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ROLE OF ACADEMIC MOTIVATION IN PREDICTING INTENTION TO PURSUE POST-GRADUATE EDUCATION AMONG UNIVERSITY STUDENTS

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ABSTRACT

This study employs a causal comparative study design to explore the academic motivation profiles of bachelor's final semester students in public sector universities in Quetta, Pakistan. The causal relationship between these profiles and students' intentions to pursue postgraduate education is examined. Using Self-Determination Theory (SDT) as a framework, this research identifies three distinct motivational profiles—high, moderate, and low motivation—through hierarchical and two-step cluster analyses. The findings indicate motivation profile of students predicts their intentions to pursue postgraduate studies. The study employs ordinal logistic regression to confirm the predictive power of motivational profiles and to identify shaping educational intentions. The study highlights the need for targeted interventions, including scholarships, motivational workshops, and community-based initiatives, to foster higher educational aspirations, particularly in underrepresented regions like Balochistan.

Keywords: Motivational profile, Self-Determination Theory (SDT), Intention to Pursue, Postgraduate Education, Academic motivation, Public Sector University, Cluster Analysis

1. Introduction

1.1. Academic Motivation

The Self-Determination Theory (SDT), proposed by Deci and Ryan (1985), emphasizes motivation as a multifaceted construct, encompassing various types, qualities, and combinations of motivation. This conceptual framework is particularly applicable to academic motivation, which refers to a learner's enthusiasm for academic pursuits, assessed against standards of academic achievement or performance (McClelland et al., 1953). The theory distinguishes motivation into four forms of extrinsic motivation: integrated regulation (EMIN), introjected regulation (EMINT), external regulation (EMER), and identified regulation (EMID), in addition to a state of amotivation (AMOT) and intrinsic motivation (IM).

Deci and Ryan (1985) presented the motivational states on a continuum ranging from the autonomous form of motivation, intrinsic motivation (IM), to the absence of motivation, amotivation (AMOT) (Deci & Ryan, 2008; Can, 2015). Expanding on this, Vallerand et al. (1989) subdivided intrinsic motivation into three distinct categories: intrinsic motivation to accomplish (IMTA), intrinsic motivation to know (IMTK), and intrinsic motivation for stimulation (IMTS). They also excluded integrated regulation (EMIN) from this continuum (Ryan & Deci, 2000b; Filgona et al., 2020; Can, 2015).

The Academic Motivation Scale (AMS) encompasses several distinct constructs that capture different types of motivation along the self-determination continuum. Integrated regulation (EMIN) refers to performing academic tasks because they are aligned with one's identity and deeply held values. Introjected regulation (EMINT) involves engaging in academic activities due to internal pressures such as guilt, shame, or the desire to maintain self-esteem. External regulation (EMER) describes behavior that is driven by the expectation of rewards or the avoidance of punishment. Identified regulation (EMID) reflects a form of extrinsic motivation in which the individual perceives academic tasks as personally valuable and worthwhile. On the intrinsic end of the spectrum, intrinsic motivation to accomplish (IMTA) is characterized by engagement in academic activities for the inherent satisfaction of achieving goals, while intrinsic motivation to know (IMTK) is driven by the pleasure derived from learning and understanding new concepts. Intrinsic motivation for stimulation (IMTS) refers to pursuing academic tasks for the excitement and stimulation they provide. In contrast, amotivation (AMOT) represents a complete lack of motivation, where individuals neither see value in the task nor believe in their capacity to succeed.

SDT emphasizes the quality of motivational orientations, differentiating between autonomous and controlled motivations. Actions stemming from IMTA, IMTK, and IMTS are considered entirely autonomous, while behaviors driven by EMID fall under partially autonomous type of motivations. Conversely, EMER and EMINT are associated with externally controlled behaviors. AMOT, on the other hand, signifies an absence of drive or intent. Intrinsic motivation to know (IMTK) pertains to engaging in activities purely for the joy of discovery, exploration, or creating novel insights.

For instance, if a pupil enjoys doing homework, their motivation would be IMTK. IMTA pertains to deriving satisfaction from achieving something, as seen in pupils who complete extra math problems voluntarily, exhibiting IMTA. IMTS describes actions undertaken to experience stimulating sensations resulting from the activity, such as a driver exceeding speed limits for an adrenaline rush (Can, 2015).

