



# The Effect of Ego resilience program on University students' self-esteem and career maturity

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## Abstract

This study aimed to verify the impact of the ego resilience program on university students' self-esteem and career maturity. Based on a review of previous research, an eight-session program was developed using the four elements namely emotion and emotion regulation, self-affirmation, interpersonal skills, and problem-solving as the components of the ego resilience program. The program was administered to 15 university students. Self-esteem and career maturity were identified through pre- and post-tests before and after implementing the program. Descriptive statistics and paired samples t-tests were conducted using SPSS 23. Results revealed that the ego resilience program showed an increase in the pre-post mean values in the areas of self-esteem and confidence in career maturity. In contrast, the mean values in overall career maturity, involvement, and consultation were lower after the pre-post than before, and curiosity remained unchanged before and after. It was difficult to prove its effectiveness because there was no statistically significant difference. On the other hand, it was confirmed through the testimony of university students participating in the ego resilience program that they were positively affected by self-growth, improvement of interpersonal skills, and future challenges. The results showed that the ego resilience program is helpful in university students' self-growth and career planning, although no statistically significant difference was found.

This study is meaningful because it developed and applied a program that can give university students the strength to grow and prosper in the future.

**Keywords:** ego resilience program, self-esteem, career maturity, university students

## 1. INTRODUCTION

The unemployment rate has increased due to various social changes such as the Fourth Industrial Revolution, the COVID-19 pandemic, and population changes. It has only slightly decreased after the pandemic, but unstable employment continues. According to the employment trends of Statistics Korea in June 2023, the employment rate for those aged 15 to 64 (OECD comparison standard) was 69.9%, up 0.8 percentage points from the same month last year, and the underemployment rate was 2.7%, down 0.3 percentage points from the same month last year, showing some changes since the COVID-19 pandemic.

However, in May 2023, the results of the youth supplement survey of the economically active population (Statistics Korea, 2023) showed that the economic activity participation rate of young people (ages 15-29) was 50.5%, the employment rate was 47.6%, and the unemployment rate was 5.8%, down 1.0 percentage points, 0.2 percentage points, and 1.4 percentage points from the same month last year, respectively. The fact that the economic activity participation rate is around 50% indicates that young people's independence is low.

University students are in the process of transitioning from adolescence to adulthood, and it is a time when they need to clarify their career paths and choose a specific occupation. However, due to social turmoil, many young people in their 20s and 30s who need to become independent are becoming kangaroos and relying on their parents for support and living a dependent life (JoongAng Ilbo, July 18, 2023). This phenomenon reflects broader cultural and social dynamics that influence the moral and psychological development of young adults, as explored in various interdisciplinary studies. For instance, Turpin (2017) discusses how moral sense and consciousness are shaped by cultural and philosophical contexts, underscoring the importance of understanding these factors in addressing contemporary challenges faced by young people (Turpin, 2017).

The industry of the first job after graduation is high in accommodation and food service(15.5%), mining and manufacturing(15.2%), and occupations are managers and professionals(25.5%) and service workers(24.1%), and the wages(income) at the time of entering the first job are 1.5million won to 2.0million won(35.7%), 2.0 million



won to 3.0 million won(31.3%), and 1.0 million won to 1.5 million won(15.7%). The most common reasons why fresh graduates leave their first job are compensation and working hours. Dissatisfaction with working conditions increased by 0.8 percentage points compared to the same month last year at 45.9%(Statistics Korea, 2023), and as employment is still unstable, the tendency to quit within one year and six months persists. Just as students' satisfaction with teaching materials, particularly lecturer's presentations, is crucial for their learning process, fresh graduates' satisfaction with their first job conditions plays a critical role in their decision to stay or leave <sup>(61)</sup>.

Under these circumstances, adolescents, especially university students who must prepare for independence as late adolescents, must develop career maturity with an interest in their career paths and career decisions. The career preparation and career maturity of university students are developmental tasks necessary to achieve important tasks of life after graduation and employment, as the career and job selection after graduation are closely related to the quality of life of individuals, and are the basis for establishing career decision-making and career choice, which is the core of career development in adulthood (1). Career maturity is the consciousness and attitude necessary for university students to make better career decisions through rational decision-making, as it has a direct effect on job search behavior (20, 48).

