Original Research

Why Do College Students in South Korea Drop Out and Stop Out? Impact of Personal Characteristics, College Environment, and College Life

Jisung Yoo[1] (iD)

Abstract

This study examines the determinants influencing students' decisions to drop out or stop out (i.e., withdraw temporarily) from colleges in South Korea. Using Korean Education and Employment Panel II survey data (2016–2019), the determinants of students' college discontinuance of 8,485 students were analyzed and categorized as personal, college environmental, and college life factors, and for this purpose, binary logistic regression analysis was employed. Results showed that college academic performance, psychological stability, and college satisfaction influenced dropping out. Also, gender, parental income, college performance, college location, and satisfaction with the college department were found to influence students' decisions to stop out. Particularly noteworthy, this study revealed the significant impact of the Korean cultural belief that success can only be achieved after graduating from one of the top colleges in the Seoul or Gyeonggi Province area. Strategies at the government and college levels are proposed to address the continuing problem of college dropouts and stopouts.

Plain language summary

This study examines the various factors that influence students' decisions to drop out or stop out (i.e., withdraw temporarily) from colleges in South Korea. Korea Research Institute for Vocational Education and Training survey data collected from 8,485 college students in 2016 to 2019 were analyzed using binary logistic regression to identify personal, college environmental, and college life factors that could influence students' discontinuation of college study. The results showed that college academic performance, psychological stability, and college satisfaction influenced dropping out, while gender, parental income, college performance, college location, and satisfaction with the college department influenced stopping out. The study also revealed the important influence of the common Korean cultural belief that success can only be achieved after graduating from one of the top colleges in the Seoul or Gyeonggi Province area. As this study was limited to the examination of factors influencing college discontinuation in South Korea, future studies providing data from other countries and possibly identifying additional influential factors are recommended. One important implication of this study is the need for effective strategies at the government and college levels to address the continuing problem of college dropouts and stopouts.

[1]Konkuk University Glocal Campus, Chungju-si, Chungcheongbuk-do, Korea

Corresponding Author:
Jisung Yoo, Konkuk University Glocal Campus, College of Liberal Arts, #204Bld. K3, Konkuk Univ. 268 Chungwon-daero, Chungju-si, Chungcheongbuk-do 27478, Korea.
Email: jisyoo@kku.ac.kr

Introduction

The number of students discontinuing their academic study at colleges and universities in Korea has been gradually increasing and thus has been recognized as a serious national problem. High dropout rates not only threaten the survival of a nation's universities but also negatively impact a nation's economic, social, and cultural development (Ministry of Education, 2018). The dropout rate of students at 4-year colleges in 2020 was 6.1%, an increase from 3.6% in 2000 and 4.0% in 2013. Even at junior colleges the dropout rate increased from 4.6% in 2000% to 7.6% in 2013, and rose significantly to 8.8% in 2020 (Higher Education in Korea, n.d.). Considering that the dropout rate of elementary, middle, and high schools is 0.9% (Ministry of Education, 2018), the current dropout rate of students from institutions of higher education is alarmingly high.

The issue of dropouts has continued to be a serious social issue in many other countries, including the U.S. According to data from the U.S. National Center for Education Statistics (National Center for Education Statistics [NCES], 2020), the 2018 dropout rate of 4-year college students in the U.S. was about 19% and the graduation rate was only about 60%. Efforts have been made to address this problem and support academic success at the college level. On the other hand, in Korea, the discussion of discontinuing one's college studies was not treated as an important topic until the 2000s. As a result, studies focusing on the factors influencing college discontinuation in Korea have been increasing since information on dropouts and students at risk of dropping out due to their low grades began to be included as items on college self-evaluations required by the Ministry of Education (Cha & Lee, 2019). Most Korean government policies and support systems related to school discontinuation are mainly supported and operated for elementary, middle, and high schools (M. Kim, 2021), while colleges must rely solely on their own efforts to solve the problem of academic discontinuation (Soh & Kim, 2015). Generally, in Korea, a 2-year institution of higher education is referred to as a *college*, while a 4-year institution is referred to as a *university*. In this paper, the term *college* refers to both a 2-year college and a 4-year university for the sake of simplicity.

An examination of studies exploring the question of why students in Korea discontinue their college education reveals a number of research limitations. First, few studies have examined the causes of college students' discontinuation as a complex action of various dimensions. Three major dimensions revealed by such studies (e.g.,Astin, 1964; Bernardo et al., 2016; Tinto, 1975) and utilized in the Korean Education and Employment Panel II survey as well as in the current study include personal characteristics, college environment, and college life, but few studies have comprehensively looked at the impact of these three dimensions.

Second, few studies have been conducted on college students who actually discontinued their college education in Korea. That is, most studies investigating the causes of dropouts have been conducted on current students who intended to drop out and not those who actually dropped out (E. Lee & Kang, 2019). However, the intention to consider performing a specific behavior does not necessarily lead to the implementation of the actual behavior (Ajzen et al., 2004). Thus, there is a limit to directly exploring the cause of the actual academic interruption only by identifying the factors influencing the intention to drop out (E. Lee et al., 2020).

Third, most existing studies focusing on college discontinuation in Korea do not distinguish between cases of dropout (permanent withdrawal) and stopout (temporary withdrawal), but rather treat them as a single academic interruption. Thus, such studies are limited in that the determinants of academic interruption for each—dropout and stopout—could not be identified. In contrast, an NCES (1998) report distinguished dropouts from stopouts among college students in the U.S. Compared to college stopouts, students who stayed out after leaving in their first year of college were more likely to be older, to have children, to work full time, and to be less academically integrated into their program of study.

