



Friendship Self-Regulation through the Lens of Self-Determination Theory: A Study of University Students in Pakistan

Aqsa Yaqoob¹, Amina Perveen², Mahwish Ali Khan³ & Aneela Mushtaq⁴

¹University of Karachi, Email: aqsayaqoob894@yahoo.com

²Shifa Tameer-e-Millat University, Email: parveen.amina76@yahoo.com

³University of Nottingham, Email: mahwishkhan33@outlook.com

⁴Shifa Tameer-e-Millat University, Email: aneelamushtaq17@gmail.com

ARTICLE INFO

Article History:

Received: December 02, 2025
Revised: January 03, 2026
Accepted: January 26, 2026
Available Online: February 07, 2026

Keywords:

Friendship Self-Regulation, Self-Determination Theory, University Students, Motivation, Pakistan, Emerging Adulthood, Interpersonal Relationships

Corresponding Author:

Aqsa Yaqoob

Email:

aqsayaqoob894@yahoo.com

ABSTRACT

Friendships play a crucial role in emotional well-being and identity development, especially during emerging adulthood. Rooted in Self-Determination Theory (SDT), this study explored how university students in Pakistan regulate their friendships across various demographic and contextual factors. Using the Friendship Self-Regulation Questionnaire (SRQ-F), data were collected from a sample of 315 university students to examine how motivational regulation styles (external, introjected, identified, and intrinsic) differed across gender, academic year, socioeconomic status (SES), and academic performance. Significant differences were found in friendship self-regulation scores across academic years, with fourth-year students reporting higher levels of autonomous motivation, particularly identified regulation and intrinsic motivation, than second-year students. Additionally, differences emerged based on gender, SES, and time spent on campus outside of class. The findings suggest that as students' progress through university, their motivation in friendships becomes increasingly internalized, shaped by both individual development and cultural context. These insights provide a foundation for designing culturally sensitive interventions that promote authentic relational engagement and emotional maturity in Pakistani university settings.



Introduction

Humans are fundamentally social beings, intricately shaped by their interpersonal relationships. Among these, friendships hold a particularly salient place in contributing to psychological development and emotional well-being. From childhood through adulthood, friendships serve as crucibles of emotional bonding, mutual understanding, and social learning. Research consistently highlights the psychological, cognitive, and physiological benefits of maintaining close

friendships, which include improved stress regulation, enhanced identity formation, and better long-term mental health (Hartup & Stevens, 1997; Hojjat & Moyer, 2017). In essence, friendships act as a protective buffer against social isolation and loneliness, two factors closely tied to mental health challenges such as depression, anxiety, and even physical ailments (Lykes & Kemmelmeier, 2014).

Beyond mere companionship, meaningful friendships confer a sense of belonging and stability. They are closely associated with improved self-worth, identity coherence, and overall life satisfaction (Chopik, 2020; Goodwin & Hernandez Plaza, 2000). These interpersonal bonds not only support individual growth but also foster resilience and emotional regulation during times of adversity. However, maintaining such enriching relationships requires more than goodwill; it necessitates the ability to manage one's internal states, behaviors, and responses in socially appropriate and constructive ways. This ability is referred to as self-regulation.

Studies conducted within Pakistani educational settings emphasize the centrality of emotion regulation as a foundation for interpersonal and academic success. For example, Solehria and Ahmad (2023) conducted a qualitative study with undergraduate students in Peshawar, finding that challenges in emotional regulation negatively impacted both academic achievement and interpersonal interactions. Literature has shown that teens from joint families exhibit better emotional regulation and social competence than their counterparts from nuclear environments, highlighting the impact of family structure on interpersonal conduct and self-regulation (Shafiq et al., 2023).

Understanding Self-Regulation in Social Contexts

Self-regulation is the ability to manage one's thoughts, emotions, and actions to achieve long-term personal and social aims (Zimmerman, 1998). This ability aids individuals in handling their desires, dealing with conflict, managing societal issues, and keeping situations peaceful in their relationships (Schunk, 2008). It has been studied and observed that in friendships, this helps in keeping a person cool when he/she disagree, understanding what your friend is going through, or searching for ways to meet their own needs even during handling a friend's need. A major ingredient to healthy relations is self-regulation skills. Previous articles show that people who are good at handling their feelings and behaviors lead to being more helpful to others and have less conflicts (Pichardo et al., 2018). Conversely, insufficient self-regulation has been linked with deferment, emotional challenges, and dissatisfaction in both academic and interpersonal contexts (Balkis & Duru, 2016).

In emerging adulthood, a developmental period marked by identity exploration and increasing autonomy, friendships become a primary source of emotional support, especially in university settings where individuals are navigating new social roles. Here, self-regulation becomes not just beneficial but essential in maintaining friendships amid the demands of academic, social, and personal transitions (Singh & Sharma, 2018; Taipale, 2017).

