

Analyzing the Factors of College Life Adaptation and Dropout: A South Korean Context
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Analyzing the Factors of College Life Adaptation and Dropout: A South Korean Context

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Abstract

This study analyzed the difference in the probability of dropping out by gender and department to identify the variables influencing the likelihood of dropping out of college students. Moreover, the following factors were primarily investigated among various causes of college student dropout: academic integrity, social integrity, emotional stability, career identity, college education satisfaction, educational service satisfaction, relationship with professors, economic stability, family emotional support, academic continuity, and stability. The data analysis was carried out for one month, from October to November 2021, for students enrolled in a four-year E institution in Gyeonggi-do. Data collection was conducted through an online survey. The effective sample number of students used in this study was 771. As a measurement tool, the college life adaptability test tool was used, and the analysis methods were cross-analysis, correlation analysis, independent-sample t-test, and logistic regression analysis. As a result of the study, the probability of dropout was higher for male students than for female students by gender, and the physical therapy department had a relatively high dropout probability compared to other departments. In addition, a negative correlation was discovered in both the sub-factors of dropout possibility and college life adaptability, and the difference in college life adaptability according to dropout possibility showed that the group with the possibility of the dropout was the group without the possibility of dropout. In comparison, the level of adaptability to college life was found to be low. Moreover, college education satisfaction and education service satisfaction were found as sub-factors of college life adaptability that predicted the possibility of dropout. The results of this study imply that the causes of college dropouts should be investigated at the institutional and government levels, not only at the individual level.

Keywords: Dropout, College life adaptability, College students

1. Introduction

Universities must assume social responsibility not just for choosing outstanding students, but also for ensuring that these students continue to thrive in school after they graduate. The importance of managing dropouts at the university level has been emphasized more recently. The dropout rate of domestic university students continues to increase (Kim & Sim, 2019). Which threatens not only the financial stability of the university but also its existence. In addition, the increase in the number of college dropouts not only lowers the quality of college education but also leads to dissatisfaction with education consumers, which in turn leads to a vicious cycle of increasing dropouts. Therefore, management is required to prevent dropouts at the university headquarters level. In particular, due to the spread of COVID-19, about 49% of college students in the 2020 academic year answered that they were not satisfied with their university education, and expressed much dissatisfaction with university education (Ministry of Education, 2020). These students' dissatisfaction is manifested through requests for refunds of university fees and dropouts,

necessitating university-level study.

Suspension of university education incurs considerable unnecessary costs in terms of individuals, households, and schools (Youn & Jang, 2015). Individuals who choose to drop out of school forfeit the possibility to further their education and achieve a higher degree of education. Educational background has a great influence on the wages to be obtained in the labour market, as well as the type of social standing that may be obtained in the future (Tinto, 2012). Furthermore, even when re-admitted to another school, extra fees, including tuition paid before dropout, are incurred until graduation from the re-admitted institution, resulting in economic difficulties for students and families (Youn & Jang, 2015; Kim, 2009).

A college dropout is a student who stops studying for personal or university institution reasons while still enrolled in school. In general, dropout means a leave of absence, dropout, transfer, or selective renunciation for a certain period or longer, excluding leave for military service (Kim, 2006; Han, 2018). On the other hand, students who are currently attending school but have practically given up on their studies with dropout in mind are called 'dropout intentions'. Dropout intentions are 'lost academics' who attend school but have been out of school (Cho, 1997). Moreover, they have emotional depression and anxiety, and low self-esteem (Park & Lee, 2016). They lose the meaning of attending school, their attendance rate is very low compared to other students, and they are not interested in their studies, which is highly likely to lead to dropouts before. To predict and prevent dropout, it is important to find out the direct and indirect factors affecting dropout of college students (Kim, 2011).

According to the Ministry of Education's 2018 education statistics (2019), the overall dropout rate of students enrolled in general universities was 4.6 per cent (92,652 students, a 0.5 per cent increase over the 2016 general university dropout rate, up from 4.0 per cent in 2010). Since most of Korea's university finances depend on student tuition, student movement and departure can lead to a crisis in university finances (Kim, 2012). Therefore, the university must keep the students studying and minimize their dropout.

For this, this study intends to analyze college students' ability to adapt to college life as a factor influencing the possibility of dropping out. Moreover, through factor analysis that predicts the possibility of dropout, a plan to prevent dropout of college students is prepared and used as basic data to solve this problem.

Accordingly, the following research questions were established.

First, What is the difference in the possibility of dropping out according to the gender and department of college students?

Second, What is the relationship between the possibility of dropping out of college students and their ability to adapt to college life?

Third, What is the difference in college life adaptability according to the possibility of dropping out?

Fourth, What are the sub-factors of college life adaptability that predict the possibility of dropping out of college students?

2. Theoretical Background

Due to the decrease in the school-age population, it is expected that the number of university admissions will exceed the number of high school graduates in 2018, which is expected to lead to a decrease in the university's fill rate (Ministry of Education, 2014). In addition, the dropout rate of college students is increasing year by year, which is a serious problem. According to the university notification site, the number of students who dropped out in 2021 at four-year universities was 93,124, with a 4.6 per cent dropout rate compared to registered students. It has maintained the same high ratio since 4.6% in 2019. Until recently, it is estimated that the percentage of students dropping out of college remains at 4% and shows an upward trend at about 50,000 to 60,000 every year. Particularly in the case of rural institutions, difficulties in recruiting new students are rising due to a fall in the school-age population, and the number of students leaving out to migrate to the metropolitan region is increasing.