EMID involves undertaking tasks to achieve favorable outcomes. When a pupil views an academic task as valuable and important, their motivational orientation is EMID. EMINT involves performing tasks to maintain self-esteem, pride, or to avoid guilt or anxiety, while external regulation refers to actions performed due to external demands or potential rewards (Altıntaş et al., 2018). When a pupil willingly internalizes the importance of a task, EMINT emerges. Amotivation, on the other hand, occurs when individuals view tasks as meaningless or believe they lack the ability to accomplish them. AMOT is the final motivational state in SDT, representing neither autonomous nor controlled behavior but rather a lack of motivation (Can, 2015; Filgona et al, 2020 Vallerand et al., 1992).

While Self Determination Theory separates motivation into distinct subtypes, some researchers (Deci & Ryan, 2012; Hayenga & Corpus, 2010; Ratelle et al., 2007) suggest that extrinsic and intrinsic motivation can coexist within the same individual, and multiple motivational orientations may operate simultaneously. Consequently, students may demonstrate various sub-motivations at different levels, allowing for several clusters of motivations within the same population.

According to SDT, when an individual's motivational orientation is autonomous, the related outcomes will tend to be more favorable (Deci et al., 1991; Deci et.,2012 Ryan & Deci, 2009). Studies employing both the variable-centered and the person-centered approach support this assertion (Boichè & Stephan, 2014; Guo, 2018; Hayenga & Corpus, 2010; Krapp et al., 1992; Schunk et al., 2013; Vansteenkiste et al., 2005; Vansteenkiste et al., 2009; Vallerand et al., 1997; Wormington et al., 2012).

1.2. Intention to Pursue Postgraduate Education

According to Ajzen (1991), intention is a significant factor that precedes human actions requiring decision-making processes and serves as an immediate determinant of voluntary behaviors. This construct has garnered considerable attention in the social sciences due to its pivotal role in predicting behavior (Gardner et al., 2020). Intentions determine individual actions, requiring willingness, and research suggests that deliberate intentions maximize the likelihood of goal attainment (Rhodes & Rebar, 2017). Among the various frameworks employed in behavioral studies, the Theory of Planned Behavior (TPB) is one of the most widely used to predict intention (Fayolle & Liñán, 2014; Riyanti, 2018). Within academic settings, Pugh (2019) demonstrated that intentions to pursue, persist, and complete education have a stronger predictive role than departure intentions, such as leaving or dropping out.

Despite its extensive application, minimal research has explored intentions to undertake postgraduate courses (Jepson & Verhegyi, 2011; Mosbah et al., 2019). TPB, as proposed by Ajzen (1991), posits that behavior is most accurately predicted by intention, which is shaped by three key determinants: attitudes, subjective norms, and perceived behavioral control. Attitudes reflect an individual's evaluation of the behavior as favorable or unfavorable. Subjective norms pertain to the individual's perception of whether significant others believe they should or should not perform the behavior. Perceived behavioral control refers to the individual's belief in their ability to execute the behavior. Together, these determinants provide a comprehensive framework for understanding academic decision-making processes.

Some studies have yielded intriguing and occasionally conflicting findings. For instance, Wegner (1969) studied the choice to pursue postgraduate studies by looking at gender differences, family background, marriage length, and academic skills. The findings showed that men's decisions were mostly shaped by academic ability, while women were influenced by a mix of strong academic

skills, low family income, and late marriage. Similarly, Ball (2016) found that men were significantly less likely than women to express intentions to pursue postgraduate studies. In the medical field, Martins et al. (2022) analyzed factors affecting students' preferences for surgical specialization in postgraduate education in Pakistan, while Hassan et al. (2022) explored the impact of social capital factors on such intentions.

Although the Theory of Planned Behavior comprises three determinants, attitudes, subjective norms, and perceived behavioral control, intention is its most proximal predictor of behavior (Ajzen, 1991). Meta-analytic evidence shows that intention alone explains a substantial portion of variance in behavior (Armitage & Conner, 2001). Moreover, research integrating Self-Determination Theory and TPB has demonstrated that autonomous motivation directly predicts intention, even when TPB mediators are included (Hagger & Chatzisarantis, 2009; Chatzisarantis et al., 2003). Accordingly, this study focuses exclusively on the relationship between motivational profiles and intention, providing a clear test of motivation's predictive power.

1.3. Current Study

Motivation serves as a critical psychological driver behind intention (Ryan & Deci, 2017; Pop et al., 2020). Ajzen (1991) and Ajzen and Fishbein (1980) emphasized the importance of intention in predicting human behavior. Researchers have consistently identified motivation as a significant factor influencing students' intentions (Chan et al., 2015a; Chan et al., 2015b; Bernet et al., 2017). Understanding the interplay between motivation and intention can provide valuable insights for educators and policymakers in designing interventions to improve academic outcomes, including persistence and graduation rates (Suttor & Paulson, 2016).

