



DROPOUT TENDENCIES IN TURKISH HIGHER EDUCATION

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Abstract

Dropping out of higher education is a significant issue that impacts not only individual students but also the educational system and society at large. The purpose of the study is to examine the levels of dropout tendency among undergraduate students attending public universities in Türkiye and to determine whether these tendencies vary according to specific demographic variables. The sample included 1,061 students, of whom 58.2% (n = 617) were female and 41.8% (n = 444) male, enrolled in public universities in Türkiye. Data were collected using the “School Dropout Scale in Higher Education” and a demographic information form. The findings indicated that students in their third year or above demonstrated higher dropout tendencies compared to those in earlier stages of their studies, including preparatory, first, and second-year students. Additionally, students studying in metropolitan cities (Ankara, Izmir, Istanbul) demonstrated significantly lower dropout tendencies than those in other cities. A decrease in school attendance was associated with a statistically significant rise in dropout tendency. Students who worked while studying were more likely to show dropout tendencies than those who did not work. Furthermore, higher parental educational levels correlated with a significant decrease in dropout tendency. Similarly, students with higher Grade Point Average (GPA) exhibited a lower tendency to drop out. Conversely, lower family income and a greater number of siblings were associated with a significant increase in dropout tendency. No statistically significant difference was found regarding gender.

Keywords: Tinto's dropout model, higher education, human capital, youth poverty, diploma inflation, descriptive correlational research

Introduction

One of the key elements contributing to the economic development and social welfare of countries is the presence of a well-qualified human capital. Education—particularly higher education—plays a crucial role in equipping individuals with the necessary knowledge and skills and facilitating their integration into society (Uysal & Aydemir, 2016). Higher education is a comprehensive process that fosters personal development while supporting economic, technological, and social transformation. Higher education is also a passport to economic security and a stable future by equipping individuals with the skills needed to adapt to rapidly evolving labor markets (UNESCO, 2024).

All these factors have contributed to the rapid increase in the demand for higher education, and this demand has been strengthened by the impact of globalization, technology, and the changing social needs and dynamics brought about by them. As of 2024, the number of students enrolled in universities worldwide is 254 million (UNESCO, 2024). In Türkiye, the number of students enrolled in higher education institutions increased by one million between 2013 and 2023, reaching a total of seven million students, with over four million enrolled in formal education programs (Yökak, 2023).

However, the tendency of students enrolled in higher education institutions to drop out after a period of time has also increased significantly (Dennison, 2022). This issue has become a source of concern not only in developing countries but also in developed countries (Şimşek,

2012). In Türkiye, the dropout rate among university students increased from 2.7% in the 2012–2013 academic year to 17% in the 2023–2024 academic year (Yökak, 2023).

This growing trend has become a critical challenge for both developed and developing countries, resulting in significant losses in human and economic capital. While Türkiye has implemented initiatives aimed at increasing student retention at the primary and secondary education levels (Önder & Şimşek, 2021), similar efforts have not been widely observed in higher education. Although several studies have addressed the issue of dropout in higher education, the complex and multifaceted nature of the phenomenon complicates efforts to establish a clear and consistent definition. This is essential for accurately identifying the scope of the problem and for designing realistic and sustainable interventions that align with national education policies. Given that the dropout process cannot be attributed to a single factor, this study has examined it through a holistic framework that considers the interaction of student-related, institutional, and environmental factors.

Literature Review

Unraveling the Dropout Dilemma: Causes, Consequences, and the Meaning of Attrition in Higher Education

Dropout in higher education is defined as an act of a student discontinuing their studies at a higher education institution for various reasons, ultimately leaving without obtaining a diploma (Uyumaz, 2021). When the individual and societal consequences of school dropout are considered, it becomes clear that the cost is high, as it undermines equal opportunities in education and challenges the role of the welfare state. Chen (2008) has identified three primary forms of dropout. In the first scenario, students temporarily interrupt their studies with the intention of returning. In the second, they transfer from their current institution to another. In the third, students permanently exit the system by withdrawing from university altogether. All three forms constitute a substantial loss of both human capital and material resources at the national level.

Dropout in higher education has been examined from various theoretical perspectives since the 1960s, beginning with the work of Durkheim. Durkheim (1961) has considered universities as systems with distinct values and social dimensions, and argues that the decision to withdraw from this institutional structure resembles the decision to disengage from a broader social system. He equates school dropout with an individual's detachment from the system—essentially resembling an act of suicide. Within this framework, Durkheim's perspective has highlighted that school dropout should be understood not only as an individual issue but also as a broader social phenomenon. Also, according to him, the likelihood of suicide increases when individuals are not effectively integrated into the broader social structure. Drawing upon Durkheim's perspective, schools can be understood as microcosmic social systems, each with its own set of norms, values, and social relationships. Consequently, a student's departure from the educational system can be interpreted as analogous to withdrawal from society at large—in a metaphorical sense, to suicide. Within this framework, the social factors that contribute to school dropout are believed to parallel those associated with suicide. As Spady (1970) has argued, insufficient academic and social integration emerges as a primary determinant of students' decisions to leave school.

