

IMPACT OF LOCUS OF CONTROL, ACADEMIC SELF-EFFICACY, AND ACADEMIC PROCRASTINATION ON STUDENT'S ACADEMIC ACHIEVEMENT

KAYINAT ASIF^{1*}, DR. SIDRA IQBAL^{2*}, MUHAMMAD SHERAZ³,
SAFINA⁴, SANA NAWAZ⁵

¹. CLINICAL PSYCHOLOGIST AT LIFEWAYS MENTAL HEALTH & DRUG ADDICTION REHABILITATION CENTER & CERTIFIED TEACHER AT DEPARTMENT OF EDUCATION, SHABQADAR, PESHAWAR, PAKISTAN

². LECTURER, DEPARTMENT OF PSYCHOLOGY, SHAHEED BENAZIR BHUTTO WOMEN UNIVERSITY, PESHAWAR, PAKISTAN

³. MANAGING DIRECTOR AT LIFEWAYS MENTAL HEALTH & DRUG ADDICTION REHABILITATION CENTER, DEPARTMENT OF PSYCHOLOGY, HAZARA UNIVERSITY, MANSEHRA, PAKISTAN

⁴. CLINICAL PSYCHOLOGIST AT REHABILITATION CENTER FOR DRUG ADDICTS SWAT, SOCIAL WELFARE, SPECIAL EDUCATION & WOMEN EMPOWERMENT DEPARTMENT, KPK, PAKISTAN

⁵. CLINICAL PSYCHOLOGIST AT LIFEWAYS MENTAL HEALTH & DRUG ADDICTION REHABILITATION CENTER & PRIMARY SCHOOL TEACHER AT DEPARTMENT OF EDUCATION, SHABQADAR, PESHAWAR, PAKISTAN

CORRESPONDING AUTHOR: kainatasif0111@gmail.com , sidra.iqbal@sbbwu.edu.pk

ABSTRACT

The purpose of the study aimed to examine the impact of locus of control academic self-efficacy, and academic procrastination on student's academic achievement. It also sought to examine the gender differences and compare academic outcomes between public and private school students. The research is quantitative in nature and cross-sectional research design is used. The study includes the (N=400) students, with the age range between 12-18 selected through simple convenient sampling technique, evenly split between public and private schools, and between boys and girls. The result revealed that internal locus of control was positively associated with academic self-efficacy and academic achievement, while negatively associated with academic procrastination. In contrast, external locus of control negatively correlated with academic self-efficacy and academic achievement and positively associated with academic procrastination. The regression analysis revealed that internal locus of control and academic self-efficacy is the significant predictor of academic achievement. Girls scored high on internal locus of control, academic self-efficacy and academic achievement, while boys have high scores on external locus of control and academic procrastination. High grade achievers had significantly high score on internal locus of control, academic self-efficacy, while low grade achievers had higher external locus of control and academic procrastination. The study highlights the importance of internal locus of control and self-efficacy in promoting academic achievement, while external locus of control and procrastination negatively impact academic achievement. These findings suggest that interventions to enhance internal locus of control and self-efficacy to improve the academic achievement among the students.

KEYWORDS: locus of control, adolescents, academic achievement, public and private schools

INTRODUCTION

Academic achievement is one of the most significant measures of educational development in students and it may be applied when the performance and progress of students are assessed within educational institutions. This is what students achieve when they learn and shows their knowledge, learning skills and ability to fulfil learning needs. With many factors that can impact academic success both inside and out of the school, it has become a significant concern for educators, parents, and researchers to understand the psychological and

behavioral attributes of students' academic performance (Tadese et al., 2022). Because educational achievement affects current learning results, and because it can affect students' future personal or professional development, parents and teachers are particularly interested in promoting their students' academic success (Hassan et al., 2022).

Good grades are just one of the benefits of being successful in school. A positive academic performance is more likely to result in the acquisition of important academic skills and positive learning outcomes for students (Chigbu & Nekhwevha, 2021). However, there are certain personal factors that affect academic achievement such as motivation, interest, maturity, talent and learning discipline (Koçak et al., 2021). In addition, achievement can help boost students' confidence and satisfaction which can help drive their personal growth (Sisk et al., 2018). Additionally, achieving academic success can boost students' self-esteem and self-confidence (Lee & Stankov, 2017). In the longer term, academic performance affects the access to further education and career opportunities (Gordon, 2015), and high-achieving students may be offered more opportunities to gain admission to university, scholarships, internships and jobs (Lüftenegger et al., 2016). Therefore, it is critical to understand the psychological variables that promote or inhibit learning and achievement to enhance educational outcomes.