This research aims to determine the academic motivation profiles of university students and to examine the relationship between emerging profiles and their intention to pursue postgraduate education. There remains a significant lack of research focusing on the academic motivation profiles of university students in Pakistan. The Higher Education Commission of Pakistan emphasizes the increase in the number of postgraduate students in the country (Akhtar, 2019), and according to recent statistics related to higher education in Pakistan, the total number of students enrolled in a bachelor's degree in Punjab is 270,078, while students who enroll in masters are 65,643 and total Ph.D. enrollments are 8,256. In Sindh, 174,467 students were enrolled in BS programs (bachelors), 34,503 were enrolled in MS programs (master's degree), and the total enrollment in Ph.D. programs was 2,475. In KPK, the total number of students enrolled in bachelor's degrees is 89,621; the number of students enrolled in master's degrees is 14,906, and the number of students enrolled in a Ph.D. is 2,179. In Balochistan, the total number of students for bachelor's are 14,755; for master's, and degree, 4,731, and 228, respectively. It is evident from these statistics that Balochistan lags behind in terms of educational indicators, particularly postgraduate enrollments. However, intention is the strongest predictor of behavior, but there are no studies conducted to understand the factors which effect intentions of bachelor student to pursue post graduate education. Furthermore, only a small number of studies have focused on determining motivation profiles in different cultural contexts and included the aspects of intrinsic motivation, extrinsic motivation, and amotivation in cluster analysis (Boiché & Stephan, 2014; Ratelle et al., 2007). In most of the existing research, motivation has been analyzed mainly as autonomous-controlled or internal-external aspects.

In this study, the AMS scale was used to assess seven types of academic motivation, while TPB was employed to measure students' intentions and behavioral beliefs toward postgraduate study.

These constructs were selected to reflect both internal motivations and social-cognitive predictors of intention. This study has used all seven aspects of academic motivation into the cluster analysis. This approach gave an opportunity to observe the academic motivations naturally exhibited by pupils in detail. Additionally, it enabled an in-depth analysis of the relationship between academic motivation profiles and students' intentions to pursue postgraduate education. Findings from earlier studies demonstrate that various dimensions of motivation significantly correlate with students' intentions, and motivational profiles are regarded as an essential variable in shaping student intention (Barkoukis et al., 2021; Leavell, 2016; Moreno-Murcia et al., 2013; Sicilia et al., 2015).

This study is also valuable for testing the applicability of Self-Determination Theory (SDT) within the cultural context of Pakistan. The findings contribute to a better understanding of how academic motivation profiles influence intentions, while also providing evidence regarding the cultural validity of SDT. By exploring these relationships in detail, the research addresses critical gaps in the literature and offers practical implications for educators and policymakers.

2. Methodology

2.1. Research Design

This causal comparative study (Paynter, 2004; Jurgens, 2018; Pugh, 2018; Fernández & Cañado, 2001) aims to unveil the academic motivation profiles of university students and explore the causal relationship between the motivation profiles of bachelor's final semester university students and their intention to pursue postgraduate education.

2.2. Study Group

The population for this study was bachelor's final semester students studying in public sector universities in Quetta. Students enrolled in bachelor's degree programs final semester in all public sector universities were identified (N=1582). Data for this study were collected through an online survey distributed to all final semester students enrolled in public sector universities located in Quetta city. A total of 650 completed questionnaires were received and included in the analysis. The final sample consisted of 650 students, of which 313 (48.2%) were female and 337 (51.8%) were male. Most respondents (94%) belonged to the 18–24 age group. Additionally, 11 students were aged between 25–30 years, another 11 students were in the 31–35 age range, and 12 students fell within the 36–40 age group.

2.3 Ethical Consideration

Research in Social science frequently focuses on humans as the primary subjects of investigation, indicating the need to make sure that the research follows a given set of ethical considerations. In this study, the researcher sought and received ethical clearance from the Ethics Committee for Research Involving Human Subjects (JKEUPM). This involved submitting all required documentation for review. The Ethical Committee approved the proposed study, and the researcher commenced the study only after receiving the approval letter.

