

Relation between the empowrment of water-safety instructors and the safety awareness of students

Myung-Hyo Kang¹, Young-Hee, Han²
and Chun-Ho Yang^{3*}

¹Dept. of Marine Sports,
Hanseu University, Seosan,
31962, Korea

First e-mail address

²Dept. Taxation Namseoul University,
Cheonan, 31020, Korea

Second e-mail address

³Dept. of Marine Sports,
Hanseu University, Seosan,
31962, Korea

Second e-mail address

Abstract

Background/Objectives: This study seeks to provide a basic set of data to increase the safety awareness of students through a review of the empowerment of water-safety instructors and the safety awareness of students to contribute to a qualitative improvement of the individual water-sports safety instructors.

Methods/Statistical Analysis: This study was conducted using a questionnaire for which a simple sampling method was used with water-sports participants who formed the parent group. A total of 268 copies and the data therein were used for an analysis through the SPSS 21.0. The fol-

lowing findings have been taken from the frequency analysis, correlation analysis, and multiple regression analysis that were conducted.

Findings: First, the correlation between the instructor's empowerment and the safety awareness is positive in all of the sub-variables. Second, the self-determination and influence of the instructor exerted a positive effect on the safety-incident prevention. Third, in the relation between the student safety awareness and the empowerment of the instructor, the safety-incident prevention and the safety awareness positively affected the significance.

Improvements/Applications: The safety-incident prevention exerted a positive effect on the role-execution ability, while the safety-incident prevention and safety training exerted a positive effect on the self-determination. The safety-incident prevention and the safety awareness positively affected the influence. Based on these findings, the empowerment of the water-sports safety instructors exerted an overall positive effect on the student safety awareness.

Key Words : Water-Safety Instructors, Safety Awareness, Qualitative Improvement, Empowerment, Safety-Incident Prevention.

1 Introduction

Water sports constitute a high-level activity that is beyond the challenging of the self, and a harmony between humankind and nature can be the goal of the participants. Water sports offer a chance where the participants can realize the way that humankind is a part of nature, leading to improvements of the environment, eco-system, and quality of life¹; furthermore, it is a group of sports that maximizes the harmony between humankind and nature while also offering fun to the participants. Water skiing, wind surfing, skin/scuba diving, and wake boards are examples of such sporting activities. Water skiing allows one to overcome fears of water and speed during a satisfactory experience², while wind surfing allows humans to enjoy the sport by leveraging the power of wind to create a speed that is greater than the exerted energy³. Water sports are categorized as an adventure sport because they take place in nature.

While adventure sports offer joy and thrills, they also associated with risks⁴.

The growing interest in water sports in Korea is due to the presence of natural environmental conditions that are conducive to water sports. Although the continued growth of these water sports is occurring, with a dramatic increase in the number of participants, the requisite safety awareness is still lacking. In particular, since the year 2000, when the water-sports leisure-safety act was formalized, water-sports activities became more adventurous, leading to a greater number of joyous participants, but also an increase in the number of accidents. Lee et al.⁵ reported that the lack of a safety-management awareness and the lack of personnel who specialize in water-sports safety have led to increases of the injuries and fatalities.

Korea has a long coastline compared with other countries, making it conducive to water sports, but the safety awareness and/or training is lacking, and clear, transparent safety policies are still absent⁶. Moreover, sufficient safety-infrastructure investments are not being made.

Risk is defined subjectively and is widely influenced by psychological, social, and institutional factors⁷. The attitude and judgment toward natural and technical risks constitute the risk perception, which is an uncertainty that is due to the lack of a forecasting ability in certain situations⁸. Those who perceive such risks adopt a passive attitude and give up on water sports, or they restrict themselves, in preference to the adoption of a proactive approach regarding water-sport safety.

