2000). *Community policing: Classical readings*. Upper Saddle River, NJ: Prentice-Hall.

- O'Malley, P., & Hutchinson, S. (2007). Converging Corporatization? Police Management, Police Unionism, and the Transfer of Business Principles. *Police Practice and Research*, 8 (2), 159 - 174.
- O'Reilly, C.A., & Roberts, K.H. (1973). Job Satisfaction among Whites and Non-whites: A Cross Cultural Approach. *Journal of Applied Psychology*, 57, 195-299.
- Osborne, D., & Gaebler, T. (1992). *Reinventing government*. Reading, MA: Addison-Wesley.
- Palmiotto, MJ., Birzer, M.L., & Unnithan, P. (2000). Training in community policing: A suggested curriculum. *Policing: An International Journal of Police Strategies & Management*, 23 (1), 8 – 21.
- Paoline, E. A., Myers, S.M., & Worden, R. E. (2000). Police Culture, Individualism, and Community Policing: Evidence From Two Police Departments. *Justice Quarterly* 17, 575- 605.
- Paoline, E.A. (2003). Taking Stock: Toward a Richer Understanding of Police Culture. *Journal of Criminal Justice* 31, 199-214.
- Paoline, E.A., & Terrill, W. (2007). Police education, experience, and the use of force. *Criminal Justice and Behavior*, 34 (2), 179-196.
- Park, H. (2010). Conflicts between line officers and officers from a Police University. *Dongailbo*, 750, p 48-49.
- Park, K. (2006). What Factors Do Explain the Citizen Orientation of the Street-Level Police? *Korea Journal of Public Administration*, 44 (2), 113-148.
- Parks, R.B., Mastrofski, S.D., Reiss, Jr., A.J., Worden, R.E., Terrill, W., DeJong, C., Stroshine, M., & Shepard, R. (1998). *St. Petersburg Project on Policing Neighborhoods: A Study of the Police and the Community*. Report to the St. Petersburg Police Department.
- Pearl, J. (2012). The Causal Foundations of Structural Equation Modeling. In *Handbook of Structural Equation Modeling*, Ed. by R. Hoyle, Guilford Press. Retrieved from http://ftp.cs.ucla.edu/pub/stat_ser/r370.pdf.
- Pelfrey, W. V. (2004). The inchoate nature of community policing: Differences between community policing and traditional police officers. *Justice Quarterly*, 21(3), 579-601.
- Pelfrey, W.V. (2007). Style of policing adopted by rural police and deputies: An analysis of job satisfaction and community policing. *Policing: An International Journal of Police Strategies & Management*, 30, 620-636.

- Perrott, S.B., & Taylor, D.M. (1994). Ethnocentrism and authoritarianism in the police: Challenging stereotypes and re-conceptualizing in group identification. *Journal of Applied Social Psychology*, 24, 1640-1664.
- Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors : The mediating role of core job characteristics. *Academy of Management Journal*, 49(2), 327-340.
- Piquero, A. R., & Rosay, A. B. (1998). The Reliability and Validity off Grasmick et al.'s Self-Control Scale: A Comment on Longshore et al. *Criminology*, 36, 157–174.
- Porter, L. W., & Lawler, E. E. (1968). *Managerial Attitudes and Performance*. Homewood, IL: Richard D Irwin Inc.
- Polzin, M.J., & Brockman, J.L. (2002). Focus on internal partnership: A framework for implementing community policing in a unionized department. In M. Morash and J.K. Ford (Eds.), *The move to community policing: Making change happen* (pp. 155-179). Thousand Oaks, CA: Sage.
- Pratt, J., Mohrweis, L. C., & Beaulieu, P. (1992). The Interaction between National and Organizational Culture in Accounting Firms: An Extension. *Accounting, Organizations and Society*, 18, 621-628.
- Pyo, C. (2000). *Policing in Korea – The Past, Present and Future*. Paper presented at the 1st Asian Association of Police Studies, Korea
- Pyo, C. (2003). The Public Perception of the Police and Various Police Reform Initiatives in Korea: 1999-2001. *Asian Pacific Journal of Police & Criminal Justice*, 1, 127-143.
- Quah, J.T. (2006). Curbing Asian Corruption: An Impossible Dream? *Current History*, 105, 176-179.
- Raykov, T., & Marcoulides, G. A. (2006). *A first course in structural equation modeling* (2nd Ed). Mahwah, NJ: Erlbaum.
- Reaves, B.A. (2007). *Census of State and Local Law Enforcement Agencies, 2004*. Washington D.C.: U.S. Department of Justice, Office of Justice Programs.
- Reisig, M.D. (2002). Citizen input and police service: Moving beyond the “Feel good” community survey. In M.Morsh and J.K. Ford (Eds.), *The move to community policing: Making change happen* (pp. 43-60). Thousand Oaks, CA: Sage.
- Reuss-Ianni, E. (1983). *Two Cultures of Policing*. New Brunswick, NJ: Transaction.

