

Affecting Factors on Social Problem-Solving Ability of University Students

Hye-gyeong Cha¹

¹Assistant Professor, Department of Nursing, Namseoul University, Korea

ABSTRACT

Background/Objectives: This study is a descriptive research to identify the factors influencing university students' ability to solve social problems.

Method/Statistical analysis: From November 18 to December 16, 2017, 250 university students in Korea were surveyed and data was collected. Data was pulled from 213 questionnaires as 37 questionnaires were inappropriately responded. SPSS Win 22.0 Program was used for data analysis.

Findings: The social problem-solving ability of university students showed a positive correlation with social support ($r = .377, p < .001$) and self-efficacy ($r = .613, p < .001$), and negative correlation with fatigue ($r = -.311, p < .001$). As a result of stepwise multiple regression with general characteristics and major variables as independent variables the study identified the factors affecting the social problem-solving ability of university students. The most influential factors in the social problem-solving ability of university students were self-efficacy ($\beta = .498, p < .001$), fatigue ($\beta = -.210, p < .001$) and emotional support ($\beta = .325, p = .007$), indicating a total explanatory power of 42.8% ($F = 50.172, p < .001$).

Improvements/Applications: It is necessary to develop a program to improve the problem-solving ability of university students in the future, and further study additional variables and mediating factors affecting problem-solving ability.

Keywords: Social problem-solving ability, self-efficacy, fatigue, emotional support, university, student

Introduction

Social problem-solving skill is a self-directed cognitive-behavioral process that seeks to find effective solutions to everyday problems [1].

Not only does social problems refer to problems in certain areas of society, but it also uses the term social problems to emphasize the importance of social context that can be applied in all kinds of social situations as well as interpersonal and personal problems that occur in real life [2]. The higher the ability to solve social

problems, the more likely it is to choose an efficient solution. Korean students usually live passive and dependent in a university-oriented environment until university admission, but after entering university, they are in a situation where they have to choose, decide, and be responsible for themselves, and experience great difficulties such as the appropriate academic and interpersonal methods and lifestyles in the newly required educational environment [3,4]. In addition, recent deterioration in the job market caused by the difficulty of employment and rising youth unemployment led to various problems such as postponement of graduation or abandonment of jobs [5,6]. University students are getting ready to leave their adolescence and go out to society, and their ability to solve problems will have a great impact on shaping a healthy and healthy society in the near future.

Many studies show that social problem-solving skills can effectively cope with various problems and

Corresponding Author:

Hye-gyeong Cha
Assistant Professor,
Department of Nursing,
Namseoul University, 91 Daehakro, Seonghwan-eup,
Seobuk-gu, Cheonan-si,
Chungcheongnam-do, 331-707, Korea
Email: hgcha@nsu.ac.kr

stresses, thus eliminating psychological stress and behavioral maladjustment [7-9]. [10] said that having the ability to solve social problems naturally builds up the ability to solve tasks, including personal problems, interpersonal problems, or intergroup problems. On the other hand, the lack of coping skills necessary to solve the problem is related to psychological maladjustment and mental illness [11]. Therefore, rational problem solving is an important task that needs to be improved through university education to adapt to new changes and solve the problems faced by university students [12].

In the previous studies, most of the factors that affect the social problem-solving ability of university students were analyzed from one aspect such as personal internal factors, physical factors, social relations factors, and there are few studies that have identified the factors that affect problem solving in complex aspect such as internal personal, external, physical factors, social relations. In this study, we examined the self-efficacy [13] in personal internal factors, which is a value judgement that indicates a person's attitude toward him or herself and a subjective experience of being delivered to others and examined the fatigue symptoms in physical factors and social support in social relationship factors. We will try to find out which factors affect the problem-solving ability of university students.

Study Method

Study Design: This study is a descriptive survey study to identify the factors affecting the social problem-solving abilities of university students living in Korea.

Subjects and data collection: The participants of this study were university students of Korea, and the data was executed from 18 November to 16 December, 2017. G*Power 3.1.2. Program was used to get a sample size for this study. The required sample size was 138 with the significant level (α) 0.05, Power of test ($1-\beta$) 0.95, effect size (p) 0.3, and the number of predictors 5. In considering the dropout rate, 225 university students participated in the survey after informed consent. However, 23 questionnaire had missing values and improper response, thus a total of 202 questionnaires were used for the data analysis of this study.