The university years are a time to gain psychological independence and independence from parents. Although adolescents fall within the age range of 9 to 24 years old according to the Framework Act on Youth, they exhibit early adult characteristics. Adolescents have many concerns in the process of establishing self-identity, and in particular, college students who are part of this age group, experience different stressors due to independence and preparations as adults. Aside from their academic concerns, they also think about their career and employment, interpersonal relationships, and living difficulties. These stressors can lead to school dropout due to maladjustment to college life, negative effects on setting their career paths, negative perception of the self, and negative emotions such as depression, anxiety, and addiction. Longitudinal studies suggest that university students' achievement strategies in academic contexts, as well as their perceptions of criteria for adulthood, significantly relate to their life satisfaction over time, with positive striving acting as a protective factor against declining satisfaction <sup>(62)</sup>. In particular, when individuals do not have a sense of value, competence, or self-esteem, it can cause personal confusion and even serious social problems such as giving up on life (2, 7, 15, 36).

It is very important to help university students in this situation grow into healthy individuals and establish themselves as members of society. To this end, developing ego resilience, which is related to inner growth and self-growth (24, 56), is an essential part of an individual's adaptation.

Ego resilience refers to an individual's characteristic that is manifested as objective insight into internal and external problem environments, the ability to reconstruct situations, and the adaptive ability to cope flexibly <sup>(4)</sup>. People with high ego resilience are good at adapting to stress and external environments, have high self-esteem, and can cope well with stressful situations that require them to choose and decide on their career paths(5, 36). Therefore, it is necessary to improve ego resilience among university students to enhance their self-esteem, help them grow and adapt, and increase their career maturity.

Most of the research to date has investigated the effects of other programs on the ego-resilience of university students, and there are only studies on the effects of ego-resilience programs for infants, toddlers, and adolescents. Accordingly, this study aimed to provide an ego resilience program for university students and verify its effectiveness.

The research objectives are as follows:

First, select the elements of the ego resilience program and construct the program's content.

Second, examine the effects of the ego resilience program on self-esteem and career maturity.

## **2. THEORETICAL BACKGROUND**

### **2.1 Relationship between Ego Resilience, Self-esteem, and Career Maturity**

Ego resilience is a characteristic of individuals who maintain an appropriate and positive attitude in risky environments, cope well with difficult situations, or show rapid recovery (32). Ego resilience is a self-regulation ability to overcome difficulties <sup>(4)</sup>, and is an internal personality characteristic that functions importantly in stressful situations that require individuals to choose and decide on their career paths as a self-regulating ability to overcome difficulties <sup>(5)</sup>. People with high ego resilience have a higher ability to regulate levels of tension and endurance and can experience positive emotions and adapt psychologically better than those with low ego resilience <sup>(5)</sup>. Ego-resilience is used together with resilience, adaptive flexibility, elasticity, resilience, overcoming ability, and resilience (17). In line with this, university students' ego resilience is an important predictor of interpersonal skills and life satisfaction (3).

Self-esteem is a general evaluation of oneself (45) and a belief in one's worth and competence <sup>(10)</sup>. Low self-esteem



on the other hand is associated with aggression, antisocial behavior, and delinquency <sup>(12)</sup>. Higher self-esteem in university students is associated with lower social anxiety <sup>(35)</sup>, and self-esteem is found to be important in the relationship between self-esteem and life satisfaction <sup>(46)</sup>, university student adjustment to college life<sup>(47)</sup>, and excessive smartphone use<sup>(22)</sup>.

Self-esteem changes throughout life <sup>(44)</sup>, so it is necessary to pay attention to individual internal factors that influence positive changes in self-esteem.

Career maturity is the degree to which an individual performs career development tasks that should be achieved at their age level <sup>(49)</sup>. It is the readiness to understand the self and the occupational world, and it is when one knows how to integrate and coordinate career planning and selection <sup>(11, 14)</sup>.

Therefore, career maturity is manifested through how well one has performed career development tasks that should be performed at each developmental stage in the career development process. Variables that affect the career maturity of university students are individual, family, and school characteristics <sup>(34)</sup>. Career maturity is a predictor of career decision-making, job preparation behavior, and job anxiety. The main factors affecting career maturity are career decision-making self-efficacy <sup>(27)</sup>, self-esteem <sup>(8)</sup>, ego resilience or career resilience<sup>(16)</sup>, and job stress or job anxiety<sup>(28)</sup>.