The sociological perspective has described the decision to drop out of school as a multidimensional phenomenon; in this context, it deals with individual, institutional, and social factors in a holistic manner (Duncan et al., 1972). This approach sees school dropout as a part of social stratification and socio-economic factors, and as a result of social inequalities. In this regard, the educational organization, the internal dynamics of the organization, and the environment in which the student lives are sociological factors that shape the dropout decision.

While the sociological perspective has evaluated the dropout phenomenon through broader social structures and interactions—such as socioeconomic status, cultural capital, institutional practices, and peer influence—the psychological approach, has grounded in attitude and behavior theories, focused more narrowly on individual-level determinants (Bean & Eaton, 1995). This perspective emphasizes the internal processes that govern student motivation, perception, and response to academic challenges. According to this view, self-efficacy, or the belief in one's capability to be successful in academic tasks, plays a central role in persistence decisions (Bandura, 1997). High-self-efficacy students tend to set higher goals, persevere during difficulties, and overcome failures, conditions directly connected with academic resilience and a lower likelihood of dropouts. In contrast, students with low self-efficacy may perceive difficulties as insurmountable, leading to disengagement and eventual withdrawal (Zajacova et al., 2005). In addition, coping strategies—such as problem-solving, seeking social support, and emotion regulation—serve as crucial mediators between academic stress and student outcomes. Tinto (1993) suggested that students with greater personal maturity demonstrate a stronger alignment between personal goals and institutional expectations, thereby enhancing their sense of belonging and integration into the academic community, both of which are crucial predictors of retention. These psychological factors do not operate in isolation but often interact with social and institutional variables.

On the other hand, the organizational perspective has suggested that a student's decision to leave school is closely related to the institution's structural features, resource capacity, and social opportunities (Berger & Milem, 1997). According to this view, institutional characteristics such as class size, student-faculty ratio, academic support services, and campus climate significantly influence student engagement and satisfaction. For example, institutions that provide comprehensive advising systems, accessible faculty, and well-resourced learning environments tend to promote a stronger sense of belonging and academic integration, thereby reducing dropout rates (Pascarella & Terenzini, 2005). Moreover, the availability of social and extracurricular opportunities—such as clubs, peer networks, and mentoring programs—enhances students' connection to the campus community, which is a key predictor of persistence (Astin, 1993). When students perceive the institutional environment as responsive, inclusive, and supportive, they are more likely to remain enrolled and committed to their educational targets (Kuh et al., 2006). Conversely, organizational shortcomings—such as bureaucratic inefficiencies, limited academic support, or unwelcoming social climates—can foster alienation and disengagement, ultimately increasing the likelihood of dropout.

According to the economic approach, individuals invest in various educational processes and experiences in order to develop their human capital; the main motivation for these investments is the expectation of future economic gain (Berger, 2000). This perspective is rooted in Human Capital Theory (Becker, 1964), which views education as a form of capital accumulation that enhances individuals' productivity and earning potential in the labor market. When individuals perceive a positive return on investment—believing that the financial and social benefits they will obtain after completing their education will exceed the direct (e.g., tuition, books) and indirect (e.g., foregone earnings, time) costs incurred during the educational process—their likelihood of persisting in school increases. Conversely, when students begin to doubt that their educational efforts will yield commensurate rewards—due to perceived labor market uncertainty, limited employment opportunities, or rising tuition fees—their motivation to continue decreases. In such cases, the cost-benefit calculation may lead them to view dropping out as a rational economic choice (Oreopoulos & Salvanes, 2011; Uslu, 2017). This is particularly evident among students from economically disadvantaged backgrounds, for whom the short-term economic pressures and opportunity costs of remaining in school are often more pronounced. Empirical studies have also shown that scholarship availability, job market conditions, and expected earnings after graduation significantly influence students' educational

decisions (DesJardins et al., 2006). For instance, when job prospects for graduates in a given field decline, students may reassess the value of continuing their education, leading to increased dropout risks—especially in contexts where student debt is a significant burden.

School dropout is widely recognized as a multifaceted phenomenon with far-reaching individual, social, academic, and economic consequences. It encompasses a complex interplay of sociological, organizational, psychological, and economic factors, each contributing to both its causes and outcomes. A comprehensive understanding of dropout therefore requires not only an exploration of its underlying determinants but also a critical examination of its broader implications. In this context, emphasis has been on the social, academic, and economic ramifications of school dropout, with the aim of shedding light on its systemic impact.

School Dropout and the Poverty Cycle

School dropout in higher education has become a growing concern globally, with significant implications for both individual well-being and broader social development. International research has consistently linked dropout to long-term socioeconomic disadvantages, including youth poverty, limited career opportunities, and increased social exclusion (Pavis et al., 2000; Schargel & Smink, 2001). In the European context, studies have emphasized that low educational attainment is a key predictor of youth poverty, low-income jobs, and/or long-term unemployment (Hubbard, 2000). It is stressed that in order to prevent youth poverty, the educational attainment of people aged 15-29 should be enhanced (Eurostat, 2022).