2.4. Data Collection Tools

2.4.1. Academic Motivation Scale (AMS)

Vallerand developed the Academic Motivation Scale (AMS) et al. in 1992, assessing seven subscales of academic motivation by considering self-determined motivation levels. This assessment aimed to unveil pre-existing motivational profiles using the Academic Motivation

Scale (AMS), which includes a subscale for a-motivation, three subscales dedicated to extrinsic motivation, and three subscales focusing on intrinsic motivation. The AMS continuum was adopted from "Construct validation de l'Echelle de Motivation education" by Vallerand et al. (1989). This scale has 28 items, four items for each subscale. Research participants rated how they can relate statements to themselves relate to them on a 7-point Likert-type scale. The AMS is a 28-item Likert-type scale. The Scale comprises seven sub-scales that assess amotivation (AMOT), three types of intrinsic motivation (IMTK, IMTA, IMTS), and three types of extrinsic motivation (EMER, EMIN, EMID), and. Construct validity: Previous studies have utilized confirmatory factor analysis to examine construct validity. The residual analysis and fit indices provide evidence for the validity of the AMS model with seven subscales, as described in the literature (Can, 2015; Guay et al., 2015; Haslofca & Korkmaz, 2016; Orsini., 2015; Stover et al., 2012).

Cronbach's Alpha (Cronbach, 1951) is a commonly used measure of reliability for scales comprising multiple questionnaire items (Bonnet & Wright, 2015). It's values above 0.60 are generally considered indicative of acceptable internal consistency, while values below 0.50 are seen as unacceptable (Manerikar & Manerikar, 2015).

2.4.2. Theory of Planned Behavior (TPB)

The TPB (Theory of Planned Behavior) (Ajzen, 1991) has been widely adopted in educational and psychology research to explore behavioral intentions. The response in relation to these constructs is recorded through Likert scales. This scale is widely recognized to produce ordinal data. Many studies have incorporated the constructs of TBP in their studies. For instance, (Huda et al., 2012; Ilmiyah et al., 2022; Bornschlegl et al, 2021; Johnson, 2017; Mah, 2020; Isnanda & Nurmala, 2022; Billari & Philipov, 2005), Adulyarat and Adulyarat, 2023) have utilized ordinal scales in their TPB-based studies, supporting the ordinal characteristic of the TPB framework. The TPB-PGQ comprises a total of 20 items. Participants' intention will be evaluated based on their responses to questions that assess intention (questions 1, 4, 7, 10, and 11) using a 6-point Likert-type scale questionnaire.

2.4.3. The Academic Motivation Scale (AMS)

A higher level of academic motivation will be indicated by a higher score, apart from the a-motivation subscale, in which a higher score will indicate a lower motivation level. Previous psychometric studies have utilized confirmatory factor analysis to examine construct validity. The residual analysis and fit indices provide evidence for the validity of the seven-subscale AMS model as described in the literature (Can, 2015; Guay et al., 2015; Orsini., 2015; Stover et al., 2012).

2.5. Data Collection and Analysis

Hierarchical Cluster Analysis is a method of cluster analysis which is used to build a hierarchy of clusters. Strategies for hierarchical clustering generally fall into two types: Agglomerative and Divisive. Agglomerative is a bottom-up approach where each observation starts in its own cluster and pairs of clusters are merged as one move up the hierarchy. Divisive is a top-down approach where all observations start in one cluster, and splits are performed recursively as one moves down the hierarchy. One of the most important properties of ordinal data is that it does not require the normality assumption because of its nonparametric nature. To analyze the nonparametric/ordinal data several nonparametric tests such as Kruskal-Walli's test, Kendall's tau-b test, and ordinal logistic regression are used. Primarily following is a brief explanation of each test used for statistical analysis in this study. The Kruskal-Walli's test was used to determine

if there are differences between intention and the motivational profiles compare the difference in the mean ranks of the distributions. Ordinal regression analysis was used to see if they have any significant/causal relationship between intention to pursue postgraduate education and motivational profiles. The goal of regression analysis is to predict the effect of independent variable dependent variable (motivational profiles) to the dependent variable (student intention).

3. Results

3.1 Cluster analysis

A hierarchical cluster analysis was performed using z-scores derived from the AMS subscales. To determine the number of clusters during the initial phase, the algorithm list generated from the study was reviewed, and gaps between cluster distances were analyzed. This evaluation revealed the most significant gap in cluster distances occurred in the second cluster, showing a 28.14% fluctuation in heterogeneity (Stage 648 coefficient = 1984.781; Stage 649 coefficient = 2543.296). According to Hair et al. (2016), it was concluded that the natural fluctuation between the first and second clusters alone was insufficient to suggest the emergence of two clusters at the end of the analysis. Furthermore, heterogeneity fluctuations in clusters 3 and 4 were examined, showing substantial fluctuations of 14% and 12%, respectively. Based on these findings, it was concluded that the hierarchical cluster analysis suggested the AMS-derived scores formed three clusters.