Locus of control is one psychological factor that is related to achievement, namely how much people feel they are responsible for their successes and failures or whether they are influenced by other people and things. The attribution theory can be seen as an important construct in understanding such beliefs and the causes people attribute to their successes and failures. Weiner (1972) suggests that attribution theory includes the factors of locus of control, stability and responsibility. Students who have internal locus of control believe that learning outcomes are due to factors they can control as preparation, effort and studying habits (Yeşilyurt, 2014). Therefore, they are likely to be more willing to take responsibility for their performance and make greater efforts to meet educational objectives. Student attributions for academic success have been linked to students' success (Piatek & Pinger, 2010), with students who use internal attributions showing higher rates of academic success than students who use external attributions. Students with an external locus of control, on the other hand, tend to believe that their grades depend on external factors like luck, teachers, task difficulty, and other factors not under their control.

Academic self-efficacy is another psychological construct that is closely related to academic achievement. Self-efficacy is defined as an individual's confidence in his/her ability to plan and perform the behavior necessary to handle future events successfully (Bandura, 1989). In the school environment, academic self-efficacy is a student's self-assurance in their ability to start, plan, and execute academic tasks successfully (Allen et al., 2022). Academic self-efficacy influences a student's view of the difficulty of academic tasks, his/her education goals, willingness to persist when encounters obstacles, and ability to recover from academic failures (Khan, 2013). Empirical evidence additionally shows that there is an important relationship between academic self-efficacy and educational outcomes. Based on that, students with higher self-efficacy showed higher academic achievement and persistence (Yokoyama, 2019). In a similar fashion, those who have higher levels of academic self-efficacy might employ more effective problem-solving and SRL strategies (Talsma et al., 2018). Academic self-efficacy can therefore affect students' self-confidence and the behaviors which lead to academic success.

Academic procrastination, however, is a potentially debilitating factor in achieving academic success, as compared to the facilitating role of internal locus of control and self-efficacy. Procrastination is the waste of time when people avoid doing something when they know that the consequences of doing it will be negative (Ferrari, 2010). Academic procrastination is the act of delaying academic tasks like study for exams, assignment submission, and writing academic papers as late as possible in the academic context (Hen & Goroshit, 2018). The repercussions of this may include late work, rushed work, increased stress, lack of completion and poor academic performance (Friedman, 2016). It's also possible that procrastination is manifested by avoiding, distracting from, or engaging in other non-academic activities when the required activity is seen as difficult, unpleasant, or demanding (Yan & Zhang, 2022). Further delay can cause stress and have a negative impact on students' mental health and performance as the deadlines approach (Balkis, 2011).

However, it is important to note that locus of control, academic self-efficacy, and academic procrastination should not be considered as independent constructs as they may have a relationship between them that will influence students' academic results. From previous studies, it is found that when a student has an internal locus of control, it leads to higher achievement, while an external locus of control can be linked to the lack of motivation and passive attitude in meeting academic problems (Peng & Kievit, 2020; Zysberg & Schwabsky, 2020). Self-efficacy in the academic field has also been linked positively to academic performance, but with not a consistent finding across studies (Mushtaque et al., 2021; Gordon, 2015). On the

other hand, procrastination is linked with disorganization, poor time management and problems with effective completion of learners' academic tasks (Howell & Watson, 2007; Scher & Osterman, 2002).

The literature as a whole highlight the need to investigate the synergy between psychological beliefs and academic behaviors in students' learning performances. The ability to explain differences in achievement might be achieved by understanding students' perceptions of their own responsibility for their academic results, sense of self-efficacy for success at academic tasks, and attitudes toward academic tasks that are not unnecessarily delayed. Considering this, the present study was focused on examining the relationship between locus of control, academic self-efficacy, academic procrastination and academic performance of school students. The study of these factors may yield evidence that has value in understanding factors that support or impede student success and may inform the design of learning-focused and self-efficacy-based counseling interventions and educational programs to enhance students' self-efficacy, personal responsibility, effective learning behaviors, and academic success (figure 1).