In Türkiye, the issue gains further urgency within the context of the country's ongoing demographic transition. The “demographic window of opportunity” offers potential for economic growth driven by a young and active population (Aysan, 2014). However, without adequate investment in education, especially at the higher education level, this opportunity may be lost—turning into a “demographic crisis” (Can & Avcı, 2015). In this context, ensuring continuity in higher education will contribute to the economic development of countries. As seen, school dropout in higher education not only leads to economic losses, such as a loss of workforce, but also brings about issues like dependency on others (Schargel & Smink, 2001).

In the literature, one of the most widely accepted approaches that explains the dropout decisions of individuals in the most comprehensive way is the interactional approach that deals with the impact of individual and environmental factors on this decision (Tinto, 1993). Tinto has hypothesized that individuals' socio-demographic characteristics, educational background, and personal goals affect their social and academic integration during the process of university attendance. In his Theoretical Dropout Model, Tinto has emphasized that students need to integrate into both the academic environment (through coursework and relationships with faculty) and the social environment (through peer interactions and extracurricular activities) to stay in school. Inspired by Durkheim's theory of social integration, Tinto has argued that the stronger a student's connection to the institution, the more likely they are to continue their studies.

Although this theoretical framework offers valuable insights, it is noteworthy that studies exploring the multifaceted nature of dropout—particularly within the context of Turkish higher education—remain notably limited, which hinders a deeper understanding of the phenomenon in local settings.

Examining the studies that have been conducted, according to the qualitative study of Bülbül (2012), the opinions of students and faculty members regarding school dropout mainly emphasize academic adjustment difficulties and financial constraints. Uslu (2017) has concluded that various individual, family, academic, and social factors that span the period before and during higher education play a decisive role in students' decisions to drop out. Yılmaz (2020) conducted a case study examining the reasons and experiences of students who left the Faculty

of Education between 2008 and 2018. The results have displayed that low intrinsic motivation is the most important factor leading to dropout. Uyumaz (2021) has adapted the School Dropout Scale in Higher Education developed by Almeida et al. (2019) to the Turkish culture. Another study, by Dündar and Bülbül (2022), has found that an increase in students' perceptions of the quality and social environment of universities reduces the effect on dropout tendencies.

While these individual studies have provided valuable insights into specific dimensions of the dropout phenomenon, they reveal a significant gap in the systematic and comprehensive investigation of dropout in Turkish universities. Existing studies have primarily focused on primary and secondary education, leaving a gap in understanding the structural, social, and economic factors that contribute to dropout in universities. By addressing this gap, the present study aimed to contribute to both national and international discussions on higher education attrition, offering evidence-based insights that may inform policies tailored to the Turkish context.

Therefore, this study aimed to understand and identify the causes of student dropout using Tinto's Theoretical Dropout Model, examining the interaction between the institution, the student, and the larger environment, as well as the voluntary and involuntary dimensions that shape different forms of dropout. While the complexity of student dropout tendency prevents a universally agreed-upon solution, addressing this issue remains vital for developing effective and context-sensitive strategies. By examining this phenomenon within the specific context of Türkiye, the present study aimed to contribute to a broader understanding of dropout tendencies in diverse higher education settings.

Research Aim and Research Questions

The purpose of the current study was to determine the causes of higher education student dropout by taking a holistic approach and utilizing a large-scale sample. Based on this purpose, the following research questions were developed:

1. What is the overall level of dropout tendency among higher education students in Türkiye?
2. Do dropout tendencies significantly differ among students at public universities in Türkiye based on gender, year of study, studying in a metropolitan area, working while studying, or having close friends who have dropped out?
3. Is there a significant correlation between students' dropout tendencies and variables such as school attendance frequency, parental education level, GPA, family income, and number of siblings?
4. Are there significant correlations among the subdimensions of the dropout tendency scale?

Research Methodology

General Background

The study adopted a descriptive correlational research design to examine the dropout tendency in higher education in Türkiye. The study was grounded in Tinto's (1993) Theoretical Dropout Model, which underlined the importance of interaction between academic, social, financial, and institutional factors in influencing student retention and attrition. Data were collected through a survey administered to undergraduate and preparatory students enrolled at public universities in Türkiye during the 2023–2024 academic year.

The statistical methods used in the research aimed to determine the level of dropout tendency of students, examine significant differences according to different variables, and

analyze the correlations between these variables (Creswell, 2012). By collecting the opinions of a large community from a defined population, this study aimed to describe the state of variables according to the conditions they are in, and to explore whether these variables change together, thereby revealing causal correlations (Büyüköztürk, 2019; Karasar, 2017). This method was considered appropriate to assess the existing tendencies and correlations related to school dropout.

By gathering data from a large and diverse student population, this study sought to offer an in-depth understanding of how individual and contextual variables may relate to dropout behavior in the context of Turkish higher education.