In 2019, 37,685 students dropped out of rural institutions, a 2.7 per cent increase from 36,687 the previous year. When the number of dropout students increases, the number of enrolled students in local universities decreases as does tuition income, causing the university's financial situation to deteriorate. Also, universities located in Seoul and the metropolitan area were not free from the increase in students dropping out. As of 2019, a total of 9,661 students dropped out of universities located in Seoul, a 10.1% increase from 8,774 students in the previous year. The number of students dropping out of universities in the metropolitan area was 7,528 in 2019, an increase of 9.5% from 6,872 in the previous year. The dropout rate was higher in Seoul and the metropolitan area than in the provinces. The dropout rate refers to the ratio of the number of students who dropped out in that year to the number of enrolled students in the previous year. Therefore, local universities have been implementing various programs at the university level before too reduce the number of dropout students. The recruitment of new students has a large impact on the decrease in the school-age population, therefore there is a limit to control, whereas dropout prevention may be done at the university level.

However, despite the efforts of each university, the dropout rate of local universities is on the rise. The average dropout rate of universities in non-metropolitan areas has increased over the past four years: 4.7% in 2016, 4.9% in 2017, 5.3% in 2018, and 5.4% in 2019. As the novel coronavirus infection (COVID-19) situation overlapped, concerns about an increase in the dropout rate among provincial universities increased. As distance learning progressed, the time spent at school became shorter. Professor A of a private university in Busan, who conducted an analysis study on factors influencing college student dropouts last year, said, "There are also research results that show that students are less likely to leave the university if they spend a lot of time in college." In the education world, there are voices that a tighter approach is needed to reduce dropout students.

The problem of dropouts should not be regarded as a minority from an individual point of view. It is necessary to comprehensively study both the educational institution aspect and the social aspect. From an individual point of view, dropping out is the process of redesigning a major or career that suits one's aptitude. Students do not obtain suitable career counselling during their previous schooling stage, and a mismatch in major or aptitude is the cause, decreasing their happiness with the institution they have enrolled in and leading to failure to adapt, which leads to quitting the school. This can lead to a negative aspect that means the disconnection of an

individual's educational career, and on the other hand, it can be viewed as a form of moving to another institution. In terms of university education institutions, dropout means the loss of graduates, which can be an important factor in exacerbating financial difficulties. In other words, the loss of financial resources is a factor that threatens the existence of university institutions and hinders quality improvement (Kim, 2007). From a social point of view, dropout is a serious problem that increases social and economic costs.

In the study of dropout students, (Lim and Han, 2013) analyzed the financial factors that affect the dropout rate according to the characteristics of private universities such as location, size, and affiliated university. In the study of (Yeon and Jang, 2015), the effects of personal background factors and characteristics of high school attendance before college, as well as characteristics of university institutions such as university type, establishment type, major, and university location, on the dropout of university students were analyzed. However, it can be said that domestic studies considering various factors such as educational conditions and educational activities of universities are still insufficient. (Heo, 2019; Lee et al, 2020) divided individual factors and college education factors, and studied how these factors affect college students' intention to drop out. Individual factors included a significantly high dropout rate among male students, those with lower grades, and foreigners. As a college factor, satisfaction with educational performance was derived as a key factor for dropout. Through individual interviews with dropouts at national universities, (Shim 2017) examined the psychological and environmental aspects that students faced before opting to drop out after attending university. Self-actualization needs and work-learning parallel factors are presented. (Kang et al., 2019) confirmed the change in college students' dropout intention and verified individual factors, family factors, and school factors as factors affecting the change. Personal and family characteristics were shown to have no statistically significant influence on dropout intention, while college satisfaction was proposed as a college factor.

(Tinto, 2012) presents a dropout model that focuses on the interaction of individual psychological variables, and institutional and social variables as the cause of dropout. It was confirmed that the possibility increased. In the study of (Stoecker et al, 1988) the university's reputation was used in the analysis along with the university selectivity variable, which is traditionally regarded as a characteristic of universities in the United States. The reasons college students opt to drop out may vary over time, beginning with college applications, and the strength that drives the choice may likewise alter (Gury, 2011). Therefore, rather than focusing on the result of dropout, it is considered that it would be more appropriate for this study to examine the change in an individual's thoughts about dropout, that is, the change in dropout intention. Recent studies related to dropout are also mainstream studies examining dropout intention based on the rational behavior theory behaviour 2011). Which states that intention is formed before the outcome of the action (Hyeong, 2015).

Achieving a sense of belonging through exchanges with university members through the process of adaptation after entering university can be an important variable in college dropout (Lee & Choi, 2014; Chao et al, 1994). Social support in relationships within the university affects the academic achievement of college students (Dennis et al, 2005). and support through counselling with a supervisor can have the effect of preventing dropouts (Kang, 2010). However, a study by (Choi & Kang, 2008) suggests that positive interpersonal relationships with seniors and juniors and professors

acted positively in the beginning, but as time passed, negative experiences also occurred, suggesting that it may be helpful only for temporary adaptation. Therefore, this study aims to analyze the factors related to college life adjustment that affect the dropout of college students.