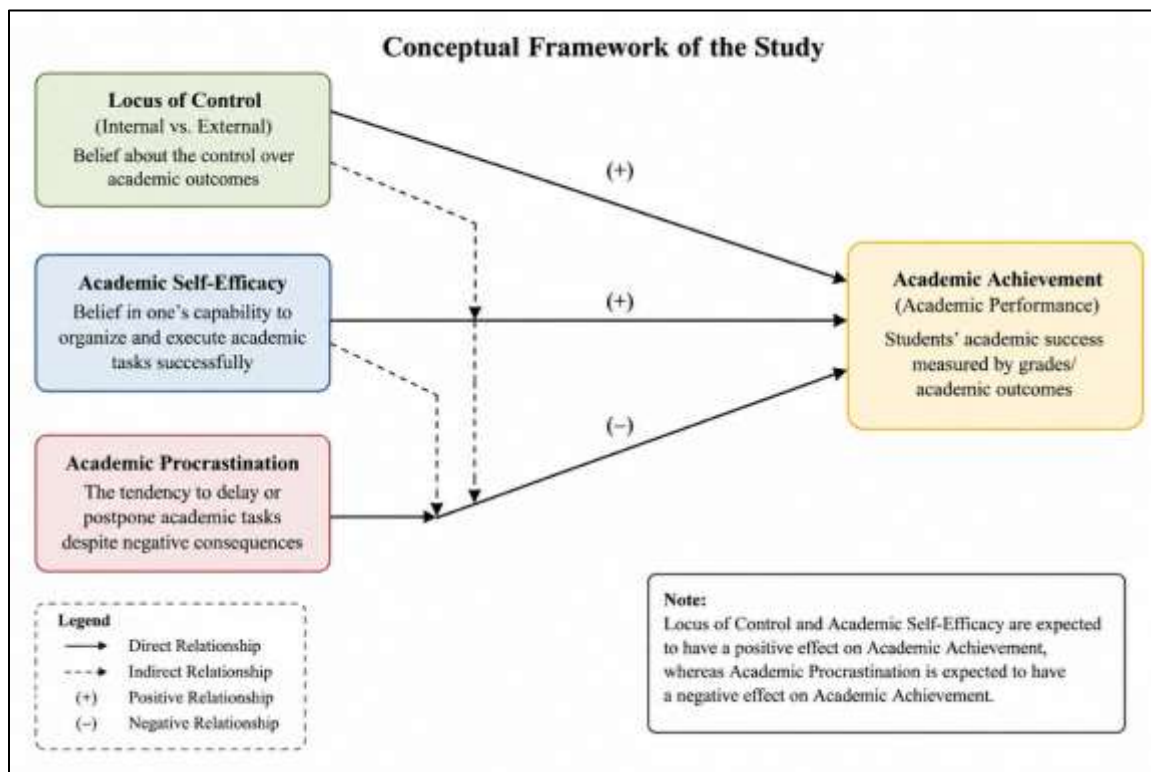


Figure 1 Conceptual Framework of Study

Hypotheses

H1. Lower achiever will score low on internal/ external locus of control, academic self-efficacy and will score high on academic procrastination.

H2. High achiever will score high on locus of control, academic self-efficacy and will score low on academic procrastination.

H3. There will be positive correlation between locus of control and academic self- efficacy.

H4. There will be negative relationship between academic self-efficacy and academic procrastination.

H5. Internal Locus of control and academic self-efficacy would positively affect academic achievement while academic procrastination would have the positive association with external locus of control.

H6. There will be no gender wise variation in Locus of Control, Academic procrastination and self-efficacy of students.

METHODS

Sample

The sample of the study was comprised of N=400 students out of which (n=200) from the public schools and (n=200) from private school. The data was obtained from a sample of (n=200) boys and (n=200) girls. An

age range of sample was between 12–18 years. Simple convenient sampling technique was employed to collect the data.

Inclusion Criteria

The study included students aged between 12 and 18 who met the criteria (Students from Class 9th to 2nd years, included low achievers and high achievers) for participation. Data was collected exclusively from schools both public and private, located in the Peshawar region.

Exclusion Criteria

Students who had any physical or mental disabilities and participants older than 18, were excluded from the study.

Instruments

Demographic Information Sheet

To gather demographic information, the researcher developed an information sheet. The sheet includes such variable as age, religion, family system, Area, Education, and government and private Institute.

