

The Effect of Resilience and Self-Efficacy on Career Preparation Behavior of University Students with Disabilities: Verification of the Controlled Mediating Effect of Internal Motivation

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ABSTRACT

This study aims to examine the effects of resilience on career preparation behavior, mediating effects of self-efficacy, and moderating effects of intrinsic motivation in 238 students with disabilities.

Reliability analysis, descriptive statistics, correlation analysis, path analysis, and bootstrap analysis were conducted. SPSS 22.0 and SPSS Process Macro 4.2 were used for all statistical analysis.

Results revealed that resilience, self-efficacy, and intrinsic motivation had a significant positive correlation with career preparation behavior. Moreover, resilience had a significant positive effect on self-efficacy and self-efficacy had a significant positive effect on career preparation behavior. In addition, resilience had a conditional indirect effect on career preparation behavior through self-efficacy, and the higher the level of intrinsic motivation, the more control the indirect effect.

With the aforementioned findings, it is recommended that career counseling should be conducted in consideration of disability characteristics, and various programs should be developed to improve resilience, motivation, self-efficacy, and reduce lethargy caused by disability through active acceptance of disability.

Keywords: Students with Disabilities, Resilience, Self-Efficacy, Intrinsic Motivation, Career Preparation Behavior

INTRODUCTION

Everyone of us hopes to be financially stable. In order to lead an economically leisurely and prosperous life, individual career choices and preparations are becoming more important. In particular, the university student period is recognized as an important period for individual career choice. This period is a time when self-concept is converted into career self-concept [28], and there is a developmental task to establish a sense of value by exercising one's ability and to choosing a career rationally through understanding oneself. However, the employment rate of non-disabled university students among university graduates in Korea is 67.7%, while the employment rate of students with disabilities is 35.3%, which is a serious problem [30]. In particular, university students with disabilities who are relatively less resilient and more vulnerable to stress than non-disabled university students have received less attention from universities and society [21]. In this context, deciding the right career is an important goal in the life of university students, especially for those with disabilities. Hence, various efforts need to be made to solve the career problems of disabled university students.

Performing career preparation behaviour as a step to achieve a plan or purpose in the course of a career decision is a very important task [17]. Various variables are involved in influencing the behaviour of university students. Among them is self-efficacy which has recently been dealt with by several researchers as an important factor in solving issues related to the career of university students [4; 16; 22]. Self-efficacy refers to confidence in the ability to perform a job related to the planning and performing of specific actions that solve various career-related problems in determining one's future and career [29]. When self-efficacy is high, career planning and achievement increase, which means that the level of career preparation behavior increases. However, students with disabilities have a very limited opportunity to find jobs that meet their needs and expectations while experiencing various difficulties in exploring and preparing for their careers. Instead of landing on a job related to their major and aptitude, they tend to work in simple jobs such as administrative assistants, masseurs, or parking assistants [32]. In addition, many university students with disabilities have difficulties in deciding according to their surroundings without considering their interests, aptitudes, and majors due to a lack of

systematic and continuous support for their chosen careers [31]. This phenomenon suggests that disability can be a serious problem in the process of preparing for a career because it is necessary to choose a career considering the characteristics of the disability or the degree of disability (mild or severe). Considering all the reasons, it is expected that students with disabilities will have more difficulties in career development and career preparation than non-disabled students.

It is important for students with disabilities to understand and motivate individual characteristics in order to make a reasonable career decision. According to the Social Cognitive Career Theory (SCCT), intrinsic factors play an important role in career behavior [19]. Therefore, this study examined resilience and intrinsic motivation as individual internal factors that affect the career preparation behavior of students with disabilities. Resilience is usually understood as an internal factor that rises higher on the basis of frustration or helplessness caused by various trials, adversities, and failures [15]. It is an individual's ability to manage efficiently with various inner and external perils [1], and, so, a resilient person has the power to adapt positively and rise again without experiencing helplessness or frustration in a negative environment of adversity and difficulties [20]. In addition, intrinsic motivation is understood as a driving force to change one's behaviour by seeking new challenges and using one's abilities to raise one's ability level [6]. Therefore, the relationship between career-related behaviors through motivation is also emphasized [7]. The resilience of university students has been found to be of great value in career preparation behavior in the results of previous studies [12; 26]. These results affirm [3; 14] that intrinsic motivation is important in setting goals and preparing for a career, hence, it is expected that intrinsic motivation will play an important role in strengthening career preparation behaviour. Meanwhile, self-efficacy is the confidence in an individual's ability to perform successfully the tasks required to achieve a goal [2]. According to the Social Cognitive Career Theory (SCCT), self-efficacy plays an important role when an individual's internal factors affect career-related behaviours [19]. Self-efficacy has been observed to show a mediating role in the path of personal characteristics and environmental factors affecting career-related behaviours [9]. So, Self-efficacy is expected to have an influence on career preparation behaviour because it positively influenced career preparation behaviour in previous studies [5; 16].