Fourth, few studies have analyzed the causes of college students' academic interruption using panel data. Because the causes of academic interruption vary depending on the period (i.e., early or mid-term of college admission), a longitudinal study examining the change trend may be more suitable than a cross-sectional study (Gury, 2011). In cross-sectional studies focusing on a specific point in time, there is a limitation in understanding the process of change in dropout intention, that is, the possibility that factors affecting dropout intention and dropout over time may differ (Singer & Willett, 1993; Voelkle & Sander, 2008). Despite the contribution of longitudinal studies on college discontinuation conducted in Korea (e.g.,Kang et al., 2019; Y. S. Kim & Lee, 2022), research providing an understanding of the growing problem of college dropouts and stopouts in Korea is still at a rudimentary stage (Yeon & Jang, 2015).

In most countries, the term *drop out* is used as an umbrella term referring to withdrawing from college due to either external forces (e.g., lack of funds, family situations) or lack of a student's will. The concept of college discontinuation has been defined in various ways depending on the interests of the researchers and the data processing methods. Hoyt and Winn (2004) classified college discontinuation into four types based on the reasons and characteristics: drop out (leaving college before completing a degree program); stop out

(discontinuing college for a particular reason and later re-enrolling); opt out (leaving college after achieving a particular goal but no completing a degree); and transfer out (leaving a college and transferring to another institution before degree completion).

Although some students may opt out of college because they feel they have achieved their primary educational goal and do not need to complete a degree program, this type of college withdrawal is rare in Korea. Also, college students in Korea may decide to withdraw in order to transfer out to a higher-ranked institution, to change their career path, or to pursue additional educational opportunities or a specific certificate, such as language training and internship. In the current study, Hoyt and Winn's (2004) four categories are collapsed more simply into two categories, drop out (permanent withdrawal) and stop out (temporary withdrawal). The current study employs this dichotomous approach for the analysis of college discontinuation.

This study aims to help fill the gap in the literature on college discontinuation in Korea. Specifically, the purpose of this study is to examine the determinants that affect college students' academic cessation (drop out and stop out) in Korea by using data from the Korean Education and Employment Panel (KEEP II) survey. Furthermore, the influence of personal, college environmental, and college life factors are examined in a multidimensional manner. Through this examination, this study offers suggestions for governmental and college-level efforts necessary to prevent and manage college students' academic discontinuation.

Literature Review

Factors Influencing College Discontinuation

As previous studies (e.g., E. Lee & Kwak, 2011) examining college discontinuation in Korea did not distinguish between cases of stop out or drop out and rather treated them as a single case, these studies are limited with respect to identifying the determinants. It is sometimes difficult to classify a particular withdrawal as a drop out or a stop out, given that at the point in time when a student withdraws there is a possibility that the student will resume their studies later. The reasons for temporary school withdrawals are varied. For example, in Korea, many male college students discontinue their college studies temporarily to meet their country's 2-year military service requirement (M. Kim, 2021).

Tinto (1975), the first scholar to theorize college students' academic discontinuation, developed a model emphasizing that college discontinuation was not caused by a single factor, but by a combination of individual characteristics and various environmental factors related to their respective educational institutions (Tinto, 1993).

These diverse influences can be categorized as personal characteristics, college environmental factors, and college life factors. As most previous Korean studies made no distinction between stopouts and dropouts, it should be noted that in the following discussion, the term *dropout* is used as a general term to refer to college discontinuation.

Personal Characteristics. Personal characteristics reflect the individual demographic factors including gender, age, year of study in college, high school type, major, and admissions type. Among the studies examining the impact of gender on school dropouts in Korea, the results have varied. While many provided evidence that male students had a higher rate of college discontinuation than female students, even excluding military leave (M. Kim, 2021; E. Lee &Kang, 2019), other studies found that female students had a higher dropout rate (Song & Kim, 2019; Yeon & Jang, 2015). Furthermore, some studies showed that gender had no effect on college discontinuation (K. Kim & Oh, 2021; E. Lee et al., 2020).

Several studies examining the correlation between the type of high school they attended (humanities, specialized high schools, etc.) and discontinuation of study showed that vocational high school graduates had a higher dropout rate than graduates of humanities high schools (Lim, 2020). In contrast, E. Lee and Kang (2019) found the highest dropout rate for students from high schools with accredited academic background, followed by students from employment-oriented high schools (e.g., specialized high schools such as agricultural/fishery industry high schools), and special purpose high schools (e.g., foreign language, science).

In addition, some studies investigated the relationship between college discontinuation and students of different majors. For example,K. Kim and Oh (2021) found that freshmen majoring in Tourism and Culture had a lower dropout intention than those in other departments. Park (2012) showed that the dropout rate of engineering students admitted from vocational high schools was higher than that of students from academic high schools.

Some previous studies focused on the relationship between college discontinuation and the effects of non-academic characteristics such as gender, high school type, and admission type, and academic characteristics such as grades. E. Lee and Kang (2019) found that the female dropout rate has been increasing. H. Lee and Kim (2018) showed that students admitted based on college entrance exams performed better but were not as well-adjusted to campus life, compared to students admitted based on other factors such as GPA, teacher's evaluation, and letters of self-introduction.

In addition, research on individual cognitive traits revealed that poor academic ability, low high school grades, low college entrance exam scores, low college

grades, and poor learning attitude are among the main factors influencing college discontinuation. Studies of female college students in Korea confirmed that low college grades were an important determinant of academic dropout (e.g., Joung, 2020;P. Lee, 2012).

E. Lee and Kang (2019) revealed the interaction among college grades, basic learning ability, and college discontinuation in Korea. A comparison of the academic background characteristics of dropouts and students who continue their college study showed that not only were the college grades of dropouts lower, but there were also different patterns by college and gender. For example, students at engineering colleges with lower grades in mathematics had a higher dropout rate, while at liberal arts colleges a higher dropout rate was reported for those with lower Korean or English grades.

Regarding the influence of psychological characteristics, emotional instability such as depression and anxiety has been shown to negatively affect students' adjustment to college life, which in turn may lead to their decision to drop out (E. Lee et al., 2020; Meilman et al., 1992; Napoli & Wortman, 1998). Depression in college students can lead to lowered academic ability and lower academic achievement, increasing the likelihood that they will be unable to adapt to school life (J. Choi et al., 1999; M. Roh et al., 2006). In addition, students suffering from emotional instability have difficulties in social interaction and have interpersonal problems, making it difficult to adjust to college life (Coyne, 1976; Kown et al., 2010).