Various studies have shown that ego resilience, self-esteem, and career maturity influence each other. Dumont and Provost <sup>(13)</sup> stated that adolescents who cope well with adversity have higher self-esteem than those who do not, and MyungJu <sup>(9)</sup> stated that the self-regulation ability of resilience is related to self-esteem and that higher self-regulation ability is associated with higher self-esteem. Studies of nursing students have shown that self-esteem and self-efficacy influence self-resilience and resilience <sup>(18, 30)</sup>, and that self-esteem and resilience influence career identity <sup>(37)</sup>. In addition, Kim, Eun-mi, and Jeon, Ju-seong <sup>(17)</sup> stated that university students with higher self-esteem had higher resilience. Kim, Sung-hyun <sup>(53)</sup> found that the self-resilience and self-esteem of adolescents who dropped out of school influenced career attitude, career ability, and career behavior. Lee, Kyung-sun and Nam, Hyun-woo <sup>(29)</sup> found in a cross-sectional study that self-resilience had a significant effect on career maturity, and Nam, Ji-young, Kim, Sung-hee, and Kim, Jae-cheol <sup>(39)</sup> reported in a longitudinal study that ego-resilience had a significant positive relationship with career maturity. These studies show that in order to increase self-esteem, ego-resilience must be increased first, and educational and counseling interventions to improve ego-resilience are needed. Therefore, this study aimed to examine the impact of self-esteem and career maturity through the intervention of a program to improve ego resilience.

## 2.2 The Components of Ego resilience Program

Ego resilience is characteristic that leads to successful adaptation despite changing conditions, stressful situations, and threatening environments. Ego resilience enhancement programs, based on many studies, emphasize the improvement of self-confidence and competence through self-understanding and acceptance. These programs highlight the importance of the ability to objectively perceive challenging situations, understand and regulate one's emotions for appropriate expression and management, foster intimate relationships in interpersonal interactions, maintain a positive attitude towards situations, and energetically cope with challenges. The components of the Ego resilience program suggested in the research since 2013 are summarized in [Table 1].

Effective library resources and information management can significantly support research and educational initiatives in this field. By providing access to relevant literature and data, libraries play a crucial role in enhancing the design and implementation of such programs, thereby contributing to the successful development of ego resilience among university students <sup>(60)</sup>.

[Table 1] Components of the ego resilience program

Scholar	Components of the Ego Resilience Program
Kim Sun-hee (21)	Interpersonal relationships, Vitality, Emotional control
Park Ji-hye (41)	Positive thinking, Problem solving, Intimate behavior, Emotional regulation, Autonomous behavior
Nam Ji-hyun (38)	Optimism, Vitality, Emotional regulation, Interpersonal skills
Lee Gwang-jae (55)	Trust in oneself and others, Problem solving ability, Endurance of negative emotions, Academic competence



Cho Soo-jin(2014)	Resilience, Interpersonal relationship skills, Stress management, Cognitive ability
Kwon Jin-hyuk (25)	Resilience, Problem solving skills, Interpersonal relationship skills, Emotion regulation skills
Park Jin-seong · Shin Hyun-jeong (43)	Confidence and competence, Positive thinking, Problem solving ability, Emotion regulation and management, Intimate attitudes and behaviors, Interpersonal relationship skills
Oh Soo-Hyun · Kim Seung (40)	Self-esteem, Initiative, Self-regulation ability
Lee Gyo-min(26)	Interpersonal relationship, Emotional control, Optimism, Vitality
Mirae Kim · Woojin Han (19)	Emotional regulation, Positive thinking, Interpersonal relationship, Problem solving
Park Jeong-min (42)	Interpersonal relationship, Vitality, Optimism, Emotional control
Jang Sun-hwa (53)	Vitality, Emotional control, Curiosity, Optimism, Interpersonal relationship

In resilience programs, the most common elements consistently revolve around emotions and affect. Following closely are aspects related to interpersonal relationships, interpersonal skills, and problem-solving. Therefore, in this study, the elements of the resilience program are structured around emotion and affect regulation, self-positivity, interpersonal relationship skills, and problem-solving. In order to grow into a healthy self, it is necessary to know one's emotions and have empathy to understand others' emotions. Therefore, the first and second sessions are composed of emotion and affect regulation programs, followed by sessions three and four targeting self-positivity. As self-positivity contributes to successful interpersonal relationships, sessions five and six concentrate on programs to enhance interpersonal skills. Moving forward, sessions seven and eight address problem-solving from an insightful perspective to facilitate living a fulfilling life.

