The Effects of the Resilience of University Student on Self-directed Learning Ability and Happiness Index

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Abstract

This study is a descriptive survey study carried out to determine the effects of resilience on the self-directed learning ability and happiness index of 457 students of a 4-year university located in G Metropolitan City; the data collection was conducted by the use of questionnaires from November 2 to 13, 2015. As for the study tools, the Korean Resilience Quotient-53 (KRQ-53) by Kim Ju-hwan (2011), which is a modified and supplemented version of the original test developed by Reivich and Shatté (2003), was used for the assessment of resilience; and for the measurement of self-directed learning ability and happiness index, the tests devised by Park Ju-yeon (2008) and Chu Hong-gyu (2005) were used, respectively. According to the results of this study, there was a significant positive correlation between resilience, self-directed learning ability, and happiness index of the subjects. Among the sub-factors of resilience (self-control, interpersonal relationship ability and optimism), optimism was identified as an influence factor on the self-directed learning ability and happiness index of the subjects. Therefore, it is necessary to develop programs and systematic implementation plans to cultivate optimism in college students

Keywords: Resilience, Self-directed learning ability, Happiness index

1. Introduction

Among the stages of human life, college years correspond to the stage involving the transition from adolescence to adulthood, which is a period in which people should take responsibility for their own actions and live an independent life. In this stage, they face many difficulties in adaptation [1]. Resilience is a behavioral, emotional, and cognitive ability to adapt to the environment and plays an important role in adaptation to college life as an adaptation factor that helps flexibly cope with stressful situations and difficulties without being frustrated with changing conditions. It is also a dynamic element that can be enhanced through learning [2]. Resilience is an essential ability for everyone and a fundamental element of happiness and success that affect the performance of tasks and physical and mental health [2][3]. Self-directed learning ability refers to the cognitive, motivational and behavioral skills or abilities that learners acquire through self-directed learning [4]. The college plays a role to

foster self-directed talents with core competencies required by the society. It needs to produce not the other-directed learners who only have knowledge in their majors, but the self-directed ones who can initiatively use it in the situations where they are facing [4]. Self-directed learning can be further promoted in the collaborative learning context rather than in the individual learning context [4]. Self-directed learning abilities can also be enhanced if resilience that includes the concepts of self-control, interpersonal relationship ability and optimism, is at a high level [5]. Most of college students can show a low happiness index due to their busy college life, and concerns about their financial situations and employment. In a survey conducted by a Korean press, the Indaily [6], college students' happiness level was rated at 56 points, which was almost a failing mark, and stress level was as high as 70 points. These results suggest that it is necessary to identify factors that affect the happiness of college students. With the increase in academic interests in happiness, in the earlier years, indicators such as the age, gender, income, and residential density emerged as factors affecting happiness; however, as happiness is experienced in a subjective way by individuals in their lives, such sociodemographic variables have limitations in explaining individual happiness. In recent years, studies have been actively conducted on psychological factors, which are internal factors affecting happiness [7]. Happiness cannot be irrelevant to the life events or situations experienced by an individual, and are closely related to the major life events that affect each developmental stage. Therefore, it is necessary to observe the daily life experiences of study subjects by the developmental stage [8]. Since resilience has indirect effects on life stress and psychological well-being, to improve the sense of well-being of college students, there is a need for life stress management and resilience improvement [8]. Thus, this study will identify the levels of resilience, self-directed learning ability and happiness index of college students and analyze the correlations and degrees of effects between these variables to provide basic data for the development of programs and strategies that can contribute to their successful academic achievement and life satisfaction enhancement.

2. Study methods

2.1. Study design

This study is a descriptive survey study carried out to determine the effects of resilience on the self-directed learning ability and happiness index of college students.

2.2. Study subjects

The subjects of this study were 457 students from a 4-year university in G Metropolitan City. The data collection was conducted by the use of questionnaires from November 2 to 13, 2015.

2.3. Study tools

Research tools are as follows. The resilience level of the study subjects was assessed using the Korean Resilience Quotient-53 (KRQ-53); it had been originally developed by Reivich and Shatté [3] and modified and supplemented for the application to Korean adults by Kim [9]. The level of self-directed learning ability was measured using the tool developed by Park [4]. Happiness index was measured by the use of the happiness index formula devised by Rothwell and Cohen [10] and a tool created by Chu [11].

2.4. Study tools

The collected data were analyzed with SPSS 20.0.

3. Research findings

3.1. General characteristics of the study subjects

The 457 study subjects consisted of 121 freshmen (26.5%), 118 (25.8%) sophomores, 128 juniors (28.0%) and 90 (19.7%) seniors. Their age averaged 22.2 years and the ratio of males and females was 38.7% versus 61.3% (177 versus 288) As for the residential type, 192 were living in their own home (42.0%), while 265 (58%) were living in other residential settings. The number of those having no religion or belief was 268 (58.6%), greater than that of those having one (189, 41.4%) The number of those who answered that they were not regularly working out was 303 (66.3%), while 154 responded that they were (33.7%) When it comes to daily studying hours, 225 were studying for less than an hour a day (49.2%), 147 for two to three hours (32.2%), and 85 for more than four hours (18.6%) Regarding their monthly reading amount, more than half of the study subjects said that they read less than a book a month (63.5%) while the numbers of those reading a book and two books or more a month turned out to be 108 (23.6%) and 59 (12.9%), respectively.

3.2. Level of resilience, self-directed learning and happiness index

The levels of their resilience, self-directed learning ability and happiness index averaged 3.25 (±0.39) out of 5 possible points, 3.25 (±0.42) out of 5 possible points, and 67.01 (±15.65) out of 100 possible points, respectively [Table 1].