Therefore, it is necessary to examine how students with disabilities prepare for their careers through resilience and intrinsic motivation, which are internal factors for them to overcome and accept their disabilities and discover their values. The study on disabled university students is significant since previous studies have only focused on the causal relationship between resilience and the career preparation behavior of non-disabled university students.

In this study, self-efficacy was used as a mediating variable, and intrinsic motivation was set as a moderating variable. However, there are few studies on improving career preparation behaviour by using self-efficacy as a mediating variable or intrinsic motivation as a moderating variable in Korea. In fact, few studies have attempted to improve career preparation behaviour by using self-efficacy and intrinsic motivation in an integrated way. With this gap, this study aimed to achieve the following objectives. First, the career preparation behaviour of university students with disabilities has an important effect on their career after university life or graduation, so an integrated study on university students' career preparation behaviour is needed. Second, a research focusing on understanding the mechanism by which resilience can predict and affects career preparation behaviour is essential. Third, if it is proved that resilience raises self-efficacy and career preparation behaviour, it is necessary to expand the research to identify the alternative variables which may interfere with the process. Hence, this study aims to understand the controlled mediating effect of intrinsic motivation on the association between resilience and career preparation behaviour with self-efficacy as a mediator, of disabled university students.

This study also provided implications that can be utilized in the actual counseling scene or teaching-student education scene focusing more on counseling for disabled students who are passive in career-related activities than non-disabled students.

Question 1. How resilience, self-efficacy, intrinsic motivation, and career preparation behavior of university students with disabilities are associated with each other?

Question 2. Does the resilience of university students with disabilities affect career preparation behavior by mediating self-efficacy?

Question 3. Is the effect of the resilience of the studied students on career preparation behaviour mediated by self-efficacy moderated by intrinsic motivation?

SURVEY SUBJECT AND DATA COLLECTION METHOD

Survey Subject

The subjects of this study were university students with disabilities in seven universities located in Seoul and Gyeonggi-do, where 238 out of 252 responses were selected for the study. Purposive sampling and snowball sampling were used to identify the subjects. Data was gathered from May 27 to June 10, 2022.

RESEARCH TOOLS

(a) Resilience

The Korean Resilience Quotient (KRQ-53) developed by Reivich and Shatte [25] and adapted by Kim [15] was used to measure the resilience of Korean culture and university students (YKRQ-27) Which was validated by Shin et al. [27]. It consisted of 27 questions, and Cronbach's α was .873.

(b) Self-Efficacy

The Career Decision-Making Self-Efficacy Scale Short Form (CDMSE-SF) developed by Taylor and Betz [29] and modified and supplemented by Lee [18] was used. It consisted of a total of 25 questions, and Cronbach's α was .824.

(c) Career Preparation Behavior

The Career Preparation Behavior Scale developed [13] was used, which composed of 18 questions, and Cronbach's α was .906.

(d) Intrinsic Motivation

The Career Decision-Making Autonomous Scale [8] was utilized. This scale consisted of four factors: identified, imposed, internal, and external control motivations, but this study used only eight internal control motivations and Cronbach's α was .820.