Many studies examining determinants of college discontinuation have focused on socioeconomic (SES) factors. Kang et al. (2019) argued that children of wealthier parents with greater interest in their children's college education had a higher intention to drop out of their current college and seek admission to a higher ranked institution. Some studies (e.g.,Choi, 2010; Kim, 2008) showed that college students whose parents had a high educational level and income had a higher dropout rate due to their desire to attend a higher ranked college for better educational and career opportunities. Other studies (e.g., G. Choi & Ham, 2010; K. Kim & Oh, 2021) revealed that the intention to discontinue college is higher among students whose parents have a low income level and those unable to obtain other financial support such as student loans and scholarships.

Studies in other countries have also focused on personal characteristics as factors influencing college discontinuation. Regarding the influence of year of study, Sosu and Pheunpha (2019) found that almost 20% of students in Thailand left college in the beginning of their second year, compared to 10% of students leaving between their second and final year. Further, Parker (2021) reported that the reasons for college discontinuation in the U.S.

varied across racial groups, with 52% Hispanic students citing inability to afford college as the main reason, compared to White (39%) or Black (41%) students. The Brookings Institution also reported a recent gender gap in the U.S. in college completion rates. In the 2018 to 2019 academic year, over 1.1 million women completed a bachelor's degree compared to fewer than 860,000 men (Reeves & Smith, 2021).

College Environmental Factors. College environmental factors include the type of college (university, 2-year college), the location of the college (metropolitan area, non-metropolitan area), and the characteristics and size of the college. Regarding the type of college, it was found that students at 2-year institutions were more likely to drop out of school than those at universities (S. Kim, 2008). From 2010 to recently, the dropout rate at 2-year colleges in Korea was 7.1% to 7.7%, which is almost twice as high as the rate at universities (3.9%–4.3%) (Song & Kim, 2019).

Studies examining the location of the college as an environmental factor found that students at non-metropolitan colleges tended to prefer admission to institutions in a metropolitan area, as living in areas such as Seoul is highly desirable. Kang et al. (2019) reported that students at non-metropolitan colleges had the intention to drop out not only in the early phase of their college study but, due to their continuing dissatisfaction, even throughout their subsequent years of study. Chung et al. (2015) found that the dropout rate of colleges in the metropolitan area was low, while S. Kim (2006) confirmed that the college location had an effect on male students only.

With regard to college characteristics and size, a host of influential factors were revealed by numerous researchers (e.g., Kang et al., 2019; M. Kim, 2021). Such influential factors include college finances, revenue from industry subsidies, scholarships, first-year enrollment rate, competition among departments for freshman admissions, education cost per student, dormitory acceptance rate, number of students per full-time faculty, and research funding from off-campus resources.

College environmental factors have also been shown to influence college discontinuation in other countries as well. In the U.S., recent education statistics have provided evidence of the influence of the type of institution (2-yearvs.4-year) on college completion: The dropout rate among students at 2-year colleges has been higher than that among students at 4-year institutions, regardless of age, gender, or ethnicity (Hanson, 2021). The availability of financial aid is another factor influencing the dropout rate, as evidenced by Modena et al.'s (2020) finding that without the assistance of need-based grants, approximately one-third of students at universities in Italy would have dropped out in their first year of study.

College Life Factors. College life factors include college life adjustment level, college life and department satisfaction, student support satisfaction, and relationships with others (faculty-student interaction). College life adjustment and satisfaction refer to a condition in which a student is in a harmonious relationship with the college environment, including adaptation to the overall college life including academics and interpersonal relationships (Woo & Noh, 2014). Various previous studies have shown that students with higher college life satisfaction are less likely to drop out (Kang et al., 2019; M. Kim, 2021).

Several studies have revealed that students' satisfaction with their major, that is, that it is a good match for their aptitude and career path, and their clear sense of purpose about their college and major have an effect on college life satisfaction and academic discontinuation (e.g., Lim, 2020; H. Roh & Choi, 2008). Song and Kim (2019) found that the higher the satisfaction with educational and welfare facilities, the lower the probability of students dropping out. Also, Kim and Lee (2022) reported that the higher the satisfaction with psychological counseling and career/job start-up support, the lower the probability of students dropping out.

In addition, studies analyzing how relationships between students and professors affect college dropouts have shown inconsistent results. In several studies, the interaction between students and professors was confirmed as an important variable explaining dropout (Choi, 2010; S. Kim, 2010). In the study of Song and Kim (2019), the degree to which a professor gave students clear vision and self-esteem for their career path was confirmed as an important variable explaining dropout. However, S. Kim (2008) found that neither friendships among students nor meetings with advisors were related to college dropout. Kang et al. (2019) showed that relationships between freshmen and other students tend to influence the dropout rate.

College life factors have also been shown to be determinants of college discontinuation in the U.S. The results of a University of Texas-Austin survey provided empirical evidence that a supportive college environment with policies and practices providing strong support for students can result in a lower college dropout rate (Price & Tovar, 2014). College graduation rates have also been linked to students' connectedness to the institution and to the relationships it fosters, such as those among peers, instructors, and counselors. Also, research has shown that a key factor in increasing college completion is advising students on coping with the problems they encounter and succeeding in the college environment (Fulcrum Labs, 2021).

The current study investigates factors affecting academic discontinuation, including personal factors (gender, high school type, college grades, psychological stability, parental education, parental income), college environmental factors (type of college, college location), and college life factors (satisfaction with college life, satisfaction with college and department). Based on these three classifications of influential variables and the review of literature presented above, this study aims to examine the determinants of college discontinuation (i.e., dropouts and stopouts) in Korea.

Research Method

This quantitative study examined potentially influential determinants of students' decisions to drop out or stop out from colleges in South Korea. A regression analysis design was deemed appropriate for this investigation.