3. Research Method

3.1 Research design

This study was designed to

First, data for this study were collected through an online survey sent to all E University students. The data collection method is a visitor survey method. After creating a link to a questionnaire on a specific site online, users who entered there voluntarily participated in the survey.

Second, the sampling in this study was a random sample, and about 19% of all university students in E University, or 771, participated. To achieve the purpose of this study, representativeness is secured.

Third, consent forms of research participants who complied with research ethics standards such as personal information protection and prior consent were collected from research participants before participating in the research.

Fourth, the dependent variable in this study was whether or not college students could drop out, and it was coded as '1' if there was a possibility of dropping out and as '0' if there was no possibility of dropping out. The independent variable consists of 10 sub-factors related to college life adaptability. A total of 10 sub-factors are as follows. These are academic integrity, social cohesion, emotional stability, career identity, college education satisfaction, educational service satisfaction, relationship with professors, economic stability, emotional support at home, and academic continuity stability.

3.1 Study Subject

The subjects of this study are university students who are enrolled in a 4-year E university in Gyeonggi-do. The effective sample number of students used in this study was 771. The general characteristics of the study subjects are presented in Table 1. The study was conducted for all enrolled students. The number of students enrolled in University E is 4,157. In addition, to comply with research ethics standards such as the protection of personal information and prior consent in online surveys conducted by individuals, consent forms from research participants were collected and submitted in electronic file format during online surveys.

[Table 1] General characteristic (N=771)

	Category	Frequency	%
Sex	male	227	29.4
	female	544	70.6
Department	Department of Nursing(Seongnam Campus)	59	7.7
	Department of Nursing (Uijeongbu Campus)	52	6.7
	Department of Physical Therapy	73	9.5
	Department of Beauty and Cosmetic Science	53	6.9

	Department of Radiology	54	7.0
	Department of Health, Environment and Safety	26	3.4
	Big Data Convergence Department	2	0.3
	Sports Outdoors Department	23	3.0
	Department of Food Industry and Food Service	16	2.1
	Department of Food and Nutrition	31	4.0
	Department of Children	18	2.3
	Department of Optics	36	4.7
	Department of Early Childhood Education	19	2.5
	Department of Emergency Rescue	24	3.1
	Medical IT Department	38	4.9
	Department of Medical Management	31	4.0
	Department of Medical Engineering	20	2.6
	Department of Medical Public Relations Design	33	4.3
	College of medicine	5	0.6
	Department of Clinical Pathology (Seongnam Campus)	59	7.7
	Department of Clinical Pathology (Uijeongbu Campus)	33	4.3
	Funeral Guidance Department	20	2.6
	Department of Addiction Rehabilitation and Welfare	18	2.3
	Department of Dental Hygiene	28	3.6

3.2 Research Tool

The measuring tool used in this study is the college life adaptability test. The purpose of the college life adaptability test is to diagnose the dropout tendency and college life adaptability of college students. The test results may be used to identify probable dropout tendencies and academic continuity, as well as to provide basic data to help students adjust to college life. The survey method was conducted as a web-based survey.

In this study, the College Student Adaptability Test (CAT) developed by (Kim, 2016) was used to measure the change in the perception of college students about adaptability to college life. Academic integrity, social cohesion, emotional stability, career identity, college education satisfaction, educational service satisfaction, relationship with professors, economic stability, emotional support at home, and academic continuity stability among the measurement items of the college life adaptability test factors were used. Variable values are on a Likert 5-point scale with 1 point for 'not at all', 2 points for 'disagree', 3 points for 'normal', 4 points for 'agree', and 5 points for 'strongly agree'. Cronbach's α was found to be .862. In addition, in this study, the question asking whether it is possible to drop out was used as a question measured by the dichotomous method of 'yes' and 'no'. The possibility of dropout measured by the dichotomous method can minimize the reaction error that appears in the neutral personal tendency among the errors in the measurement (Sung, 2009). Therefore, the questions answerable by 'yes' or 'no', used to check the possibility of dropout, will be able to derive statistically meaningful results in identifying predictors that determine the possibility of dropping out of college students.

3.3 Data Analysis

The data collected in this study were analyzed using IBM SPSS 26 version by the research question as follows. First, cross-analysis was conducted to examine the difference in the possibility of dropping out by gender and grade of college students. Second, Spearman's co-correlation analysis was conducted to examine the correlation between the possibility of dropping out and the sub-factors of college life adaptability.

Third, descriptive statistics that can explain the collected data were first calculated to analyze the difference in the sub-factors of college life adaptability according to the possibility of dropping out. In addition, an independent sample t-test was performed to confirm the statistical significance of the difference in scores between groups.

Fourth, logistic regression analysis was performed to find out the statistical significance of the model using the sub-factor of college life adaptability as an independent variable. The advantage of logistic regression analysis is that the coefficient becomes a Log Odds ratio, and a reasonable coefficient estimate without bias may be obtained for data collected based on the response variable, such as case-control. Moreover, the statistical significance of individual independent variables for group classification accuracy and dropout possibility was investigated. Logistic regression analysis is suitable when the dependent variable is a dichotomous variable such as 'yes/no'. Unlike discriminant analysis, the variance-covariance matrix of the groups categorized by the dependent variable must be the same. Also, it does not require the assumption that the independent variables should have a multivariate normal distribution (Kim, 2004). In addition, the method of simultaneously inputting the variables to be analyzed was applied, and Hosmer and Lemeshow tests were performed to measure the overall fit of each model.