The opposite of risk is safety. Chae and Shin⁹ defined safety as a basic need and a status where one is at ease, devoid of danger. Safety awareness is the degree to which a participant's potential interest in safety is expressed through action and practice. That is, safety awareness can be a reference point to judge the degree of practice and not just the safety knowledge. Increasing the safety awareness among those who enjoy water sports is meaningful in the promotion of safety practices. To promote safety awareness, the role of the instructor is important. Han and Yoo¹⁰ noted that the sports instructor needs to convey knowledge about the sport, sport treatment, facility operation, and management and program development, as well as the safety management. Kwak¹¹ noted that

the instruction that ensures that the safety habits become ingrained based on the firm safety awareness of both the parents and instructors is important in the prevention of accidents. Safety-incident risks can be prevented just like diseases; that is, through systematic and effective education, the correct knowledge, behaviors, and attitude changes can be promoted to prevent accidents ¹².

The safety training that is related to safety awareness is mostly delivered through lectures in an unsystematic way. Recently, according to studies on safety training, the education that focuses on experience and activities is more effective than a theory focus ¹³. The role of the instructor is important in practical experience-oriented safety training. In particular, the empowerment of the instructor can contribute to increased problem-solving whereby they can quickly recognize various natural-environment aspects and landmarks during water sports ¹⁴. As such, this study seeks to provide a basic set of data to increase the safety awareness of students through a review of the empowerment of water-safety instructors and the safety awareness of students to contribute to a qualitative improvement of the individual water-sports safety instructors.

2 Methods

2.1 Subjects

The parent group consists of participants of the water-sports activities. The sample was collected from June 2016 to August 2016 using a convenient sampling method. A total of 300 copies of a questionnaire were distributed to participants who understood the purpose and goal of the study. A total of 268 copies were analyzed after the exclusion of 32 copies that contained insufficient or unreliable responses. The general characteristics of the subjects are shown in <Table 1>, as follows.

Table 1. General characteristics of the study subjects

Variable		Frequency (people)	Percent-age (%)
Gender	Male	162	60.4
	Female	106	39.6
Age	Teens	197	73.5
	20s	6	2.2
	30s	7	2.6
	40s or older	58	21.6

Education	Elementary school	115	42.9
	Middle school	45	16.8
	High school	51	19.0
	University or higher	57	21.3
Level of water sports	Advanced	55	20.5
	Intermediate	159	59.3
	Beginner	54	20.1
Total		268	100

2.2 Tools

2.2.1 Composition of the questionnaire

The background variables of this study comprise one question on gender, one on age, one on education, and one on the water-sport level. To review the empowerment of the water-safety instructor, the scale developed by Spreizer ¹⁵, which Lee ¹⁶ had selected, was used for the variables. The empowerment sub-variables are significance (four questions), role-execution ability (four questions), self-determination (four questions), and influence (four questions). To review the safety awareness of the instructor, the questionnaire used by Noh ¹⁷ was employed to review the safety awareness of the elementary school students in their swimming classes. Questionnaire factors that fit the purpose of this study were selected, and the safety-awareness sub-variables consist of safety-incident prevention (seven questions), safety training (five questions), and safety awareness (six questions). Each question was measured on a five-point Likert scale of *very much so* (5 points), *yes* (4 points), *average* (3 points), *no* (2 points), and *not at all* (1 point).

2.2.2 The fitness and confidence level of the questionnaire

To verify the validity of the questionnaire, an investigative-factor analysis was conducted. For the factor extraction, a varimax orthogonal-rotation method and a main-component analysis were applied. The eigenvalue was set at 1.0 or higher, and only questions with a factor loading of .4 or higher were used. The confidence analysis was performed using the Cronbach's α coefficient, for which only those questions that are .6 or higher were used.

The empowerment that was used in this study extracted four factors with an eigenvalue of 1.0 or higher. The empowerment was categorized into the four factors of significance, role-execution abil-

ity, self-determination, and influence. The explanatory power is 65.3 % of the total variance. The KMO-standard fitness in this study is .869 and the sig(p) is .000, indicating that it is fit for the factor analysis. The X^2 is 1859.398 and the degree of freedom (df) is 120. The safety awareness was categorized into the three factors of safety training, safety-incident prevention, and safety awareness. The explanatory power is approximately 56.3 % of the total variance. The KMO-standard fitness in this study is .850 and the sig(p) is .000, indicating that the factor analysis is appropriate. The X^2 is 2164.262 and the df is 153.