Measurements

Social problem-solving ability: The social problem-solving skills scale used in this study used the social

problem-solving ability (SPSI-R) scale that was revised by the [14], translated by [15]. It consists of a total of 52 questions and a Likert 5 points scale. In this study, the tool reliability Cronbach's α was found to be .913.

Self-efficacy: The self-efficacy test used in this study used a self-efficacy scale developed by [16] that was translated and modified by [17].

It consists of a Likert scale with a total of 25 questions. In this study, the tool reliability Cronbach's α was found to be .926.

Social support: The social support measure used in this study, a Likert scale with a total of 25 questions, was developed by [18]. The subcomponents consist of seven questions about emotional support, six questions about information support, six questions about evaluation support, and six questions about tool support. In this study, the tool reliability Cronbach's α was found to be .962. In this study, the tool reliability Cronbach's α was found to be .962.

Fatigue: The fatigue measurement tools used in this study used a translation of the Subjective Symptom of Fatigue Test by [19], which was standardized by the Industrial Fatigue Research Committee of the Japan Society of Industrial Health. This tool consists of a Likert 5 points scale with 30 questions, 10 questions of physical symptoms, 10 questions of mental symptoms, and 10 questions of neurological symptoms.

Data Analysis

This study used SPSS/WIN 22.0 program for statistical analysis of the data, conducted descriptive statistics for the general characteristics, t-test and One-way ANOVA for difference analysis of variables according to the general characteristics, and analyzed the relation between variables with Pearson correlation coefficients. This study used stepwise multiple regressions for finding affecting factors on social problem-solving ability of university students.

Ethical Consideration: Prior to data collection, this study considered the ethical aspects by providing participants with the purpose and method of research, utilization of research results, survey data to be used only for the study purpose, anonymity and confidentiality of research participants, and a description of stopping during the creation of the questionnaire, and by receiving the consent from participants.

Results and Discussion

General characteristics (N = 202): As shown in table 1, the general characteristics of the subjects were female 150 (74.3%), male 52 (25.7%) and their mean age was 21.07 ± 1.72 . There were 101 people (50.0%) who identified as religious, 101(50.0%) were non-religious, 76(37.6%) were the second born, 75(37.1%) were the first born, and 37(18.3%) were the third or more, and 14(6.9%) were the only ones. The final education level of the father was the most with 98 university graduates (48.5%), while the final education level of the mother was the most with 108(53.5%) high school graduates. The most common economic level was ‘middle-class’ with 106 students (52.5%). Father’s job status was the most with 178(88.1%) ‘Yes’, and mother’s job status also was the most with 139(68.8%). 88 respondents (43.6%) answered that they had education experience related to problem-solving. Among the types of education practice for problem-solving, 29 respondents named practical training (32.9%), 27 people named discussion (30.9 percent), 14 people named Simulation (15.9 percent), 13 named PBL (14.7 percent) and 5(5.6%) named counseling and reviewing opinions.

Table 1: General Characteristics (N = 202)

Characteristics	Categories	N (%), M ± SD
Gender	Male	52(25.7%)
	Female	150(74.3%)
Age(year)	Average	21.07 ± 1.72(18-26)
Religious status	Yes	101(50.0%)
	No	101(50.0%)
Rank among sibling	Only one	14(6.9%)
	First born	75(37.1%)
	Second born	76(37.6%)
	Third or more	37(18.3%)
The final education level of the father	Below middle school	9(4.5%)
	High school graduate	78(38.6%)
	College/ University graduate	98(48.5%)
	Graduate school and higher	17(8.4%)

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The final education level of the mother	Below middle school	5(2.5%)
	High school graduate	108(53.5%)
	College/ University graduate	79(39.1%)
	Graduate school and higher	10(5.0%)
The economic level	High	3(1.5%)
	Upper middle	51(25.2%)
	Middle	106(52.5%)
	Lower middle	37(18.3%)
Father’s Job status	Low	5(2.5%)
	Yes	178(88.1%)
Mother’s Job status	No	24(11.9%)
	Yes	139(68.8%)
Education experience status related to problem-solving	No	63(31.2%)
	Yes	88(43.6%)
The types of education related to problem solving	No	114(56.4%)
	PBL	13(14.7%)
	Simulation	14(15.9%)
	Discussion	27(30.9%)
	Practical training	29(32.9%)
	Others	5(5.6%)

Descriptive Statistics for variables: As shown in table 2, the social problem-solving abilities of the study subjects averaged 182.46 ± 24.09 points out of the total score of 52–260 and were 3.51 ± 0.46 points in terms of 1–5 points. Self-efficacy averaged 81.37 ± 13.49 points in the 24-120 points range, and social support averaged 103.51 ± 13.73 points on the 25-125 points, and fatigue scored 51.13 ± 13.02 points on average from the total core range of 30-120 points.