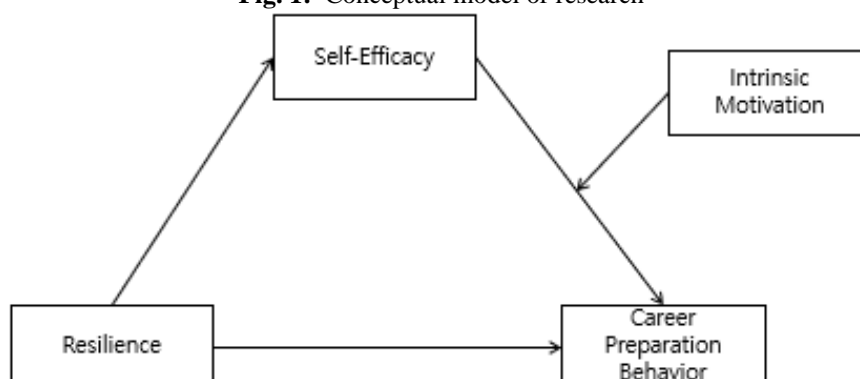
Data Analysis

The collected data were analyzed using SPSS and SPSS Process Macro 4.2 proposed by Hayes [10]. In order to verify the research questions. The trends were identified by using frequency analysis, the reliability was tested by Cronbach's α , a measure to test the internal consistency reliability. Pearson's correlation analysis was used to check if any correlation existed between the variables. The moderated mediation effect was analyzed using SPSS PROCESS macro models 14. The 95% confidence interval was used, and the number of bootstrap samples was set to 5,000. The independent variable and the moderating variable were analyzed after the mean centering.

Research Model

SPSS Process Macro model 4 and 14 were used to verify the research model.

Fig. 1: Conceptual model of research



RESULTS AND DISCUSSION

Frequency Analysis

There were 122 persons with mild disabilities (51.3%), 116 persons with severe disabilities (48.7%), 142 female students (59.7%), and 96 male students (40.3%).

Table 1: Frequency analysis

Division		Frequency (N)	Percent (%)
Degree of Disability	Mild Disabilities	122	51.3
	Severe Disabilities	116	48.7
Gender	Female Students	142	59.7
	Male Students	96	40.3
Total		238	100.0

Correlation and Descriptive Statistics

Table 2 shows the results of the correlation analysis and descriptive statistics. The descriptive statistics were calculated to examine the characteristics of the main variables. The mean score for resilience was a low at 1.93 point (SD=0.708), self-efficacy was a mid at 2.42 point (SD=0.622), intrinsic motivation was high at 2.82 point (SD=0.573), career preparation behavior was high at 2.71 point (SD=0.778). The average and standard deviation were checked to confirm the characteristics of the main variables and the values of skewness and kurtosis were checked to see if they fit the normal distribution standard. Results showed that the skewness and kurtosis of each variable were below the absolute value of 2 and below 4 [11]. For the correlation analysis, career preparation behavior was positively correlated with resilience ($r=.203$, $p<.01$), positive correlation with self-efficacy ($r=.498$, $p<.001$), and positive correlation with intrinsic motivation ($r=.473$ $p<.001$). In other words, the higher the resilience, the higher the self-efficacy, and the higher the intrinsic motivation, the higher the level of career preparation behavior.

Table 2: Results of correlation analysis and descriptive statistics

	Resilience	Self-efficacy	Intrinsic motivation	Career Preparation Behavior
Resilience	1			
Self-efficacy	.332***	1		
Intrinsic motivation	.404***	.572***	1	
Career Preparation Behavior	.203**	.498***	.473***	1
M	1.93	2.42	2.82	2.71
SD	.708	.622	.573	.778
Skewness	.978	.664	.566	1.230
Kurtosis	1.333	1.332	1.125	2.351

** $p<.01$, *** $p<.001$

Mediating Effect Verification

In order to verify the mediating effect of self-efficacy in the relationship between resilience and career preparation behavior of students with disabilities, Hayes' SPSS Process Macro 4 model was used. After designating 5,000 bootstrap samples, a 95% confidence interval standard was applied and analyzed. The results of the analysis showed that resilience had a significant positive effect on self-efficacy ($\beta=.447$, $p<.001$), resilience had a positive effect on career preparation behavior in the path of putting resilience and self-efficacy ($\beta=.067$, $p>.05$), and self-efficacy had a positive effect on career preparation behavior ($\beta=.196$, $p<.01$). The indirect effect was .680 and was statistically significant as shown in Tables 3 and 4. Therefore, it was confirmed

that there was a complete mediating effect because it had a significant effect on the path of resilience and career preparation behavior through self-efficacy, although it had no direct effect.