Sample

The target population of the study consisted of undergraduate and preparatory class students enrolled in formal education programs at public universities in Türkiye. According to the 2023-2024 data of the Higher Education Council (YÖK), Türkiye has a total of 208 universities, of which 129 are public universities, 75 are private universities, and 4 are private vocational colleges. A total of 7,081,289 students are enrolled, of which 2,927,308 are enrolled in distance and open education programs and 4,153,981 are enrolled in formal education. Of these, 3,740,171 are undergraduate students. Due to the impracticality of reaching the entire population in terms of time and space, a sampling method was used. Based on sample size formulas for a 99% confidence interval and a 5% margin of error, a sample size of 666 was determined to be sufficient (Yazıcıoğlu & Erdoğan, 2004).

Accordingly, the study group consisted of 1,061 students (617 female students, 58.2%; 444 male students, 41.8%). Participation in the study was entirely voluntary, and informed consent was obtained from all students prior to their involvement in the study. The data were gathered through a combination of online surveys and in-person administration, depending on participant preference and institutional logistics. The sample was selected using a simple random sampling method from the preparatory and undergraduate students, enrolled in public universities during the 2023–2024 academic year.

Table 1
Study Group

Variables	<i>n</i>	%
Gender		
Female	617	58.2
Male	444	41.8
Age Group		
17–22	918	76.2
23–28	143	13.8
Year of Study		
Preparatory class	422	39.8
1st and 2nd Year	380	35.8
3rd Year and Above	259	24.4

The study sample consisted of 1,061 university students, with a gender distribution of 58.2% female ($n = 617$) and 41.8% male ($n = 444$). The majority of participants (76.2%, $n = 918$) were between the ages of 17 and 22, while 13.8% ($n = 143$) were between 23 and 28 years old. In terms of academic level, 39.8% ($n = 422$) were in preparatory programs, 35.8% ($n = 380$) were in their first or second year of undergraduate study, and 24.4% ($n = 259$) were in their third year or higher.

Instrument and Procedures

The data utilized in this study were obtained through the “School Dropout Scale in Higher Education,” originally developed by Almeida et al. (2019) and later adapted into Turkish by Uyumaz (2021), along with a form containing demographic information. Permission to use the scale in this study was first obtained from the owner of the scale. Then, ethical committee approval was obtained from the Social and Human Sciences Research Committee at Yıldız Technical University, with project ID 006190. After the study was deemed ethical by the committee, the data collection process was formally initiated.

School Dropout Scale in Higher Education

The “School Dropout Scale in Higher Education”, which was developed to determine the dropout tendencies of university students, is a 5-point Likert-type rating scale consisting of 6 sub-dimensions and 32 items. The options in the scale are graded from “Strongly disagree” to “Strongly agree”. The Cronbach’s Alpha internal consistency reliability coefficient for the overall School Dropout Scale in Higher Education was determined as .92 by Uyumaz (2021). However, these values were also examined again in the current study. Accordingly, the validity and reliability values are also obtained in the current study (see Table 2).

Table 2

Cronbach’s Alpha Internal Consistency Coefficients of the Scale and Its Subdimensions in the Current Study

Entire Scale		Social	Health&Wellbeing	Institutional	Financial	Academic	Faculty Members
Cronbach Alfa	.911	.752	.591	.751	.822	.674	.849
Item Number	32	6	5	5	5	5	6

The reliability analysis revealed a high degree of internal consistency for the overall scale ($\alpha = .911$), suggesting that the instrument is a highly reliable tool for assessing dropout tendencies among university students in the Turkish context. Internal consistency coefficients for the subdimensions ranged from .591 to .849. While the Faculty Members subdimension exhibited the highest reliability ($\alpha = .849$), the Health and Wellbeing subdimension showed the lowest ($\alpha = .591$), which still falls within the acceptable range for early-stage research instruments (Kuu & Li, 2018; Portney & Watkins, 2009; Taherzadeh & Madadzadeh, 2021). These findings confirm that the scale is psychometrically sound and suitable for use in the present context.

Additionally, the skewness (.17) and kurtosis (.70) values fell within the acceptable range of ± 2 , indicating an approximately normal distribution of the scale scores (Tabachnick & Fidell, 2007). This finding justifies the use of parametric statistical methods in the subsequent analyses.

Given that the original version of the scale was developed in Brazil, cross-cultural validity was also addressed. Separate Confirmatory Factor Analyses (CFA) were performed for the Brazilian and Turkish samples. The findings supported the factorial structure across both groups. In addition, measurement invariance testing confirmed that the instrument functioned equivalently across cultural contexts, ensuring the comparability of results (Uyumaz, 2021).

Demographic Information Form

The form was developed to collect specific background details about the participants. This form included questions related to students' gender, city of residence, year of study, number of siblings, whether they were employed while studying, school attendance frequency, GPA average, whether close friends had dropped out of university, and their families' monthly income and education levels.

Data Analysis

To analyze the research findings in line with the study's objectives, various statistical methods were employed. Descriptive statistics, including arithmetic means and percentages, were utilized to present the demographic characteristics of the participants.

To examine whether students' dropout tendencies differed significantly by gender, studying in a metropolitan city, and concurrent employment while studying, independent samples *t*-tests were applied. One-way analysis of variance (ANOVA) was employed to test whether dropout tendencies differed significantly by year of study.