4. RESEARCH RESULTS

4.1 Differences in the possibility of dropout by gender and grade of college students

Table 2 shows the results of examining the differences by gender and department regarding the possibility of dropping out of college students.

[Table 2] Differences by gender and grade in the possibility of dropout (N=771)

	Category	Dropout no possibility n=532(69.0) n(%)	Dropout there is a possibility n=239(31.0) n(%)	Frequency (%)	χ^2	df	p
Gender	Male	105(13.6)	122(15.8)	227(29.4)	77.81***	1	.000
	Female	427(55.4)	117(15.2)	544(70.6)			
Department	Department of Nursing(Seongnam	45(5.8)	14(1.8)	59(7.7)	65.52***	23	.000

Campus)						
Department of Nursing (Uijeongbu Campus)	40(5.2)	12(1.6)	52(6.7)			
Department of Physical Therapy	47(6.1)	26(3.4)	73(9.5)			
Department of Beauty and Cosmetic Science	32(4.2)	21(2.7)	53(6.9)			
Department of Radiology	32(4.2)	22(2.9)	54(7.0)			
Department of Health, Environment and Safety	18(2.3)	8(1.0)	26(3.4)			
Big Data Convergence Department	1(0.1)	1(0.1)	2(0.3)			
Sports Outdoors Department	6(0.8)	17(2.2)	23(3.0)			
Department of Food Industry and Food Service	11(1.4)	5(0.6)	16(2.1)			
Department of Food and Nutrition	23(3.0)	8(1.0)	31(4.0)			
Department of Children	13(1.7)	5(0.6)	18(2.3)			
Department of Optics	23(3.0)	13(1.7)	36(4.7)			
Department of Early Childhood Education	14(1.8)	5(0.6)	19(2.5)			

Department of Emergency Rescue	19(2.5)	5(0.6)	24(3.1)			
Medical IT Department	22(2.9)	16(2.1)	38(4.9)			
Department of Medical Management	22(2.9)	9(1.2)	31(4.0)			
Department of Medical Engineering	12(1.6)	8(1.0)	20(2.6)			
Department of Medical Public Relations Design	16(2.1)	17(2.2)	33(4.3)			
College of medicine	5(0.6)	0(0.0)	5(0.6)			
Department of Clinical Pathology (Seongnam Campus)	49(6.4)	10(1.3)	59(7.7)			
Department of Clinical Pathology (Uijeongbu Campus)	29(3.8)	4(0.5)	33(4.3)			
Funeral Guidance Department	12(1.6)	8(1.0)	20(2.6)			
Department of Addiction Rehabilitation and Welfare	16(2.1)	2(0.3)	18(2.3)			
Department of Dental Hygiene	25(3.2)	3(0.4)	28(3.6)			

*** $p < .001$

By gender, 122 men (15.8 per cent) indicated a likelihood of dropping out, indicating a greater dropout rate than 117 women (15.2 per cent). The physical therapy department showed the

highest probability of dropping out with 26 (3.4%).

As a result of examining whether the difference in dropout possibility was significant according to gender, the statistical value was 77.81 at the significance level of .001, indicating that there is a significant difference in the possibility of dropping out of college students according to gender.

As a result of examining whether there is a significant difference in the possibility of dropping out by department, the statistical value was 65.52 at the significance level of .001, indicating that there is a significant difference in the possibility of dropping out of college students depending on the department.

4.2 Correlation between the possibility of dropping out and factors of college life adaptability

Table 3 shows the results of analyzing the correlation between the possibility of dropping out and the sub-factors of college life adaptability. The sub-factors of college life adaptability are academic integrity, social cohesion, emotional stability, career identity, college education satisfaction, educational service satisfaction, relationship with professors, economic stability, family emotional support, and academic continuity stability.

[Table 3] Correlation between the possibility of dropping out of college students and sub-factors of college life adaptability (N=771)

	1	2	3	4	5	6	7	8	9	10	11
1	1										
2	-.132**	1									
3	-.099**	.518**	1								
4	-0.029	.605**	.295**	1							
5	-.154**	.520**	.298**	.334**	1						
6	-.126**	.475**	.476**	.289**	.387**	1					
7	-.127**	.550**	.495**	.293**	.424**	.794**	1				
8	-0.057	.336**	.408**	0.041	.129**	.350**	.437**	1			
9	-0.069	.249**	.163**	.263**	.222**	.213**	.240**	.103**	1		
10	-.071*	.338**	.269**	.277**	.242**	.348**	.350**	.171**	.266**	1	
11	-.123**	.278**	.084*	.422**	.238**	.148**	.179**	-0.059	.360**	.244**	1

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

1. Possibility of dropout 2. Academic integrity 3. Social integrity 4. Emotional stability 5. Career identity 6. University education satisfaction 7. Education service satisfaction 8. Relationship with professor 9. Economic stability 10. Family emotional support 11. Academic continuity stability

The Spearman's correlation link between the potential of dropping out and the sub-factors of college life adaptation was examined, and it was discovered that there was a negative correlation in both the chance of dropping out and the sub-factors of college life adaptation.