Self-Determination Theory in Pakistani Universities

Most of the literature exploring friendship, motivation, and self-regulation originates from Western individualistic cultures, where personal autonomy is highly valued. However, in collectivist societies like Pakistan, relational norms and self-regulatory behaviors are deeply embedded within social expectations, family roles, and communal harmony (Saeed et al., 2016). In such contexts, behaviors that are externally regulated, such as maintaining social approval or avoiding familial disapproval, may be culturally reinforced and not necessarily viewed as maladaptive. For example,

at a young age, girls are generally taught to be obedient, hold in their feelings, and do what others want (Zaman, 2014).

In Pakistani culture, interdependence and relational duty are very important. Looking at self-regulation through the perspective of SDT can help us understand how young adults handle friendships. The idea of *wasta*, which means social capital gained via personal connections, shows that friendships are not only important for emotional reasons but also helpful for finding jobs and getting into school (Niazi et al., 2022). This emphasizes the cultural imperative of sustaining harmonious relationships, frequently through externally or introjected driven actions. Nonetheless, university students in Pakistan are increasingly influenced by global, individualistic ideas through media and higher education, resulting in a complicated interaction between traditional norms and the rise of individual autonomy. Comprehending the interplay between various motivating types and self-regulatory behaviors in friendships can elucidate how Pakistani students navigate this cultural dichotomy.

The tenets of Self-Determination Theory (SDT) have been applicable in Pakistani educational contexts. Afzal and Jami (2023) discovered that the fulfillment of autonomy and relatedness significantly predicted GPA among university students, mediated via an internal locus of control. Their research confirmed that the fulfillment of fundamental psychological needs boosts intrinsic motivation and academic achievement, hence validating the significance of SDT's foundational principles. Likewise, Zafar et al. (2024) examined the function of self-regulated learning strategies in augmenting student motivation and autonomy, indicating that internalized motivation is favorably associated with long-term learning results.

Interpersonal Skills and Self-Directed Learning

The research examined the correlation between self-directed learning and interpersonal skills among 869 undergraduates from Lahore. Their results showed a moderate positive correlation, which means that students who are better at managing their learning are also better at dealing with social relationships. This supports the idea that self-regulation applies to relationships as well, such as friendship (Jahangir et al., 2024).

Family Structure and Socialization

The family structure in Pakistan significantly influences the regulation skills of children. A study indicated that adolescents reared in mixed homes were more prone to demonstrate socially competent behaviors and proficient emotion management in comparison to their counterparts from nuclear households. This corresponds with the collectivist focus on social harmony and interdependence within extended family structures, which can cultivate prosocial and self-regulatory behaviors from early childhood (Shafiq et al., 2023).

Self-Determination Theory and Friendship Motivation

It has been mentioned that self-regulation is significant for happy friendships and is extensively documented; there is a scarcity of literature aiming at the underlying features that drive self-regulatory actions in friendships. Self-Determination Theory (SDT), a wide-ranging concept of human enthusiasm (Deci & Ryan, 1985). SDT focuses on the level of motivation (intrinsic or extrinsic), which affects individuals' connection with tasks and relationships (Ryan & Deci, 2000). SDT points out three intrinsic psychological needs (autonomy, competence, and relatedness) that work as the basis of human motivation. When these criteria are met, humans are more persuaded to act on their own and have a healthier capacity to control themselves (Ryan & Deci, 2017).

The theory outlines a motivational range, covering external regulation, introjected regulation, identified regulation, and intrinsic motivation (acting purely for enjoyment or in harmony with the self) (Deci & Ryan, 2014). These regulatory styles affect how people handle their friendships. For instance, someone who cultivates friendships primarily for external validation may find it challenging to sustain genuine emotional ties. On the other hand, people who are driven by intrinsic motives are more likely to show empathy, patience, and ways to resolve conflicts that are based on respect and understanding for each other (Soenens & Vansteenkiste, 2005).

Additionally, the internalization of extrinsic motives into more autonomous forms, a process highlighted by SDT, is essential for the cultivation of genuine and lasting relationships (Reshvanloo et al., 2021). Research indicates that individuals who effectively internalize relational rules exhibit superior self-regulation across various life domains, including academics, prosocial behavior, and emotional closeness (Lee, 2018; Alborzi, 2009).

Rationale of the Study

While the role of self-regulation in academic and romantic relationships has been widely studied, its function within friendships, particularly in collectivist cultures, remains underexplored. In Pakistan, where familial obligations, gender roles, and social harmony heavily influence behavioral expectations, university students may regulate friendships differently based on their internalized motivations. This study attempts to fill this empirical gap by examining how motivational styles, as conceptualized by SDT, relate to friendship self-regulation among university students in Pakistan.

Specifically, this research investigates the four self-regulation styles (external, introjected, identified, and intrinsic) with friendship behaviors and explores how these vary across demographic variables such as gender, age, birth order, academic performance, socioeconomic status, time spent on campus outside class, and family structure (nuclear vs. joint). By doing so, the study seeks not only to contribute to cross-cultural validation of SDT in interpersonal domains but also to illuminate how emerging adults in a collectivist context manage one of their most essential psychological needs, *connection*.