### 3. RESEARCH METHOD

#### 3.1 Research subjects

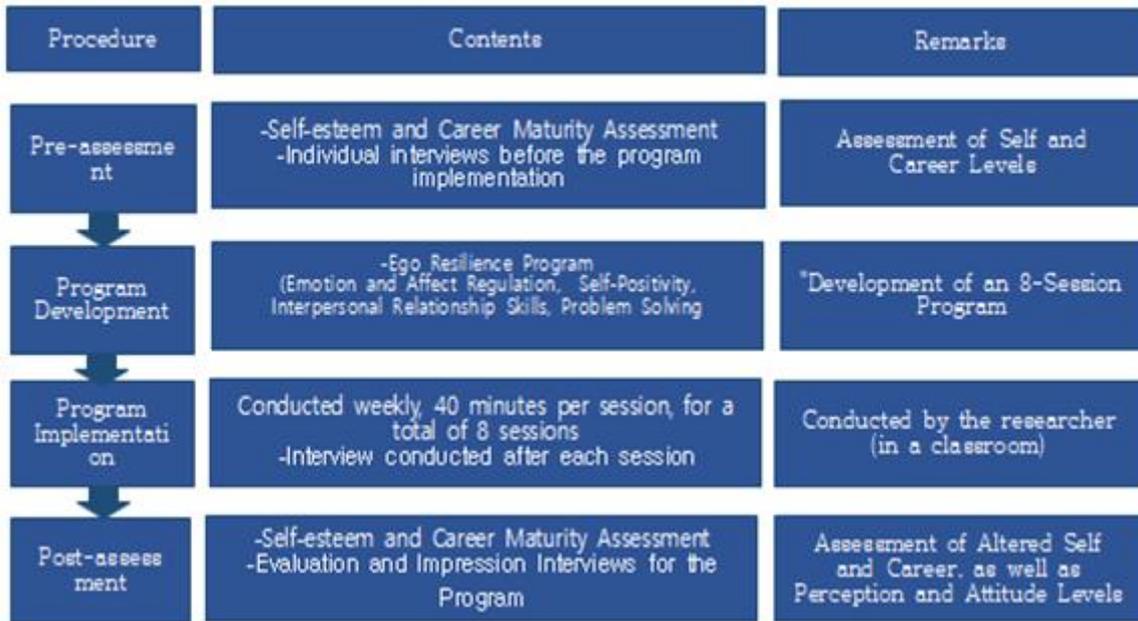
The study participants consisted of 15 third-year students currently enrolled in universities located in Gyeonggi Province, South Korea. The demographic details of the participants are presented in [Table 2].

[Table 2] Program participation target

Gender	Number of people(people)	Ratio (%)
Male	2	13.3
female	13	86.7
Sum	15	100.0

#### 3.2 Research Procedure

This program was conducted once a week from April 18 to June 13, 2023. Pre-assessments were administered, followed by the implementation of the Ego resilience program, then post-assessments were conducted. The procedure is illustrated in [Figure 1].



[Figure 1] Research procedure

### 3.3 Program composition

In this study, the components of the Ego resilience program developed through preliminary research include emotion and affect regulation, self-positivity, interpersonal relationship skills, and problem-solving. It is structured into a total of eight sessions, with emotion and affect regulation covered in sessions 1 and 2, self-positivity in sessions 3 and 4, interpersonal relationship skills in sessions 5 and 6, and problem-solving addressed in sessions 7 and 8. Emotion and affect regulation involve developing emotional awareness and mindfulness. Self-positivity includes positive self-talk and resilience. Interpersonal relationship skills encompass relationships (role models) and communication. Problem-solving is comprised of coping with challenges and goal setting as sub-factors. The specific program composition is detailed in [Table 3].