That is, the negative correlation between the possibility of dropout and career identity ($r=-.154$, $p=.000$) was the highest, and academic integrity ($r=-.132$, $p=.000$) and educational service satisfaction ($r=-.127$, $p=.000$), college education satisfaction ($r=-.126$, $p=.000$), academic continuity stability ($r=-.123$, $p=.000$), social cohesion ($r=-.099$, $p=.000$), family emotional support ($r=-.071$, $p=.000$), economic stability ($r=-.069$, $p=.000$), relationship with professors ($r=-.057$, $p=.000$) and emotional stability ($r=-.029$, $p=.000$) showed negative correlations in that order. Therefore, it can be seen that the possibility of dropping out of college students has the highest negative correlation with career identity among the sub-factors of college life adaptability.

4.3 Differences in college life adaptability sub-factors according to the possibility of dropping out of college students

Descriptive statistics were calculated to investigate the difference in the sub-factors of college life adaptability according to the possibility of dropping out of college students. Table 4 shows the results of the independent sample t-test to find out the statistical significance of the difference in scores for the sub-factors of college life adaptability between groups according to the possibility of dropping out.

[Table 4] Results of independent sample t-test on the difference in college life adaptability sub-factors according to the possibility of dropping out of college students (N=771)

Independent variable (College life adaptability)	Group division		M	SD	t	p
	There is no possibility of dropout (n=532)	There is a possibility of dropping out (n=239)				
Academic integrity	no possibility		54.70	9.538	3.697***	0.000
	There is a possibility		51.90	10.131		
Social cohesion	no possibility		48.41	11.387	2.761**	0.006
	There is a possibility		45.86	12.931		
Emotional stability	no possibility		53.97	10.145	0.818*	0.414
	There is a possibility		53.28	12.580		

Career identity	no possibility	52.39	9.059	4.309***	0.000
	There is a possibility	49.26	9.914		
Satisfaction with a college education	no possibility	55.94	8.483	3.514***	0.000
	There is a possibility	53.53	9.539		
Education service satisfaction	no possibility	54.45	8.540	3.553***	0.000
	There is a possibility	51.97	9.849		
Relationship with professor	no possibility	48.70	8.839	1.585	0.113
	There is a possibility	47.57	9.870		
Economic stability	no possibility	55.79	9.142	1.920	0.055
	There is a possibility	54.38	10.144		
Emotional support in the family	no possibility	55.20	9.596	1.975*	0.049
	There is a possibility	53.74	9.312		
Academic continuity stability	no possibility	54.63	7.431	3.433**	0.001
	There is a possibility	52.46	9.404		

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

After examining the difference in college life adaptability between groups based on the possibility of dropout, it was discovered that the group that answered 'there is a possibility of dropping out' had a low life adaptation score except for the relationship with the professor and economic stability among the sub-factors of college life adaptability. To examine the statistical significance of the difference in the scores of the college life adaptability sub-factors between the group with and without the possibility of dropout, it was checked whether Levene's assumption of equal variance was satisfied. As a result of the analysis, the null hypothesis was accepted at the significance level of .05, so it could be said that the variances of the two groups were the same. The independent sample t-test revealed a significant difference between groups in the sub-factors of college life adaptation based on the potential of dropout at significance levels of .05, .01, and .001. In other words, the difference in college life adaptation between the group with the possibility of dropping out and the group without the possibility of dropping out is considerable.

4.4 Results of logistic regression analysis to predict the possibility of dropping out of college students

Logistic regression analysis was used to find out the statistical significance and accuracy of group classification for the model predicting the possibility of dropping out of college students using the college life adaptability sub-factor as an independent variable, and the results are shown in Table 5.

[Table 5] Test of the suitability of the logistic model for predicting dropout probability

			forecast		
			Possibility of dropping out		Classification Accuracy (%)
			no possibility	There is a possibility	
observation	Possibility of dropping out	no possibility	738	3	99.6
		There is a possibility	24	6	20.0
		Total (%)			96.5
χ^2 (Intercept Model - Theoretical Model)			88.174(df=11, p=.000)		
Hosmer & Lemeshow Test			10.900(p=.207)		
-2Log Likelihood			165.433 ^a		
Cox & Snell R ²			.108		
Nagelkerke R ²			.386		

In the model, the χ^2 value of the predictive test was 88.174, and the significance probability was .000. And, it was confirmed that the model predicting each sub-factor of college life adaptability and the possibility of dropout was a statistically significant regression model at the significance level of .001. Nagelkerke R², an index with explanatory power for the amount of change in the dependent variable, was .386, academic cohesion, social cohesion, emotional stability, career identity, college education satisfaction, educational service satisfaction, and relationship with professors, economic stability, family emotional support, and academic continuity stability can be said to explain 38.6% of college students' possibility of dropping out. And if the Hosmer and Lemeshow test value (10.900), which indicates the overall fit of the logistic regression model, is greater than the significance level of .05, the model can be said to be suitable. However, the significance probability is .207, which is much larger than .05, so it can be said that it is an acceptable high-level model.