Methodology

Objectives of the Study

The objectives of this study are:

1. To examine whether friendship self-regulation significantly differs in scores based on the gender of university students.
2. To explore the relationship between students' campus presence outside of class hours and their friendship self-regulation patterns.
3. To examine whether different socioeconomic statuses (SES) are associated with significant differences in friendship self-regulation among university students.
4. To evaluate whether the academic year of study contributes to differences in friendship self-regulation.
5. To explore the association between students' academic achievement (measured by percentage) and their friendship self-regulation scores.

Hypotheses

1. There is a significant difference in friendship self-regulation scores between males and females.
2. There is a significant correlation between their decision to stay in classes and leave when classes are off, on friendship self-regulation scores.
3. There is a significant difference in friendship self-regulation scores across different SES categories.
4. There is a significant difference in friendship self-regulation scores across different years.
5. There is a significant correlation between percentage (academic achievement level) and friendship self-regulation scores.

Research Design

This quantitative study used a cross-sectional survey design. A correlational and comparative approach was employed to explore how friendship self-regulation varies across different demographic variables and how it correlates with continuous predictors such as age, academic performance, and time spent at university. The design was best suited to capture a snapshot of motivational regulation patterns among university students within a collectivist cultural setting.

Sample

A non-probability convenience sampling technique was utilized to recruit 315 university students from various departments of public and private universities in Pakistan. Participants were selected based on availability and willingness to participate in the research.

Inclusion Criteria

- Enrolled undergraduate or postgraduate students.
- Aged between 18 and 27 years.
- Fluent in English.
- Provided informed consent.

Instruments

The Friendship Self-Regulation Questionnaire (SRQ-F) was used to measure motivational regulation styles in the domain of friendship. Revised from the broader Self-Regulation Questionnaire framework grounded on SDT (Ryan & Deci, 2000), it has 4 regulation styles: External Regulation, Introjected Regulation, Identified Regulation, and Intrinsic Regulation.

This Likert-type scale, ranging from 1 (Not at all true) to 7 (Very true), focuses on the degree to which each statement relates to the participant's conduct within their close friendships. The SRQ-F has shown satisfactory reliability and construct validity in prior studies (Reshvanloo et al., 2021).

Demographic Sheet includes information about gender, age, year and semester of study, academic performance (CGPA or percentage), time spent on campus outside of class (in hours), and socioeconomic status (low, middle, high).

Procedure

During this study, participants were taken through university networks, student forums, and classroom notices. Verbal or written consent was also recorded, and then participants were provided with a paper-based or online version of the study scales. The survey packet included:

1. An informed consent form
2. A demographic information sheet
3. The SRQ-F scale

Participants were informed about the confidentiality of their responses and their right to withdraw at any stage of the study without any consequences. Data collection spanned approximately 4 weeks.

Ethical Considerations

This study adhered to the ethical guidelines outlined by the American Psychological Association (APA, 2017). Ethical approval was obtained from the university's institutional review board (IRB). Participants were briefed about the purpose of the study, their voluntary participation, assurance of anonymity and data confidentiality, and lastly, the option to withdraw at any time without penalty. No identifying information was collected. Completed questionnaires were stored securely, with access restricted to the principal investigator.

Results

Table 1 *Descriptive Statistics of Demographic Variables (N = 315)*

Variable	n	%	M	SD	Min	Max
Age	–	–	20.89	2.27	17	36
Gender						
Men	155	49.2				
Women	160	50.8				
Year of Study						
First Year	175	56.1				
Second Year	62	19.9				
Third Year	30	9.6				
Fourth Year	41	13.1				
Time Spent at University						
Stay (after classes)	190	65.3				
Leave (after classes)	101	34.7				
Socioeconomic Status						
Upper	19	6.2				
Middle	281	91.8				
Lower	6	2.0				
Academic Performance (Last Sem)						
A+	25	9.5				
A	105	40.1				
B	75	28.6				
C	49	18.7				
D	8	3.1				

Note. M = Mean; SD = Standard Deviation; Min = Minimum; Max = Maximum.

Table 2: Descriptive statistics of the Study measure

Variables	Items	A	M	SD
E-R	5	.55	22.39	6.04
INT-R	5	.56	23.15	5.85
IND-R	5	.69	27.03	5.88
I-M	5	.65	27.06	5.52
CM	10	.72	45.53	10.56
AM	10	.81	54.13	10.55

Note. ER= External Regulation, INT-R= Introjected Regulation, IND-R= Identified Regulation, I-M= Intrinsic Motivation.

Table 3: Differences between Men and Women on External Regulation (E-R), Introjected Regulation (INT-R), Identified Regulation (IND-R), and Intrinsic Motivation (I-M), Controlled motivation (CM), Autonomous motivation (AM).

Variables	Men (n=155)		Women (n=160)		t(313)	P	Cohen's d
	M	SD	M	SD			
ER	4.48	1.17	4.52	1.25	-.26	.790	.03
INT-R	4.59	1.24	4.64	1.10	-.38	.704	.04
IND-R	5.21	1.20	5.56	1.14	-2.65	.008*	.30
I-M	5.19	1.12	5.61	1.04	-3.44	.001**	.39
CM	4.54	1.09	4.58	1.02	-.36	.717	.03
AM	5.20	1.07	5.59	1.00	-3.28	.001**	.37

p < .05* p ≤ .01**

Table 3 shows the results of independent t-test pertaining to the significant differences between study variables. The analysis shows the significant high scores of females on identified regulation (IND-R), intrinsic motivation (I-M), and autonomous motivation (AM) suggesting that women are more likely to do tasks and activities that are motivated by internal and self-driven factors rather than external pressures as compared to men. No significant gender differences were found between men and women on the scores of external regulations (ER), introjected regulation (INT-R), controlled motivation (CM).