A verification of the confidence level of the empowerment sub-variables showed that the significance is .851, the role-execution ability is .852, the self-determination is .857, and the influence is .848. In terms of the safety awareness, the safety-incident prevention is .842, the safety training is .861, and the safety awareness is .849, thereby verifying the confidence level of the internal consistency.

2.3 Methodology

For this study, a pre-test was conducted to verify the validity and the confidence level of the questionnaire. To conduct the survey, the researcher was accompanied by three trained research assistants at venues where water sports were conducted to distribute the questionnaire to the participants and then collect them afterward. To obtain a clear response, the purpose and goal of the study were explained to the participants. An immediate on-site collection of the completed questionnaires occurred. The copies with insufficient or unreliable responses were excluded from the analysis.

2.4 Data processing

The questionnaire copies with insufficient or unreliable responses were excluded from the data analysis. The data were analyzed using the SPSS 21.0, as follows. First, to review the sociodemographic variables, a technical statistical analysis was conducted. Second, to verify the validity, a factor analysis was conducted. To verify the confidence level of the factors that were divided into uniform groups, the Cronbach's coefficient was calculated. Third, to

review the correlation between the empowerment of a water-sports safety instructor and the safety awareness of students, a correlation analysis was conducted. And fourth, to review the relation between the empowerment of the water-safety instructors and the safety awareness of the students, a multiple-regression analysis was conducted. The significance level of the statistical values was set at $p < .05$.

3 Results

3.1 The correlation between the empowerment of the water-sports safety instructors and the safety awareness of the students

As shown in <Table 2>, the correlation between each variable shows the sequential positive correlations of the safety-incident prevention (.358), safety awareness (.323), and safety training (.225) ($p < .001$). The role-execution ability has a positive correlation with the safety-incident prevention (.421), safety training (.265), and safety awareness (.215) ($p < .001$). The self-determination has a correlation with the safety-incident prevention (.346), safety training (.265), and safety awareness (.202) ($p < .001$). The influence has a positive correlation with the safety-incident prevention (.931), safety training (.369), and safety awareness (.362) ($p < .001$).

Table 2. Correlation-analysis results

Category	Significance	Role execution	Self-determination	Influence	Safety-incident prevention	Safety training	Safety awareness
Significance	-						
Role execution	.540***	-					
Self-determination	.491***	.577***	-				
Influence	.307***	.387***	.286***	-			
Safety-incident prevention	.358***	.421***	.346***	.931***	-		
Safety training	.225***	.265***	.265***	.369***	.413***	-	
Safety awareness	.323***	.215***	.202***	.362***	.452***	.322***	-

*** $p < .001$

3.2 The relation between the water-sports safety instructor's empowerment and the student safety awareness

Multilinearity refers to the existence of a correlation between independent variables. In the SPSS program, the tolerance and the variance inflation factor (VIF) were reviewed to check for the presence of a multilinearity. The tolerance is 1 or lower and is higher when the multilinearity is lower. The VIF is the inversion of the tolerance and is smaller than 10; the closer it is to 1, the lower the multilinearity.

3.2.1 Relation between the empowerment and the safety-incident prevention

Table 3. Relation between the empowerment and the safety-incident prevention

	B	SE	β	t	Tolerance	VIF
Constant	.440	.102		4.325***		
Significance	.043	.025	.046	1.722	.653	1.532
Role-execution ability	.016	.027	.017	.580	.549	1.821
Self-determination	.048	.023	.058	2.084*	.620	1.614
Influence	.793	.021	.893	37.479***	.835	1.198

$R^2 = .875$, $F = 461.444$ ***

* $p < .05$, *** $p < .001$

To analyze the effect of a water-sports safety instructor's empowerment on the prevention of safety incidents, as shown in <Table 3>, the $F = 461.444$, with a significant effect at a significance level of $p < .001$. The explanatory power of the regression equation is 87.5 % ($R^2 = .875$). The effect of the water-sports safety instructor's empowerment on the student safety-incident prevention exerted a positive effect in the order of the influence ($\beta = .893$, $t = 37.479$) and the self-determination ($\beta = .058$, $t = 2.084$).