For the variable studying in a metropolitan city, Levene's Test for the institutional subdimension revealed unequal variances ($p < .001$; $p < .05$), so Welch's ANOVA was conducted instead. Since variance homogeneity was confirmed for other subdimensions, regular ANOVA tests were performed. Similarly, for the close friend dropout variable, the assumption of homogeneity of variances was not met ($p < .023$; $p < .05$), and thus, Welch's test was used here as well.

Spearman's rank correlation coefficient was used to assess the correlations between dropout tendency and variables such as school attendance frequency, parents' educational level, GPA, family income, and number of siblings. Pearson correlation analysis was used to determine whether significant correlations existed among the subdimensions of the School Dropout Scale in Higher Education.

Research Results

Findings Related to Overall Dropout Tendency

The purpose of the first research question was to determine the level of student dropout tendency in higher education in Türkiye. In line with this objective, Table 3 presents descriptive statistics for the subdimensions of students' dropout tendencies.

Table 3*Descriptive Results of Students' Dropout Tendencies in Higher Education*

Sub Dimensions	Items	$\bar{x}$	SD
Institutional Factors	IF 1	2.74	1.01
	IF 2	2.93	1.15
	IF 3	2.43	1.10
	IF 4	3.27	1.15
	IF 5	2.66	1.09
Financial Factors	FF 1	1.83	0.95
	FF 2	2.61	1.26
	FF 3	3.08	1.32
	FF4	2.53	1.12
	FF 5	2.31	1.07
Health&Wellbeing	H &W 1	2.71	1.12
	H &W 2	3.27	1.24
	H &W 3	2.77	1.13
	H &W 4	3.07	1.15
	H &W 5	3.08	1.24
Social Factors	SF 1	1.88	1.01
	SF 2	2.43	1.07
	SF 3	2.71	1.26
	SF 4	2.55	1.11
	SF 5	2.42	1.11
	SF 6	2.70	1.32
Academic Factors	AF 1	2.97	1.15
	AF 2	2.56	1.07
	AF 3	2.46	1.01
	AF 4	2.42	1.04
	AF 5	2.86	1.16
Faculty Members	F M 1	2.83	1.06
	F M 2	2.57	1.03
	F M 3	2.49	1.03
	F M 4	2.80	1.11
	F M 5	2.73	1.07
	F M 6	2.67	1.07
Sub Dimensions Mean	Social	2.45	0.77
	Academic	2.65	0.72
	Faculty Members	2.68	0.80
	Health&Wellbeing	2.98	0.73
	Institutional	2.80	0.78
	Financial	2.47	0.88
Entire Scale Mean	-	2.67	0.58

Table 3 presents that the scale consists of six main sub-dimensions: Institutional Factors, Financial Factors, Health and Wellbeing, Social Factors, Academic Factors, and Faculty Members. Each item represents a specific reason or condition that may contribute to a student's intention to drop out of higher education. Among the sub-dimensions, Health and Wellbeing ($\bar{x} = 2.98$) and Institutional Factors ($\bar{x} = 2.80$) had relatively higher mean scores, and students displayed a moderate tendency toward dropping out of higher education.

Findings Related to the Demographic Variables

The second specific research question sought to examine whether there was a significant difference in the dropout tendency of students studying at public universities in Türkiye

according to the variables of gender, year of study, studying in metropolitan cities, working while studying, and close friends who dropped out of school. The results of the analysis conducted in this context were presented in 4, 5, and 6. An independent sample *t*-test was conducted to test whether there was a significant difference between the female ($n = 617$) and male ($n = 444$) groups in the dropout tendency. The results of the analysis are shown in Table 4.

Table 4
Independent Sample t-Test Results According to Gender Variable

	Groups	<i>n</i>	$\bar{x}$	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Dropout Tendency	Women	617	2.66	0.583	-.338	1059	.735
	Men	444	2.67	0.574			

Levene's test conducted prior to the analysis indicated that the assumption of homogeneity of variances was met, ($p = .674$, $p > .05$). Independent samples *t*-test results revealed no statistically significant difference between the mean dropout tendency scores of female students ($\bar{x} = 2.66$, $SD = 0.583$) and male students ($\bar{x} = 2.67$, $SD = 0.574$), $t(1059) = -.34$, $p = .735$, $p > .05$.

The descriptive statistics for dropout tendency according to the year of study variable are as follows: The average dropout tendency score of preparatory students was 2.61 ($SD = 0.538$), the average dropout tendency score of 1st and 2nd grade students was 2.61 ($SD = 0.585$), and the average dropout tendency score of 3rd grade and above students was 2.84 ($SD = 0.601$). Table 5 presents the results of a one-way ANOVA to determine whether there is a significant difference in dropout tendency by year of study.