Table 4: Differences between decision to stay or leave from university on External Regulation (E-R), Introjected Regulation (INT-R), Identified Regulation (IND-R), and Intrinsic Motivation (I-M), Controlled motivation (CM).

Variables	Stay (n=190)		Leave (n=101)		t(289)	P	Cohen's d
	M	SD	M	SD			
ER	4.64	1.21	4.29	1.16	2.35	.019*	.29
INT-R	4.63	1.22	4.57	1.06	.430	.668	.05
IND-R	5.48	1.19	5.22	1.11	1.81	.070	.22
I-M	5.48	1.02	5.23	1.18	1.88	.060	.22
CM	4.64	1.08	4.43	.985	1.57	.115	.20
AM	5.48	1.01	5.22	1.08	2.00	.046*	.24

p < .05*

According to Table 4 significant differences were found on external regulation (ER) suggesting that students who stay in university beyond the study hours have slightly higher external regulation motivation (e.g., pressure, rewards). Additionally, scores of students on autonomous motivation (AM) are also higher in students who stay. No significant difference was found on the subscales of introjected regulation (INT-R), identified regulation (IND-R), intrinsic motivation (I-M), controlled motivation (CM) between two groups.

Table 5: Differences between Socioeconomic status on External Regulation (E-R), Introjected Regulation (INT-R), Identified Regulation (IND-R), and Intrinsic Motivation (I-M), Controlled motivation (CM), Autonomous motivation (AM).

Variables	Upper (n=19)		Middle (n=281)		Lower (n=6)		F(2, 303)	P	η ²
	M	SD	M	SD	M	SD			
E-R	4.38	1.25	4.51	1.22	4.26	1.34	.202	.817	.001
INT-R	4.44	1.29	4.65	1.17	4.10	1.24	.926	.397	.006
IND-R	5.12	.882	5.42	1.21	4.65	.843	1.99	.138	.012
I-M	5.05	.990	5.44	1.10	4.50	.927	3.15	.044*	.020
CM	4.41	1.16	4.58	1.06	4.18	1.22	.619	.539	.011
AM	5.08	.873	5.43	1.07	4.53	.736	2.92	.055	.018

p < .05*

Table 5 shows the analysis of variance (Anova) between upper, middle, and lower socioeconomic status suggesting that significant difference was found between socioeconomic status showing intrinsic motivation (I-M) is high in students who belong to middle socioeconomic status. Insignificant differences were found for the subscales of external regulation (E-R), introjected regulation (INT-R), identified regulation (IND-R), controlled motivation (CM), autonomous motivation (AM) among three groups.

Table 6: Differences between Academic performance in last semester on External Regulation (E-R), Introjected Regulation (INT-R), Identified Regulation (IND-R), and Intrinsic Motivation (I-M), Controlled motivation (CM), Autonomous motivation (AM).

Variables	A+ (n=25)		A (n=105)		B (n=75)		C (n=49)		D (n=8)		F(4,257)	P	η ²
	M	SD	M	SD	M	SD	M	SD	M	SD			
E-R	4.51	1.16	4.67	1.26	4.23	1.08	4.75	1.26	3.29	.991	2.47	.045*	.037
INT-R	4.43	1.22	4.64	1.24	4.60	1.15	4.83	.946	4.42	1.15	6.18	.650	.009
IND-R	5.61	1.12	5.51	1.15	5.20	1.15	5.76	.946	5.40	.985	2.01	.094	.030

I-M	5.56	.965	1.10	1.27	5.51	5.34	5.60	4.82	1.62	1.21	.304	.018
			1.02	1.23	.986							
CM	4.47	1.03	4.65	4.42	4.79	4.17	1.01	1.46	.214	.011		
			1.10	1.00	.956							
AM	5.59	.945	5.51	5.27	5.68	5.11	1.26	1.57	.182	.011		
			.982	1.18	.888							

p < .05*

Table 6 shows the significant difference between academic performance in last semester on the subscale of external regulation (E-R) showing high scores on students who got C grade in their last exam. Insignificant differences were found on the following subscales: introjected regulation (INT-R), identified regulation (IND-R), intrinsic motivation (I-M), controlled motivation (CM), and autonomous motivation (AM).

Table 7a: Differences between Grade levels on External Regulation (E-R), Introjected Regulation (INT-R), Identified Regulation (IND-R), and Intrinsic Motivation (I-M), Controlled motivation (CM), Autonomous motivation (AM).