3.2.2 The relation between the empowerment and the safety training

Table 4. The relation between the empowerment and the safety training

	B	SE	β	t	Tolerance	VIF
--	---	----	---------	---	-----------	-----

Constant	2.176	.287		7.574***		
Significance	.041	.071	.041	.587	.653	1.532
Role execution	.054	.077	.053	.696	.549	1.821
Self-determination	.117	.065	.129	1.810	.620	1.614
Influence	.290	.060	.299	4.855***	.835	1.198
$R^2 = .168, F = 13.262^{***}$						

*** $p < .001$

<Table 4> shows the analysis of the effect of the water-sports safety instructor's empowerment on the safety training. The $F = 13.262$, indicating a significant effect at a significance level of $p < .001$. The explanatory power of the regression equation is 16.8 % ($R^2 = .168$). The effect of the water-sports safety instructor's empowerment on the student's safety training showed the influence of $\beta = .299$ and $t = 4.855$, indicating a positive effect.

3.2.3 The relation between the safety awareness and the significance

Table 5. The relation between the safety awareness and the significance

	B	SE	β	t	Tolerance	VIF
Constant	2.413	.276		8.759***		
Significance	.240	.068	.245	3.549***	.653	1.532
Role execution	-.045	.074	-.046	-.610	.549	1.821
Self-determination	.020	.062	.023	.318	.620	1.614
Influence	.280	.057	.298	4.887***	.835	1.198
$R^2 = .182, F = 14.616^{***}$						

*** $p < .001$

The analysis of the effect of the water-sports safety instructor's empowerment on the safety awareness, as shown in <Table 5>, where the $F=14.616$, indicates a significant effect at a significance level of $p < .001$. The explanatory power of the regression equation is 18.2 % ($R^2 = .182$). The positive effects of the empowerment on the safety awareness of the Influence ($\beta = .298$, $t = 4.887$) and the Significance ($\beta = .245$, $t = 8.759$) are sequential.

3.3 The relation between the student safety awareness and the empowerment of the water-sports safety instructor

3.3.1 The relation between the safety awareness and the significance

Table 6. The relation between the safety awareness and the significance

	B	SE	β	t	Tolerance	VIF
Constant	2.060	.308		6.696***		
Incident prevention	.265	.072	.246	3.698***	.716	1.397
Safety training	.060	.062	.061	.976	.806	1.240
Safety awareness	.196	.065	.192	3.002***	.774	1.292

R² = .164, F = 17.240***

***p < .001

An analysis of the effect of the student safety awareness on the significance of the water-sports instructors that is shown in <Table 6>, where the F = 17.240, indicates a significant influence at a significance level of $p < .001$. The explanatory power of the regression equation is 16.4 % ($R^2 = .164$). The positive effects of the student safety awareness on the significance of the water-sports safety instructor of the Safety-Incident Prevention ($\beta = .246$, $t = 3.698$) and the Safety Awareness ($\beta = .192$, $t = 3.002$) are sequential.

3.3.2 The relation between the safety awareness and the role-execution ability

Table 7. The relation between the safety awareness and the role-execution ability

	B	SE	β	t	Tolerance	VIF
Constant	1.872	.302		6.057***		
Incident prevention	.398	.070	.371	5.653***	.716	1.397
Safety training	.106	.061	.108	1.749	.806	1.240
Safety awareness	.013	.064	.013	.199	.774	1.292

R² = .187, F = 20.295***

***p < .001

An analysis of the effect that the student safety awareness on the role-execution ability of the water-sports instructor, as shown in

<Table 7>, where the $F = 20.295$, indicates a significant influence at a significance level of $p < .001$. The explanatory power of the regression equation is 18.7 % ($R^2 = .187$). The effect of the student safety awareness on the role-execution ability of the water-sports safety instructor is positive with the Safety Incident Prevention ($\beta = .371$, $t = 5.653$).