[Table 3] Ego-resilience program composition

Session	Element	Sub-factor	Activity name (subject)	Goal	Activity Content
1	Emotion and affect regulation	Emotional awareness	Developing awareness of emotions	We can recognize our emotions and empathize with others through the body messages.	-Self-introduction (favorite things ) -What are your feelings now? -Messages from our body -Know your emotions -Empathize
2		Mindfulness	Find your way to mindfulness	We can learn and utilize mindfulness techniques.	-The importance of rest -Relaxation techniques : massage - Mindfulness/Attention Training -Eat/drink mindfully -Breathing and coloring with all



					your heart
3	Self-positivity	Positive self-talk	Make positive changes in my life	We can make positive changes in our life through positive self-talk.	-Discovering positive self-talk through situations -Recognizing changes in thoughts, emotions, and behaviors, and changing thinking (transforming negative thoughts, emotions, and behaviors into positive ones)
4		Resilience	Learn resilience	We can acknowledge their accomplishments and discover ways to make the most of them when facing adversity.	- The ways of coping with challenging situations -Our success stories -Developing resilience
5	Interpersonal relationship skills	Relationship	Find a role model	We can understand the importance of building relationships and identify role models.	-Find my role model -Someone I respect -Conditions for being a good friend -A person who can help in difficult situations
6		Communication	How to communicate in conflict situations	We can find effective communication methods in conflict situations and learn to apply conflict resolution strategies.	-My behavior when I am angry -Sharing conflict resolution strategies (Discussion of the pros and cons of each method) -Conflict resolution training(CALM)
7	Problem-solving	Challenge	Coping with challenges	We can find the best solution for the challenge we are facing.	-Creating a 5-step effective plan to address worrying situations (Facing the challenge/What can I do?/Selecting the optimal solution/Taking action/Evaluating the positive and



					negative aspects of the solution).
8		Goal setting	Prepare in advance for upcoming difficulties	We can develop coping skills for upcoming challenges through healthy lifestyle habits.	-Healthy lifestyle -Changing old habits -Small steps for a healthy lifestyle -Coping stage plan

**3.4 Measurement Tools**

This study used the Self-esteem and Career Maturity Scale to analyze the effects of the Ego resilience program on self-esteem and career maturity.

The Self-esteem Scale used in this study was developed by Rosenberg (45) and translated by Choi Jung-ah (6). It consists of 10 items with a 4-point scale, consisting of 5 positive self-esteem items and 5 negative self-esteem items. Scoring involves reverse-coding responses to the negative self-esteem items and then summing them up with the responses to the positive self-esteem items. Higher scores indicate a higher level of self-esteem. Rosenberg (45) defines self-esteem as a subjective evaluation of oneself and a positive or negative attitude toward oneself. Self-esteem reflects the degree of self-respect and the extent to which one views oneself as a valuable person. High self-esteem implies self-acceptance, self-respect, and a positive self-perception. The reliability of the scale in this study was .420.

To measure the career maturity of university students, the CMI-C, which was translated by Savickas and Porfeli (2011) after revising the CMI-R(Career Maturity Inventory-Revised) by Crites and Savickas(1995), was used after Lee Jong-won (27) confirmed and verified its face validity. The measurement variables and items of the CMI-C are relevance with 6 items, curiosity with 6 items, confidence with 6 items, and consensus with 6 items, totaling 24 items in four areas. The reliability of this study was .754.

**3.5 Data analysis**

The collected data were statistically processed using SPSS 23.0 for Windows statistical program. Qualitative analysis was conducted through interviews before the Ego resilience program, program implementation and interviews for each session, and interviews two weeks after the program ended. The specific method is as follows. First, Self-esteem and career maturity were assessed for differences through non-parametric Wilcoxon signed-rank tests, comparing pre- and post-assessment results. Second, qualitative analysis was conducted by analyzing interviews before program implementation, interviews for each session, and interviews after program completion.

**4. RESEARCH RESULTS**

**4.1 Effect of ego resilience program on university students' self-esteem and career maturity**

The results of the nonparametric test Wilcoxon signed-rank test to determine the effect of the Ego resilience program on university students' self-esteem and career maturity are shown in [Table 4].

[Table 4] Changes in pre- and post-test self-esteem and career maturity scores (n=15)

변인		Negative rank		Positive rank		Tie	Z
		Average rank	N	Average rank	N		
Self-esteem		5.70	5a	7.07	7b	3c	-.833
Career maturity	Career maturity(Overall)	6.50	8a	7.80	5b	2c	-.455
	Relevance	6.43	7a	6.60	5b	3c	-.474
	Curiosity	7.11	9a	9.33	6b	0c	-.230
	Confidence	6.38	8a	8.00	5b	2c	-.387
	Reliability	8.19	8a	7.79	7b	0c	-.315

a. Post < Pre, b. Post > Pre, c. Post = Pre

After conducting the resilience program, changes in self-esteem and career maturity were examined both before and after the program. The results indicated that there were no statistically significant differences in self-esteem and career maturity, as well as the sub-factors of career maturity such as relevance, curiosity, confidence, and reliability. This result shows that the Ego resilience program did not affect self-esteem and career maturity and



that it did not improve self-esteem and career maturity of the study participants.