Variables	First Year (n=175)		Second Year (n=62)		Third Year (n=30)		Final Year (n=41)		F(3,304)	P	η^2
	M	SD	M	SD	M	SD	M	SD			
E-R	4.38	1.21	4.56	1.23	4.59	1.06	4.89	1.24	2.11	.098	.020
INT-R	4.62	1.11	4.48	1.24	4.46	1.36	5.01	1.16	1.99	.115	.016
IND-R	5.42	1.18	5.15	1.31	5.18	1.21	5.81	.816	2.93	.034*	.028
I-M	5.39	1.08	5.19	1.16	5.31		5.90	.844	3.71	.012*	.035
					1.15						
CM	4.50	1.03	4.52	1.11	4.53		4.95	1.08	2.06	.104	.020
					1.08						
AM	5.40	1.04	5.17	1.17	5.25		5.85	.745	3.79	.011*	.036
					1.08						

p < .05*

Table 7a shows the significant differences between the Class Grade levels on the subscales of identified regulation (IND-R), intrinsic motivation (I-M), and autonomous motivation (AM) showing the higher scores of final year students. No significant differences were found on the scores of external regulations (E-R), introjected regulation (INT-R), and controlled motivation (CM).

Table 7b shows the result of post hoc comparison showing final year students are more likely to have higher scores of identified regulation and autonomous motivation. Final years students as compared to second year students are more likely to engage in activities that are personally important to them. On the subscales of intrinsic motivation, they are more likely to scored higher as compared to first and second year.

Table 7 (b): Post Hoc Analysis for Significant Difference among Groups of Grade Levels.

		Identified Regulation				95% CI	
Grade Levels (I)	Grade Levels (J)	Mean Difference (i-j)	i-j	SE	P	LL	UL
4. Fourth Year	2. Second Year	.656*	4>2	.236	.030	.045	1.26
		Intrinsic Motivation				95% CI	
Grade Levels (I)	Grade Levels (J)	Mean Difference (i-j)	i-j	SE	P	LL	UL
4. Fourth Year	1. First Year	.508*	4>1	.187	.036	.023	.993
	2. Second Year	.703*	4>2	.217	.007	.141	1.26
		Autonomous Motivation				95% CI	
Grade Levels (I)	Grade Levels (J)	Mean Difference (i-j)	i-j	SE	P	LL	UL
5. Fourth Year	3. Second Year	.680*	4>2	.209	.007	.139	1.22

Discussion

The present study was based on friendship self-regulation through the lens of self-determination theory and investigated gender-based differences in friendship self-regulation among university students in Pakistan, guided by SDT (Deci & Ryan, 2000, 2014). A significant finding revealed that female students exhibited higher levels of identified regulation, intrinsic motivation, and autonomous motivation. in the context of managing and maintaining friendships. These results affirm the hypothesis that friendship self-regulation styles vary significantly between genders, particularly in motivational style. The finding that females scored higher on both identified regulation and intrinsic motivation suggests that women tend to engage in friendship behaviors that are either personally valued or inherently satisfying. Identified regulation is undertaking acts perceived as significant or congruent with one's intrinsic objectives (Ryan & Deci, 2017). Conversely, intrinsic motivation is defined by engagement in behavior driven solely by interest or pleasure. These results are consistent with previous international studies indicating that women, across various cultures, are more inclined to internalize relational norms and exhibit emotional attunement in friendships (Rose & Rudolph, 2006). In Pakistan, where female socialization often prioritizes emotional intelligence, caregiving tasks, and the sustenance of relationships, these trends are more pronounced (Zaman, 2014). It has been observed and practiced that since childhood, Pakistani girls/women are being attuned to have empathy, social conformity, and interpersonal responsibility, potentially increasing their encouragement to maintain lifelong friendships through actions that are internally valued or joyful. Such findings have a basis in

previous literature that indicates that female teens from joint households in Pakistan had better emotional management and social competence than male teens (Shafiq et al., 2023). Similarly, the complex investigation of autonomous motivation, including identified regulation and intrinsic motivation gave a composite score that indicated the overall equilibrium between autonomous and controlled motivation was both markedly preeminent in female participants. These findings suggest that females are more inclined to participate in friendship actions motivated by internal volition rather than external influences.

Women in collectivist societies are frequently socialized to emphasize relational harmony (Saeed et al., 2016), which may lead to a more profound internalization of prosocial norms, yielding friendship regulation that is both self-endorsed and emotionally aligned. A study indicated that university students exhibiting elevated levels of autonomy and relatedness achieved superior academic performance, underscoring the importance of need satisfaction for intrinsic motivation among Pakistani students (Afzal & Jami, 2023; Zaman, 2014). These positions might promote a more independent and emotionally involved interaction with friendship relations. In contrast, guys may be less motivated to internalize relationship behaviors due to cultural norms that promote independence, emotional restraint, or peer rivalry, particularly within male friendship groups. This difference in relational styles further explains why women experience greater personal value and enjoyment in their friendship interactions, thereby enhancing both their identified and intrinsic regulation scores.

