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Abstract

Private security industry is a promising industry of the 21st century to overcome limitation of public police and implement the ideology of efficient government.

Above all, government’s legal and institutional support and interest are indispensable to help private security take root as the best security service industry promoting safety of the public.

To keep pace with development of private security industry, legal ground has been laid for private security business in Korea with enactment of Security Services Industry Act.

In this context, this study was intended to examine major aspects of Security Business Act and private security system, the positive legal basis for private security, and present development measures to highlight purpose of promoting ‘benefits and protection of law’ for the public as the subject of security service, along with the measures to mitigate inadequacy of current private security in Korea.

To pursue public benefits of crime prevention based on publicness of private security, the role of private security is inevitable. For that, measures that can ensure strong public confidence should be explored.

In other words, the quality of private security, which forms an axis of collaborative security as co-producer of security service comparable to that of the police, should be improved to accommodate the demand of citizens, and furthermore, institutional improvement measures should be mapped out for autonomous implementation.

For that, qualification system should be enforced for members, along with certification system for security business. Moreover, management assessment should be carried out first to assure fairness of government support.

Unit price adjustment and resultant labor cost-cutting based on market principle may hinder provision of high quality security service. To resolve such problems, government support is needed desperately.

Future amendment of Security Business Act should be made in such a way that security business works are specified clearly, so that duties and authority of security personnel can be regulated specifically. Through that, publicness needs to be strengthened further.

In addition, discussion on enactment of regulations is needed to seek harmony between publicness and corporate characteristics, along with independence of private security as subject providing collaborative security service.


1. Introduction

Various types of collaborative security service have been carried out to mitigate insufficiency of police force in Korea. However, no practical effect has been achieved.
Among others, private security industry plays an important role in making up for inadequacy of public security.

Private security has come to the fore as part of privatization of police works. Practicable functional division has been pushed forward for crime prevention, etc., among police duties for risk prevention.

Particularly, risk mitigation and risk elimination, which are related to improvement of public welfare for members society, can be considered from standpoint of publicness. Risk elements which can affect public welfare associated with safety of ordinary citizens can be dealt with in the realm of publicness[1].

Fundamental social role of private security is to protect the lives and properties of individuals and groups while defending and protecting certain facilities.

In other words, fundamental social role of private security implies taking central role comparable to that of police with respect to social safety, securing and expanding independent job realm, thereby contributing actively to promoting social safety, which goes beyond mere auxiliary functions of police works[2].

Private security industry is a promising industry of the 21st century to overcome limitation of public police and implement the ideology of efficient government.

Above all, government’s legal and institutional support and interest are indispensable to help private security take root as the best security service industry promoting safety of the public.

To keep pace with development of private security industry, legal ground has been laid for private security business in Korea with enactment of 「Security Business Act」. Since Service Security Business Act was written into law in 1976, Security Business Act, a law in formality, has been keeping abreast with changes in social environment through installation of security instructor system and adoption of personal protection business in 1995, renaming of the Service Security Business Act to current 「Security Business Act」 in 1999, and expansion of security business scope in 2001. Particularly, 「Security Business Act」, which was amended by Act No. 6467 on April 7, 2001, added special security works to the type of security business in order to build efficient security system for important national facilities.

Private security, however, should ensure freedom of business to accommodate corporate characteristics while emphasizing more stringent administrative regulations founded on its publicness and actual effectiveness of supervision.

In this context, this study was intended to examine major aspects of Security Business Act and private security system, the positive legal basis for private security, and present development measures to highlight purpose of promoting ‘benefits and protection of law’ for the public as the subject of security service, along with the measures to mitigate inadequacy of current private security in Korea.

2. Theoretical Background

2.1. Meaning of private security

By the most universal definition, private security is defined as the activities of individuals, groups, and corporations carrying out duties as much they were paid by specific clients in connection with provision of services related to security and safety for protection of lives and properties of individuals from various hazards[3].

If safety services, such as security services, are carried out in exchange for payment by government(public fund) or performed as part of universal obligations, such role is to be taken by public security. Conversely, the service that corresponds to the realm of private service is the services provided for protection of specific individuals or groups[4].

Private security business aims to guard against and prevent hazards to human life and body and infringement upon properties, etc. By nature, private security business is a type of business which may raise concern
about illegal and unfair behaviors such as infringement upon rights and freedom of others or intervention with activities of individuals or groups.

Thus, private security business, which is related to crime and disaster prevention as the request of other people, is a kind of business that can trigger anxiety and confusion in public lives as a consequence of poor and improper performance of security business[5].

The state’s responsibility for safety guarantee in principle should not be curtailed. The responsibility for basic control and supervision resides with the state in respect of scope and quality of private security service[6].

2.2. Need for enactment of regulations on private security

Nationwide regulations and supervision would need to be enforced for private security sharing the security-related structural roles of the police in connection with promotion of ‘benefits and protection of law’ if public purpose and roles of private security are highlighted, although it may be also important to create rights to ensure profitability for private security in terms of freedom of business. For that, related regulatory legal and institutional system should be created.

Private security itself corresponds to the police function, a unique right of government, and has strong characteristics of monopolistic state power. Thus, private security is the monopolistic power of state, not the public. Therefore, it should be reasonable to consider private security as special permit, rather than permit characterized by restoration of natural freedom of the public[7]. Likewise, private security business implementation should be considered as entrustment of state affairs for private reasons[8].

In Korea which adopts Continental legal system, risk prevention works that aim to guarantee public safety represent both right and obligation conferred upon and imposed on state. To transfer such right and obligation, legitimacy and legal ground are required when transferring such police duties in part.

2.3. Establishment of publicness in private security

Security works aim to guard against and prevent hazards to human life/body, infringement upon properties, etc. Proper performance of security works contradicts privatization of police business that aims to assure public safety, and therefore, consequent damage should be borne by the public.

「Security Services Industry Act」 specifies legal regulations and administrative supervision required to eliminate negative elements of security business and develop it into an industry useful for society.

Illegality which may arise from private security personnel is pointed out as malady of private security, such as infringement upon privacy and human rights, erosion of public benefit, degradation of security service quality as a consequence of overheated competition, etc[9].

Clause 1, Article 4 of the Security Business Act prescribes, “Corporation that intends to carry on security business based on subcontract shall specify security business and obtain approval of Regional Police Agency having jurisdiction over the location of principal office of concerned corporation”[10].

The approval of security business stipulated in Security Business Act implies that the right was conferred upon by the state to operator of security business. To carry on security business, obligations corresponding to public authority of state are required to be fulfilled and qualification should be regulated strictly. Thus, that represents an emphasis on publicness of private security.

3. Improvement Measures for System

3.1. Clarity of security business

abstract in terms of its meaning and therefore specific duties of security personnel cannot be derived. Hence, criminal law and civil law have to be relied on for interpretation of that.

As a result, security business works need to be presented clearly for concrete enactment in connection with security personnel’s duties and scope of authority based on obligations and rights of security personnel.

3.2. Strengthening of collaborative security service

Roles of private security consist of activities requested by state or administrative organizations, like building collaborative private security system, ensuring professionalism of security business and utilizing autonomous neighborhood watch group, voluntary services (such as participation in public events such as international sports match, international conference, etc), which suggests that publicness is inherent in private security[11].

The difference between the police and private security from macroscopic viewpoint is that the police has more law enforcement authority or regulatory power based on legal authority conferred upon it compared to private security, and there is no difference in terms of work details.

If no significant difference exists in security service provided by the police and private security in term of the roles that they perform, it is natural that they have a competition relationship. The scope of private security activities has been recently far more diversified, compared to that of the police, considering the expanding scope of private security activities and creation of new services combining health and residential convenience system in connection with crime prevention and loss prevention[12].