Data

In this study, data from the KEEP II survey conducted by the Korea Research Institute for Vocational Education and Training (KRIVET) were used to examine the determinants of college dropouts and stopouts. As a global research institute, KRIVET aims to achieve dramatic improvement in the area of national human resource development. The KEEP II data are collected annually to continuously investigate and analyze the educational experience of young people and the transition process to the job market, and to build a database that is sustainable and representative in the long term. This study analyzed data collected during the years 2016 to 2019.

In 2016, data were collected at 2,167 high schools from students in their second year (comparable to the 11th grade in the U.S.). The high schools included 1,595 general high schools; 428 specialized high schools (vocational education, alternative schools); and 144 special purpose high schools (foreign language high schools, science high schools, arts high schools, etc.). The KEEP II used a proportional stratification sampling method that stratified the country by region and extracted classes and students from selected schools. Data have been collected from approximately 6,125 high school students every year since 2016, with follow-up investigations conducted in subsequent years.

Variables

In this study, college discontinuation was conceptualized as two dependent variables: dropouts and stopouts. Dropouts refer to college students who discontinue their studies and do not graduate, while stopouts refer to those who discontinue their studies only for a certain period of time before graduating. Dropouts and stopouts

were treated as dummy variables (dropouts = 1, otherwise = 0; and stopouts = 1, otherwise = 0).

In the process of selecting the independent variables, a review of previous studies revealed a number of factors that could have an impact on students' college discontinuation (dropouts and stopouts). Finally, from a review of the available data provided by the KEEP II survey, 13 variables were selected.

Specifically, the independent variables were grouped into three categories. The first category included personal characteristics: gender (male = 1, female = 0), father's educational background, mother's educational background, parental income, college grades (GPA/full marks), general high school graduation (normal high school = 1, otherwise = 0); and psychological stability. The second category consisted of college environmental factors including college location (Seoul and Gyeonggi = 1, otherwise = 0), whether or not enrolled in a 2-year college (2-year college = 1, otherwise = 0), and whether or not enrolled in a 4-year college (4-year college = 1, otherwise = 0). The third category consisted of college life factors including satisfaction with college life, with the department, and with the college itself. The definition, description, and measurement of each variable are presented in Table 1.

Conceptual Model and Statistical Model

As illustrated in the conceptual model below (Figure 1), the independent variables are largely divided into personal factors, college environmental factors, and college life factors. Two types of college discontinuation—dropouts and stopouts—are set as the dependent variables.

As binary logistic regression is the appropriate analysis when the dependent variable is dichotomous (binary), this method of predictive analysis was selected to explain the relationships between college discontinuation (dropouts and stopouts) and the independent variables described in Table 1.

Binary logistic regression was performed to assess the impact of the independent variables on the likelihood that subjects would fall into the category of college discontinuation, either as dropouts or stopouts. In Equation 1, below, the dependent variables are dropout and stopout, and the predictors are the 13 independent variables.

$$In \frac{\pi}{1 - \pi} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta x_4 + \beta_5 x_5$$
$$+ \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + \beta_{10} x_{10}$$
$$+ \beta_{11} x_{11} + \beta_{12} x_{12} + \beta_{13} x_{13} + e_i$$

$$(1)$$

Where π is the event probability (dropouts or stopouts); β_0 is the Y-intercept; β_1 to β_{13} = the coefficients (or slopes) of the 13 predictor variables; x_1 to x_{13} = independent variables where x_1 = gender, x_2 = father's education, x_3 = mother's education, x_4 = parents' income, x_5 = college grades, x_6 = general high school, x_7 = psychological stability, x_8 = college location, x_9 = 2-year college, x_{10} = 4-year college, x_{11} = satisfaction with college life, x_{12} = satisfaction with department, x_{13} = satisfaction with college. β_0 to β_{13} are estimated by the maximum likelihood estimator MLE approach. e_i = the error term that captures errors in measurement of Y and the effect on Y of any variables missing from the equation that would contribute to explaining variations in Y.

Results

Descriptive Statistical Analysis

Table 2 presents the descriptive statistical analysis results for the 13 independent variables covered in this study. Regarding the dependent variables, dropout and stopout, it was found that among the 8,485 students surveyed, 1.2% dropped out of college while 5.3% stopped out of college. Of the total respondents, 50.6% were male. The father's educational background was 4.952 on average, while the mother's educational background was 4.723, indicating that parents, on average, had at least a high school education. The average parental monthly income was 0.012, indicating a monthly salary of 212,2000 won, or US$ 1670.71.

Regarding college grades, the average score was 74.8 out of a score of 100. Of the total respondents, 54.6% of students graduated from a general high school. Psychological stability was found to be an average of 2.205, with 1 being unstable psychological stability and 5 being psychological stability. Most of the college respondents showed good psychological stability.

With regard to college environmental factors, 25.6% of the students were attending colleges located in Seoul and Gyeonggi Province, with 12.6% attending a 2-year college and 42.2% attending a 4-year college. Lastly, looking at college life factors, school life satisfaction was 3.614, department satisfaction was 3.730, and college satisfaction was 3.620, all indicating moderate satisfaction.

Determinants Affecting College Dropouts

Table 3 presents the results of the binary logistic regression analysis of the factors affecting the dropout of college students. Model 1 includes only personal factors, and Model 2 includes personal factors and college environmental factors. In the analysis of Model 3, which includes all independent variables, first, for personal factors, college grades showed a statistically significant negative influence, indicating that the lower the college grades, the more likely students will drop out (−2.196,

Table I. Definition and Measurement of Variables.

Dependent variables		Definition and measurement
	Dropouts	- Definition: College students who discontinue their studies and do not graduate - Measurement: dropouts = 1, otherwise = 0.
College discontinuation	Stopouts	- Definition: College students who discontinue their studies only for a certain period of time before graduating - Measurement: Stopouts = 1, otherwise = 0.