Table. 3: Mediating variable mode

Variables		β	S.E.	t(p)	ΔR^2	F	
Resilience	→	Self-efficacy	.447	.066	7.835***	.493	28.578***
Resilience	→	Career preparation behavior	.067	.128	1.231	.225	6.250**
Self-efficacy			.196	.017	4.234**		

p<.01, *p<.001

Table. 4: Significance result of moderating effect

Effect	β	Boot S.E.	boot LLCI	boot ULCI
Total	.506	.072	.383	.676
Direct	-.174	.127	-.122	.034
Idirect	.680	.068	.103	.523

Moderated Mediating Effect of Intrinsic Motivation

In order to verify whether intrinsic motivation moderates the mediating effect of self-efficacy in the relationship between resilience and career preparation behavior of students with disabilities, SPSS Process Macro 14 model was applied and analyzed. Resilience had a positive effect on career preparation behavior ($\beta=.055$, $p>.05$), but it was not statistically significant. Self-efficacy had a significant positive effect on career preparation behavior ($\beta=.192$, $p<.01$) and had a mediating effect. The interaction between self-efficacy and intrinsic motivation had a positive effect on career preparation behavior ($\beta=.160$, $p<.05$), which had a moderated mediating effect. Finally, result of the conditional indirect effect analysis revealed that the simple slope of self-efficacy on career preparation behavior was significant from 2.534(M-1SD) to 3.223(M+1SD).

Table. 5: Moderated mediating effect verification

Variables		β	S.E.	t(p)	ΔR^2	F	
Resilience	→	self-efficacy	.447	.066	7.835***	.493	28.578***
Resilience	→	Career preparation behavior	.055	.162	1.196	.303	10.436***
Self-efficacy			.192	.018	4.154**		
Intrinsic motivation			.059	.064	.923		
Self-efficacy × Intrinsic motivation			.160	.031	2.325*		

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



Fig. 2: Controlled mediating effect statistical model of intrinsic motivation

Table. 6: moderated mediating effect of intrinsic motivation

Intrinsic motivation	Conditional Indirect Effects: Resilience → self-efficacy → Career preparation behavior			
	Effect	S.E.	LLCI	ULCI
2.534(M-1SD)	.173	.083	.105	.321
2.842(M)	.215	.065	.092	.554
3.223(M+1SD)	.269	.011	.084	.415

CONCLUSION

The study investigated the mediating effect of self-efficacy and intrinsic motivation on the relationship of resilience with career preparation behaviours.

First, resilience, self-efficacy, and intrinsic motivation showed a significant positive correlation with career preparation behaviours, but in the case of resilience, the score was low at 1.93. This is inconsistent with the results of a study on general university students, where the score was relatively high [12; 26]. It can be interpreted to be because of the subjects' disability.

Second, resilience statistically significantly affected self-efficacy which in turn had significant positive effect on career preparation behavior. Self-efficacy was found to have complete mediation effect. These results are consistent with the results of the complete mediating effect [16] on the effect of ego-resilience in general university students.

Third, the career preparation behavior was influenced by resilience via self-efficacy, and the level of intrinsic motivation had a conditional indirect effect of controlling this indirect effect. In other words, resilience has a positive indirect effect on career preparation behavior through self-efficacy, and this indirect effect is strengthened according to the level of intrinsic motivation. These results are consistent with the results that self-efficacy has a positive effect on career [18], career self-efficacy has a mediating effect [24], and self-efficacy has a mediating effect on the relationship between social support and career preparation behavior and a moderated mediating effect of motivation [5].

This moderated mediation effect test is meaningful in that it verified the structural relationship in an integrated way considering the disability characteristics of the students, unlike the existing research on general university students. Through this, it is highly recommended that when counseling students with disabilities in the actual counseling scene, counselors should be able to conduct specialized career searches based on disability sensitivity that is different from general university students. In particular, career counseling should be conducted in consideration of the characteristics of disability (type and degree of disability), and various programs should be developed to promote resilience, motivation, self-efficacy, and self-acceptance.

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