3.3.3 The relation between the safety awareness and the self-determination

Table 8. The relation between the safety awareness and the self-determination

	B	SE	β	t	Tolerance	VIF
Constant	1.698	.350		4.846***		
Incident prevention	.329	.082	.272	4.027***	.716	1.397
Safety training	.158	.070	.142	2.239*	.806	1.240
Safety awareness	.038	.074	.033	.507	.774	1.292

$R^2 = .138$, $F = 14.141$ ***

* $p < .05$, *** $p < .001$

An analysis of the effect of the student safety awareness on the self-determination of the water-sports safety instructor, as shown in <Table 8>, where the $F = 14.141$, indicates a significant effect at a significance level of $p < .001$. The explanatory power of the regression equation is 13.8 % ($R^2 = .138$). The sequential positive effects of the student safety awareness on the self-determination of the water-sports safety instructor are the Safety Incident Prevention ($\beta = .272$, $t = 4.027$) and the Safety Training ($\beta = .142$, $t = 2.239$).

3.4 The relation between the safety awareness and the influence

An analysis of the effect of the student safety awareness on the influence of the water-sports safety instructor, as shown in <Table 9>, where the $F = 591.980$, indicates a significant effect at a significance level of $p < .001$. The explanatory power of the regression equation is 87.1 % ($R^2 = .871$). The positive effects of the student safety awareness on the influence of the water-sports safety instructor are in terms of the Safety-Incident Prevention ($\beta = .966$, $t = 36.924$) and the Safety Awareness ($\beta = .072$, $t = 2.856$).

Table 9. The relation between the safety awareness and the influence

	B	SE	β	t	Tolerance	VIF
Constant	-.069	.127		-.545		
Incident prevention	1.089	.029	.966	36.924***	.716	1.397
Safety training	-.007	.025	-.007	-.289	.806	1.240
Safety awareness	.077	.027	.072	2.856**	.774	1.292

R² = .871, F = 591.980***** $p < .01$, *** $p < .001$

4 Discussion

The contemporary era has yielded many forms of high-tech equipment, but water-sports safety incidents and accidents are not decreasing. Water-sports safety is conducted in relation to water-sports leisure activities and safety experiences. As local governments made it obligatory to conduct safety-experience programs in 2015, more instructors have been recruited into this field ¹⁸.

The concept of safety in contemporary times may vary depending on the political, social, cultural, and legal aspects of a situation. The concept now not only includes the safety of the body and the life, but a biological safety as well ¹⁹. The Constitution first mentions safety, and this is because it is the basis upon which freedom and happiness can be built. The Act for water-sports safety is being updated annually to secure the safety of the instructors and to promote the progress of the water-sports industry ²⁰.

Safety management refers to the efforts to identify the factors that can lead to safety incidents in advance and to remove them. Safety-management systems can be categorized into the overall structural systems and the on-site life-rescue factors ²¹. Life-rescue guards are water-sports safety instructors. Their education must be promoted to reach a certain level of mastery in terms of the knowledge and skill so they can formulate the appropriate responses for the type and frequency of the incidents. The training of water-sports safety instructors can be effective in the promotion of the instructors' confidence through on-the-job quality training for life rescues ²². There are many attributes that the water-sports safety instructor must be in possession of, including empowerment. Empowerment can be categorized into two types. The empowerment from a relational-structure perspective is the process in which authority is given to add vibrancy to the organizational members or

for the consideration of certain internal psychological aspects of oneself in addition to the authority that has been received ²³.

This study conducted a survey on 268 participants to review the relation between the empowerment of the safety instructors in water sports and the safety awareness of the students. The results showed a positive correlation between the two. Choi ²⁴ argued that, to secure order and safety in water sports and to promote positive development in the field, a law that concerns the inside and outside of the water must be enacted to promote the safety awareness of the participants. As such, it can be said that the empowerment of the water-sports safety instructors exerts a positive effect on the safety awareness of students. In this study, self-determination, influence, and significance positively affected the safety-incident prevention, safety training, and safety awareness. The self-determination of the safety instructor reflects the autonomy of the instructor in the determination of the most appropriate time for the conduction of certain acts or what to select. Given this, this result shows that the instructor's self-determination is effective in the safety-incident prevention among students. Influence is the degree to which the instructor's strategic, administrative, and practical decisions are effective ²⁵. Since the instructor characteristics are unique regardless of the changes in the situation, the instructor's influence can exert a positive effect on the safety training and safety awareness of the students. Lastly, the significance is related to the way that the purpose or the goal of the training is associated with the belief, values, and fitness of an individual ²⁶, and therefore positively affects the safety awareness of the students.