Thus, there is a need for paradigm change to strengthen collaborative security service in order to ensure harmony between the publicness and corporate characteristics of private security.

4. Conclusion

To pursue public benefits of crime prevention based on publicness of private security, the role of private security is inevitable. For that, measures that can ensure strong public confidence should be explored.

In other words, the quality of private security, which forms an axis of collaborative security as co-producer of security service comparable to that of the police, should be improved to accommodate the demand of citizens, and furthermore, institutional improvement measures should be mapped out for autonomous implementation.

For that, qualification system should be enforced for members, along with certification system for security business. Moreover, management assessment should be carried out first to assure fairness of government support.

Unit price adjustment and resultant labor cost-cutting based on market principle may hinder provision of high quality security service. To resolve such problems, government support is needed desperately.

Future amendment of Security Business Act should be made in such a way that security business works are specified clearly, so that duties and authority of security personnel can be regulated specifically. Through that, publicness needs to be strengthened further.

In addition, discussion on enactment of regulations is needed to seek harmony between publicness and corporate characteristics, along with independence of private security as subject providing collaborative security service.

5. References

5.1. Journal articles


5.2. Thesis degree


5.3. Books


5.4. Additional references


A Study on Trend and Characteristics of Industrial SECURITY Regulatory Legislation in KOREA

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Abstract

Korea has seen a constant increase in highly sophisticated, intelligent, and advanced industrial spying crimes, such as leakage of state-of-art technologies, infringement upon intellectual properties, etc., as industrial technology competitiveness is strengthening. State-led control is being pushed forward at policy level to prevent such industrial spying crimes. For that, legal grounds need to be clarified for authority, mechanism, and obligations of competent government ministries as the leader of industrial security protection at national level. Currently, laws have already been enacted to control industrial technology leakage, infringement of business secret and others in Korea.

This study was intended to examine trends of regulatory legislation related to industrial security, such as leakage of industrial technologies and infringement upon business secrets, in Korea and to discuss implications associated with industrial security policies and system nationwide by identifying characteristics of regulatory legislation on industrial security.

In Korea, regulatory laws pertaining to industrial security is legalized with separate laws such as ‘Act on Prevention of Leakage and Protection of Industrial Technology’, ‘Act on Prevention of Unfair Competition and Protection of Business Secret’, ‘Act on Protection of Small Medium Company’s Technology’, etc. Thus, applicable laws may vary, depending on cases. Moreover, laws need to be applied based on individual statutes under the status of special laws and interpretation needed to be made in consideration of complementary application of statutes as general laws.

Regulatory legislation on industrial security in Korea involves appointment of concerned management and supervision organizations, along with clarification of responsibilities of state and government for industrial security despite different entities covered by individual laws. Private corporate business secrets, as well as nation’s key technologies, are protected, controlled, and supported under the leadership of state.

Industrial security system in Korea emphasizes punishment for leakage and infringement which are components of specific crimes, with management and supervision from the standpoint of ex post facto response to leakage of technologies and infringement upon secrets based on government policies. However, it is more important to create an environment conducive to prevention of such leakage and infringement in the realm of private sector, particularly for small and medium companies. That calls for specialization related to industrial security mechanism.

Therefore, it should be considered to develop professional manpower with concerned expertise and implementation capabilities and to introduce national certification system necessary for increasing related public confidence.

1. Introduction

Industrial security refers to the activities preventing infringement upon industrial secrets, including valuable persons, documents, facilities, technology worthy of protection, and preclude access of unauthorized person[1], and is classified into preventive activities with a focus on protection of tangible and intangible assets of entities retaining industrial secrets and immediate counteractive actions made in response to leakage of industrial secrets[2].

According to the ‘Industrial Security Operation Manual’ published by the National Intelligence Service(NIS), industrial security is defined as the activities protecting technologies, management information, and related personnel, documents, facilities, communication, etc., owned and retained by industries and research institutes, in order to prevent infringement by various hazard elements including competing countries, industrial spies, current (incumbent) or former officials/employees, foreign scientists in Korea, etc. The Manual also suggests that industrial security is for prevention of leakage and protection of industrial technologies[3].

Korea witnessed 438 cases involving detection of industrial spies from 2003 to 2014. Damage caused to companies as a result of technology leakage is protected to reach KRW 50 billion yearly. Particularly, large companies suffered from such damage which was four times as large as that inflicted upon small and medium-sized companies. Internal leakage caused by current and former officials and employees accounted for over 80% of whole leakage[4].

Korea has seen a constant increase in highly sophisticated, intelligent, and advanced industrial spying crimes, such as leakage of state-of-art technologies, infringement upon intellectual properties, etc., as industrial technology competitiveness is strengthening. State-led control is being pushed forward at policy level to prevent such industrial spying crimes. For that, legal grounds need to be clarified for authority, mechanism, and obligations of competent government ministries as the leader of industrial security protection at national level. Currently, laws have already been enacted to control industrial technology leakage, infringement of business secret and others in Korea.

Thus, this study was intended to determine the trends of regulatory legislation on industrial security in Korea, discuss the characteristics of industrial security policies and systems that could be derived, and present related implications.

2. Trend of Regulatory Legislation on Industrial Security in Korea

2.1. Act on prevention of leakage and protection of industrial technology

The ‘Act on Prevention of Leakage and Protection of Industrial Technology’ proclaims the prevention of leakage and protection of industrial technologies as duty of state[5] and requires prior approval of or report to the Minister of Trade, Industry and Energy when organizations with nation’s key technologies developed through government’s funding support for R&D (Research & Development) intend to export or proceed with overseas acquisition, merger, etc[6], and furthermore, specifies that concerned organizations may seek court injunction against infringement on industrial technologies[7].

Moreover, this Act typifies and bans leakage of and infringement upon industrial technologies specifically, such as acquisition of industrial technologies of concerned organizations through theft, fraud, intimidation and other unfair means or use or divulgence of industrial technologies that have been acquired[8]. Penalty provisions are contained in this Act, imposing punishment for their breach[9].

2.2. Act on prevention of unfair competition & protection of business secrets

Under this Act, those in possession of business secrets may register electronic fingerprints with original copy authentication organization that authenticates original copy of
electronic documents containing business secrets[10] and also may seek court injunction against infringement on business secrets[11]. In addition, those who acquired or used business secrets or disclosed them to any third party for the purpose of causing damage to entities possessing business secrets are punished with imprisonment of less than 5 years or fine worth less than KRW 50 million. The punishment will double if such illegal acquisition, use, or disclosure occur abroad[12].

2.3. Establishment of publicness in private security

Government should map out and implement comprehensive policies necessary to strengthen technology protection capabilities of small and medium-sized enterprises(SME) and protect technologies of SME[13]. Under this Act, Chief of the Small and Medium Business Administration may appoint organization dedicated to protecting technologies of SME[14]. The Act prohibits any person, who is performing works such as technology protection diagnosis, consultation, etc., or is or was employed by SME technology developer to carry out R&D works related to security technologies, from disclosure of secrets learned in the course of performance of works to any third party and from using such confidential information for any purpose other than for purposes of works[15]. Violation of which will result in imprisonment of less than 3 years and fine worth less than KRW 30 million[16].

3. Characteristics of Regulatory Legislation on Industrial Security in Korea

3.1. Complementary interpretation & application through individual legislation

There are no legal grounds under general laws for overall regulatory mechanism related industrial security. Provisions set forth in the Act on Prevention of Leakage and Protection of Industrial Technology are applicable, except to the extent that there are other special provisions specified in other laws in connection with prevention of leakage and protection of industrial technology[17]. However, other laws need to be interpreted in a complementary manner, applying the laws case by case.