Table 5
Results of One-Way Variance (ANOVA) Analysis According to the Year of Study Variable

Dropout tendency	<i>SS</i>	<i>df</i>	$\bar{x}$	<i>F</i>	<i>p</i>
Between groups	10.50	2	5.25	16.12	<.001
Within groups	344.68	1058	.326		
Total	355.19	1060			

One-way ANOVA was conducted to examine whether there were significant differences in students' dropout tendencies based on their year of study. Levene's test confirmed the assumption of homogeneity of variances, $F(2, 1058) = 1.69$, $p = .186$, $p > .05$. The ANOVA results revealed a statistically significant difference in dropout tendency scores across years of study, $F(2, 1058) = 16.12$, $p < .001$ (see Table 5).

Post hoc Tukey analysis indicated that students in the third year and above ($\bar{x} = 2.84$, $SD = 0.601$) had significantly higher dropout tendencies compared to both preparatory class ($\bar{x} = 2.61$, $SD = 0.538$) and first- and second-year students ($\bar{x} = 2.61$, $SD = 0.585$). These results suggested that as students progress in their years of study, their tendency to drop out increases.

The results of the independent sample *t*-test, conducted to determine whether there was a significant difference between the groups in terms of dropout tendency according to the variable of studying in metropolitan areas, are given in Table 6.

Table 6*Independent Sample t-Test Results According to Location of the University*

	Groups	<i>n</i>	$\bar{x}$	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
Dropout Tendency	Metropolitan Cities	710	2.57	0.552	-7.68	1059	< .001	0.510
	Other Cities	351	2.86	0.587				

An independent sample *t*-test was conducted to determine whether there was a significant difference between the groups in terms of dropout tendency according to the variable of studying in a metropolitan cities. Levene's test showed that the variances of the groups were equal, $F(1,1059) = .169$, $p > .05$. Therefore, the *t*-test assumption was met. The *t*-test results showed that there was a significant difference between metropolitan students ($\bar{x} = 2.57$, $SD = 0.552$) and non-metropolitan students ($\bar{x} = 2.86$, $SD = 0.587$) in terms of dropout tendency, $t(1059) = -7.68$, $p < .001$, Cohen's $d = 0.510$. This finding reveals that non-metropolitan students have a significantly higher dropout tendency than metropolitan students. An independent sample *t*-test was conducted to determine whether there was a significant difference between the dropout tendency according to the employment status while studying (see Table 7).

Table 7*Independent Samples t-Test Results Based on the Working While Studying Variable*

	Groups	<i>n</i>	$\bar{x}$	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
Dropout Tendency	Non-working	848	2.63	0.556	-3.86	1059	< .001	0.283
	Working	213	2.80	0.644				

Levene's test showed that the variances between groups were equal, $F(1, 1059) = .077$, $p > .05$. Therefore, the *t*-test hypothesis was met. The results showed that students who worked while studying ($\bar{x} = 2.80$, $SD = 0.644$) had significantly higher dropout tendency scores than students who did not work ($\bar{x} = 2.63$, $SD = 0.556$), $t(1059) = -3.86$, $p < .001$, Cohen's $d = 0.283$.

Welch test was used to determine whether there was a significant difference between the dropout tendency according to the dropout status of close friends, because Levene's test showed that the variances were not equal, $F(1, 1059) = 5.17$, $p = .023$.

Table 8*One-Way Analysis of Variance (ANOVA) Results Based on the Variable of Close Friends' Dropping Out of School*

	<i>SS</i>	<i>df</i>	$\bar{x}$	<i>F</i>	<i>p</i>
Between groups	20.35	1	20.35	64.35	< .001
Within groups	334.84	1059	.316		
Total	355.19	1060			

A one-way ANOVA revealed a statistically significant difference in dropout tendency based on whether students had close friends who had dropped out of school, $F(1, 1059) = 64.35$, $p < .001$. Supporting this, Welch's ANOVA also indicated a significant difference, $F(1, 605.01) = 59.21$, $p < .001$, suggesting that the assumption of homogeneity of variances may have been violated. This finding indicates that students whose close friends dropped out of school ($\bar{x} = 2.87$, $SD = 0.61$) had a significantly higher tendency to drop out compared to those whose close friends did not ($\bar{x} = 2.57$, $SD = 0.54$). This finding indicates a potential peer influence effect on students' tendency to drop out.

Correlation Between Dropout Tendency and Socioeconomic-Academic Variables

Spearman's rank correlation coefficient was used to examine whether there is a significant correlation between the dropout tendency of students studying at public universities in Türkiye and the variables of school attendance frequency, mother's and father's education, GPA average, family income, and number of siblings. The Spearman correlation coefficient was preferred because the variables analyzed were categorical. Significant correlations are shown in Table 9.