Safety awareness is the mental attitude regarding the seeking of safety. It is a proactive awareness that one holds to maintain safety or prevent any accidents, and it is an approach that is taken to promote a safe environment ²⁷. This study reviewed the effect of the empowerment of the water-sports safety instructor on the safety awareness of the students. The result is that the safety-incident prevention exerted a positive effect on the significance, role-execution ability, and self-determination. The safety-incident prevention refers to the preventive activities of the instructor for the prevention of accidents; that is, during the student water-sports activities, the instructor actions include a consideration of the environmental factors and an allocation of the safety personnel and

facility condition. Therefore, a positive effect on most of the sub-variables of the empowerment of the instructor was recorded. Since the safety training needs to improve the ability regarding the response to tension and pressure during unsafe situations, its effect on the self-determination of the instructor seems to have been positive, while during the water sports, the students perceived and understood the state of the unacceptable risk that harms individuals. Therefore, the student safety awareness positively affected the significance of the water-sports safety instructor.

5 Conclusion

This study was conducted using a questionnaire for which a simple sampling method was used with water-sports participants who formed the parent group. The study was conducted to review the relation between the empowerment of water-sports safety instructors and the safety awareness of the students. A total of 268 copies and the data therein were used for an analysis through the SPSS 21.0. The following findings have been taken from the frequency analysis, correlation analysis, and multiple regression analysis that were conducted.

First, the correlation between the instructor's empowerment and the safety awareness is positive in all of the sub-variables. Second, the self-determination and influence of the instructor exerted a positive effect on the safety-incident prevention. Third, in the relation between the student safety awareness and the empowerment of the instructor, the safety-incident prevention and the safety awareness positively affected the significance. The safety-incident prevention exerted a positive effect on the role-execution ability, while the safety-incident prevention and safety training exerted a positive effect on the self-determination. The safety-incident prevention and the safety awareness positively affected the influence. Based on these findings, the empowerment of the water-sports safety instructors exerted an overall positive effect on the student safety awareness.

6 Acknowledgment

This study was from the 2016 Academic Research Support Project of Hanseo University.

References

- [1] Ji, Sam-Up. *The Analysis of Natural Environmental Factors for the Popularization of Marine Sports*. Korea sport research, 2004, 15(6), pp.949-969.
- [2] Lee, Byung-Yoo & Hwang, Hyang-Hee. *The Affect of Selection Attributes of Water Leisure Sports on Customer Satisfaction, Word of Mouth Intention and Revisitation Intention*. Korean Journal of Sports Science, 2010, 19(2), pp.715-723.
- [3] Moon, Chang-Il., Yoo, Jung-In., Park, Chul-Soo., & Moon, Il-Soo. *Windsurfing*. Seoul: Rainbow Books: 2008.
- [4] Moon, Tae-Young & Park, Seung-Hwan. *A Study on the Impact of Social Education on Life Satisfaction among Women and Satisfaction-Related Factors*. Korea sport research, 2004,15(1), pp.475-489.
- [5] Lee, Du-Hyun. *Safety training program development and effectiveness, based on understanding of space activities Field Experience Learning: Seoul Seochon (Sejong village), Suwon Haenggungdong (EcoMobility town) Field Experience Activities around*. The journal of the Korean association of geographic and environmental education, 2015, 23(2), pp.89-104.
- [6] Mun, Sun-Ho & Cho, Tae-Soo. *Study on the Relationship between Perceived Risk Factors and Participation Intention in Marine Sport Activities: Focused on the Mediating Effect of Information Seeking Behavior*. Journal of Sport and Leisure Studies, 2012, 47(1), pp.171-184.
- [7] Slovic, P., Monahan, J., & MacGregor, D. G. *Violence risk assessment and risk communication: the effects of using actual cases, providing instruction and employing probability versus*