There are some cases in which related laws, such as equity law under general statute, need to be considered comprehensively in relation to behaviors constituting leakage of industrial technologies and infringement upon business secrets when punishment is imposed. This suggests that applicable laws may vary, depending on difference in organizations such as large companies, small and medium-sized enterprises(SME), state-funded research institutes, or ordinary private organizations, etc.

3.2. Punishment imposition & actions based on status of special law

Different administrative management and supervision organizations are engaged, depending on difference in regulatory legislation by case, resulting in different administrative measures and punishment imposition. When industrial technology leakage and business secret infringement have components of crime, special law prevails over criminal law which falls under category of general law in accordance with regulatory legislation. In relation to that, individual laws specify behaviors constituting violation and stipulate penal provisions that impose responsibilities under criminal law in individual laws.

4. Conclusion & Recommendation

Inevitably, the role of private security is to expand to pursue public benefits, i.e., crime prevention, based on its publicness. For that, measures need to be explored to increase public confidence in private security. In other words, quality of private security service, which will form a backbone of collaborative security as joint producer of security service comparable to that of the police, should increase to a level that can fully accommodate the demand of citizens. Along with that, institutional improvement measures should be designed for autonomous implementation.

This study was intended to examine trends of regulatory legislation related to industrial
security, such as leakage of industrial technologies and infringement upon business secrets, in Korea and to discuss implications associated with industrial security policies and system nationwide by identifying characteristics of regulatory legislation on industrial security.

In Korea, regulatory laws pertaining to industrial security is legalized with separate laws such as ‘Act on Prevention of Leakage and Protection of Industrial Technology’, ‘Act on Prevention of Unfair Competition and Protection of Business Secret’, ‘Act on Protection of Small Medium Company’s Technology’, etc. Thus, applicable laws may vary, depending on cases. Moreover, laws need to be applied based on individual statutes under the status of special laws and interpretation needed to be made in consideration of complementary application of statutes as general laws.

Regulatory legislation on industrial security in Korea involves appointment of concerned management and supervision organizations, along with clarification of responsibilities of state and government for industrial security despite different entities covered by individual laws. Private corporate business secrets, as well as nation’s key technologies, are protected, controlled, and supported under the leadership of state.

Industrial security system in Korea emphasizes punishment for leakage and infringement which are components of specific crimes, with management and supervision from the standpoint of ex post facto response to leakage of technologies and infringement upon secrets based on government policies. However, it is more important to create an environment conducive to prevention of such leakage and infringement in the realm of private sector, particularly for small and medium companies. That calls for specialization related to industrial security mechanism. Therefore, it should be considered to develop professional manpower with concerned expertise and implementation capabilities and to introduce national certification system necessary for increasing related public confidence.

5. References

5.1. Journal articles

5.2. Additional references

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<tr>
<td>Choi Pan-am / Kyungwoon University Professor</td>
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<td>B.A. Yongin University</td>
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<td>M.A. Yongin University</td>
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<td>Ph.D. Kyonggi University</td>
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Research field

Major career
- 2013~2016. Daegu Arts University, Lecture
- 2016~present. Kyungwoon University, Professor

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<th>Corresponding Author</th>
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<tr>
<td>Kim Young-hoon / Kyungwoon University Professor</td>
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<td>B.A. Yongin University</td>
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<td>M.A. Yongin University</td>
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<td>Ph.D. Seonam University</td>
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Research field
- Effect of Atmosphere and Motive Scales on the Adaptation according to the Participation Level in Kumdo, Seonam University, Doctoral Thesis (2009).

Major career
- 2010~2016. Korea University Kumdo Federation, Director
- 2016~present. Kyungwoon University, Professor
Effect of Private SECURITY Guards' Emotional Labor on Organizational Effectiveness -Focusing on Apartment SECURITY Guards-

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Abstract

Currently, most apartments hire security guards to prevent crimes and outside intrusions and with ever rising expectation and demand not only for individual security but also for efficiency and satisfaction with living services and conveniences, residents’ demands toward the apartment security guards are also multiplying. Thus, as they perform delivery and safekeeping of door-to-door express service and mails, notification of information on apartment complex, removal of snow and preventing flood, drainage work, etc. other than crime prevention and order maintenance activities, they have special characteristics different from those of general security guards or intermittent workers.

Thus, with the change of social environment, it is expected that apartment security guards’ emotional labor will be on steady increase and thus, basic studies are required to prepare policies to ameliorate its side effects. Therefore, this study aims to grasp the reality of apartment security guards’ emotional labor, elucidate its effect on job satisfaction, organizational commitment, turnover intention and, based on study results, to suggest ways and policy implications to reduce harm and damage from apartment security guards’ emotional labor and manage it effectively.

In order to explore the effect of apartment security guards’ emotional labor on organizational effectiveness, this study analyzed first, the difference between emotional labor and organizational effectiveness based on demographic characteristics and second, the relationship between emotional labor and organizational effectiveness(job satisfaction, organizational commitment and turnover intention).

First, as the result of analysis on the difference between emotional labor and organizational effectiveness based on demographic characteristics, there were significant differences in deep acting and job satisfaction depending on monthly income. Due to characteristics of apartment security guards’ job which requires both their original security work and treatment of residents’ complaints, they have trouble focusing on their work as their rest periods are not even kept. Since high turnover rate from low wage, excessive work, job stress and burnout not only causes temporal and economic loss but also lowers individual and corporate performance, it is necessary to take proactive actions for insecure work environment in the long term focusing on balanced achievement of goals.

Second, as the result of analysis on the effect of apartment security guards’ emotional labor on organizational effectiveness, surface acting of emotional labor had negative(-) effect on job satisfaction and organizational commitment, which are sub-factors of organizational effectiveness, and had positive(+) effect on turnover intention. On the other hand, deep acting of emotional labor had positive(+) effect on job satisfaction and organizational commitment, which are sub-factors of organizational effectiveness, and had negative(-) effect on turnover intention.

Results of the study imply that prevention and management of emotional labor is required on organizational level so that damages by emotional labor can be prevented in the process of apartment security guards’ job performance. In addition, it is necessary to enact laws to compensate emotional labor, to improve poor labor conditions and treatment and to prepare work manuals and punishment regulations on customer wrongdoings.
1. Introduction

Aging phenomenon in Korea which has been progressing in an unprecedented speed is expected to have various effects not only on social and economical structure and overall lives of individuals, which requires plenty of change and preparation in social and policy aspects[1]. With continuing aging of society, apartment security guard is one of a few jobs for the elderly and aging is expected to cause many changes in the labor market of private security guards in Korea.

Currently, most apartments hire security guards to prevent crimes and outside intrusions and with ever rising expectation and demand not only for individual security but also for efficiency and satisfaction with living services and conveniences, residents’ demands toward the apartment security guards are also multiplying. Thus, as they perform delivery and safekeeping of door-to-door express service and mails, notification of information on apartment complex, removal of snow and preventing flood, drainage work[2], etc. other than crime prevention and order maintenance activities, they have special characteristics different from those of general security guards or intermittent workers.

Although current 'Labor Standard Act' guarantees rest period of at least 30 minutes for more than 4 hours of work and at least 1 hour for more than 8 hours of work and recognize workers' standby time under the command and supervision of employer as work hours[3], apartment security guards and intermittent workers are out of application of work hours and rest period stipulated by the Act and their rest facilities are dilapidated or almost non-existent.

Like this, apartment security guards, who provide services to protect property and secure safety of residents in the front, are judged to suffer from highly serious level of emotional labor. In addition, as their expression of emotions tends to have direct effect on creation of profit for their affiliated companies due to traits of their work process, their emotional labor is generally under strict control of the companies they work for[4].