Table 2: Descriptive Statistics for Variables (N = 202)

Variables		Total Score Range	M ± SD (Min-Max)	Grade Range	M ± SD (Min-Max)
Social Problem-Solving Ability	Positive problem solving-orientation	5-25	19.24 ± 2.89 (10-25)	1-5	3.85 ± 0.58 (2.00-5.00)
	Negative problem solving-orientation	10-50	32.23 ± 7.89 (11-49)	1-5	3.22 ± 0.79 (1.10-4.90)
	Rational problem-solving skill	20-100	72.31 ± 10.64 (39-98)	1-5	3.62 ± 0.53 (1.95-4.90)
	Impulsive-careless response	10-50	34.30 ± 6.11 (20-49)	1-5	3.43 ± 0.61 (2.00-4.90)
	Avoidance response patterns	7-35	24.19 ± 5.15 (8-35)	1-5	3.46 ± 0.74 (1.14-5.00)
	Total Score	52-260	182.46 ± 24.09 (113-236)	1-5	3.51 ± 0.46 (2.17-4.54)
Self-efficacy		24-120	81.37 ± 13.49 (47-119)	1-5	3.39 ± 0.56 (1.96-4.96)
Social Support	Emotional support	7-35	29.57 ± 4.24 (14-35)	1-5	4.22-0.61 (2.00-5.00)
	Evaluation support	6-30	24.96 ± 3.76 (11-30)	1-5	4.16 ± 0.63 (1.83-5.00)
	Information support	6-30	24.58 ± 3.56 (12-30)	1-5	4.10 ± 0.59 (2.00-5.00)
	Instrumental support	6-30	24.49 ± 3.62 (12-30)	1-5	4.08 ± 0.60 (2.00-5.00)
	Total Score	25-125	103.51 ± 13.73 (50-125)	1-5	4.14 ± 0.55 (2.00-5.00)
Fatigue	Physical fatigue	10-40	18.72 ± 5.18 (10-32)	1-4	1.87 ± 0.52 (1.00-3.20)
	Mental fatigue	9-36	15.95 ± 4.90 (9-39)	1-4	1.77 ± 0.54 (1.00-4.33)
	Neurotic symptoms	11-44	16.47 ± 4.59 (11-34)	1-4	1.50 ± 0.42 (1.00-3.09)
	Total Score	30-120	51.13 ± 13.02 (30-96)	1-4	1.70 ± 0.43 (1.00-3.20)

Social problem-solving ability related to education experience: As shown in table 3, analysis of differences between the social problem-solving ability and its subcomponents according to the general characteristics of this study showed that the differences in education status related to the problem resolution are different.

The social problem-solving ability of university students is higher ($t=2.611$, $p=.010$) for those who receive problem solving education. Among the sub-factors, there was a significant difference in negative problem orientation ($t=2.233$, $p=.027$) and rational problem-solving skills ($t=2.132$, $p=.034$). In other words, university students with problem-solving training had higher scores for negative problem-solving orientation. However, this could be interpreted as lower for reverse conversion. Reasonable problem-solving skills also showed higher scores for university students with training related to problem-solving.

Table 3: Social problem-solving ability related to education experience (N = 202)

Variables	Education	M ± SD	t(P)
Social problem-solving ability	Yes	187.45 ± 22.03	2.611(.010)*
	No	178.59 ± 24.99	
Positive problem-orientation	Yes	19.63 ± 2.64	1.684(.094)
	No	18.94 ± 3.04	
Negative problem-orientation	Yes	33.63 ± 7.24	2.233(.027)*
	No	31.15 ± 8.23	
Rational problem-solving skill	Yes	74.11 ± 10.08	2.132(.034)*
	No	70.90 ± 10.90	
Impulsive-careless responses patterns	Yes	34.88 ± 6.10	1.172(.242)
	No	33.86 ± 6.11	
Evasive response pattern	Yes	24.75 ± 4.90	1.353(.178)
	No	23.76 ± 5.32	

*p<.05

Correlation among main variables: As shown in table 4, the correlation between study variables, the social problem-solving ability of university students was positively correlated with self-efficacy (r = .613, p <.001) and social support (r = .377). Fatigue (r = -.311, p <.001) was found to have a significant negative correlation.