Table 1. Levels of resilience, self-directed learning and happiness index   (N=457)

Variables	Mean±SD	Min	Max
Resilience	3.25±0.39	3.21	3.28
Self-directed learning ability	3.25±0.42	3.21	3.29
Happiness index	67.01±15.65	65.57	68.45

3.3. Difference in variables according to the general characteristics of the subjects

First, there were statistically significant differences in resilience between the subject groups according to their daily studying hours (F=4.55, p<.05) and monthly reading amount (F=6.44, p<.01) of all general characteristics. As a result of a Bonferroni test, it was found that the group studying four hours or more a day (3.31±0.39) showed a higher level of resilience than the groups studying for two to three hours (3.29±0.41) and for an hour or less (3.19±0.37) There were also differences in the sub-factors of resilience. In the case of self-control, the subject groups showed significant differences according to daily studying hours (F=6.97, p<.01) and monthly reading amount (F=5.57, p<.01) A Bonferroni test revealed that

the group studying for four hours or more (3.23±0.51) had a higher level of self-control than the groups studying for two to three hours (3.19±0.45), and for an hour or less (3.05±0.38) The test also verified that the group reading a book a month (3.25±0.45) had a higher level of self-control than the group reading no books at all (3.08±0.41) As for the interpersonal relationship ability, there were significant differences according to the age (t=1.99, p<.05) and daily studying hours (F=4.09, p<.05) In the case of the age, the group aged 21 years or less (3.42±0.46) showed a significantly higher level of interpersonal relationship ability than the group aged 22 years or more (3.13±0.48); in the case of daily studying hours, the group studying for two to three hours a day (3.40±0.53) had a significantly higher level of interpersonal relationship ability than the group studying for an hour or less (3.26±0.46) There were also differences between the groups in optimism according to monthly reading amount (F=6.86, p<.01) As a result of a Bonferroni test, it turned out that the group reading a book a month had a significantly higher optimism (3.24±0.48) than the group reading no books at all (3.06±0.41)

An analysis on differences between the subjects groups in self-directed learning ability according to their general characteristic found that there were significant differences according to monthly reading amount (F=5.59, p<.01): the group reading a book a month (3.35±0.46) showed a significantly higher self-directed learning ability than the group reading no books at all (3.20±0.39) When it comes to differences in the sub-factors of self-directed learning ability, there were differences in the learning motivation (F=4.17, p<.05), self-awareness (F=3.87, p<.05) and learning strategy (F=3.96, p<.05) according to monthly reading amount as well. As a result of a Bonferroni test, the group reading no books at all a month and the group reading a book showed statistically significant differences in the learning motivation, self-awareness and learning strategy. Among the sub-factors, there were differences in the learning context according to the regular workout (t=1.99, *p*<.05) among the general characteristics.

As for the happiness index, the group regularly working out showed a higher level of happiness index according to the regular workout (t=2.28, p<.05); the group regularly working out (69.34±14.55) showed a higher level of happiness index than the group not regularly working out (65.82±16.07)

3.4. Correlations between variables

Resilience had a significantly positive correlation with self-directed learning ability (r=.342, p <.001) and happiness index (r=.385, *p*<.001) There was also a positive correlation between self-directed learning ability and happiness index (r=.377, p<.001) [Table 2].

Table 2. Correlations between variables   (N=457)

Variables	Resilience	Self-directed learning ability
Self-directed learning ability	.342***	
Happiness index	.385***	.377***
*** p<.001		

3.5. Factors affecting self-directed learning ability

To understand the effect of resilience on self-directed learning ability, a multiple regression analysis was conducted with self-directed learning ability as a dependent variable

and with the sub-factors of resilience, which are self-control, interpersonal relationship ability and optimism, as independent variables. The analysis revealed that optimism ($\beta = .33$, $p < .001$), one of the sub-factors of resilience, affected self-directed learning ability and the explanatory power of this variable was 14% [Table 3].

Table 3. Factors affecting self-directed learning ability (N=457)

Variable	Sub-factors	B	SE	β	t	p	R^2	$\triangle R2$	F	VIF
Resilience	Self-control	0.3	.05	.03	.63	.529	.14	.13	25.14***	1.46
	Interpersonal relationship ability	.03	.05	.04	.70	.484				1.85
	Optimism	.32	.05	.33	5.63	.000				1.82

*** p<.001

3.6. Factors affecting happiness index

To understand the effect of resilience on happiness index, a multiple regression analysis was conducted with happiness index as a dependent variable and with the sub-factors of resilience, which are self-control, interpersonal relationship ability and optimism, as independent variables. The analysis revealed that optimism (β=.33, $p < .001$), one of the sub-factors of resilience, affected happiness index and the explanatory power of this variable was 17% [Table 4].

Table 4. Factors affecting happiness index　　　　　　　　　　　　　(N=457)

Variable	Sub-factors	B	SE	β	t	p	R^2	$\triangle R2$	F	VIF
Resilience	Self-control	1.22	1.83	.03	.66	.507	.17	.07	32.17***	1.46
	Interpersonal relationship ability	2.36	1.84	.07	1.28	.200				1.85
	Optimism	12.33	2.04	.34	6.03	.000				1.82

*** p<.001

4. Conclusions

This study confirmed that the influence factor on the self-directed learning ability and happiness index of college students was, among the sub-variables of resilience, optimism. Therefore, resilience can be considered an important factor in adaptation to college life as it enhances the self-directed learning ability of college students and affects their sense of happiness. Resilience is not an innate ability but rather the one that is gradually established through the dynamic interaction of the individual and environment, which means that it is the individual's ability that can be improved through education and training. Thus, intervention is needed to cultivate resilience in the college curriculum and it is also necessary to combine specific strategies to this in order to increase sense of happiness in college students through the enhancement of resilience in the approaches to problems related to their stress and majors.

Acknowledgement

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