Thus, with the change of social environment, it is expected that apartment security guards' emotional labor will be on steady increase and thus, basic studies are required to prepare policies to ameliorate its side effects. Therefore, this study aims to grasp the reality of apartment security guards' emotional labor, elucidate its effect on job satisfaction, organizational commitment, turnover intention and, based on study results, to suggest ways and policy implications to reduce harm and damage from apartment security guards' emotional labor and manage it effectively.

2. Theoretical Background

2.1. Emotional labor

Emotional labor is defined as expressing specific emotions which look desirable to enhance organizational effectiveness or task performance by controlling one's actual emotions when there is difference between actual emotions a person experiences and the norm of emotional expression which the organization requires[5].

2.2. Organizational effectiveness

Organizational effectiveness is the degree of achieving short and long-term goals and, it is defined as the ability to realize multiple goals such as profit, productivity, employee satisfaction, social responsibility and financial stability by reflecting multiple constitutional factors, assessors’ interest and development stage of the organization in establishing goals and to adapt to and survive in changing environments[6].

2.3. Preceding studies

In a study on the effect of tourism employees' emotional labor on organizational effectiveness, emotional labor had significant effect on turnover intention, which is a constituting factor of organizational effectiveness, and especially, the higher the intensity of
emotional labor, the higher the level of turnover intention[7].

In addition, emotional labor is defined as expressing specific emotions which look desirable to enhance organizational effectiveness or task performance by controlling one’s actual emotions when there is difference between actual emotions a person experiences and the norm of emotional expression which an organization requires[8].

3. Study Methods

3.1. Subjects of study

The subjects of this study were apartment security guards working in Seoul and 6 metropolitan cities selected by stratified cluster random sampling. For the period of 2 months from November through December 2015, researcher of this study called or visited the management heads or supervisors of the apartments and explained about the questionnaire survey and asked their cooperation. A total of 322 questionnaires were used as data for this study except for 28 questionnaires with insincere answers or without answers. As the result of research on demographic characteristics of the subjects, gender-wise, all of the subjects were males(n:322) and, as for age, they were in their 40s(n:14), 50s(n:100), 60s(n:190) and over 70s(n:18). As for monthly income, they made less than 1.5 million won(n:92), 1.50~2.0 million(n:208), over 2.0 million(n:22) and career-wise, they worked less than 1 year(n:74), 1~3 years(n:144), 3~5 years(n:47) and less than 5 years(n:57).

3.2. Research tools

All the questions were constituted based on preceding studies and theories to fit the purpose of the study in 5-point Likert scale. For questions regarding apartment security guards’ emotional labor, study used a total of 8 questions by modifying questions used in Cho CheolKyu, SeungWook Hwang’s study(2011) to fit the purpose and subjects of this study based on 5-dimension emotional labor suggested by Blau et al.(2010). For questions on organizational effectiveness, study composed a total of 13 questions to fit the purpose and subjects of this study based on the indices used in Yong Joo Lee et al.’s study (2012)[9][10][11][12].

Validity for the contents of the questionnaire of this study was verified by professional committee composed of 3 doctors of security science. Composition of questionnaire was completed by conducting preliminary survey and reviewing in professional committee.

3.3. Analysis of reliability and validity of measurement tools

SPSS 20.0 program was used for analysis in this study. To analyze reliability and validity of the questionnaire, value of Cronbach’s Alpha in Internal Consistency Method and exploratory factor analysis were conducted. To analyze the demographic characteristics of the samples, frequency analysis was conducted. To investigate the difference among variables based on demographic characteristics, ANOVA test was performed. To measure the effect of emotional labor on organizational effectiveness, correlation among measuring variables was analyzed and multiple regression analysis was conducted.

4. Research Results

4.1. Analysis on difference between emotional labor and organizational effectiveness based on demographic characteristics

There was significant difference in deep acting(F=3.060, p<05) and job satisfaction(F=3.693, p<.05) depending on monthly income. There was also significant difference in turnover intention(F=4.684, p<.01) based on career years and as the result of post test, guards with over 5 years of experience had higher level of turnover intention than those with experience of 1~3 years and 3~5 years while there were no significant difference in all sub-factors of emotional labor and organizational effectiveness depending on age.

4.2. Correlation among variables
Table 1. Correlation analysis among variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
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<tbody>
<tr>
<td>Surface acting</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Deep acting</td>
<td>.605***</td>
<td>1</td>
<td></td>
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<tr>
<td>Job satisfaction</td>
<td>-.523**</td>
<td>.497**</td>
<td>1</td>
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<td>Organizational commitment</td>
<td>-.596**</td>
<td>.524**</td>
<td>-.458</td>
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<td>Turnover intention</td>
<td>.588**</td>
<td>-.503</td>
<td>.405</td>
<td>.692</td>
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</tbody>
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There was significant difference in deep acting \(F=3.060, \ p<.05\) and job satisfaction \(F=3.693, \ p<.05\) depending on monthly income. There was also significant difference in turnover intention \(F=4.684, \ p<.01\) based on career years and as the result of post test, guards with over 5 years of experience had higher level of turnover intention than those with experience of 1~3 years and 3~5 years while there were no significant difference in all sub-factors of emotional labor and organizational effectiveness depending on age.

Table 2. Effect of emotional labor in organizational effectiveness.

<table>
<thead>
<tr>
<th>Subordination variable</th>
<th>Independent variable</th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>t</th>
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</thead>
<tbody>
<tr>
<td>Job satisfaction</td>
<td>(constant)</td>
<td>2.749</td>
<td>.383</td>
<td>7.184</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surface acting</td>
<td>-.416</td>
<td>.068</td>
<td>-.351</td>
<td>-6.085</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Deep acting</td>
<td>.345</td>
<td>.070</td>
<td>.284</td>
<td>4.917</td>
<td>.001</td>
</tr>
</tbody>
</table>

\(R^2=.325, \text{ F-value }= 76.758*** (\text{sig}= .001)\)

| Organizational commitment | (constant) | 2.451 | .303 | 8.098 | .001 |
|                          | Surface acting | -.436 | .054 | -.440 | -8.068 | .001 |
|                          | Deep acting     | .261  | .055 | .257  | 4.718 | .001 |

\(R^2=.397, \text{ F-value }= 105.124*** (\text{sig}= .001)\)

| Turnover intention       | (constant)        | 3.696  | .272 | 13.595| .001 |
|                         | Surface acting    | .392   | .049 | .447  | 8.066 | .001 |
|                         | Deep acting       | -.210  | .050 | -.233 | -4.209| .001 |

\(R^2=.380, \text{ F-value }= 97.604*** (\text{sig}= .001)\)

5. Conclusion

In order to explore the effect of apartment security guards' emotional labor on organizational effectiveness, this study analyzed first, the difference between emotional labor and organizational effectiveness based on demographic characteristics and second, the relationship between emotional labor and organizational effectiveness (job satisfaction, organizational commitment and turnover intention).

First, as the result of analysis on the difference between emotional labor and organizational effectiveness based on demographic characteristics, there were significant differences in deep acting and job satisfaction depending on monthly income. Due to characteristics of apartment security guards' job which requires both their original security work and treatment of residents' complaints, they have trouble focusing on their work as their rest periods are not even kept. Since high turnover rate from low wage, excessive work, job stress and burnout not only causes
temporal and economic loss but also lowers individual and corporate performance, it is necessary to take proactive actions for insecure work environment in the long term focusing on balanced achievement of goals.