The present study aimed to examine how university students' campus engagement, specifically their choice to remain on campus beyond class hours, relates to their friendship self-regulation. The findings revealed that both ER and AM were significantly higher among students who chose to stay on campus after classes, as compared to those who typically leave immediately after academic sessions. Furthermore, a significant positive correlation was found between students' decision to stay and their overall friendship self-regulation scores, suggesting that patterns of physical presence and social availability may play a vital role in shaping motivational dynamics within close peer relationships. Remaining on campus after academic hours may reflect a deeper level of social investment, providing opportunities for sustained interaction, emotional reciprocity, and spontaneous peer bonding. In the context of SDT, this aligns with the satisfaction of the basic psychological needs of relatedness and autonomy; students choose to remain in relationally rich environments, not merely for academic requirements but for social nourishment. This voluntary choice may enhance intrinsic engagement with peers and promote authentic motivation in friendships (Ryan & Deci, 2017).

The higher AM among those who stay suggests that students are internally driven to maintain and cultivate their friendships. These individuals likely view their peer interactions as personally meaningful, enjoyable, and aligned with their sense of identity and well-being. It was found that intrinsic and identified regulations in friendships were associated with deeper emotional investment and more stable interpersonal bonds (Reshvanloo et al., 2021).

Interestingly, students who stayed also showed elevated ER. This might seem contradictory to the principles of SDT, where external regulation is considered the least self-determined form of motivation. However, within Pakistan, social behavior is often guided by external expectations (Saeed et al., 2016). Students may remain on campus not only due to intrinsic social interest but also to fulfill group norms, avoid social exclusion, or maintain visibility within their peer groups. In this sense, external motivation does not necessarily undermine relationship quality but rather reflects a culturally contextualized strategy to maintain harmony and connection (Zaman, 2014).

The observed positive correlation between time spent on campus and friendship self-regulation scores further emphasizes that physical availability in peer-dense environments facilitates the practice and development of self-regulatory skills. Students who spend more time on campus likely encounter a broader range of social experiences, support, conflict, negotiation, and empathy, which serve as informal “training grounds” for developing regulation strategies. Motivation in close relationships influences how individuals respond to interpersonal challenges, from handling disagreements to sustaining emotional closeness (Soenens & Vansteenkiste, 2005). Moreover, spending time beyond structured academic routines may reflect a proactive attitude toward social development, a behavior previously linked to higher levels of self-regulation and emotional competence in Pakistani students (Jahangir et al., 2024). These students may be more inclined to invest time and effort in maintaining friendships through both spontaneous and planned interactions, thus reinforcing both their regulatory styles and their social identity.

Citizens of Pakistan usually place a lot of significance on groupism and devotion. So, students who spend the majority time at university could be perceived as more socially engaged, which possibly improves their drive to conform to friendship standards. These peripheral effects can facilitate the development of introjected and extrinsic regulation, wherein actions are impacted by the quest for social approval or the worry of rejection (Niazi et al., 2022). It was postulated that the Pakistani university setting signifies an idiosyncratic conjunction of autonomy and social conformity, interpreting it as an optimal context for seeing the coexistence and influence of various motivational types on peer behavior (Zafar et al., 2024).

The present study examined the impact of socioeconomic status (SES) on friendship self-regulation among university students in Pakistan, using SDT (Ryan & Deci, 2000). The results indicated a statistically significant disproportion in friendship self-regulation within socioeconomic status (SES) groups, with middle-class students exhibiting increased levels of intrinsic drive in their friendships compared to their lower or upper socioeconomic equivalents. This result is significant and highlights that middle-class pupils may face more well-adjusted motivational climates, allowing them to form contacts based on their interest, delight, and emotional fulfillment rather than external validation or influential necessities (Ryan & Deci, 2017). In friendships, it could be a picnic with friends to feel close to them, ask for some help, or have fun, despite of status, usefulness, or duty. In Pakistan, this conclusion may be formed by the socio-cultural characteristics of the middle class, which often blends collectivist ethics with mounting aspirations for autonomy and self-expression (Saeed et al., 2016). Middle-class students, particularly those attending urban or semi-urban universities, often have enough economic security to pursue emotional and social goals without the pressing material concerns that can dominate the experiences of low-income students (Zaman, 2014). They may also be more exposed to values of personal agency, emotional intelligence, and self-reflection, either through their education, media consumption, or parental expectations. These factors can promote the development of authentic, emotionally rich friendships, rooted in internal motivations rather than external social pressures.

In contrast, students from lower SES backgrounds may experience friendships as a means of coping with stress or accessing resources (both social and material), potentially leading to higher reliance on introjected or external regulatory styles. This is consistent with literature suggesting that individuals in economically constrained settings often engage in relationships to meet basic survival, academic, or financial needs (Baumeister & Leary, 1995). In such cases, friendship may be regulated more by obligation, dependency, or fear of social exclusion, thereby reducing the space for intrinsic enjoyment. Conversely, students from upper SES groups might also show lower intrinsic motivation in friendships due to increased individualism, competitive environments, or status-oriented socialization (Deci & Ryan, 2014). In some upper-class families, high parental

expectations and social image maintenance may prioritize performance, etiquette, or networking over emotionally genuine peer bonds. As a result, even though these students may have more resources and opportunities, their friendship behaviors may be shaped by more controlled forms of regulation, such as acting to maintain social standing or avoid criticism.