In the second stage, a non-hierarchical cluster analysis was conducted to verify the three clusters identified through the hierarchical method and to finalize the cluster centers. The findings confirmed the stability of these clusters, with 75% of students consistently remaining in the same clusters across both analyses. This stability was further corroborated by the double-split cross-validation procedure, which produced an average kappa value of 0.89, signifying substantial reliability.

Table 1 presents the mean scores and standard deviations for the seven AMS sub-dimensions across the three clusters. Cluster 1 includes students exhibiting moderate levels of both intrinsic and extrinsic motivation, coupled with higher levels of amotivation. Cluster 2 consists of students with lower intrinsic and extrinsic motivation, along with the lowest levels of amotivation. Cluster 3 comprises students who demonstrate the highest intrinsic and extrinsic motivation while having the lowest amotivation levels.

Table 1: Descriptive Statistics of Individual Constructs of AMS

	N		Median	Std. Deviation	Skewness	Kurtosis	Percentiles		Cronbach' Alpha	
	Valid	Missing					25	50	75	
IMTK	650	0	3.5	0.9450	-0.31	-0.48	3	3.5	4	0.72
IMTA	650	0	3.5	1.0475	0.37	-0.20	3	3.5	4	0.7
IMTE	650	0	3.5	1.1241	0.16	-0.50	3	3.5	4.5	0.71
EMIN	650	0	4	0.9509	-0.31	-0.58	3	4	4.5	0.78
EMID	650	0	3.5	1.0094	-0.46	-0.39	3	3.5	4	0.74
EMER	650	0	3.5	0.9660	-0.14	-0.72	3	3.5	4	0.7
AMOT	650	0	2	1.0887	0.81	-0.14	1	2	3	0.71

The Kruskal-Wallis test was performed to determine if the mean scores of the motivation clusters, based on the AMS sub-dimensions, showed significant differences. This test was utilized to assess

variations among the clusters in the analysis. As shown in Table 2, the third cluster's average scores for the intrinsic and extrinsic motivation subscales are higher than those of the first and second clusters. Conversely, the third cluster's average score on the amotivation scale is lower than that of the first and second clusters.

When comparing the average scores of the first and second clusters, it is evident that the intrinsic and extrinsic motivation scores of the first cluster are higher than those of the second cluster, whereas the average score on the amotivation scale is lower than that of the second cluster. The Kruskal-Wallis test results revealed significant differences among the clusters concerning the average scores of the AMS subscales. Post hoc pairwise comparisons further confirmed that all these differences were statistically significant. Overall, these findings supported the accurate distinction of the three motivation clusters.

A non-parametric ANOVA was performed to evaluate whether the mean scores of the motivation clusters, derived from the seven AMS dimensions, exhibited significant differences. Due to the non-parametric nature of the data, the Kruskal-Wallis test was utilized. As indicated in Table 2, the third cluster had higher average scores for the intrinsic and extrinsic motivation subscales compared to the first and second clusters. In contrast, the third cluster's average score on the amotivation scale was lower than that of the first and second clusters.

When the average scores of the first cluster are compared to those of the second and third clusters, it is observed that the first cluster exhibits moderate intrinsic and extrinsic motivation scores, with an amotivation score higher than that of the third cluster but lower than that of the second cluster. Similarly, the second cluster shows the lowest intrinsic and extrinsic motivation scores among all clusters but the highest amotivation score.

The Kruskal-Wallis test results indicated statistically significant differences ($p < 0.001$) among the clusters in terms of the average scores of the AMS subscales. Pairwise comparisons further confirmed that all differences between the clusters' average scores were significant. These findings validated the accurate distinction of the three motivation clusters. Table 2 presents the average scores obtained from the AMS subscales and the Kruskal-Wallis test results showing whether these scores differ significantly.