Second, as the result of analysis on the effect of apartment security guards' emotional labor on organizational effectiveness, surface acting of emotional labor had negative (-) effect on job satisfaction and organizational commitment, which are sub-factors of organizational effectiveness, and had positive (+) effect on turnover intention. On the other hand, deep acting of emotional labor had positive (+) effect on job satisfaction and organizational commitment, which are sub-factors of organizational effectiveness, and had negative (-) effect on turnover intention.

Results of the study imply that prevention and management of emotional labor is required on organizational level so that damages by emotional labor can be prevented in the process of apartment security guards' job performance. In addition, it is necessary to enact laws to compensate emotional labor, to improve poor labor conditions and treatment and to prepare work manuals and punishment regulations on customer wrongdoings.

6. References

6.1. Journal articles


6.2. Thesis degree


6.3. Books


6.4. Additional references

| Lead Author | Park Su-hyeon / Taegu Science University Professor  
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| Major career  
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Impact of SECURITY Knowledge Management to the Nurse Organization Republic of KOREA

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Abstract

The literature reviews have been made to understand the impact of the knowledge management in the advancement of nurse organization in this study.

Disaster indicates loss of human lives or property due to natural causes such as weather or man-made accidents (Wikipedia), and the number and damage scale of disaster is increasing in the modern society. Along with earthquake, flood, storm and other natural disasters, the man-made disaster due to the development of humanity civilization are largely increasing, and the complicated disaster due to both human and nature is frequently occurring.

Knowledge management is a series of organization activities to create typical common knowledge considering the information, technology, knowhow, and so on of the organization members as the collective knowledge, to organize the culture of sharing the created knowledge with the organization members or organizations, and to facilitate the interactions.

Knowledge management in the nurse organization is to provide with the best nursing services by facilitating the acquisition, creation, sharing, and utilization of the nursing knowledge. Nurse intellectual has been defined as the nurse who enhances the added values by seamless improvement, development, and innovation on his or her nursing job in the clinical practices, transmits and shares the new created knowledge based on the nursing experiences with nursing unit like ward or the other nurses in Nursing Department to maximize the productivity not only of the nursing department but also the whole hospital.

To improve the nursing practice capability by knowledge management, it is important to understand that knowledge is the base of qualitative nursing, to confirm what the core knowledge on nursing job is, and to learn job related topics continuously. In addition, it is required to help job practices and career development by the activations of nursing education programs, and to conduct the motivation policies for the individuals by active supports for the learning employees. The core components of knowledge management are correlated with nursing practice capabilities, therefore, it is important for the top leader in the hospital nursing to establish the knowledge management strategy and to seek its supports and utilizations to the practices.

Accordingly, there is a need for nursing education program about promotion and disaster nursing that can cope with disaster with specific measures. Also, the tool based on disaster nursing capability should be developed to objectively evaluate the knowledge and technology provided to patients from disaster.

[Keywords] Security, Knowledge Management, Nurse, Hospital, Nurse Organization

1. Introduction

Knowledge management is a series of organization activities to create typical common knowledge considering the information,
technology, knowhow, and so on of the organization members as the collective knowledge, to organize the culture of sharing the created knowledge with the organization members or organizations, and to facilitate the interactions. In this regard, the knowledge management in the nursing site means to make the individual knowledge of each nurse as the common knowledge, to organize the environment to share these with other nurses, and to facilitate these among the nurses. Since the nursing knowledge is considered as the organization asset, they consider the knowledge creation and sharing as the priority value, and the mutual interactions among the nurses are performed with the norms of knowledge management activities in the nurse organization where the knowledge management has been established, the nurses are motivated to share the nursing knowledge established in the organization, feel the needs to study the knowledge related to the practices, and have the opportunities to acquire more knowledge, so that they can concentrate the study processes of practical knowledge, information, technology, knowhow, and so on[1].

The needs of knowledge management are not the exception in the nurse organization. Nurse organization should pay attention to the knowledge management to meet the social trend and changes actively, and to survive in the fierce competition. Nurses are the representative collectors who acquire the most information on the various patients’ responses and needs being with them for 24 hours in the frontline with the patients that are the customers. In addition, they are not only knowledge users who provide the patients with direct nursing services or indirect healthcare services applying with nursing theories as well as related professional knowledge, but also knowledge creators who create the new practical knowledge and experiences while they take care of the patients under the changing environment. Therefore, with the contribution on the differentiations in the nursing and healthcare services by strategic management of the nurses’ individualized information and knowledge in the organization, it can play a significant role to create the competitive advantage of the hospital[2].

However, it has not been reported on the study results to investigate the relations between the knowledge management and the learning concentration yet. Up to now, the studies on the knowledge management have been reported in the subjects of the company organizations focusing on the cases of knowledge management practices, success factors of knowledge management, and the process of knowledge management[3], as well as the relationship between knowledge management and organization efficacy or performances[4].

Especially for the subjects with nurses, only the results of the followings have been reported; the impacts of the knowledge management activities, job satisfaction, organization concentration, job performance, and organization efficacy to the job satisfaction or organization concentration[5]. Hence, the literature reviews have been made to understand the impact of the knowledge management in the advancement of nurse organization in this study.

2. Background

2.1. Concept of knowledge management

Nonaka[6] defined knowledge management as to create the new knowledge within the organization, to expand this into the whole organization, and to formalize it into the goods, services, and systems. That meant knowledge management was to share the knowledge within the organization and to add values with the shared knowledge as the organization assets. In the nurse organization, the information on the patients that acquires during nursing for 365 days, knowhow that the experienced nurse shall get which is hard to express with the words, experiences and knowhow of the head nurses who operate the wards can be knowledge and these are knowledge management of the nurses to make assets with these so as to utilize them as the important assets in the nurse organization or among the nurses <Table 1>.
<table>
<thead>
<tr>
<th>Type</th>
<th>Investigator</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of knowledge</td>
<td>Nonaka (1998)</td>
<td>Management activity to secure the organization competitiveness through sharing, elevating, and formalizing unspoken knowledge which cannot externalize and objectify, and recycling it into unspoken knowledge again with newly created formal knowledge[6].</td>
</tr>
<tr>
<td></td>
<td>Ruggles (1998)</td>
<td>Approaching method to add or create values by more active utilization of knowhow, experiences, and decisions in and out of organization[7].</td>
</tr>
<tr>
<td>Knowledge management</td>
<td>Bechman (1997)</td>
<td>To create new organization competency, to enable high performance of the organization members, and to facilitate the innovative activities, as well as to formalize the experiences, knowledge, and professionalism of the organization members so as to enhance the customer values[8][9].</td>
</tr>
<tr>
<td></td>
<td>Quintas (1997)</td>
<td>Not simply to store and process the data and information but to recognize the knowledge which is the internalized asset of the individuals and to computerize it so as for the organization members to use this on the decision making process, and so on[10].</td>
</tr>
<tr>
<td>Intellectual properties</td>
<td>Sveiby (1997)</td>
<td>To create new values using intangible assets at maximum such as hiring and maintaining talents, inviting customers and meeting their needs with the company competency[11].</td>
</tr>
<tr>
<td></td>
<td>O’Leary (1998)</td>
<td>It is the process to change the knowledge to be used as the source of people and organization which link to the knowledge, and defines to focus on the final utilization of knowledge management[12].</td>
</tr>
<tr>
<td>Utilization of IT</td>
<td>McElrory (2005)</td>
<td>Management activities to pursue to expand the knowledge process[13].</td>
</tr>
<tr>
<td></td>
<td>Davenport et al (1998)</td>
<td>To establish knowledge warehouse, to access it easily, to provide with knowledge environment to facilitate creation, transfer, and utilization of knowledge, and to manage it as the asset[14].</td>
</tr>
</tbody>
</table>

2.1.1. Core components of knowledge management

Core components to consist of knowledge management should be prepared to perform it effectively. Core components of knowledge management are six including strategy, leadership, knowledge worker, process, information technology, culture, and evaluation and compensation. The diagnosis results according to the diagnosis index for knowledge management level of Maekyoung-Arthur Anderson described in detail to suggest the objective items including knowledge management strategy, performance measurement and compensation system for knowledge management, official procedure to share the knowledge, culture and system for knowledge management, learning knowledge management, IT of knowledge management, and knowledge contents. Knowledge Management Team, POSCO Construction classified knowledge management with five components.