Independent variables		Definition and measurement
Personal factors	Gender	- Definition: Student's self-identification of gender - Measurement: Male = 1, Female = 0
	Father's education	- Definition: Father's education level - Measurement: 1 = no education, 2 = elementary school, 3 = middle school, 4 = high school, 5 = 2-3 year college, 6 = 4 year college, 7 = master's degree, 8 = doctorate degree
	Mother's education	- Definition: Mother's education level - Measurement: 1 = no education, 2 = elementary school, 3 = middle school, 4 = high school, 5 = 2-3 year college, 6 = 4 year college, 7 = master's degree, 8 = doctorate degree
	Parents' income	- Sum of parents' income - Formula: sum of parents' income/sum of all parents' income
	College grades	- Student's academic grades - Formula = individual student's GPA/full marks (highest possible GPA)
	General high school	- Whether student has graduated from a general high school - General high school = 1, Otherwise = 0.
	Psychological stability	- The psychological state of the student - Formula: psychological stability $1 + 2 + 3 + 4 + 5 + 6$) / 6 Six survey items assessed student's psychological stability: (1) tend to worry a lot; (2) tend to get angry; (3) get irritated easily; (4) often depressed; (5) mind is often disturbed; (6) frequent mood swings
College environmental factors	College location	- Whether the student is enrolled in a college located in Seoul or Gyeonggi - College located in Seoul or Gyeonggi = 1, Otherwise = 0
	2-Year college	- Whether the student is attending a 2-year college - 2-year college = 1, Otherwise = 0
	4-Year college	- Whether student is attending a 4-year college - 4-year college = 1, Otherwise = 0
College life factors	Satisfaction with college life	- Level of student's satisfaction with college life 1 = not at all, 2 = slightly, 3 = moderately, 4 = very, 5 = completely
	Satisfaction with department	- Level of student's overall satisfaction with the education provided by the college 1 = not at all, 2 = slightly, 3 = moderately, 4 = very, 5 = completely
	Satisfaction with college	- Level of student's overall satisfaction with the college 1 = not at all, 2 = slightly, 3 = moderately, 4 = very, 5 = completely
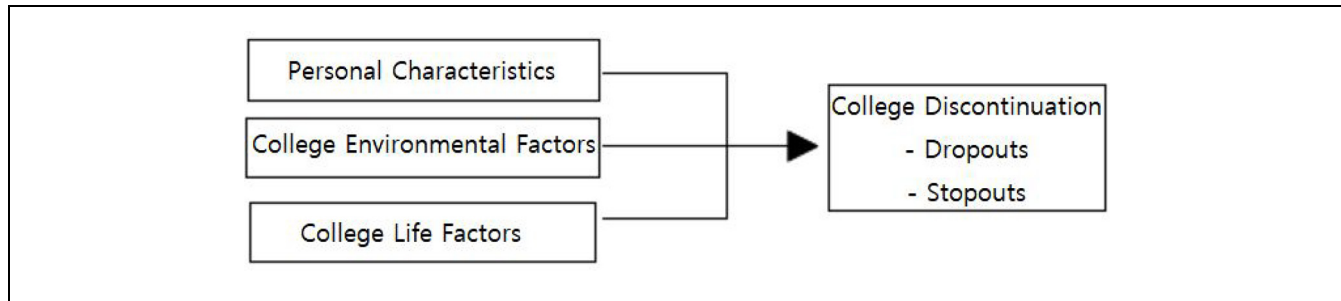
Figure 1. Conceptual model.

Table 2. Descriptive Statistical Analysis Results for Key Variables.

Variables	N	Min	Max	Mean	S.D.
Dropouts	8.485	0.000	1.000	0.012	0.108
Stopouts	8.485	0.000	1.000	0.053	0.224
Gender	8.485	0.000	1.000	0.506	0.500
Father's education	7.733	1.000	8.000	4.952	1.167
Mother's education	7.916	1.000	8.000	4.723	1.034
Parents' income	8.485	0.000	0.470	0.012	0.015
College grades	4.833	0.080	1.000	0.748	0.133
General high school	8.078	0.000	1.000	0.546	0.498
Psychological stability	8.475	1.000	4.000	2.205	0.603
College location	8.485	0.000	1.000	0.256	0.437
2-Year college	8.485	0.000	1.000	0.126	0.332
4-Year college	8.485	0.000	1.000	0.422	0.494
College life satisfaction	4.947	1.000	5.000	3.614	0.580
Department satisfaction	5.010	1.000	5.000	3.730	0.830
College satisfaction	5.010	1.000	5.000	3.620	0.861

$p < .05$). Psychological stability was found to have a statistically significant and negative effect (-0.627, $p < .05$), indicating that the more psychologically stable students have a tendency to drop out. Second, none of the college environmental factors had a statistically significant influence. Third, with respect to college life factors, college satisfaction was found to have a statistically significant negative influence (-0.965, $p < .001$). Therefore, it can be said that students who are less satisfied with the college they attend are more likely to drop out.

Determinants Affecting College Student Stopouts

Table 4 shows the results of the analysis by binary logistic regression of factors affecting college student stopouts. Based on the results for Model 3, which includes all independent variables, first, with respect to personal

Table 3. Analysis of Determinants Affecting College Dropouts.

		M1		M2		M3	
Variables		B	s.e.	B	s.e.	B	s.e.
Personal factors	Gender	0.096	0.348	0.116	0.351	0.029	0.379
	Father education	−0.147	0.185	−0.124	0.187	−0.138	0.190
	Mother education	0.170	0.200	0.189	0.201	0.081	0.201
	Parents' income	3.839	8.194	3.020	7.912	2.518	9.737
	College grades	−3.963***	1.030	−3.937***	1.027	−2.196*	1.113
	General high school	0.089	0.390	0.196	0.399	−0.043	0.421
	Psychological stability	−0.020	0.292	−0.069	0.294	−0.627*	0.316
College environ-mental factors	College location			0.306	0.349	0.151	0.382
	2-Year college			0.171	0.562	0.026	0.600
	4-Year college			−0.383	0.512	0.056	0.549
College life factors	College life satisfaction					−0.501	0.358
	Department satisfaction					−0.385	0.236
	College satisfaction					−0.965***	0.275
Constant		−2.140	1.377	−2.252	1.424	4.194*	1.725
−2 Log likelihood		396.179		393.249		317.702	
Cox and Snell's R^2		.004		.005		.021	
Nagelkerke R^2		.039		.047		.217	
N		4.044		4.044		4.003	

Note. B = unstandardized coefficients. Standard errors in parentheses.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 4. Analysis of Determinants Affecting College Student Stopouts.