Table 2: Non-Parametric Results Table for Clusters

Subscale	Cluster 1 Mean (SD)	Cluster 2 Mean (SD)	Cluster 3 Mean (SD)	Kruskal-Wallis p-value
IMTK	3.36 (0.72)	2.57 (0.72)	4.39 (0.57)	0.001
IMTA	3.42 (0.93)	2.22 (0.58)	4.09 (0.76)	0.002
IMTE	3.60 (1.00)	2.29 (0.74)	4.24 (0.80)	0.003
EMIN	3.43 (0.65)	2.63 (0.83)	4.53 (0.52)	0.001
EMID	3.47 (0.66)	2.12 (0.66)	4.40 (0.53)	0.002
EMER	3.23 (0.76)	2.63 (0.72)	4.38 (0.60)	0.001
AMOT	2.38 (1.08)	1.70 (0.70)	1.76 (1.15)	0.005

Note: Author's calculation

3.2 Interpretation of the Clusters

The clusters were interpreted using the histogram in Figure 1 and the data provided in Table 2. Cluster 3 demonstrates the highest average scores for intrinsic motivation subscales (IMTK = 4.39, IMTA = 4.09, IMTE = 4.24) and extrinsic motivation subscales (EMIN = 4.53, EMID = 4.40, EMER = 4.38). Its amotivation score (AMOT = 1.76) is slightly higher than that of Cluster 2 (AMOT = 1.70) but remains low overall. This indicates that Cluster 3 represents students with the highest academic motivation, with 46.8% of students falling into this category. Cluster 1 shows moderate scores for intrinsic motivation (IMTK = 3.36, IMTA = 3.42, IMTE = 3.60) and extrinsic motivation (EMIN = 3.43, EMID = 3.47, EMER = 3.23). Its amotivation score (AMOT = 2.38) is higher than that of Cluster 2 but lower than that of Cluster 3, representing students with moderate academic motivation, with 34% of students in this group. Cluster 2 shows the lowest scores for intrinsic motivation (IMTK = 2.57, IMTA = 2.22, IMTE = 2.29) and extrinsic motivation (EMIN = 2.63, EMID = 2.12, EMER = 2.63), as well as the lowest amotivation score (AMOT = 1.70) among all clusters, representing students with the lowest academic motivation, with 19.2% of students in this cluster.