Table 9
Spearman's Rank Correlation Coefficients Between Demographic Variables and School Dropout Tendency

Variables	1. School Attendance Frequency	2. Mother's Education	3. Father's Education	4. GPA	5. Family Income	6. Number of Siblings	7. Dropout Tendency
School Attendance Frequency	-						
Mother's Education	-	-					
Father's Education	-	.667	-				
GPA	-.137	-	.088	-			
Family Income	.087	.398	.368	-	-		
Number of Siblings	-	-.324	-.267	-.066	-.170	-	
Dropout Tendency	-.118	-.137	-.125	-.178	-.178	.154	-

**All the correlations presented in Table 9 are statistically significant at the $p < .05$ level.*

According to the results of the Spearman's rank correlation coefficients in Table 9, school attendance frequency demonstrated a significant negative correlation with dropout tendency, $r = -.118$, $p < .05$, indicating that students who attend school more regularly are less likely to consider dropping out. A negative correlation was found between the mother's level of education and the tendency to drop out of school, $r = -.137$; $p < .05$. A negative correlation was observed between the father's education and the tendency to drop out, $r = -.125$; $p < .05$. This indicates that as the father's educational level increases, the tendency to drop out decreases. There was a negative correlation between GPA average and the tendency to drop out of school, $r = -.204$; $p < .05$. A negative correlation was found between family income level and the tendency to drop out of school, $r = -.178$; $p < .05$. A positive correlation was found between the number of siblings and the tendency to drop out of school, $r = .154$; $p < .05$.

Table 10*Significant Pearson Correlation Coefficients Between the Subdimensions of the School Dropout Scale*

Sub-dimensions						
1. Social	-					
2. Academic	.470	-				
3. Faculty Members	.452	.544	-			
4. Health & Wellbeing	.518	.591	.481	-		
5. Institutional	.414	.426	.524	.451	-	
6. Financial	.427	.441	.349	.492	.378	-
Dropout Tendency	.748	.762	.765	.776	.710	.696

According to the results of the Pearson correlation analysis, a strong positive correlation was found between the social subdimension and overall school dropout tendency, $r = .748$; $p < .01$. There is a positive correlation between the academic subdimension and school dropout tendency, $r = .762$; $p < .01$. A significant positive correlation was found between the faculty members subdimension and school dropout tendency, $r = .765$; $p < .01$. A high positive correlation was also found between the health and wellbeing subdimension and school dropout tendency, $r = .776$; $p < .01$. A positive correlation was found between the institutional subdimension and school dropout tendency, $r = .710$; $p < .01$. Finally, a significant positive correlation was detected between the financial subdimension and school dropout tendency, $r = .696$; $p < .01$.

Discussion

The aim of this study was to determine the school dropout tendency levels of students studying at public universities in Türkiye and to identify whether this tendency varied according to certain demographic variables. The findings, as suggested by Tinto's (1993) "Theoretical Dropout Model," indicated that school dropout tendencies in higher education could stem from various causes, with socio-demographic, environmental, and academic factors playing a significant role in dropout tendencies.

The mean score for the School Dropout Scale in Higher Education was calculated to be 2.67 ($SD = 0.579$). This value indicated that students had a moderate tendency to drop out. The relatively low standard deviation suggested that there were no significant variations in this tendency among students. This overall result could be interpreted as a reflection of students' growing sense of uncertainty regarding the value of a university degree in a highly saturated job market. The increasing "diploma inflation" might have contributed to a perceived reduction in the long-term benefits of higher education.

In terms of gender, no statistically significant differences in dropout tendency were observed between male and female students. Different findings have existed in the literature regarding the gender variable. Brandt (1992) reached results that support the current study. However, some studies have indicated that dropout rates are higher among female students compared to male students (Aina, 2013; Croninger & Lee, 2001), while others have pointed out that male students show a higher tendency to drop out (Firat et al., 2016; Gury, 2011; Şahin & Uysal, 2007). When examining school dropout tendencies by gender, it is evident that a consensus has not been reached in the literature. Studies conducted in different countries have suggested that geographical and cultural differences may lead to different interpretations of gender roles, and these roles may vary from society to society, which might have affected

the findings. This study pointed out that the concept of gender was not a simple demographic variable, but also a reflection of the educational policies of different cultures. Additionally, the narrowing gap between gender expectations for male and female students today shows that all students, regardless of gender, are subject to similar pressures on academic success and persistence in education.

Working while studying variables proved that students who worked while studying had a higher tendency to drop out. Research by Lee and Staff (2007) and Araque et al. (2009) also concluded that students who work during their undergraduate education tend to have a higher dropout tendency. These findings supported the literature. They suggested that students had difficulty balancing their work and academic life. Economic concerns, the stress encountered in the workplace, and the inability to dedicate enough time to academic studies could be considered as primary reasons for an increased dropout tendency.

Parental education—particularly that of the mother, was negatively associated with dropout tendencies. These findings supported previous studies (e.g., Yi et al., 2015), which highlighted the role of parents' educational background in shaping students' academic life. A higher level of parental education could provide a greater cultural capital, academic guidance, and emotional support, all of which may encourage persistence. The prominent role of maternal education underscored mothers' influence on children's emotional development and educational motivation. A similar result was found regarding family income. As the income increased, the dropout tendency decreased. Lavrijsen and Nicaise (2015) pointed out that children from low-income families had a higher tendency to drop out. Similarly, Tinto (1986) and Gury (2011) have also indicated that students from low-income families who do not receive sufficient financial support tend to have a higher dropout tendency. The lack of financial security could lead to stress, exclusion from social-academic activities, and even the need to prioritize work over education—all of which hinder academic persistence. The number of siblings also appeared to influence dropout tendency, with students from larger families showing higher scores. No similar study was found in the literature. It could be interpreted in terms of resource dilution theory: more siblings often meant less financial and emotional support per child. In some cases, older siblings may feel responsible for caregiving or financial support within the family, prompting decisions to leave school.

