



HIGHER EDUCATION ATTRITION: DETERMINANTS, IMPACTS, AND POLICY INTERVENTIONS IN URBAN UNIVERSITIES

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Abstract:

Attrition in higher education remains a pressing concern, impacting student success and institutional efficiency. This study quantitatively examines the determinants of attrition in urban universities in Peshawar, focusing on financial, academic, social, and psychological factors. A structured survey of 300 undergraduate students was conducted, and multiple regression analysis was employed. Results indicate that financial constraints ($\beta = 0.38$) and academic difficulties ($\beta = 0.31$) were the strongest predictors of attrition. Poor social integration and psychological stress also significantly influenced dropout likelihood. Humanities students showed slightly higher attrition risk. Policy interventions including financial aid, academic support, social integration programs, and mental health services are recommended to reduce attrition. The study provides evidence-based guidance for enhancing student retention and institutional effectiveness.

Keywords: Attrition, Higher Education, Student Retention, Financial Factors, Academic Support, Psychological Factors

Introduction

Higher education attrition students leaving university before completing their degree—remains a pressing issue globally, particularly in urban universities in developing countries. Attrition not only affects individual educational attainment and career prospects but also imposes financial and societal costs, including lost tuition revenue, inefficient resource allocation, and reduced skilled workforce (Tinto, 2017). Urban universities face multiple attrition-related challenges, including academic pressure, financial constraints, social integration issues, and mental health concerns, which can exacerbate dropout rates.

Attrition is often conceptualized as the outcome of both individual-level factors (academic preparedness, motivation, socio-economic background) and institutional-level factors (student support services, teaching quality, learning environment) (Bean & Eaton, 2001). Understanding these determinants is critical for policymakers and administrators seeking to enhance student retention, improve learning outcomes, and reduce the economic and social burden of premature withdrawal.

This study quantitatively examines the determinants of attrition in urban universities in Peshawar, focusing on financial, academic, social, and psychological factors. It further investigates the impacts of attrition on academic performance, student well-being, and institutional efficiency. The findings aim to inform evidence-based interventions to reduce dropout rates.

Problem Statement

Despite increasing enrollment rates in urban universities, attrition remains high, undermining student success and institutional efficiency. Limited empirical studies quantify the relative influence of financial hardship, academic difficulty, social integration, and mental health on attrition in the context of South Asian urban universities. Without systematic analysis, interventions may fail to address the primary drivers of

student withdrawal.

Research Questions

1. What are the primary determinants of higher education attrition in urban universities?
2. How do financial, academic, social, and psychological factors influence attrition rates?
3. What is the impact of attrition on students' academic performance and institutional outcomes?
4. How can targeted policy interventions mitigate attrition in urban universities?

Hypotheses

H1: Financial constraints significantly increase the likelihood of student attrition.

H2: Academic difficulty is positively associated with attrition rates.

H3: Poor social integration and lack of campus support are significant predictors of dropout.

H4: Mental health issues contribute to higher attrition in higher education.

H5: Targeted institutional interventions can significantly reduce attrition rates.

Objectives of the Study

1. To identify key determinants of attrition in urban universities.
2. To quantify the effects of financial, academic, social, and psychological factors on student dropout.
3. To assess the consequences of attrition on academic performance and institutional efficiency.
4. To propose policy interventions aimed at improving student retention.

Significance of the Study

This study addresses a critical gap in higher education research by providing quantitative evidence on attrition determinants in urban universities. The findings are relevant to policymakers, university administrators, and educators, facilitating the design of targeted retention strategies, including financial aid programs, academic support services, and mental health interventions. Reducing attrition can enhance student outcomes, optimize institutional resources, and strengthen workforce development.

Literature Review

Conceptualizing Attrition

Attrition is commonly defined as the voluntary or involuntary withdrawal of students from higher education before degree completion (Tinto, 2017). Theoretical frameworks, such as Tinto's Student Integration Model, emphasize the role of academic and social integration in retention. According to this model, students who feel academically competent and socially connected are more likely to persist (Tinto, 1993).

Financial Determinants

Financial hardship is a prominent cause of attrition, particularly in developing countries where tuition fees, living expenses, and family obligations burden students. Empirical evidence indicates that students with limited financial resources are 2–3 times more likely to withdraw (Dynarski, 2003). Scholarships, flexible payment plans, and on-campus employment are shown to mitigate attrition risk.

Academic Determinants

Academic difficulty, reflected in poor grades, high course load, or inadequate preparedness, contributes significantly to dropout. Bean and Eaton (2001) found that students experiencing repeated academic failure were more likely to exit, suggesting the need for remedial programs, tutoring, and early alert systems.



Social and Psychological Determinants

Lack of social integration, including weak peer networks and low faculty interaction, reduces a student's sense of belonging, increasing dropout likelihood (Hausmann et al., 2007). Mental health issues—stress, anxiety, and depression also negatively affect persistence (Eisenberg et al., 2009).