Variables		M1		M2		M3	
		B	s.e.	B	s.e.	B	s.e.
Personal factors	Gender	1.478***	0.145	1.472***	0.147	1.480***	0.149
	Father education	−0.106	0.068	−0.067	0.069	−0.070	0.070
	Mother education	−0.090	0.077	−0.046	0.078	−0.064	0.079
	Parents' income	5.684 +	3.062	4.993	3.096	5.384 +	3.085
	College grades	−2.293***	0.426	−2.305***	0.429	−1.911***	0.439
	General high school	−0.355**	0.132	−0.206	0.136	−0.292	0.139
	Psychological stability	0.115	0.109	0.116	0.110	−0.010	0.115
College environ-mental factors	College location			−0.024	0.135	−0.020*	0.138
	2-year college			0.448*	0.224	0.399 +	0.228
	4-year college			−0.331	0.212	−0.209	0.217
College life factors	College life satisfaction					−0.093	0.149
	Department satisfaction					−0.239*	0.101
	College satisfaction					−0.273**	0.107
Constant		−0.915 +	0.536	−1.294*	0.561	0.910	0.694
−2 Log likelihood		1902.449		1875.080		1815.087	
Cox and Snell's R^2		.046		.052		.063	
Nagelkerke R^2		.113		.129		.156	
N		4.044		4.044		4.003	

Note. B = unstandardized coefficients. Standard errors in parentheses.
$+p < .1$. $*p < .05$. $**p < .01$. $***p < .001$.

factors, gender was found to be statistically significant and to have a positive (+) relationship with college students' stopouts (1.480, $p < .001$). This indicates that male students have a greater tendency to stop out. Parental income was found to have a statistically significant but weak influence (5.384, $p < .100$), indicating that students with higher parental income are more likely to stop out from college. College grades were also found to have a negative (−) relationship with stopouts (−0.1911, $p < .001$). In other words, students with lower grades tend to stop out.

Second, with respect to the college environmental factors, the location of the college was found to have a statistically negative relationship (−0.020, $p < .05$) with stopouts, but it was found that the students in colleges outside the Seoul and Gyeonggi-do areas have a greater tendency to stop out. In addition, the 2-year college variable showed a statistically significant but weak influence (0.399, $p < .100$), indicating that students attending 2-year colleges tend to stop out. Lastly, for college life factors, department satisfaction (−0.239, $p < .05$) and college satisfaction (−0.273, $p < .01$) showed statistically significant results. These results indicate that students with lower department satisfaction or lower college satisfaction tend to stop out.

Discussion and Conclusion

This study empirically analyzed the determinants of college students' academic discontinuation (dropout or stopout) using data from the Korea Education and Employment Panel II survey. To this end, the independent variables were classified into three categories: personal factors, college environmental factors, and college life factors. These factors affecting college dropouts and stopouts were analyzed using binary logistic regression analysis.

Based on the analysis results, the main factors affecting the dropout of college students are as follows. First, in terms of personal factors, a negative relationship with college grades indicates that students with lower college grades tend to drop out. These results are consistent with previous studies showing that low college grades and academic difficulties have an effect on academic dropout (Joung, 2020; Lim, 2020). These findings point to the need for policies that provide academic support for students with low grades and at risk of dropping out. Additionally, multifaceted support is required at the department level (e.g., counseling and mentoring of seniors); at the teaching and learning support center level (e.g., consulting and guidance on learning methods, and learning programs and clubs); and at the non-curricular support center level (e.g., classes related to developing basic learning skills). To implement these various forms of assistance, colleges require the support of effective policies and adequate funding from the government.

Furthermore, the negative relationship between psychological stability and dropout indicates that psychologically stable students tend to drop out. This finding was inconsistent with previous studies that showed that

emotional problems and psychological instability (e.g., depression) affect attitudes and thoughts related to college adjustment, and thus act as a major cause of study suspension (e.g., E. Lee et al., 2020). One possible explanation for the current study's finding about the relationship between students' psychological stability and tendency to drop out is that these students may have the desire to leave their current institution to pursue more stimulating academic study at another institution or to seek a challenging career. Government-supported policies are needed to enable all colleges to develop and provide curriculum, programs, and state-of-the-art facilities and instructional equipment that will help them compete with the higher-ranked institutions.

Second, the negative relationship between college satisfaction and dropout indicates that students who are less satisfied with their college are more likely to drop out. This finding is consistent with other studies that show that low satisfaction with college life and difficulties in adapting to college life determine academic discontinuation (e.g., Hwang, 2020; Kang et al., 2019; M. Kim, 2021). Efforts are needed to increase college life satisfaction of students at both the college and department levels to address the drop out problem. For example, the college needs to conduct a college life satisfaction survey for freshmen and develop a systematic management system to track and help new students with low satisfaction through counseling and assistance in establishing a career path. The department should provide a welcome party and counseling for new students with advisors, counseling for current students with career advisors, and mentoring for seniors preparing for the next step of their career path.

Major factors affecting the stopout of college students were also identified in this study. First, regarding personal factors, the influence of parental income was found to be weak but statistically significant. Parents' higher education and income levels may cause their children to stop out for the purpose of moving to a higher-ranked college, for changing their career path, or for additional experiences beyond a college degree that better prepare them for their career (e.g., internships). Several studies have reported that parents' low economic level, lack of ability to afford tuition, and difficulties in obtaining tuition increase the probability of college discontinuation (K. Kim & Oh, 2021) while scholarship support lowers this possibility (M. Kim, 2021). Therefore, the government and colleges should prepare various scholarship systems to help socially and economically disadvantaged students maintain a stable college life.