Table 4: Correlation among Main Variables (N = 202)

	Social problem-solving ability	Self-efficacy	Social Support
Self-efficacy	.613**	1	
Social Support	.377**	.368**	1
Fatigue	-.311**	-.243**	-.161*

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

Factors influencing on social problem-solving: In order to identify the factors affecting the social problem-solving ability, which is a dependent variable of the study subjects, a stepwise multipurpose regression analysis was conducted with the self-efficacy, emotional support, evaluation support, information support, material support, physical fatigue, mental fatigue, neurotic fatigue, educational experience related to problem solving, age, and gender as independent variables.

As shown in table 5, problem solving education experience and gender were included in the regression equation after treating variable numbers. And the multiple regression analysis was carried out by satisfying the results of testing the normality and homoscedasticity of residuals. Multiple regression analysis showed that self-efficacy (β=.498) had the greatest effect on university students’ ability to solve social problems. Mental fatigue(β=-.210) and emotional support(β=.155) were added to have an explanatory power of 42.8%(F=50.172, p<.001).

Table 5: Factors Influencing on Social Problem-Solving (N = 202)

Variable	B	S.E.	β	t	p	Adj. R2
Constant	100.024	12.695		7.879		
Self-efficacy	.894	.107	.498	8.384	<.001	.371
Mental Fatigue	-1.034	.278	-.210	-3.720	<.001	.409
Emotional support	.884	.325	.155	2.724	.007	.428

F(p) = 50.172(p<.001), Durbin-Watson = 1.814

Discussion

In this study, A regression analysis shows that among many input independent variables, the most influential factor in solving a university student's social problems was his or her sense of self-efficacy. Next, mental fatigue negatively affected and emotional support positively affected problem-solving abilities. In other words, the higher the self-efficacy, less mental fatigue, and more emotional support, the higher the ability of solving social problems.

The analysis that higher the self-efficacy, the higher the problem-solving ability is supported by many papers. In a study to identify factors that influence the self-efficacy of university students on dealing with stress and solving social problems, [20] said that university students who have high self-efficacy tend to use various coping strategies for stress to define problems and focus on problem-oriented coping mechanisms that analyze problems objectively and help solve social problems. This is the same for high school students [21], middle school students [22], and troubled teenagers [23].

Although the study by [20] stated that there were gender differences in the emotional domain, which is a lower area of social problem resolution, in this study, there were no differences in social problem resolution ability related to gender, sibling order, religion, economic level, and education level of parents, etc. There were only significant differences in the general characteristics of subjects correlated to education related problem resolution. This suggests that social problem-solving skills can be improved by increasing the self-efficacy of problem-solving by education rather than by conditions and circumstances. According to the participants, the types of education that helped solve social problems were action learning 32.9%, discussion 30.9%, simulation 15.9%, and problem-based learning 14.7%. Through education related problem resolution, university students can improve their self-efficacy by practicing and discussing practical issues related to problem resolution, and thus improve their social problem-solving ability. Therefore, considering the importance of social problem-solving ability of university students, it is necessary to apply various teaching methods focusing on practice and discussion to improve social problem-solving ability.

The second most influential factor in university students' ability to solve social problems was mental

fatigue among other sub - factors of fatigue. Youth unemployment has become one of the serious social problems of Korean society [8] as, university students to work harder than before to get a satisfactory job and have high stress in preparation for employment. In addition, various mental fatigue is accumulated due to financial problems such as university adaptation, interpersonal relationship, tuition and living expenses. [24] also found that mental health such as somatic symptoms, anxiety, insomnia, and severe depression were significantly associated with social problem-solving based on the fact that physical activity affects problem-solving abilities [25], and those who learn problem-solving skill are more effectively able to cope with stress [9], in addition to the improvement of physical activity, improvement of problem solving ability by improving coping ability of mental fatigue through the education related to problem-solving can be a practical solution. In addition, among the sub-factors of social support, emotional support rather than evaluation, information, and material support appears to be a factor influencing university students' social problem solving. When university students have problems, it was found that they needed to support in solving problems on their own rather than giving advice on assessments or results.

Conclusion

This study is a descriptive survey to identify the factors affecting the social problem-solving abilities of university students living in Korea.

The study is meaningful in that it provided basic data on how university students can improve their social problem-solving skills by identifying factors affecting their ability to solve social problems in Korean society. However, since this study is a result of convenience extraction of some university students in Korea, it is necessary to be cautious in applying the extension, and it is recommended to repeat research that can confirm and extend the results of this study.

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