According to this model, the prediction rate that can accurately predict the possibility of dropping out of college students is 20.0% of the cases with the possibility of dropping out. And in the case of no dropout possibility, 99.6% of the total was correctly classified, indicating high accuracy of 96.5% overall.

Table 6 shows the results of analyzing the statistical significance of individual independent variables according to the possibility of dropping out.

[Table 6] Results of logistic regression analysis of sub-factors of college life adaptability according to the possibility of dropout

	B	S.E.	Wald	df	p	Exp(B)
Academic integrity	0.037	0.075	0.241	1	0.624	1.038
Social cohesion	0.084	0.053	2.507	1	0.113	1.087
Emotional stability	0.010	0.092	0.013	1	0.910	1.010
Career identity	-0.026	0.039	0.446	1	0.504	0.974
Satisfaction with a college education	-0.176	0.062	8.152	1	0.004	0.839
Education service satisfaction	0.131	0.065	4.077	1	0.043	1.140
Relationship with professor	0.062	0.035	3.141	1	0.076	1.064
Economic stability	0.001	0.030	0.001	1	0.970	1.001
Emotional support in the family	0.046	0.029	2.549	1	0.110	1.047
Academic continuity stability	-0.045	0.027	2.677	1	0.102	0.956
constant term	1.442	6.895	0.044	1	0.834	4.230

Academic cohesion, social cohesion, emotional stability, career identity, relationship with the professor, economic stability, family emotional support, and academic continuity were excluded from the sub-factors of college life adaptability, and college education satisfaction (Wald = 8.152, $p = .004$) and educational service satisfaction (Wald = 4.077, $p = .043$) were analyzed to predict the possibility of dropping out of college students at the significance levels of .05 and .01. The

regression equation derived by logistic regression analysis is as follows.

$$\text{Logit(Whether it is possible for college students to drop out)} = 1.442 - .176(\text{Satisfaction with college education}) + .131(\text{Education service satisfaction})$$

In logistic regression analysis, the regression coefficient (B) means that when the value of the independent variable increases by 1 unit when the values of the other independent variables are kept constant, the probability of college students dropping out is increased by then the probability that there is no probability of dropping out. Therefore, assuming that the scores of the other independent variables are the same, it can be predicted that if the value of each independent variable increases by 1 point, the college education satisfaction will be about $e^{-.176} = .839$ times higher than the probability that there is no probability of dropping out of college students. And e is a natural constant and has a value of 1.442 and $(1.442)^{-.176} = .839$. In addition, it can be predicted that educational service satisfaction is increased by about $e^{.131} = 1.140$ times, and $(1.442)^{.131} = 1.140$.

5. Discussion

The purpose of this study was to investigate the sub-factors of college life adaptability that predict whether college students will drop out. Therefore, in this study, a college life adaptability test was conducted for college students enrolled in 4-year university E in Gyeonggi-do. Moreover, this study will look into the sub-factors of college life adaptation that influence the likelihood of dropping out, as well as determine which factors predict the likelihood of dropping out using logistic regression analysis.

The discussion through the analysis results is as follows.

First, the possibility of dropping out of college students according to gender and department was checked. As a result, more males than females in the group answered that there was a possibility of dropping out in terms of gender. In the case of the department, the probability of dropping out was highest in the department of physical therapy. The results of this study are consistent with the research results of Jeong (2021) who analyzed dropouts at University P by gender. His study also showed that the dropout rate of male students was higher than that of female students. In addition, studies by (Youn and Jang, 2015; Hur, 2019) also showed that gender was a factor influencing dropout.

Second, the correlation between the possibility of dropping out of college students and the sub-factors of college life adaptability was analyzed. As a result, it was found that there was a negative correlation between the possibility of dropping out and the sub-factors of college life adaptability. In particular, the negative correlation between the possibility of dropping out and career identity was found to be the highest. One of the most important variables predicting successful adaptation to college life is a career decision. The biggest concern during the four years of college life is career and employment issues (Kim, 2011). An undecided career means that the person is unable to decide on a career path and therefore cannot focus on a career choice (Tokar et al, 2003). An undecided career path makes it difficult to prepare for a job because it cannot determine the direction of the career path, affecting not only college life but also personal life (Kelly & Lee, 2002). When a college student decides on his or her career path, he or she takes active actions such as

studying or various activities to achieve it. Learners with a high level of career decision-making are satisfied with and immersed in the university environment and adapt well to the academic needs of college life (Park & Lee, 2013).

Third, the difference in college life adaptability between groups according to the possibility of dropping out was analyzed. As a result, except for the relationship with professors and economic stability, the sub-factors of college life adaptability were found to be low in college life adaptability scores of the group who responded that there was a possibility of dropping out. Therefore, it can be seen that if the college life adaptability score is low, there is a possibility of dropping out. When college students fail to integrate into the university's social and academic system, dissatisfaction with education can lead to maladjustment to the university and, as a result, dropout (Tinto, 2012; Anderman & Wolters, 2006). (Kim, 2008; Hymavathi & Rao, 2020) suggested that college life satisfaction rather than college selection factors affected school dropout and school transfer. Dropout due to maladaptation to university may be more related to the path to the labour market than university.