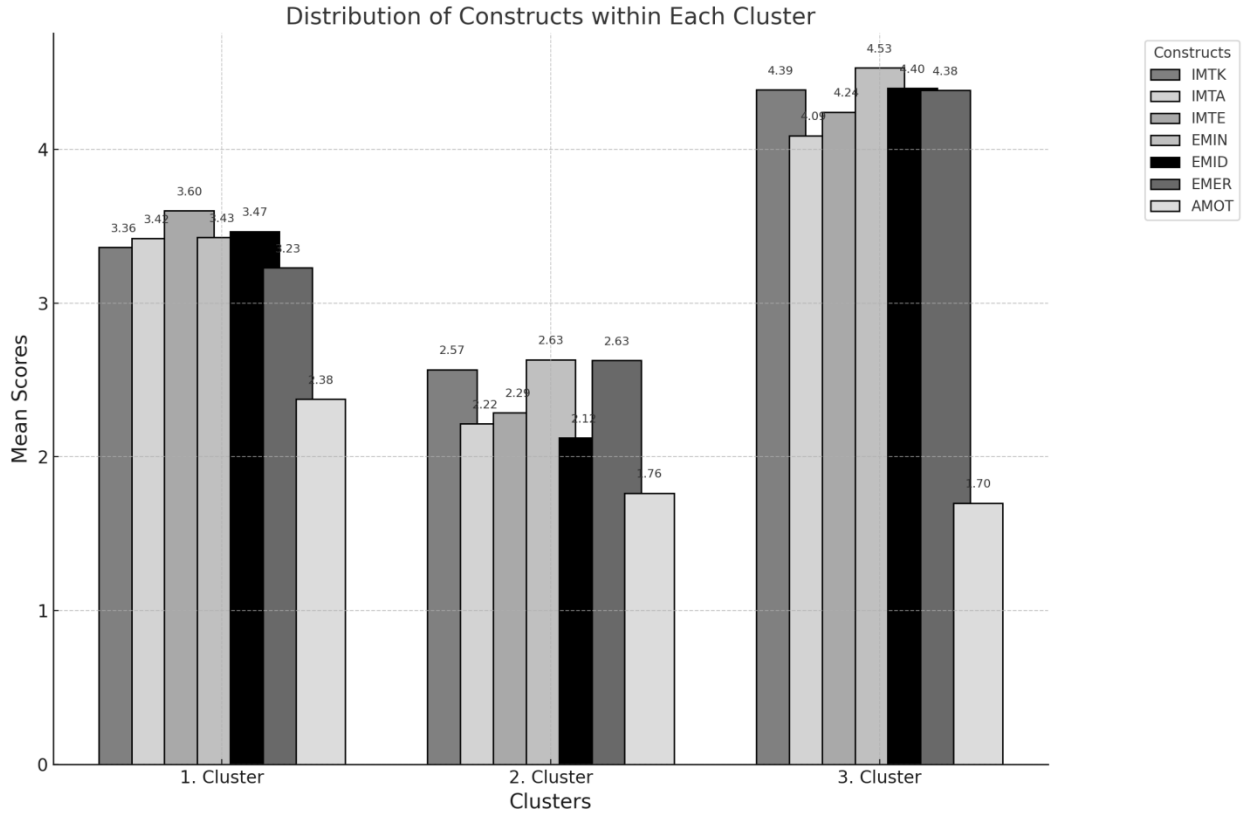

Figure 1: Cutlers Distribution

The ordinal logistic regression was run to determine the effect of profile membership (cumulative odds) on intention to pursue post graduate education. The model fitting Summary and goodness of fit is presented in Table 3. The Table 3 shows that the value of chi-square (45.556, $p < .000$) is significant with p-value less than 0.05, and the tests for goodness of fit have p value (Pearson = .061, Deviance = .090) greater than 0.05 thus, it can be confirmed that the model is good fit. The Pseudo R-Square (Table 3) shows the total variations explained by the independent variable in the model. Ordinal logistic regression between motivational profile and intention to pursue postgraduate education is performed.

This Table 4 presents the results of the logistic regression analysis. The thresholds indicate cutoff points on the logit scale, where logit is the natural log of the odds of being at or below a certain level of intention to pursue a postgraduate education. For example, the threshold for intent = 1.00 is -2.769. It shows that when the Motivational Profile has no effect zero, the odds of having an intention level of 1 or below is -2.769. As the intention level increases, the threshold estimates also change, indicating different log odds for each intention cutoff. The level of significance (Sig. < .05) across different thresholds showed statistical significance, and these cutoff points were statistically significant. The 'location' row in the Table 3 presents the coefficient value of the effect of the Motivational Profile on the intention to pursue postgraduate education. The estimate of 0.539 (p < .000) suggests that, while holding other factors constant, the log odds of intention to pursue postgraduate education change by 0.539 for each one-unit change in the motivational profile.

Table 3: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	236.503			
Final	190.947	45.556	1	.000
Goodness-of-Fit				
	Chi-Square	df	Sig.	
Pearson	89.926	17	.061	
Deviance	92.111	17	.090	
Pseudo R Square				
Cox and Snell	.068			
Nagelkerke	.069			
McFadden	.018			

Table 4: Logistic Regression Between Motivational Profile and Intention to Pursue Post Graduate Education

Estimate		Std. Error	Wald	df		Sig.		95% Confidence Interval
Lower Bound				Upper Bound				
Threshold	[Intent = 1.00]	-2.769	.285	94.638	1	.000	-3.327	-2.211
[Intent = 2.00]	-1.866	.213	76.602	1	.000	-2.284		-1.448
[Intent = 2.50]	-1.615	.200	64.923	1	.000	-2.008		-1.222
[Intent = 3.00]	-1.298	.188	47.738	1	.000	-1.666		-.930

[Intent = 3.50]	-.593	.171	12.010	1	.001	-.928		-.257
[Intent = 4.00]	.832	.169	24.206	1	.000	.500		1.163
[Intent = 4.50]	1.244	.173	51.660	1	.000	.904		1.583
[Intent = 5.00]	1.841	.181	103.376	1	.000	1.486		2.196
[Intent = 5.50]	2.128	.186	131.177	1	.000	1.764		2.492
Location	Profiles	.539	.081	44.664	1	.000	.381	.697

4. Discussion

The predictive power of motivational profiles in determining student intentions has been extensively examined. Studies such as Leavell (2016) suggest that intrinsic and extrinsic motivations significantly shape students' educational aspirations, a finding echoed by Moreno-Murcia et al. (2013) and Sicilia et al. (2015), who emphasize the role of self-determination in academic persistence and goal achievement. However, Pugh (2018) presents a contrasting view, arguing that motivational profiles alone do not reliably predict graduation intentions, possibly due to methodological or demographic differences. Barkoukis et al. (2021) reaffirm the importance of motivational profiles, highlighting their relevance in enhancing academic persistence.

Cultural and contextual factors also play critical roles. Thompson and Nguyen (2019) highlight that motivation's impact varies across culturally diverse groups, while Davis and Martin (2020) illustrate how online learning environments, with their self-paced flexibility, influence motivational dynamics differently than traditional classrooms. Furthermore, Gomez and Lee (2017) demonstrate the dynamic nature of motivational profiles, showing their evolution over time and the corresponding shifts in students' intentions.