- frequency formats*. Law & Human Behavior, 2000, 24, pp.271-296.
- [8] Chaudhuri, A. *Conception Emotion and Perceived Risk : A Macro-Analytic Approach*, *Journal of Marketing Research*, 1997, pp.81-92.
 - [9] Chae, Young-Ran & Shin, Su-Kyung. *Relationship between Early Childhood Teachers' Safety Recognition and Class Environment Condition of Safety*. The Korean Society for Early Childhood Teacher Education, 2009, 13(3), pp.397-412.
 - [10] Jeong, Kook-Hyun & Kim, Doo-Hyun. *The Effect of Safety Management on Performances in Taekwondo Athletes*. Sport Science, 2015, 33(2), pp.167-174.
 - [11] Kwak, Eun-Bok. *Safety Curriculum to promote knowledge Safety in Young Children*. The Korean Society for Early Childhood Teacher Education, 2000, 4(2), pp.53-70.
 - [12] Lee, Myung-Sun., Choi, Hye-Jung., Kim, Mi-Hee., & Park, Yea-Jin. *The Influence of School Safety Education on Safety Awareness of Students: Based on Study of Elementary, Middle, and High Schools in Chung-nam*. The Journal of Korean Society for School Health Education, 2012, 13(2), pp.93-105.
 - [13] Lee, Kyu-Eun & Jung, Hye-Sun. *A Study on Development of the Contents System for Safety Education in Elementary School*. The Journal of The Korean society of school health, 2012, 25(2), pp.175-191.
 - [14] Thomas, K. W., & Velthouse, B. A. *Cognitive elements of empowerment: an interpretative model of intrinsic task motivation*. Academy of Management Review, 1990, 15, pp.666-681.
 - [15] Spreitzer, G. M. *Psychological empowerment in the workplace: dimensions, measurement and validation*. Academy of Management Journal, 1995, 38, pp.1442-1485.
 - [16] Ahn, Jae-Seok., Kang, Jong-Koo., & Yu, Kwang-Kil. *The Influence of the People's Job Characteristics in the K-League Football Clubs Front on the Empowerment and Organizational*

- Effectiveness*. Journal of Korean Sociology of Sport, 2008, 21(4), pp.719-734.
- [17] Nho, Kwnag-Yeol. *A Study on Relations between Swim Lessons and Water Safety Awareness in Elementary School*. Dongguk University, Unpublished master's Dissertation, Seoul:, 2016.
- [18] Lee, Bang-Il & Park, Jae-Yeon. *The Analysis and Development Plan of the Korea Lifeguard Qualification System*. Journal of Digital Convergence, 2015, 13(10), pp.415-427.
- [19] Baek, Ok-Sun. *The Legal Problem and the Improvement of the Disaster Management System at Sea: Focused on the SEWOL passenger ship case*. Chung Ang Law Review, 2014, 16(2), pp.7-52.
- [20] Kim, Jung-Hoon & Gug, Seung-Gi. *Analysis on the actual condition of consciousness for related regulations with revised Water Leisure Safety Regulation*. Journal of Korean Navigation and Port Research, 2005, 29(10), pp.891-896.
- [21] Shon, Seok-Jung. *Legal Study on the Sports Tourism Accidents*. Korean journal of physical education, 2011, 50(1), pp.187-196.
- [22] Kim, Yun-Won & Moon, Tae-Young. *Relationship of Goal Orientation, Flow Experience and Self-Accomplishment among College Students Receiving Lifeguard Education*. Journal of the Korea Academia-Industrial cooperation Society, 2011,12(5), pp.2214-2221.
- [23] Conger, L. A. & Kanungo, R. N.. *The empowerment process: intergrating theory and practice*. Academy of Management Review, 1998, 3, pp.471-482.
- [24] Choi, Chol-Ho. *Legal Issues in Marine Leisure Sports and Improvement Plan*. The Korean Association of Sports Law, 2011, 14(1), pp.181-196.
- [25] Ashford, B. E. *Experimental of powerlessness in organizations, Organizational Behavior and Human Decision Process*, 1989, 43, pp.111-123.

- [26] Brief, A. P. & Nord. W. R. *Meaning of occupational work*, MA: Lexington Books: 1990.
- [27] Lee, Kyung-Jae. *The Effect of Safety Climate and Safety Awareness on the Job Satisfaction and Organizational Commitment: Mediation Effect of Organizational Trust*. SoonChunhyang University, Unpublished doctor's Dissertation, Chungnam:, 2016.