#### 4.2 Growth Experiences Felt During the Program

In addition to the quantitative analysis of the program(which was not statistically significant), qualitative analysis was conducted to explore growth experiences through interviews conducted before the program, after each session, and at the program's completion. The content was categorized into self-growth(emotional regulation), interpersonal relationship skills, and future challenges as key themes. It was found that the resilience program had a positive impact on self-growth through emotional regulation, interpersonal skills, and future challenges related to finding one's path. The components and sub-components of the self-growth experience are presented in [Table 5].

[Table 5] Components of self-growth experience

Subcomponent	Component
1) Discovered strengths and weaknesses about oneself	1) Experienced self-growth through emotional regulation
2) Became aware of the importance of emotional regulation	
3) Developed the ability to focus on one's own sensations	
1) Became more considerate of other people	2) Enhanced interpersonal skills
2) Explored various coping strategies for conflict situations	
3) Built friendships with different friends	
4) Found diverse thoughts intriguing and enjoyable	
1) Realized the importance of planning and implementation	3) Started contemplating future challenges
2) Gained confidence about the future	

Participants' specific experiences of self-growth through the Ego resilience program are summarized in [Table 6].

[Table 6] Specific Content of Self-Growth Experiences

Component	Subcomponent	Content
self growth (emotion regulation)	Discovered strengths and weaknesses about oneself	-It was a time to reflect on the emotions I felt, recalling what thoughts came to mind and how I felt. -I got to know myself better. -It was time to look back at myself. -I felt reassured by realizing how many things I could be thankful for on a day that could have just passed by. -It was nice to have time to think about my strengths and many other things. -Reflecting on what thoughts and feelings arise in certain situations and contemplating how to act was beneficial.
	Became aware of the importance of emotional regulation	-A sense of peace settled in my heart. -My mind and body relaxed.



		<p>-Through expressing emotions in drawings, I could deeply contemplate what happens when I'm happy and how my thoughts change.</p> <p>-Examining the characteristics of emotions allowed for a more detailed reflection.</p> <p>-Filling anxiety with a sense of stability and tranquility through drawing.</p> <p>-I found solace for my mind.</p> <p>-The softness of the pastels gave me a feeling of softness in my heart as well.</p> <p>-I gained a deeper understanding of emotional regulation.</p> <p>-I learned the importance of understanding my own emotions.</p>
	Developed the ability to focus on one's own sensations	<p>-Experiencing almost a first-time sensation of savoring food heightened my senses and was incredibly intriguing.</p> <p>-The experience of focusing on various sensations while eating was a valuable learning opportunity.</p> <p>-I discovered that when I concentrate, I can derive enjoyment and exhibit tremendous focus.</p> <p>-It was nice to be able to empty my mind of other thoughts and focus.</p>
Interpersonal skills	Became more considerate of other people	<p>-Up until now, I had little interest in people other than myself, but gradually, I developed a bit of curiosity.</p> <p>-Presentations from others became interesting.</p> <p>-Listening to the diverse thoughts of different people made me realize that it's possible.</p>
	Explored various coping strategies for conflict situations	<p>-Realizing the strengths and weaknesses of my actions and communication style in conflict situations was meaningful.</p> <p>-Each person has different conflict resolution methods, and they each have pros and cons. It would be good not to choose only one method but to adjust with each other.</p> <p>-I learned the ideal way to resolve conflicts.</p> <p>-It was helpful to listen to how others handle conflict resolution.</p> <p>-I could understand the emotions of conflicts and think about possible solutions.</p>
	Built friendships with different friends	<p>-It was great to be able to talk with friends I hadn't talked to before.</p> <p>-I got to know the names of friends whose faces I knew while participating in activities.</p>



		-I could become more familiar with other friends. -I could understand the thoughts of my friends.
	Found diverse thoughts intriguing and enjoyable	-It was fascinating to discover that there are many friends with similar conversation styles. -I learned that there are various thoughts, including similar and different opinions.
Future Challenge	Realized the importance of planning and implementation	-I don't often plan step by step when doing something, but this method seemed efficient for task execution. -It was a good time to think about planning and implementation. -I could contemplate how I plan and execute when something happens.
	Gained confidence about the future	-It was an opportunity to seriously think about my future (what I want to do) once again. -It was a time to discuss various ways to gain confidence. -A determination emerged that I can achieve something.