College grades were also found to have a negative relationship with stopouts, which means that students with lower grades tend to stop out. Hwang (2020) found that students thought that grades were an important factor influencing employment, especially students with poor grades in their first year of study. These students thought that they should discontinue college or prepare for a different career that does not require good college grades. This finding points to the need for colleges to provide counseling for students who perceive that finding a job is too stressful and that low grades will lead to failure in securing employment after graduation. On the other hand, students who stop out due to low college grades can be seen as lacking aptitude and interest in their major. Therefore, colleges should provide educational support to allow students to explore their interests and possible majors as well as their identity, vision, goals, and career direction.

Second, among the college environmental factors, it was found that students who attend 2-year colleges tend to stop out, compared with those attending 4-year colleges. In fact, the rate of college discontinuation at 2-year colleges has been increasing at the recently recorded rate of 7.6%, which is almost twice as high as 4.3% at general colleges (4-year college) in the same year (Song & Kim, 2019). In 2-year colleges, students have a limited choice of majors and liberal arts classes because the roadmap for required major courses is more limited and straightforward. In addition, the implicit atmosphere of the college and department culture at 2-year colleges makes it difficult for students to freely utilize the academic system such as extending their study to add a minor or double major. Efforts should be made by both 2-year colleges and the government to improve and expand the curriculum and programs, leading to greater student satisfaction and greater career success.

Regarding college location, it was shown that students who did not attend colleges in Seoul or Gyeonggi Province tended to stop out. The trend toward more students wanting to attend colleges in Seoul and Gyeonggi is expected to accelerate in the future. Korea's educational culture and the myth that success can only be achieved after graduating from a prestigious university, that is, one located in Seoul, seem to affect college student dropouts and stopouts. The government should promote various policies that ensure that students graduating from colleges in other local areas are not discriminated against in employment. For example, government policy can expand measures to give additional benefits to companies and public institutions that hire local talent.

Third, regarding college life factors, the results indicate that students with lower department satisfaction or lower college satisfaction tend to stop out. Accordingly, systematic management and support from universities for students who stop out are required. Colleges, as well as the government, should make the effort to find out why students stop out and come up with systematic and comprehensive measures and policies to address this problem.

This study's significance is that its research design aims to help fill the gap in the literature on academic discontinuation among college students in Korea. Specifically, this study distinguished between cases of dropout and stopout, rather than treating them as a single academic interruption. Furthermore, the study categorized the factors influencing dropout and stopout into three dimensions—personal, college environmental, and college life factors—and then comprehensively examined those factors.

This study is not without limitations. First, as this study was limited to the examination of factors influencing college discontinuation in South Korea, caution is advised regarding generalization of the results. Despite the contributions of this focused research, future studies providing a comparison of analysis of data from other countries could be beneficial not only for the generalization of results but also for the identification of other potentially influential factors.

ORCID iD

Jisung Yoo https://orcid.org/0000-0001-5273-4784

Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

References

Ajzen, I., Brown, T. C., & Carvajal, F. (2004). Explaining the discrepancy between intentions and actions: The case of hypothetical bias in contingent valuation. *Personality and Social Psychology Bulletin*, *30*(9), 1108–1121.

Astin, A. W. (1964). Personal and environmental factors associated with college dropouts among high aptitude students. *Journal of Education & Psychology*, *55*(4), 219–227.

Bernardo, A., Esteban, M., Fernández, E., Cervero, A., Tuero, E., & Solano, P. (2016). Comparison of personal, social and academic variables related to university drop-out and Persistence. *Frontiers in Psychology*, *7*, 1610.

Cha, J. K., & Lee, T. H. (2019). A review on the trend of domestic researches and support methods for university students under academic probation. *Journal of Learner-Centered Curriculum and Instruction*, *19*(3), 337–356.

Choi, B. (2010). Analysis of change process and related factors in college student's intention to drop out of school. *5th Conference for Korean Education and Employment Panel*.

Choi, G., & Ham, S. (2010). Factors affecting college students' intention to decide dropout. *Korea Business Review*, *3*(1), 95–118.

Choi, J., Kwak, I., Lee, S. J., Choi, J., & Cho, S. (1999). The relationship between depression and school related adjustment. *Korean Journal of Family Medicine*, *21*(9), 1144–1151.

Chung, J. Y., Sun, M. S., & Jeong, M. J. (2015). An analysis of institutional factors affecting on college dropout rates. *Asian Journal of Education*, *16*(4), 57–76.

Coyne, J. C. (1976). Depression and the response of others. *Journal of Abnormal Psychology*, *85*(2), 186–193.

Fulcrum Labs. (2021). *The college dropout crisis: Moving the needle.* https://www.fulcrumlabs.ai/blog/the-college-dropout-crisis/

Gury, N. (2011). Dropping out of higher education in France: A micro-economic approach using survival analysis. *Education Economics*, *19*(1), 51–64.

Hanson, M. (2021, November 22). College dropout rates. *EducationData.org*. https://educationdata.org/college-dropout-rates

Higher Education in Korea. (n.d). *Dropout and stopout rate.* https://www.academyinfo.go.kr.

Hoyt, J. E., & Winn, B. A. (2004). Understanding retention and college student bodies: Differences between drop-outs, stop-outs, opt-outs, and transfer-outs. *NASPA Journal*, *41*(3), 395–417.

Hwang, S. (2020). Exploring the decision-making process of academic persistence in university students who suffered a dropping-out crisis. *Journal of Education and Culture*, *26*(2), 327–352.

Joung, Y. (2020). A prediction analysis on the dropout of cyber university based on learning analytics. The *Korean Journal of Educational Methodology Studies*, *32*(2), 205–232.

Kang, M., Lea, E., & Lee, E. (2019). Trends and influencing factors of college students' dropout intention. *Forum For Youth Culture*, *58*, 6–30.