Fourth, among the sub-factors of college life adaptability, college education satisfaction and educational service satisfaction were analyzed as statistically significant predictors of whether college students could drop out. It can be confirmed that this study result is in the same context as that of (Kang, 2010). In other words, college life satisfaction is the most influential variable on the intention to drop out of college students. In addition, forming a sense of belonging through exchanges with university members through the process of adaptation after entering university can be an important variable in dropping out (Lee & Choi, 2014; Lee & Han, 2012; Lee & Yang, 2019).

6. Conclusion

This study tried to analyze college life adaptability as a predictive factor that determines the possibility of dropping out for students of 4-year E university in Gyeonggi-do. College education satisfaction and educational service satisfaction were shown to have the most impact on predicting the probability of dropping out of college students among the sub-factors of college life adaptation that affect the risk of dropping out of college. In particular, the highest ratio among the migration routes of dropouts after dropping out of college is moving to other higher education institutions. This is a situation in which talents from local universities have flowed to the metropolitan area, and the unfilled rate of local universities is increasing. Therefore, based on the results of this study, it is important to draw policy implications at the university and government level from a macro level, since dropping out of college students is a problem that affects not only the individual but also society as a whole.

The most effective way to reduce the dropout rate is to predict dropouts in advance and provide guidance and consideration at the school level so that the target students do not lead to dropouts. Dropout may reduce the number of students at a university, as well as grow into a variable that affects the existence of a university at a time when the school-age population is shrinking. Therefore, it is important to identify the causes and factors of dropouts, but it is necessary to introduce a system that can predict and prevent dropouts in advance by considering these factors and causes. Of course, it is time to study for the development of an intelligent system that can identify students who are expected to drop out in advance by introducing an intelligent data

analysis system.

Declaration of Conflicts of Interests:

The authors reported no potential conflict of interest.

Reference

- Kim, M.S., & Sim, J. Y. (2019). The improvement strategy of student care system for the prevention from adequacy of college life. *Korean Journal of Correctional Counseling*, 4 (1), 73-90.
- Ministry of Education, Digital-Based Higher Education Innovation Support Plan for Future Education Transformation in Post-COVID-19 era. Ministry of Education Press Release (2020.9.9.). Retrieved from <https://moe.go.kr/boardCnts/view.do?boardID=294&lev=0&statusYN=W&s=moe&m=0204&opType=N&boardSeq=81865>
- Youn, B. R., & Jang, H. W. (2015). Temporal aspects and determinants of college student departure. *Korean Journal of Sociology of Education*, 25 (1), 129-155.
- Tinto, V. (2012). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago, IL: University of Chicago Press.
- Kim, Y. N. (2009). *An Analysis of Factors of Influence on College Student Withdrawal*. Chungnam National University Doctoral dissertation.
- Kim, S. Y. (2006). A Study on Exploring the Academic Persistence and Dropout of Korean Universities and Colleges' Students. *The Journal of Korean Education*, 33 (4), 33-62.
- Han, S. I. (2018). Exploration of Factors that Affect College Student Drop-out and Resilience. *Journal of Learner-Centered Curriculum and Instruction*, 18 (24), 1369-1391.
- Cho, H. J. (1997). *The meaning of potential dropout students. Colloquium for dropout prevention system*. Seoul: Plaza for Youth Dialogue.
- Park, E. J., & Lee, H. K. (2016). A Study of Factors affecting College Dropout Intention for Freshmen in College : Focused on K-College. *Forum for youth culture*, 46, 91-111.
- Kim, J. H. (2011). The Hierarchical Relationship between Individual, College, Social Variable, and Dropout Intention of College Students. *The Journal of Vocational Education Research*, 30 (2), 249-266.
- Ministry of Education, Education Basic Statistics, 2019, <http://kess.kedi.re.kr>
- Kim, S. Y. (2012). A Study on College Freshmen`s Adaptation Process Influencing on the Dropout-A Basic Research of the College Dropouts` Mobility Path and Structure-. *The Journal of Career Educational Research*, 25 (3), 139-160.
- Ministry of Education, University Structural Reform Promotion Plan, 2014.
- Kim, S. Y. (2007). An Analysis on Institutional Characteristics and Student Support Programs Effecting on Student Retention. *The Journal of Career Education Research*, 20 (1), 111-141.
- Lim, S. Y., & Han, Y. K. (2013). Impacts of Financial Factors of Private Colleges on Student Dropout Rates. *The Journal of Economics and Finance of Education*, 22 (2), 83-113.