In this sense, economic disadvantage not only creates structural barriers that limit individuals' access to and success in educational settings but also plays a significant role in the reproduction of socio-economic inequalities. Students from lower-income backgrounds often face challenges such as limited access to quality educational resources, the need to work while studying, and a lack of social capital, all of which can hinder their academic performance and persistence. As a result, education—which is often seen as a pathway for upward mobility—can instead become a mechanism that reinforces existing class structures, perpetuating cycles of poverty and exclusion across generations.

When comparing dropout tendencies by the location of the university, it was found that students studying outside metropolitan cities had a higher tendency to drop out. The research results aligned with Troelsen and Laursen's (2014) study, which has found that students studying in large cities have a lower dropout tendency. They have attributed this to the richer social and academic opportunities provided by large cities compared to smaller cities. In parallel, it has been determined that as students' expectations align more with the socio-cultural opportunities provided by the university and its surrounding area, their tendency to drop out of their school and program decreases (Bahat et al., 2023). The university years coincide with the age when young people need social interaction. The social opportunities offered by large cities, along with the academic resources available (courses, libraries), can help students strengthen their academic skills, which in turn strengthens their belonging to the city and the school.

Students in their third and fourth years showed higher dropout tendencies compared to their first- and second-year peers. This was also supported by Gury (2011) and Gregg (2010). It could be because students in advanced stages faced greater academic pressure, potential burnout, or a growing realization that their program no longer aligned with their personal or professional goals.

School attendance frequency was also found to be a critical factor. Students with lower attendance rates demonstrated significantly higher dropout tendencies. Consistent with Şimşek's (2013) findings, irregular attendance could reduce academic performance and social integration, both of which were crucial to maintaining educational commitment. Students' GPA also emerged as another factor affecting the school dropout tendency. Students with higher GPAs showed a lower tendency to drop out. Studies in the literature supported this finding (Lavrijsen & Nicaise, 2015; Troelsen & Laursen, 2014). Strong academic performance reinforces students' confidence and sense of belonging in school.

Another influential factor was whether students had close friends who had dropped out. Those who did reported significantly higher dropout tendencies themselves. This result, also observed by Şimşek (2013), highlighted the powerful influence of peer behavior on student decisions. Peer pressure or peer support had the potential to directly influence school dropout tendencies. This may be explained by social learning theory, which suggests that individuals tend to adopt behaviors observed in their immediate social circles. When close friends disengage from academic responsibilities, it can reduce motivation, and the emotional support provided by peer groups may diminish, leading to a sense of isolation. Peer norms, shared dissatisfaction, or a sense of collective disengagement could have contributed to such outcomes.

When examining the differences and correlations between the subdimensions of the School Dropout Scale (Uyumaz, 2021), significant correlations were found between the subdimensions, and meaningful differences were observed in the social, health and wellbeing, institutional, and financial subdimensions for students studying in metropolitan cities. Students living outside large cities exhibited higher dropout tendencies in the social, health and wellbeing, institutional, and financial subdimensions. This finding could be attributed to the limited access to institutional resources, health services, and social support systems in less urbanized regions. Students in smaller cities or rural areas may have faced challenges such as insufficient campus facilities, lack of psychological counseling or academic advising, financial difficulties, or fewer opportunities for extracurricular involvement—all of which could weaken their school belonging. In contrast, students in metropolitan cities likely benefited from a more resource-rich academic and social environment, which may have avoided dropout risk. These findings underscored the multifaceted nature of dropout tendencies and pointed to the importance of geographic equity in higher education policy and institutional support structures.

Conclusions and Recommendations

This study examined the tendency toward school dropout among students at Turkish public universities by analyzing how demographic, academic, and environmental variables shaped this tendency. Using quantitative data from the School Dropout Scale in Higher Education, the research revealed that students showed a moderate level of dropout tendency, with significant variations based on gender, family income, parental education, working while studying, GPA, school attendance, and university location. Students in rural regions, those with lower incomes, less-educated parents, or low attendance and GPA scores, exhibited a higher dropout risk. These findings supported and localized Tinto's dropout model, adding a sociocultural lens specific to the Turkish context and extending theoretical understanding of student attrition across diverse educational environments.

The results highlighted the need for institutions—especially in non-metropolitan regions—to implement retention strategies such as academic mentoring, financial support programs, and mental health services. Institutions should also monitor school attendance patterns and identify at-risk students early. Despite its contributions, the study was limited by its reliance on self-reported, limiting causal interpretation. Future studies should adopt longitudinal and mixed-method approaches to better explore the interplay of personal, institutional, and contextual factors over time. Comparative research across university types (e.g., public vs. private) could further clarify institutional impacts on dropout behavior.

Declaration of Interest

The authors declare no competing interest.

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