Robinette, H. (1982). The police problem employee. *FBI Law Enforcement Bulletin*, 51 (7), 10-17.

Roberg, R., & Bonn, S. (2004). Higher education and policing: Where are we now? *Policing: An International Journal of Police Strategies & Management*, 27 (4), 469-486.

Rodgers, R., & Hunter, J.E. (1992). A foundation of good management practice in government: management by objectives. *Public Administration Review*, 52 (1), 27-39.

Rosenbaum, D.P., & Lurigio, A.J. (1994). An Inside Look at COP Reform: Definitions, Organizational Changes, and Evaluation Findings. *Crime & Delinquency* 40, 299-314.

Rosenbaum, D.P., & Wilkinson, D.L. (2004). Can police adapt? Tracking the effects of organizational reform over six years. In W.G. Skogan (Eds.), *Community Policing: Can it work?* (pp.79-108). Belmont, CA: Wadsworth/Thomson.

Roth, J.A., Roehl, J., & Johnson, C.C. (2004). Trends in the adoption of community policing. In W.G. Skogan (Eds.), *Community Policing: Can it work?* (3-29). Belmont, CA: Wadsworth/Thomson.

Rubin, D.B. (1976). Inference with missing data. *Biometrika*, 63, 581-592.

Satorra, A. (2000). Scaled and adjusted restricted tests in multi-sample analysis of moment structures. In Heijmans, R.D.H., Pollock, D.S.G. & Satorra, A. (eds.), *Innovations in multivariate statistical analysis*. A Festschrift for Heinz Neudecker (pp.233-247). London: Kluwer Academic Publishers.

Schafer, J.A. (2001). *Community policing: The challenges of successful organizational change*. New York: LBS Scholarly Publishing.

Schafer, J.A. (2002). "I'm not against it in theory ...": Global and Specific COP Attitudes. *Policing: An International Journal of Police Strategies & Management* 25, 669-686.

Schafer, J.L. (1999). Multiple Imputation: A Primer. *Statistical Methods in Medical Research*, 8, 3-15.

Schafer, J.L., & Graham, J.W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7, 147-177

Schall, M.S. (1983). A Communication-Rules Approach to Organizational Culture. *Administrative Science Quarterly*, 28 (4), 557-581.

Schumacker, R.E., & Lomax, R.G. (2010). *A Beginner's Guide to Structural Equation Modeling* (3rd Ed). New York: Routledge Academic.

Seo, G. (1997). A study on job satisfaction of police officers. *Korean Association of Public Safety and Criminal Justice Journal*, 6, 295-324.

Setton, R. P., Bennett, N., & Liden, R. C. (1996). Social Exchange in Organizations: Perceived Organizational Support, Leader–Member Exchange, and Employee Reciprocity. *Journal of Applied Psychology*, 81, 219-227.

Sherwood, C.W. (2000). Job design, community policing, and higher education: a tale of two Cities. *Police Quarterly*, 3 (2), 191-212.

Shin, K. (2006). Women's Policies of the Local Governments in Korea. *Korean Journal of Feminism*, 6, 135 – 167.

Silvester, J., Anderson, N. R., & Patterson, F. (1999), Organizational culture change: An inter-group attributional analysis. *Journal of Occupational and Organizational Psychology*, 72, 1–23.

Singleton, R. A., Jr. & Straits, B. C. (2004). *Approaches to social research* (4th Ed.). New York: Oxford University Press.

Sirias, D., Karp, H.B., & Brotherton, T. (2007). Comparing the levels of individualism and collectivism between baby boomers and Generation X: implications for teamwork. *Managerial Research News*, 30, 749-761.

Skogan, W.G. (1994). The impact of community policing on neighborhood residents: A cross-site analysis. In D.P.Rosenbaum (Eds.), *The challenge of community policing: Testing the promises* (pp. 167-181). Thousand Oaks, CA: Sage.

Skogan, W.G. (2006). *Police and community in Chicago: A tale of three cities*. New York, NY: Oxford University press.