- Yeon, B. R., & Jang, H. W. (2015). Temporal aspects and determinants of college student departure. *Korean Journal of Sociology of Education*, 25 (1), 129-155. DOI. 10.32465/ksocio.2015.25.1.006
- Heo, Y. J. (2019). Effect Individual and Educational Factors on Dropout Intention of University Students. *Asia-Pacific Journal of Multimedia Services Convergent with Art, Humanities, and Sociology(AJMAHS)*, 9 (1), 503-512. DOI : 10.35873/ajmahs.2019.9.1.051
- Shim, H. (2017). A grounded theory-based analysis on the factors that causing dropout of students in Korean national universities. *Journal of Education & Culture (JOEC)*, 23 (2), 105-128.
- Kang, M. H., Lee, E. K., & Lee, E.T. (2019). Trends and Influencing Factors of College Students' Dropout Intention. *Forum For Youth Culture*, 58, 5-30.
- Tinto, V. (2012). Leaving college. Chicago, Ill.: University of Chicago Press.
- Stoecker, J., Pascarella, E. T., & Wolfle, L. M. (1988). Persistence in higher education: A 9-year test of a theoretical model. *Journal of College Student Development*, 29 (3), 196-209.
- Gury, N. (2011). Dropping out of higher education in france: A micro-economic approach using survival analysis. *Education Economics*, 19 (1), 51-64.
- Ajzen, I. (2011). The Theory of Planned Behaviour: Reactions and Reflections. *Psychology & Health*, 26, 1113-1127. <http://dx.doi.org/10.1080/08870446.2011.613995>
- Hyeong, J. E. (2015). Analysis of structural relationships of self-discrepancy, depression, career indecision, academic self-efficacy, and dropout intention. Pusan National University graduate school doctoral thesis.
- Lee, M. J., & Choi, Y. J. (2014). Program development and effects for freshman college life adaptation. *Korean Journal of General Education*, 14 (11), 67-73.
- Chao, G. T., O'Leary-Kelly, A. M., Wolf, S., Klein, H. J., & Gardner, P. D. (1994). Organizational socialization: Its content and consequences. *Journal of Applied Psychology*, 79(5), 730.
- Dennis, J. M., Phinney, J. S., & Chuateco, L. I. (2005). The role of motivation, parental support, and peer support in the academic success of ethnic minority first-generation college students. *Journal of College Student Development*, 46 (3), 223-236.
- Kang, S. H. (2010). Predictors of Academic Achievement and Dropout Thinking among University Students. *Journal of Educational Evaluation*, 23 (1), 29-53.
- Choi, M. S., & Kang, J. H. (2008). Qualitative Study about Experience of Students' Dropping Out. *Korean Journal of Youth Studies*, 15 (7), 203-225.
- Kim, S. Y. (2016). The development of scales on rating college students' adaptability and the analysis of technical quality. *The journal of the institute of internet, Broadcasting and Communication*, 16 (6), 295-303.
- Sung, T. J. (2009). The basis of educational evaluation. Seoul: Hakjisa.
- Kim, S. G. (2004). Understanding and application of logistic regression model using SPSS. Seoul: SPSS Academy.
- Jeong, S. H. (2021). A Study on the Dropout of University Students: Focusing on the Case of P University. *Journal of Convergence Consilience*, 4 (3), 136-145.
- Hur, Y. J. (2019). Effect Individual and Educational Factors on Dropout Intention of University Students. *Asia-pacific Journal of Multimedia Services Convergent with Art, Humanities, and Sociology*, vol. 9,

- no. 1, 2019, pp. 503-512.
- Kim, B. Y. (2011). Exploration of Occupational Decision-making by Career Flexibility and Occupational Engagement. *The Journal of Learner-Centered Curriculum and Instruction*, 21 (11), 31–39.
- Tokar, D. M., Withrow, J. R., Hall, D. J., & Moradi, B. (2003). Psychological separation, attachment security, vocational self-concept crystallization and career indecision: A Structural equations analysis. *Journal of Counseling Psychology*, 50, 3-19.
- Kelly, K. R., & Lee, W. C. (2002). Mapping the domain of career decision problem. *Journal of Vocational Behavior*, 61, 302-326.
- Park, S. Y., & Lee, D. H. (2013). Moderating Effects of Career Preparation Behavior in the Relationship of Career Decision Level and Student Adaptation to College. *The Journal of Vocational Education Research*, 32 (1), 123-38.
- Anderman, E., & Wolters, C. (2006). Goal, values, and affect. In P. Alexander & P. Winne (Eds.), *Handbook of educational psychology* (pp. 369–389). Mahwah, NJ: Erlbaum Publishers.
- Kim, S. S. (2008). A exploratory study on withdrawal and transfer of Korean college students : the influence of college-choice reason and satisfaction afterwards. *The Journal of Korean Education*, 35 (1), 227-249.
- Kang, S. H. (2010). Predictors of Academic Achievement and Dropout Thinking among University Students. *Journal of Educational Evaluation*, 23 (1), 29-53.
- Lee, M. J., & Choi, Y. J. (2014). Program development and effects for freshman college life adaptation. *Proceedings of the Conference of the Korean Association for Liberal Arts Education*, 11, 67-73.
- Lee, W. K., & Han, S. H. (2012). The educational effect of freshman pre-college on college members: the evolution of college orientation. *Proceedings of the Korean Liberal Education Association Conference*, 6, 460-480.
- Lee, M., & Yang, A. (2019)., Factors influencing to 21st century skill of college student, *Asia-Pacific Journal of Educational Management Research*, 4(2), 13-20. doi:10.21742/AJEMR.2019.4.2.02.
- Lee, H. S., Lee, S. Y., & Shin, J. Y. (2020). An analysis on the satisfaction and perception of performance outcomes of the university information disclosure system, *Asia-Pacific Journal of Educational Management Research*, 5(3), 49-56. doi:10.21742/AJEMR.2020.5.3.05.
- Hymavathi, K., & Rao, K. S. S. (2020). Impact of Emotional Intelligence on Quality of Work Life : A study on Jute Industry in Andhra Pradesh and West Bengal, India, *Textiles Trends*, 63 (3), June, 25-30