Kim, K., & Oh, B. (2021). Factors affecting admission satisfaction and intention to drop out: A case of a university. *CNU Journal of Educational Studies*, *42*(3), 5–27.

Kim, M. (2021). An analysis of the factors affecting college freshmen's withdrawal: A case study on college A. *Journal of Learner-Centered Curriculum and Instruction*, *21*(4), 1335–1354.

Kim, S. (2006). A study on exploring the academic persistence and dropout of Korean universities and colleges' students. *Journal of Korean Education*, *33*(4), 33–62.

Kim, S. (2008). An exploratory study on withdrawal and transfer of Korean college students: The influence of college-choice reason and satisfaction afterwards. *Journal of Korean Education*, *35*(1), 227–249.

Kim, S. (2010). The development of scales on rating college students' academic persistence and the analysis of technical quality. *Journal of Career Education Research*, *23*(3), 1–29.

Kim, Y. S., & Lee, H. (2022). An empirical analysis on the relationship between college students' satisfaction on college efforts for student support and student withdrawal. *Journal of Economics and Finance of Education*, *31*(2), 33–61.

Kown, H., Suh, S., Kwon, J., Ham, B., & Paik, J. (2010). Psychosocial functioning in depression. *Korean Journal of Clinical Psychology*, *29*(4), 1117–1133.

Lee, E., & Kang, S. (2019). The research trends and implications of college dropouts in Korea. *Journal of Learner-Centered Curriculum and Instruction*, *19*(10), 169–199.

Lee, E., & Kwak, Y. (2011). College students' leave of absence types and related factors. *Journal of Vocational Education Research*, *30*(2), 231–248.

Lee, E., Song, Y., & Oh, S. (2020). Survival analysis approach for student departure of freshmen: Focusing on the case of S University. *Journal of Learner-Centered Curriculum and Instruction*, *20*(18), 235–258.

Lee, H., & Kim, H. (2018). The differences based on university admission types in college of education students' academic performance, university life adjustment, career preparation based on faculty's cognition. *Journal of Employment and Career*, *8*(1), 137–158.

Lee, P. (2012). Exploring determinants of delayed graduation and dropout of 4-year college female students. *Journal of Educational Administration*, *30*(1), 207–233.

Lim, J. M. (2020). Educational factors affecting the dropout intention of college students. *Journal of* the *Korea Entertainment Industry Association*, *14*(3), 105–115.

Meilman, P. W., Manley, C., Gaylor, M. S., & Turco, J. H. (1992). Medical withdrawals from college for mental health reasons and their relation to academic performance. *Journal of American College Health*, *40*(5), 217–223.

Ministry of Education. (2018). *Education basic statistics*. https://kess.kedi.re.kr/index.

Modena, F., Rettore, E., & Tanzi, G. M. (2020). The effect of grants on university dropout rates: Evidence from the Italian case. *Journal of Human Capital*, *14*(3), 343–370. https://doi.org/10.1086/710220

Napoli, A. R., & Wortman, P. M. (1998). Psychosocial factors related to retention and early departure of two-year community college students. *Research in Higher Education*, *39*(4), 419–455.

National Center for Education Statistics. (1998). *Stopouts or Stayouts? Undergraduates Who Leave College in Their First Year (NCES 1999-087)*. United States Department of Education. https://nces.ed.gov/pubs99/1999087.pdf

NCES (National Center for Education Statistics). (2020). *Undergraduate retention and graduation rates*.

Parker, K. (2021). What's behind the growing gap between men and women in college completion? *Pew Research Center*. https://www.pewresearch.org/fact-tank/2021/11/08/whats-behind-the-growing-gap-between-men-and-women-in-college-completion/

Park, S. (2012). A relationship analysis between admission type and dropout of engineering university students. *Journal of Engineering Education Research*, *15*(5), 98–107.

Price, D. V., & Tovar, E. (2014). Student engagement and institutional graduation rates: Identifying high-impact educational practices for community colleges. *Community College Journal of Research & Practice*, *38*(9), 766–782.

Reeves, R. V., & Smith, E. (2021). *The male college crisis is not just in enrollment, but completion*. https://www.brookings.edu/blog/up-front/2021/10/08/the-male-college-crisis-is-not-just-in-enrollment-but-completion/

Roh, H., & Choi, M. (2008). A study on exploring the dropouts in Korean University. *Korean Journal of Human Resources Development*, *11*(1), 89–107.

Roh, M., Jeon, H., Lee, H., Lee, H., Han, S., & Hahm, B. (2006). Depressive disorders among the college students: Prevalence, risk factors, suicidal behaviors and dysfunctions. *Journal of Korean Neuropsychiatric Association*, *45*(5), 432–437.

Singer, J. D., & Willett, J. B. (1993). It's about time: Using discrete-time survival analysis to study duration and the timing of events. *Journal of Educational Statistics*, *18*(2), 155.

Soh, B., & Kim, J. (2015). An analysis on the causes of dropout in junior college: Focused on the indirect effects of college experiences. *Journal of Educational Administration*, *33*(3), 405–426.

Song, Y., & Kim, S. (2019). Factors affecting college freshmen's intention to drop out. *Journal of the Korea Contents Association*, *19*(6), 257–270.

Sosu, E. M., & Pheunpha, P. (2019). Trajectory of university dropout: Investigating the cumulative effect of academic vulnerability and proximity to family support. *Frontiers in Education*, *4*(6), 1–10.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, *45*(1), 89–125.

Tinto, V. (Ed.). (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). University of Chicago Press.

Voelkle, M. C., & Sander, N. (2008). University dropout: A structural equation approach to discrete = time survival analysis. *Journal of Individual Differences*, *29*(3), 134–147.

Woo, Y. R., & Noh, C. R. (2014). Mediating effects of sense of community solidarity between emotional and aggressive problems and school adjustments among adolescents. *Korean Journal of Adolescent Welfare*, *16*(2), 203–227.

Yeon, B., & Jang, H. (2015). Temporal aspects and determinants of college student departure. *Korean Journal of Sociology of Education*, *25*(1), 129–155.