The participants were unsure of what to do in advance, and they were not interested in focusing on themselves, their emotions, and their senses. However, they were able to feel the importance of emotional control, the process of finding stability in their minds, and the importance of focusing on something through the program. They realized the importance of emotional regulation and the process of finding peace of mind. Moreover, as they recognized relationship-building with friends, they demonstrated an improvement in interpersonal skills. Participants expressed concerns about interpersonal relationships and acknowledged diverse thoughts, contributing to an enhancement of interpersonal abilities. Additionally, they gained an understanding that planning and taking action are crucial for future life and they developed confidence in facing the future. These results show that the resilience program has a positive effect on the self-growth experiences of university students.

**5. CONCLUSION**

This study aimed to develop a self-resilience program for college students and to examine its effects on self-esteem and career maturity. Previous studies were reviewed and an eight-session program was developed based on the elements of the self-resilience program (emotions and affect regulation, self-positivity, interpersonal relationship skills, and problem-solving). The effectiveness of the program was then verified by conducting it with 15 university students.

**The discussion based on the results is as follows:**

First, self-resilience involves adapting to difficult situations, leading one's life positively by perceiving oneself positively, regulating emotions, empathizing, and effectively engaging in interpersonal relationships. Therefore, elements of emotion and emotional regulation, self-positivity, interpersonal relationship skills, and problem-solving were extracted. For university students to adapt effectively, adaptation within personal and social relationships is necessary, so elements of self-regulation and problem-solving were extracted as problem-solving competencies for adaptation. This is supported by studies that the factors of a self-resilience program should be self-confidence and competence, positive thinking, problem-solving skills, emotional control and management, intimate attitude and behavior, and interpersonal relationship skills(43), and it should be classified into emotional control, positive thinking, interpersonal relationship, and problem-solving (19).

Second, the self-resilience program showed a slight increase in pre- and post-test average scores (2.60 → 2.63) in university students' self-esteem, but there was no statistically significant difference. This is consistent with studies that self-resilience and self-esteem have a close relationship(9, 17, 18 30). The self-resilience program can help improve self-esteem.

Third, the self-resilience program had no effect on university students' career maturity, and there was no effect on the sub-areas of career maturity, relevance, reliability, and curiosity, and only the average score of confidence



increased slightly (2.47 → 2.49). There was no statistically significant difference in career maturity. This may be because college students are less interested in their careers as they focus on immediate exams and assignments. This result is different from studies in that self-resilience has a positive effect on career maturity. Yeo, Ji-Young, and Park, Tae-Young (51) suggested that career maturity should be increased through a self-resilience program, but this study did not prove its effectiveness.

Fourth, the results of the interviews conducted before, during, and after the self-resilience program showed that the participating university students mentioned that they gained self-growth(emotional regulation), improved interpersonal skills, and future challenges through the self-resilience program. Engaging in activities such as drawing, using multiple senses while eating, and participating in dialogues during conflict situations provided participants with opportunities for self-reflection and moments of introspection, allowing them to attain emotional stability. In addition, the program allowed them to understand each other by listening to the thoughts of various people and to improve interpersonal skills by thinking about and learning various solutions to conflicts. And, through the process of the self-resilience program, university students were able to have time to get to know themselves and find stability in their minds, improve their relationships, gain the power to plan and act anew. The self-resilience program is a program that has a positive effect on the challenges of developing self-growth, interpersonal relationships, and career paths in university students by developing their abilities.

The significance of this study is that it developed a self-resilience program for university students and examined its effectiveness in helping them grow, adapt, and plan for the future.

However, there are limitations to this study wherein, the effectiveness of the self-resilience program was not demonstrated through the comparison of the control group and the experimental group, and the sample size is not sufficient to generalize the results of this study. In subsequent studies, it is necessary to verify the effectiveness through comparison with a control group and to determine the effect by increasing the sample size.

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#### **Availability of data and materials**

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#### **Use of Artificial Intelligence**

Not applicable

#### **Declarations**

Author declares that all works are original and this manuscript has not been published in any other journal.

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