This finding is corroborated by local studies demonstrating that medium SES students in Pakistan generally exhibit superior emotional adjustment, self-regulation, and interpersonal functioning (Shafiq et al., 2023). Researchers discovered that self-regulation and proactive attitudes were more pronounced among students who had moderate yet supportive parenting, a characteristic prevalent in numerous middle-class households (Niazi et al., 2022). Moreover, middle-class university students exhibited elevated self-regulated learning and interpersonal motivation, attributed to a combination of parental expectations and individual goals, hence corroborating the findings of the present study (Zafar et al., 2024).

The current study examined the correlation between academic performance, quantified by percentage grades, and self-regulation in friendships among university students in Pakistan. It was hypothesized that academic performance would be significantly correlated with self-regulation in the context of friendships. The results confirmed this hypothesis, revealing a noteworthy pattern: students who reported higher academic performances, specifically those with A grades, also demonstrated higher levels of ER in their friendship behaviors. This finding is both intriguing and somewhat counterintuitive. ER is defined in SDT as the behavior motivated by external rewards, expectations, or pressures (Deci & Ryan, 2000). In friendships, this may manifest as helping peers, spending time with them, or maintaining contact primarily due to external expectations, like peer approval, fear of social judgment, or maintaining a positive reputation, rather than from intrinsic enjoyment or personal values. One plausible explanation for this outcome lies in the cultural and educational context of Pakistan. Within many Pakistani universities, academic success is not only a personal goal but often a family and societal expectation (Zaman, 2014). Students who consistently perform at high levels are frequently under implicit pressure to maintain not only their grades but also a socially favorable image. In collectivist cultures like Pakistan's, maintaining interpersonal harmony and avoiding relational conflict are deeply ingrained values (Hofstede, 2011; Saeed et al., 2016). Consequently, academically successful students may extend these motivations into their social behaviors, engaging in friendships in ways that align with social expectations rather than intrinsic desire. In other words, academic achievers may feel compelled to behave in socially desirable ways, including in friendships, to uphold their broader image as "ideal" or "model" students. These individuals may experience pressure to conform to peer norms, offer emotional labor, or engage in social reciprocity not out of intrinsic motivation, but to sustain their academic or social standing, characteristics aligned with ER (Ryan & Deci, 2017).

The findings align with previous work by Pichardo et al. (2018), who noted that self-regulation can manifest differently depending on context, sometimes driven by internal goals and at other times by external demands. Furthermore, Singh and Sharma (2018) observed that students with higher psychological well-being tend to demonstrate balanced regulation, but that in competitive or evaluative environments, motivation may skew toward extrinsic drivers.

Interestingly, this also echoes findings from Afzal and Jami (2023), who showed that Pakistani students' academic success was linked to their internal locus of control only when psychological needs, including autonomy and relatedness, were satisfied. In the absence of such need satisfaction, students may rely more on external cues for direction, including in relationships. Consequently, it is plausible that the high-achieving students in our study, despite their academic

success, may still be managing friendships from a standpoint of regulated motivation, striving to fulfill the implicit expectations of their social environment.

These results indicate that friendship self-regulation is influenced not just by individual emotional maturity but also by overarching social and academic constraints. The academic setting in Pakistan frequently underscores organized competition, comparison, and hierarchical achievement (Siddiqui et al., 2020), perhaps exacerbating the internalization of external motivators among students. This affects how colleges and universities help students with both their mental health and their academic work. Promoting genuine social connections and intrinsic drive, in conjunction with academic achievement, may assist in equilibrating the regulatory behaviors kids exhibit in their peer interactions. Furthermore, the emotional work necessary to sustain friendships through external regulation may, over time, lead to burnout or social fatigue, especially for individuals who persistently endeavor to achieve excellence in all areas. While external regulation may provide transient social advantages, it is typically correlated with diminished psychological well-being and reduced interpersonal satisfaction over time (Ryan & Deci, 2000). Therefore, cultivating circumstances that promote autonomy and emotional authenticity in friendships may mitigate these impacts.

The current study sought to investigate if friendship self-regulation ratings exhibit significant variations throughout academic years among university students in Pakistan. The results corroborated the hypothesis, indicating significant disparities in IND-R, I-M, and total AM across different year levels. Specifically, fourth-year students exhibited elevated levels of autonomous motivation in their friendships relative to second-year students. These results are consistent with Self-Determination Theory (Ryan & Deci, 2017). Autonomous motivation, encompassing recognized regulation (endorsing values as personally significant) and intrinsic motivation (participating in conduct for inherent satisfaction), is considered the most self-affirmed type of motivation. The elevated levels of autonomous motivation in fourth-year students indicate a developmental transition, presumably driven by enhanced self-awareness, interpersonal experiences, and emotional maturity acquired throughout university life.