Institutional Interventions

Policies targeting attrition include academic advising, mentorship programs, student engagement initiatives, and mental health services. Evidence suggests that a multi-dimensional approach combining financial aid, social support, and academic assistance is most effective (Kuh et al., 2006).

Research Gaps

While attrition determinants are documented in developed countries, limited research exists on South Asian urban universities, particularly using quantitative analysis to measure relative contributions of financial, academic, social, and psychological factors. Additionally, few studies link attrition to policy effectiveness, highlighting a gap this study aims to address.

Methodology

Research Design

This study adopts a quantitative, cross-sectional survey design. The design allows for examination of multiple determinants of attrition and their relative influence on student dropout.

Population and Sample

The population comprises undergraduate students enrolled in three major urban universities in Peshawar. Using stratified random sampling, 300 students were selected, ensuring proportional representation across gender, discipline (STEM vs. humanities), and year of study.

Instrumentation

A structured questionnaire was developed with the following sections:

1. **Demographics** – age, gender, academic discipline, year of study, family income.
2. **Financial Factors** – tuition affordability, financial aid availability, family support.
3. **Academic Factors** – GPA, course difficulty, perceived academic preparedness.
4. **Social Factors** – peer interaction, faculty engagement, participation in campus activities.
5. **Psychological Factors** – stress, anxiety, depression measured using validated scales (e.g., DASS-21).
6. **Attrition Likelihood** – self-reported probability of leaving university within the next year (Likert scale 1–5).

Data Collection Procedure

Questionnaires were administered **online and in-person** over four weeks. Participation was voluntary, and anonymity was assured.

Data Analysis

Data were analyzed using **SPSS 27**. Techniques included:

- **Descriptive statistics** – frequencies, means, and standard deviations.
- **Correlation analysis** – to assess relationships between determinants and attrition likelihood.
- **Multiple linear regression** – to quantify the predictive effect of financial, academic, social, and psychological factors on attrition.

ANOVA – to examine differences across gender, discipline, and year of study.

Results

Descriptive Statistics

Table 1. Participant Characteristics (N = 300)

Variable	Frequency	Percentage (%)
Gender		
Male	160	53.3
Female	140	46.7
Discipline		
STEM	170	56.7
Humanities	130	43.3
Year of Study		
1st Year	90	30
2nd Year	80	26.7
3rd Year	70	23.3
4th Year	60	20

Regression Analysis of Attrition Determinants

Table 2. Multiple Regression Results

Predictor	B	SE	β	t	p
Financial Factors	0.42	0.08	0.38	5.25	<0.001
Academic Factors	0.35	0.09	0.31	3.89	<0.001
Social Factors	-0.28	0.07	-0.25	-4.00	<0.001
Psychological Factors	0.30	0.08	0.27	3.75	<0.001
Constant	1.12	0.21		5.33	<0.001

Interpretation:

- Financial constraints ($\beta = 0.38$) and academic difficulties ($\beta = 0.31$) were the strongest positive predictors of attrition.
- Poor social integration negatively predicted attrition likelihood, indicating higher integration reduces dropout.
- Psychological factors, including stress and anxiety, significantly increased attrition risk.

ANOVA Results

Table 3. Attrition Likelihood by Discipline

Discipline	Mean Attrition Score	SD	F	p
STEM	3.12	0.91	4.56	0.034*
Humanities	3.48	0.95		



Interpretation:

- Humanities students reported slightly higher attrition likelihood than STEM students ($p = 0.034$).
- No significant gender differences were observed.

Discussion

The findings align with international literature emphasizing financial, academic, social, and psychological determinants of attrition (Bean & Eaton, 2001; Tinto, 2017). Financial constraints emerged as the strongest predictor, highlighting the importance of scholarships and financial aid. Academic difficulties also significantly contributed, indicating the need for remedial programs and academic support.

Social integration reduced attrition likelihood, underscoring the role of peer networks, mentorship, and engagement in campus life. Psychological factors, including stress and anxiety, were significant, reinforcing the importance of counseling and mental health support.

Conclusion

Higher education attrition in urban universities is influenced by interrelated financial, academic, social, and psychological factors. Addressing these determinants through multi-faceted interventions can reduce dropout rates, improve student outcomes, and optimize institutional efficiency. Humanities students showed slightly higher attrition risk, suggesting discipline-specific interventions may be required.

Policy Recommendations

1. **Financial Aid Expansion** – Scholarships, grants, and flexible payment plans to reduce financial barriers.
2. **Academic Support Programs** – Tutoring, mentoring, and early alert systems for at-risk students.
3. **Social Integration Initiatives** – Peer mentorship, clubs, and engagement activities to foster belonging.
4. **Mental Health Services** – Counseling, stress management workshops, and awareness campaigns.
5. **Monitoring and Evaluation** – Longitudinal tracking of attrition and continuous assessment of intervention effectiveness.

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