Skogan, W., & Frydl, K. (2003). *Fairness and Effectiveness in Policing*. Washington, D.C.: The National Academies Press.

Skogan, W.G., & Roth, J. A. (2004). Introduction of community policing. In W.G. Skogan (Eds.), *Community Policing: Can it work?* (xvii-xxxiv). Belmont, CA: Wadsworth/Thomson.

Skolnick, J.H. (1994). *Justice Without Trial: Law Enforcement in Democratic Society* (3rd Ed). New York: Macmillian

Skolnick, J. H., & Bayley, D.H. (1988). *Theme and Variation in Community Policing*,

Crime and Justice, 1-37.

Slate, R.N., Johnson, W.W., & Colbert, S.S. (2007). Police Stress: A Structural Model. *Journal of Police and Criminal Psychology* 22, 102-112.

Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). *Measurement of satisfaction in work and retirement*. Chicago: Rand-McNally.

Stevens, D. J. (2001). *Case Studies in Community Policing*. Upper Saddle River, NJ: Prentice-Hall.

Stone-Romero, E. F., Weaver, A. E. and Glenar, J. L. (1995). Trends in research design and data analytic strategies in organizational research. *Journal of Management*, 21, 141 - 157.

Strauss, G. (1968). Human relations—1968 style. *Industrial Relations*, 7, 262-276.

Sykes, G.W. (1994). Accreditation and community policing: Passing fads or basic reforms? *Journal of Contemporary Criminal Justice*, 10 (1), pp.1-16.

Tabachnick, B.G., & Fidell, L.S. (2007). *Using Multivariate Statistics* (5th Ed.). New York: Allyn and Bacon.

Tark, J. (2009). The Police Officer's Evaluation of the Police Cadet Graduates. *Journal of Korean Police Law*, 7 (1), 261-283

Terrill, W., Paoline, E. A., & Manning, P. K. (2003). Police culture and coercion. *Criminology*, 41, 1003 - 1034.

Terrill, W., & Mastrofski, S.D. (2004). Working the street: Does community policing matter? In W.G. Skogan (Eds.), *Community Policing: Can it work?* (109-135). Belmont, CA: Wadsworth/Thomson.

Tilley, N. (2004). Community policing and problem solving. In W.G. Skogan (Eds.), *Community Policing: Can it work?* (pp.165-184). Belmont, CA: Wadsworth/Thomson.

Trojanowicz, R. C., & Banas, D. (1985). *Job Satisfaction: A Comparison of Foot Patrol versus Motor Patrol Officers*. East Lansing: Michigan State University, National Neighborhood Foot Patrol Center.

Trojanowicz, R. C., & Bucqueroux, B. (1990). *COP: A Contemporary Perspective*. Cincinnati, OH: Anderson Publishing Co.

- Trojanowicz, R. C., & Bucqueroux, B. (1994). *Community policing: How to get started*. Cincinnati, OH: Anderson.
- Trojanowicz, R. C., Kappeler, V.E., & Gaines, L. K. (2002). *Community policing: A contemporary perspective*. Cincinnati, OH : Anderson.
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38, 1–10.
- Turnley, W. H., & Feldman, D. C. (2000). Re-examining the effects of psychological contract violations: unmet expectations and job dissatisfaction as mediators. *Journal of Organizational Behavior*, 21, 25 – 42.
- Van Maanen, J. (1975). Police Socialization: A Longitudinal Examination of Job Attitudes in an Urban Police Department. *Administrative Science Quarterly*, 20 (2). 207-228.
- Van Maanen, J. (1979). Reclaiming Qualitative Methods for Organizational Research: A Preface *Administrative Science Quarterly*, 24 (4), 520-526.
- Vroom, V. H. (1964). *Work and motivation*. New York: Wiley.
- Wagner, J. A., & Moch, M.K. (1986). Individualism-Collectivism: Concept and Measure. *Group & Organization Management* December, 11, 280-304.
- Wakefield, A. (2007). Carry on Constable: Revaluing Foot Patrol. Policing. *Journal of Policy and Practice*, 1(3), 342-355.
- Walker, J, T., & Maddan, S. (2008). *Statistics in Criminology and Criminal Justice: Analysis and Interpretation (3rd ed)*. Sudbury, MA: Jones and Bartlett Publishers.
- Weisburd, D., Greenspan, R., & Hamilton, E. E. (2000). *Police Attitudes toward Abuse of Authority: Findings from a National Study*. Washington, DC: National Institute of Justice.
- Wells, W., & Maguire, E. (2009). Introduction: Making Sense of Community Policing. In E. Maguire and W.Wells (Eds.), *Implementing Community Policing: Lessons From 12 Agencies* (pp.XV - XXIII). Washington D.C.: Office of Community Oriented Policing Services.
- Wells, W. (2009). Problem solving. In E. Maguire and W.Wells (Eds.), *Implementing Community Policing: Lessons From 12 Agencies* (pp.13 - 34). Washington D.C.: Office of Community Oriented Policing Services
- Wilkinson, L. Deanna., Rosenbaum, P. Dennis. (1994). The Effects of Organizational Structure on Community Policing: A Comparison of Two Cities. In D.P. Rosenbaum (Eds.), *The*