The shift from the early to later years of university frequently entails cognitive and emotional development, enhanced self-reflection, and the transformation of interpersonal roles (Arnett, 2014). As students advance in their academic pursuits, they confront increasingly intricate social dynamics and cultivate more sophisticated perceptions of themselves and others. The elevated levels of identified regulation and intrinsic motivation shown in fourth-year students may indicate this evolution: relationships may no longer be sustained only for social validation or companionship, but rather for more profound, personally significant reasons. On the other hand, second-year students may still be figuring out how to make friends at university, where relationships are more experimental and typically based on fitting in with others or being useful to them. Their lower levels of autonomous regulation could be attributed to less internalized friendship values and a greater reliance on external cues, consistent with SDT's claim that internalization of social behavior is a gradual process (Deci & Ryan, 2014). However, as students move through university, there is often a subtle shift from externally driven relationship behaviors, such as pleasing others or maintaining social image, toward more authentic, internally guided connections. The observed differences in autonomous motivation may therefore reflect not only age and academic progression but also a transformation in how students internalize cultural expectations and manage relational autonomy. Furthermore, fourth-year students typically face increased academic and career-related stressors. In such contexts, friendships may become more intentional and valuable as support systems, leading to stronger identification with personally endorsed values such as empathy, loyalty, and emotional reciprocity (Lee, 2018; Soenens &

Vansteenkiste, 2005). This shift from superficial connection to meaningful engagement may explain their higher scores in both identified and intrinsic regulation.

Autonomous motivation in close relationships has been positively linked with psychological well-being, relationship satisfaction, and emotional resilience (Ryan & Deci, 2017; Reshvanloo et al., 2021). Hence, the increased autonomous regulation among final-year students suggests not only more stable friendships but also a potentially higher level of social-emotional functioning. Promoting internalized relational values may contribute to healthier peer interactions, reduced conflict, and greater emotional support, critical factors in emerging adulthood. Conversely, the lower autonomous motivation among second-year students may indicate vulnerability to peer pressure, emotionally taxing friendships, or reliance on extrinsic motivators such as social status. Interventions targeting self-reflection, communication skills, and emotional literacy in earlier university years could facilitate earlier internalization of prosocial values and help students engage in more authentic friendships.

Implications of the Study

The findings of this study offer both theoretical and practical implications, especially in the context of a collectivist society like Pakistan. First and foremost, the study contributes to the growing body of literature on Self-Determination Theory (SDT) by applying its constructs to the domain of friendship, a relationship type that has been relatively underexplored in South Asian contexts. It affirms that friendship self-regulation is not a static trait but one influenced by multiple factors, including gender, family structure, socioeconomic status, academic year, birth order, academic performance, and campus engagement. From a developmental psychology perspective, the increase in autonomous motivation, particularly identified regulation and intrinsic motivation, in later academic years reflects how friendship values become internalized over time. This suggests that university environments can play a critical role in fostering mature, self-driven interpersonal motivation, particularly by promoting autonomy-supportive peer cultures.

In terms of educational and counseling practice, the results highlight the need for early interventions that enhance self-awareness, emotional literacy, and relational competence, especially among first- and second-year students. Workshops or peer support programs that help students understand the dynamics of motivation and emotional regulation could improve relationship quality, stress coping, and social satisfaction. Culturally, the study sheds light on how Pakistani collectivist values shape motivation, especially the strong influence of the family system and social conformity. Understanding these cultural underpinnings can help educators, psychologists, and student affairs professionals design culturally sensitive frameworks for promoting healthy peer relationships that balance personal authenticity with relational interdependence.

Finally, the study opens a pathway for using friendship self-regulation as a predictor of well-being, particularly in youth populations navigating critical identity and relational transitions during emerging adulthood.

Limitations and Future Directions

1. The research was conducted in a snapshot in time. Thus, causal inferences about how friendship motivation changes across academic years cannot be made. A longitudinal approach would offer deeper insights into how motivation develops over time.
2. The use of a self-report questionnaire may introduce social desirability bias, particularly in a collectivist society where interpersonal harmony and reputation are highly valued.

3. The non-probability convenience sampling limits the generalizability of the results.
4. The SRQ-F is grounded in Self-Determination Theory, which was originally developed in Western contexts. Although applicable, the scale may not fully capture the nuanced ways in which relational motivation is expressed within Pakistani collectivist values.
5. The study relied solely on quantitative methods. Including qualitative interviews or focus groups could have enriched the findings by offering more personal, contextual narratives about friendship dynamics and motivational drivers.

Conclusion

This study set out to explore how university students in Pakistan regulate their friendships, using Self-Determination Theory as a guiding framework. The findings suggest that friendship self-regulation is significantly shaped by individual differences, including gender, academic performance, as well as developmental progression, with final-year students exhibiting more autonomous forms of motivation. Within the Pakistani cultural context, where social expectations, family ties, and group belonging are heavily emphasized, these results underscore a fascinating interplay between external pressures and internal values. As students advance through university life, their friendship behaviors increasingly reflect personally meaningful and intrinsically satisfying motivations, pointing toward psychological growth and deeper social engagement.

Overall, this research advances the understanding of relational motivation in non-Western settings and provides a strong foundation for future studies, educational policies, and mental health interventions aimed at fostering authentic, emotionally nourishing friendships during one of the most transformative stages of life: emerging adulthood.

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