First regarding contents, they performed the systemic classification of the required knowledge for the organization related to the knowledge of working process, vision of the organization, and business direction.

Second on IT, they reviewed knowledge management system and related technologies, stable infrastructure, and security technology with the existing system.

Third with respect to the culture, they reviewed strengthening knowledge management mind, system establishment on knowledge management, PR and education for response and activation of knowledge
management, motivation policy and incentive for knowledge management activities, compensation, and evaluation.

Fourth on leadership, they established the firm strategy of knowledge management, induced continuous participation and sponsorship of CEO, and organized knowledge management support team. Fifth on the process, they considered the knowledge creation and sharing by working process, standardization of knowledge management policy, making the rules, evaluation of knowledge and protection system and so on[15].

2.2. Knowledge management in the nurse organization

Knowledge management in the nurse organization is to provide with the best nursing services by facilitating the acquisition, creation, sharing, and utilization of the nursing knowledge. Nurse intellectual has been defined as the nurse who enhances the added values by seamless improvement, development, and innovation on his or her nursing job in the clinical practices, transmits and shares the new created knowledge based on the nursing experiences with nursing unit like ward or the other nurses in Nursing Department to maximize the productivity not only of the nursing department but also the whole hospital[2].

To improve the performance of nursing and its productivity like this, it is required to practice. knowledge management and the following should be considered as the approaching methods for creation, sharing, and utilization of nursing knowledge. First, it is necessary of the improvement, standardization, and documentation for the processes of nursing service provisions. Second, the core competency on nursing should be secured by the best nursing practices. Third, learning opportunity for changing facilitation into the intellectuals should be provided. Fourth, it is required to develop the knowledge warehouse using intranet. Fifth, it is important to suggest the incentive strategy by knowledge sharing and utilization.

The trend of nursing informationization has resulted in many changes not only in the nursing job but also in the methods of nursing education. Web-based education, cyber training, e-learning, and so on have been performed for the development of nurses’ capabilities, new employee training, continuous training of the existing employees. Korean Nurses Association accepted various training demands and specialized learning requests from the nurses timely, and opened to conduct cyber continuous education programs for the expansion of education opportunities through cyber training which does not limit the time and the space for the nurses who require seamless self-developments[16].

Education and learning methods such as E-learning, cyber training, web-based education, and so on are parts of organization learning among the core components of knowledge management. For knowledge management in the field of nursing, it is necessary to have and express the knowledge, to share it with other nurses, to standardize it, to create new knowledge by knowledge based clinical study activities, to share it again, and to re-apply it into the clinical practices. Nursing knowledge can enhance the capability of nursing services and nursing job performances by the process of knowledge transformation such as socialization, externalization, integration, and internalization, and contribute to the competitiveness of the hospital. To do so, it is crucial for the top managements and the heads of nursing department to make multidimensional efforts such as knowledge management strategy, on/offline training and learning, IT utilization for storage and processing of the knowledge, efficient communication style, and the development of community mind.

3. Conclusion

So far, literature reviews were performed on the understanding of knowledge management and its introduction strategies to secure nursing competitiveness by the integration of knowledge management and clinical nursing. We should understand that knowledge man-
agement has not become the choice of the individuals, organizations, and countries, but become the tool for the survival. The source of competitiveness in the 21st century comes from the people regardless of the fields, and they are based on the knowledge. Therefore, the key point is to lower the gap of knowledge.

According to the results of Myung Hee Hwang’s study[17], organization learning was found as the component to impact the nursing practice capability among the core components of knowledge management. To improve the nursing practice capability by knowledge management, it is important to understand that knowledge is the base of qualitative nursing, to confirm what the core knowledge on nursing job is, and to learn job related topics continuously. In addition, it is required to help job practices and career development by the activations of nursing education programs, and to conduct the motivation policies for the individuals by active supports for the learning employees. The core components of knowledge management are correlated with nursing practice capabilities, therefore, it is important for the top leader in the hospital nursing to establish the knowledge management strategy and to seek its supports and utilizations to the practices. Finally, it should be lessened to close the gap in the nursing organization by realization of knowledge management.

4. Reference

4.1. Journal articles


4.2. Thesis degree


4.3. Books


4.4. Conference proceedings


4.5. Additional references

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Major career
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- 2015~present. Crisis and Emergency Management Theory and Practice, Academic Director
Abstract

Social workers are based, including the professional skills and experience they have. The professionals who are professionally addressed with respect to interact with individuals, families and communities with life on the difficulty or problem. Social workers and ensure a comprehensive and professional information about them. Information with a social worker it is very important to the individual level, family level there, the group level, the community level. And are resources that can give serious damage. It is very important to ensure professionalism and ethics professional knowledge about information security as a prerequisite. Social workers should learn the professional knowledge and skills in social work practice based on high ethical. This learning can be made from the University of Social Welfare Training begins. Therefore, the information security training for social workers shall be made from the university.

The purpose of this study is to provide basic information for information security training of social workers. An Empirical Study on Republic of Korea Information SECURITY Convergence-type Latent means Analysis of Social Welfare average presence and gender differences.

Information security configuration parameters are information security act, information security education, information security behavior. Personal information is information security behavior is not experienced, optimistic bias in information security, technical understanding of information security, and understanding of information security threats. The study is the welfare of students majoring in Gwangju University students and Non-Major Students. The samples of this study were carried out three weeks from March 05, 2016 using a non-probability sampling methods. Self-report questionnaire was used to survey. 317 people were targets except one respondent insincere. Target of the lion male 106 people(33.4%) were female students, 211 people(66.6%). Social work majors are 149 people(47.0%), Non-Major Students was(53.0%). This study applies the correlation analysis, multi-group analysis and latent mean analysis. The results of this study were as follows.

First, personal experience, optimistic bias, the difference between groups for the presence gender and social groups majoring in structural relationships of technical understanding, understanding of threats, information security education, information security and information security for the action showed that. The difference was not great.

Second, women's groups and major groups personal experience in information security, optimism bias, higher education technological understanding is increasing security information, and information security Information security is high, the action showed that high.

Third, it was a personal experience, optimistic bias, technical understanding, and understanding of information security threats education, the difference between groups according to the presence or absence Gender and Social Welfare in the structure of the relationship between information security acts on information security.

Fourth, the need for women and social welfare groups in major information security education was relatively high. Many women relative to men majors than social welfare, information security education is very important when considering the proportion of women in the social welfare field. Therefore, the information security courses shall be established on social welfare majors. In addition, you should enable information security education based on ethics for social welfare information security and personal security.
1. Introduction

The fundamental problem for information security awareness should start from the security of the organization in order to fundamentally solve the commitment is based on behavior and information security problems of the members in violation or violation of information security controls. Should start from voluntary control of behavior and knowingly and voluntarily[1]. The information security practices of the organization urgently require above all is the protection of information resources[2].