In alignment with these findings, this study identifies three distinct motivational profiles—high, moderate, and low—among bachelor's students, using Self-Determination Theory (SDT) and cluster analyses. High-motivation students exhibit stronger intentions to pursue postgraduate education, while low-motivation student show diminished aspirations. Ordinal logistic regression confirms that intrinsic motivation, driven by the desire for knowledge and growth, is a key determinant of educational intentions, consistent with prior research (e.g., Deci & Ryan, 2000; Valenzuela & Manzano-Sánchez, 2019).

While the findings underscore the importance of motivational dynamics, the study's limitations, including its focus on public universities in Balochistan and a cross-sectional design, constrain generalizability. Future research should include longitudinal studies and diverse institutional contexts to provide a broader understanding. Nonetheless, this research offers actionable insights, advocating for policies and interventions that address socio-cognitive barriers and enhance intrinsic motivation to foster educational aspirations.

5. Conclusion and Recommendations

This study provides substantial evidence on how motivational profiles shape the intentions of bachelor's students to pursue postgraduate education. By employing hierarchical and two-step cluster analyses, three motivational profiles were identified, with intrinsic motivation emerging as the strongest predictor of educational aspirations. Students with high motivational profile demonstrated significantly stronger intentions to pursue postgraduate studies.

The research highlights the importance of fostering intrinsic motivation to promote higher education enrollment, particularly in socio-culturally constrained regions like Balochistan. These findings contribute to the broader discourse on educational aspirations by integrating Self-Determination Theory (SDT) and the Theory of Planned Behavior (TPB), offering actionable insights for policy and practice.

The results of this study provide clear evidence that academic motivation significantly influences students' intentions to pursue postgraduate education. Most notably, students in Cluster 3, characterized by high levels of both intrinsic and extrinsic motivation, exhibited the strongest intention to continue their studies. This underscores the need for motivation-based policy interventions tailored to students' motivational profiles. Institutions in Balochistan should adopt AMS-based motivation assessments to regularly identify students with low or moderate motivation levels. These students should be supported through targeted interventions, including academic counseling, personalized mentoring, and motivation-enhancing programs that address their specific needs and barriers.

Students in Cluster 2, who showed low intrinsic and extrinsic motivation, demonstrated the weakest intention to pursue further education. This finding highlights a critical challenge for educational institutions in Balochistan. It is recommended that faculty receive training on how to recognize and respond to varying student motivation levels. Educators should be encouraged to implement classroom strategies that foster student engagement, autonomy, and achievement. In addition, structured academic mentorship programs should be developed to offer consistent support to low-motivation students, helping them build confidence and long-term academic goals.

The ordinal logistic regression analysis further confirmed that motivation levels significantly predict intention to pursue postgraduate studies ($\beta = 0.539$, $p < .000$). This finding supports the development of institutional policies that link financial and academic support to motivational profiles. The Higher Education Commission (HEC) and regional education authorities should establish targeted scholarship schemes specifically for students from underrepresented regions such as Balochistan. These financial incentives can help remove economic barriers and promote equitable access to higher education.

In response to the persistent regional disparity in postgraduate enrollment, it is essential to adopt localized strategies that reflect the unique socioeconomic and cultural realities of Quetta and its surrounding areas. Awareness campaigns should be conducted in schools and colleges across the region to promote the long-term benefits of postgraduate education. These campaigns can include alumni testimonials, career guidance, and motivational talks that resonate with students' backgrounds. Furthermore, peer support networks should be established to encourage collaboration, goal sharing, and a sense of academic community.This study contributes to the literature by being the first to examine the relationship between academic motivation profiles and the intention to pursue postgraduate education among university students in Balochistan, Pakistan. A key strength of the research is its novel focus on identifying motivation clusters and their

influence on educational intentions in an underrepresented region. However, the study has some limitations. The sample was limited to students from public sector universities in Balochistan, which may affect the generalizability of the findings to other regions and types of institutions. Future research should include students from private universities and from other provinces to enhance the scope and applicability of the results. Additionally, while this study focused only on academic motivation, other important factors such as family background, financial situation, job prospects, and differences in academic fields were not examined. These variables may significantly influence students' intentions and should be considered in future studies. Future research may build on this by incorporating the full TPB framework to examine how attitudes, subjective norms, and perceived behavioral control interact with motivation to shape postgraduate intentions.

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