Challenge of Community Policing: Testing the Promise (pp. 110 – 126). Thousand Oaks, CA: Sage.

Wilson, J. Q. (1968). *Varieties of police behavior*. New York: Atheneum.

Wilson, J. M. (2001). *The implementation of community policing in large municipal police organizations*. Unpublished Dissertation. Columbus, Ohio: Ohio State University.

Wilson, J. M. (2006). *Community Policing in America*. New York, NY: Routledge Press.

Wing, H. (1981). Estimation of the adverse impact of a police promotion examination. *Personnel Psychology*, 34(3), 503-510.

Witte, J.J., Travis, L.F., & Langworthy, R.H. (1990). Participatory Management in Law Enforcement. *American Journal of Police*, 9, 1-24.

Won, S., & Pascall, G. (2004). A Confucian War over Childcare? Practice and Policy in Childcare and Their Implications for Understanding the Korean Gender Regime. *Social Policy & Administration*, 38, 270–289.

Wycoff, M.A., & Skogan, W.G. (1994). The effect of a community policing management style on officers' attitudes. *Crime & Delinquency*, 40, 371-383.

Yaakov, W. (1996). Corporate Cultural Fit and Performance in Mergers and Acquisitions. *Human Relations*, 49, 1181-1199.

Yang, S., & Rosenblatt, P.C. (2008). Confucian Family Values and Childless Couples in South Korea. *Journal of Family Issues*, 29, 571-591.

Yates, D.L., & Pillai, V.K. (1996). Attitudes toward community policing: A casual analysis. *Social Science Journal*, 33(2), 193–209.

Yim, Y., & Schafer, B.D. (2009). Police and their perceived image: How community influence officers' job satisfaction. *Police Practice & Research*, 10 (1), 17 – 29.

Yoon, W. (2010). Review of Previous Studies on Police Job Satisfaction and Suggestion a Study Model including New Determinant Factors. *Journal of Korean Police Studies*, 9 (1), 111 – 138.

Young, R., & Jordan E. (2008). Top management support: Mantra or necessity? *International Journal of Project Management*, 26 (7), 713-725.

Yousef, D. A. (2002). Job satisfaction as a mediator of the relationship between role stressors and organizational commitment: A study from an Arabic cultural perspective. *Journal of Managerial Psychology*, 17 (4), 250 – 266.

Yu, C. (2002). *Evaluating Cutoff Criteria of Model Fit Indices for Latent Variable Models with Binary and Continuous Outcomes*. Unpublished Dissertation. LA, CA: University of California, Los Angeles

Zeitz, G., Johannesson, R., & Ritchie, J.E. (1997). An Employee Survey Measuring Total Quality Management Practices and Culture. *Group & Organizational Studies* 22, 414-444.

Zhao, J. Thurma, Q., & Lovrich, N. (1995). Community oriented policing across the U.S.: Facilitators and impediments to implementation. *American Journal of Police*, 14, 11-28.

Zhao, J. (1996). *Why Police Organizations Change: A Study of Community- Oriented Policing*. Washington D.C.: Police Executive Research Forum.

Zhao, J., Thurman, Q., & He, N. (1999). Sources of job satisfaction among police officers: A test of demographic and work environment modes. *Justice Quarterly* 16(1), 154-155.

Zhao, J., Lovrich, N., & Thurma, Q. (1999). The status of community policing in American cities: Facilitators and impediments revisited. *Policing: An International Journal of Police Strategies & Management*, 22, 74-92.

Zhao, J., He, N., & Lovrich, N. (2002). Predicting five dimensions of police officers stress: Looking more deeply into organizational settings for sources of police stress. *Police Quarterly*, 5, 43 – 63.

Zucker, L. G. (1977). The role of institutionalization in cultural persistence. *American Sociological Review*, 42 (5), 726-743.