Social workers are based, including the professional skills and experience they have. The professionals who are professionally addressed with respect to interact with individuals, families and communities with life on the difficulty or problem. Social workers and ensure a comprehensive and professional information about them. Information with a social worker it is very important to the individual level, family level there, the group level, the community level. And are resources that can give serious damage. It is very important to ensure professionalism and ethics professional knowledge about information security as a prerequisite. Social workers should learn the professional knowledge and skills in social work practice based on high ethical. This learning can be made from the University of Social Welfare Training begins. Therefore, the information security training for social workers shall be made from the university.

The purpose of this study is to provide basic information for information security training of social workers. However, in the university, majoring in information security education and social welfare research has not been made at all. Information security awareness around the university area, not majoring in social work research[3][4][5], college Protection Study[6] A study on the educational needs[7], service provider need to study[8] and the like have been made. Research on the information security threats act as a general research on information security[9], information security education and awareness studies[10], information security systems and educational research[11], information security behavioral studies[12], such as research active it has been made. However, information security research centered on social welfare agencies or social history has not been found. Therefore, the present study is to proceed with the first empirical study that started the social welfare and education, mainly universities to train social workers through a multidimensional approach to information security to find a way for information security training.

Hypothesis is as follows.

Hypothesis 1: personal experience, optimistic bias, technical understanding, understanding of threats, information security education on information security information security behavior will seem different levels depending on whether gender and social welfare majors.

Hypothesis 2: Information is personal experience, optimistic bias, the technical understanding of security increases the security higher education information. This will increase the information security Information security is high action.

Hypothesis 3: The information in the security structure variable will show the difference in the groups according to the presence or absence Gender and Social Welfare.

2. Research Methods

2.1. Research models

This study is a population-specific difference in structural parameters of empirical information security through latent mean analysis. After verifying the whole model through structural equation is a difference between the groups with and without Social Welfare Gender and explores whether there are significant differences. An information security
configuration variables are independent variables (information security personal experiences, information security optimistic bias, technical understanding of information security, information security threats understand), parameters (information security education), the dependent variable (information security behavior).

**Figure 1.** Research models.

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### 2.2. Study

This study was a survey of Non-Major Students in Gwangju college students majoring in social work and study. The samples of this study were carried out three weeks from March 05, 2016 using a non-probability sampling methods. Self-report questionnaire was used to survey. 317 people were targets except one respondent insincere. Target 106 were male (33.4%), 211 female (66.6%) of the lion. Social Welfare 149 (47.0%), and Non-Major 168 (53.0%).

### 2.3 Research tool

#### 2.3.1. Information security act

##### 2.3.1.1. Information security personal experience

One experienced in the past experiences on the security information used to modify the tool[13]. Using tools are a total of four questions. The 5-point Likert scale single factor. A higher score means plenty of personal experience in information security. Cronbach’s α was 0.808.

##### 2.3.1.2. Security optimistic bias

He is unlikely to be at risk than others of information security were used to modify a tool used[13]. 6 items with the tool. The 5-point Likert scale single factor. A higher score means that the bullish bias on information security is high. Cronbach’s α was 0.836.

##### 2.3.1.3. Information security technical understanding

The basic knowledge and skills related to information security was used to modify a tool used[14]. 6 items with the tool. The 5-point Likert scale single factor. A higher score means that the technical understanding of the information security is high. Cronbach’s α was 0.895.

##### 2.3.1.4. Understanding of information security threats

The type, impact and knowledge of the appropriate measures, namely threats against information security threats[14][15]. was used to modify the use of a tool. 7 items with the tool. The 5-point Likert scale single factor. A higher score means that a threatening attitude toward information security is high. Cronbach’s α was 0.832.

#### 2.3.2. Information security education

Indeed women and the importance of education was used to modify a tool used[16]. 4 items with the tool. The 5-point Likert scale single factor. A higher score means higher education, the importance of information security. Cronbach’s α was 0.917.

#### 2.3.3. Information security behavior
Technical, managerial and institutional action on information security was used to modify a tool used[16]. Using the tool 11 questions. The 5-point Likert scale single factor. A higher score means that a high information security actions. Cronbach’s α was 0.857.

2.4. Data analysis

This study was carried out a correlation analysis using the SPSS 17.0. Using AMOS 17.0 was applied to the average group analysis and potential analysis. The structural equation model through the RMSEA, TLI, CFI assessed the fit of the model. If the value is less than 0.05 RMSEA good fit, 05–.08 is the right fit. If the value is 0.90 or more TLI and CFI good fit[17].

3. Results

3.1. Descriptive statistics and correlation of key variables

<Table 1> has shown the technical statistics of the measured variables. Analysis results the main variables are the normal conditions of distribution requirements applying structural equation (Skewness <2, kurtosis <4) were all satisfied in[18]. Showed that the correlation between the input variables used to verify a causal structure between the variables set in the study as good <Table 2> and <Table 3>.

Table 1. Statistical analysis technology.

<table>
<thead>
<tr>
<th></th>
<th>Personal experience</th>
<th>Optimistic bias</th>
<th>Technical understanding</th>
<th>Understanding of threats</th>
<th>Security education</th>
<th>Security behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skewness</td>
<td>-.490</td>
<td>-.464</td>
<td>-.713</td>
<td>-.1235</td>
<td>-.799</td>
<td>-.354</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>.016</td>
<td>.314</td>
<td>.364</td>
<td>2.376</td>
<td>.767</td>
<td>.051</td>
</tr>
</tbody>
</table>

Table 2. Correlational relationship(gender).

<table>
<thead>
<tr>
<th></th>
<th>Personal experience</th>
<th>Optimistic bias</th>
<th>Technical understanding</th>
<th>Understanding of threats</th>
<th>Security education</th>
<th>Security behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal experience</td>
<td>1</td>
<td>.810***</td>
<td>.547***</td>
<td>.719***</td>
<td>.670***</td>
<td>.593***</td>
</tr>
<tr>
<td>Optimistic bias</td>
<td>.653***</td>
<td>1</td>
<td>.485***</td>
<td>.684***</td>
<td>.671***</td>
<td>.629***</td>
</tr>
<tr>
<td>Technical understanding</td>
<td>.431***</td>
<td>.496***</td>
<td>1</td>
<td>.619***</td>
<td>.656***</td>
<td>.672***</td>
</tr>
<tr>
<td>Understanding of threats</td>
<td>.407***</td>
<td>.494***</td>
<td>.520***</td>
<td>1</td>
<td>.686***</td>
<td>.699***</td>
</tr>
<tr>
<td>Security education</td>
<td>.706***</td>
<td>.591***</td>
<td>.548***</td>
<td>.598***</td>
<td>1</td>
<td>.679***</td>
</tr>
<tr>
<td>Security behavior</td>
<td>.566***</td>
<td>.632***</td>
<td>.565***</td>
<td>.424***</td>
<td>.606***</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: * p<.05, ** p<.01, ***p<.001
Diagonal top male, female groups are displayed at the bottom of the diagonal.

Table 3. Correlational relationship(major presence).

<table>
<thead>
<tr>
<th></th>
<th>Personal experience</th>
<th>Optimistic bias</th>
<th>Technical understanding</th>
<th>Understanding of threats</th>
<th>Security education</th>
<th>Security behavior</th>
</tr>
</thead>
</table>
### 3.2. Comparison and latent mean analysis of measurement models on the participating group and the non-participating group

The goodness of the base model which allows the correlation among all latent variables and the free estimation of parameter measurement were shown to be a satisfying level. Also, measurement invariance and intercept invariance were established as shown in the Table 4.

<table>
<thead>
<tr>
<th></th>
<th>$\chi^2$</th>
<th>DF</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1: configure invariance</td>
<td>2039.230</td>
<td>1158</td>
<td>.909</td>
<td>.916</td>
<td>.049</td>
</tr>
<tr>
<td>Model 2: metric invariance</td>
<td>2084.561</td>
<td>1188</td>
<td>.909</td>
<td>.914</td>
<td>.049</td>
</tr>
<tr>
<td>Model 3: metric and intercept invariance</td>
<td>2124.933</td>
<td>1224</td>
<td>.912</td>
<td>.914</td>
<td>.048</td>
</tr>
<tr>
<td>Model 4: metric, scale, factor variance invariance</td>
<td>2143.732</td>
<td>1230</td>
<td>.911</td>
<td>.913</td>
<td>.049</td>
</tr>
<tr>
<td><strong>Major presence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1: configure invariance</td>
<td>1965.298</td>
<td>1158</td>
<td>.917</td>
<td>.923</td>
<td>.047</td>
</tr>
<tr>
<td>Model 2: metric invariance</td>
<td>1990.763</td>
<td>1188</td>
<td>.919</td>
<td>.924</td>
<td>.046</td>
</tr>
<tr>
<td>Model 3: metric and intercept invariance</td>
<td>2056.352</td>
<td>1224</td>
<td>.919</td>
<td>.921</td>
<td>.046</td>
</tr>
<tr>
<td>Model 4: metric, scale, factor variance invariance</td>
<td>2062.348</td>
<td>1230</td>
<td>.919</td>
<td>.921</td>
<td>.046</td>
</tr>
</tbody>
</table>

As a result, the group Gender male was higher than female understood technology and security training. It was statistically significant. The Social Welfare presence is majoring in information behavior higher than Non - Major Students. It was not statistically significant. Major differences in gender and social groups, but the presence or absence was seen as an effect size of Cohen insufficient difference[19].

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>Major presence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Note: * p<.05, ** p<.01, ***p<.001
Diagonal top social welfare, non-major groups are displayed at the bottom of the diagonal.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Male Latent mean</th>
<th>Male Mean</th>
<th>Female Latent mean</th>
<th>Female Mean</th>
<th>Male Social welfare Latent mean</th>
<th>Male Mean</th>
<th>Female Non-major Latent mean</th>
<th>Female Mean</th>
<th>Effect size (d)</th>
<th>Total mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal experience</td>
<td>.090</td>
<td>.349</td>
<td>.0</td>
<td>.340</td>
<td>.102</td>
<td>.341</td>
<td>0</td>
<td>.345</td>
<td>0</td>
<td>3.43</td>
</tr>
<tr>
<td>Optimistic bias</td>
<td>.098</td>
<td>.353</td>
<td>.0</td>
<td>.343</td>
<td>.130</td>
<td>.351</td>
<td>0</td>
<td>.342</td>
<td>.114</td>
<td>3.46</td>
</tr>
<tr>
<td>Technical understanding</td>
<td>.206*</td>
<td>.360</td>
<td>0</td>
<td>.336</td>
<td>.295</td>
<td>.351</td>
<td>0</td>
<td>.338</td>
<td>.187</td>
<td>3.44</td>
</tr>
<tr>
<td>Understanding of threats</td>
<td>-.027</td>
<td>.370</td>
<td>0</td>
<td>.373</td>
<td>-.035</td>
<td>.378</td>
<td>0</td>
<td>.367</td>
<td>.145</td>
<td>3.72</td>
</tr>
<tr>
<td>Security education</td>
<td>.224*</td>
<td>.357</td>
<td>0</td>
<td>.351</td>
<td>.243</td>
<td>.362</td>
<td>0</td>
<td>.345</td>
<td>.127</td>
<td>3.53</td>
</tr>
<tr>
<td>Security behavior</td>
<td>.046</td>
<td>.340</td>
<td>0</td>
<td>.319</td>
<td>.055</td>
<td>.333</td>
<td>0</td>
<td>.320</td>
<td>.208</td>
<td>3.26</td>
</tr>
</tbody>
</table>

Note: * p<.05, ** p<.01, ***p<.001

### 3.3. Models fit the hypothesis compare

Comparison between groups analysis is to verify whether the path coefficient between the measurement model in the same structural model and the path coefficients of other groups.

Table 6. Models of group-specific parameter estimates(model added to the identity constraints on factors loading).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Gender</th>
<th>Major presence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Security education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal experience</td>
<td>.150(.143)</td>
<td>.563***(.599)</td>
</tr>
<tr>
<td>Optimistic bias</td>
<td>.322(.267)</td>
<td>.022(.018)</td>
</tr>
<tr>
<td>Technical understanding</td>
<td>.588***(.415)</td>
<td>.182*(.142)</td>
</tr>
<tr>
<td>Understanding of threats</td>
<td>.161(.146)</td>
<td>.399***(.312)</td>
</tr>
<tr>
<td>Security behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal experience</td>
<td>-.189(-.201)</td>
<td>.081(.084)</td>
</tr>
<tr>
<td>Optimistic bias</td>
<td>.302(.280)</td>
<td>.386***(.335)</td>
</tr>
<tr>
<td>Technical understanding</td>
<td>.369**(.291)</td>
<td>.317***(.261)</td>
</tr>
<tr>
<td>Understanding of threats</td>
<td>.305**(.311)</td>
<td>-.113(-.093)</td>
</tr>
<tr>
<td>Security education</td>
<td>.221(.247)</td>
<td>.260*(.274)</td>
</tr>
</tbody>
</table>
Nine models was added to each of the nine paths equality constraint factor present in the model to evaluate the significant difference in path Quarterly between groups were compared with the base model.

**Table 7.** Differences between groups(variation).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Gender</th>
<th>Major presence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\Delta \chi^2$</td>
<td>$\Delta TLI$</td>
</tr>
<tr>
<td><strong>Security education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal experience</td>
<td>1</td>
<td>5.691* .000</td>
</tr>
<tr>
<td>Optimistic bias</td>
<td>1</td>
<td>2.541 .000</td>
</tr>
<tr>
<td>Technical understanding</td>
<td>1</td>
<td>7.376** .001</td>
</tr>
<tr>
<td>Understanding of threats</td>
<td>1</td>
<td>2.601 .000</td>
</tr>
<tr>
<td><strong>Security behavior</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal experience</td>
<td>1</td>
<td>2.438 .000</td>
</tr>
<tr>
<td>Optimistic bias</td>
<td>1</td>
<td>.213 .000</td>
</tr>
<tr>
<td>Technical understanding</td>
<td>1</td>
<td>.100 .000</td>
</tr>
<tr>
<td>Understanding of threats</td>
<td>1</td>
<td>7.747** .001</td>
</tr>
<tr>
<td>Security education</td>
<td>1</td>
<td>.062 .000</td>
</tr>
<tr>
<td><strong>All constrained</strong></td>
<td>9</td>
<td>25.179** .001</td>
</tr>
</tbody>
</table>

**4. Conclusion**

The results are as follows.

First, it was found that the difference between groups for the presence gender and social groups majoring in information security structure variables. The difference was not great.

Second, women’s groups and major groups are the personal experiences; optimistic bias, technical understanding of information security increased the information security training is high. In addition, the high information security Information security actions showed that high.

Third, the structural parameters in the information security group showed a difference between the genders in the presence or absence and Social Welfare.

Fourth, the need for women and social welfare groups in major information security education was relatively high. Social work graduates were female than male relative. Information security training is very important when considering the proportion of women in the social welfare field. Therefore, the information security courses shall be established on social welfare majors. In addition, you should enable information security education based on ethics for social welfare information security and personal security.

**5. References**

**5.1. Journal articles**

5.3. Books

5.4. Conference proceedings

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- 2012~2016. Gwangju University School of Social Welfare, Professor

5.2. Thesis degree