Academic Procrastination Scale (Morales, 2010)

The scale was developed by Morales (2010) and used for measuring procrastination among adolescents. The scale comprises of 25 items and adopts a Likert-type response format with 1= Disagree and 5= Agree. The accuracy of the scale was evaluated through Cronbach's Alpha, yielding a coefficient of .94, indicating a high level of internal consistency (Morales, 2010).

Trice Academic Locus of Control Scale

Trice (1985) originally developed the scale, which has 28 items in a true/false format. The scale has two sub-dimensions (internal locus of control and external locus of control). The revised version maintains the same level of reliability as the original scale, with a Cronbach's alpha coefficient of 0.92. Additionally, the revised scale's validity remains consistent with the original version, with a reliability coefficient of 0.85 (Trice, 1985).

Academic Self-Efficacy Scale

The scale was constructed by Gafoor and Ashraf (2012). This scale comprises 40 items and a 5-point Likert scale, and participants are required to respond on a scale ranging from 1 to 5. The scale's reliability was assessed through test-retest method, resulting in a coefficient of 0.85. Additionally, the scale demonstrated high internal consistency, as indicated by a scale-halving reliability coefficient of 0.90.

Academic Achievement Scale

The study's Academic Achievement Scale is composed of 20 items that have been designed to measure different aspects of academic achievements, such as grades, examination marks, and overall success in academics. Each item has a five-point rating scale based on Likert's method, from "strongly disagree" (1 point) to "strongly agree" 22 (5 points). The total score is obtained by adding up all the 20 scores, giving a range between 20 and 100, with higher values indicating better educational performance. Scores between 20 and 39 indicate poor academic achievement, while scores ranging from 40 to 69 point towards moderate academic achievement. And finally, high academic achievement is indicated by scores within the range of 70–100. Reliability of the scale was 0.76 (Mushtaque et al., 2021).

Procedure

The data collection procedure commenced with the acquisition of formal permission from the relevant higher authorities of both public and private higher secondary schools. Following this, the researcher systematically gathered data from enrolled students at their institutions. Prior to their participation, prospective respondents received a detailed briefing outlining the objectives of the study and providing clarity on the questionnaires or scales utilized. The researcher placed particular emphasis on ensuring confidence in the strict confidentiality protocols implemented to safeguard personal information of the participants. The researcher thanked the participants for their time and cooperation in the end.

Data Analysis

The following statistical techniques were employed for data analysis. Descriptive analysis was utilized for demographic variables, while an independent sample t-test was conducted to compare the means between

higher achievers and lower achievers, private school students and public-school students. Additionally, correlation and regression analyses were employed to examine potential associations between variables.

RESULTS

Table 1 Socio-Demographic Information of the Sample (N=400)

Variable	Frequency	%	Mean (SDV)
Gender			
Boys	200	50.0	
Girls	200	50.0	
Age of Student			14.5 (5.6)
Institute			
Public School	175	43.7	
Private School	225	56.3	
Grades			
High Grades			
A+ (90% or above)	37	9.2	
A (80%–89%)	109	27.2	
B (70%–79%)	135	33.7	
Low Grades			
C (60%–69%)	32	8.0	
D (50%–59%)	55	13.8	
F (below 50%)	32	8.0	

The students' socio-demographic information (N = 400) is presented in Table 1.

Table 2 Psychometric Properties of the Scale

Scale	Items	M	SD	Skewness	Kurtosis	α
APS	25	26.1	9.3	.851	.081	.81
ALCS	28	55.1	19.5	.738	.079	.75
ASES	40	77.3	47.3	.538	.066	.93
AAS	20	27.8	18.3	.632	.059	.83

Note= APS= Academic Procrastination Scale, ALCS= Trice Academic Locus of Control Scale, ASES= Academic Self Efficacy Scale, AAS= Academic Achievement

Table 2 provides an overview of the psychometric characteristics of the scales employed. All the scale used in the current study is reliably for the current population.

Table 3 Correlation Analysis for Locus of control, academic self-efficacy, academic procrastination and academic achievement (N=400)

Variables	Internal Locus	External Locus	Academic Self-Efficacy	Academic Procrastination	Academic Achievement
1. Internal Locus	-		.40*	-.25*	.43*
2. External Locus		-	-.35*	.46*	-.48*
3. Academic Self-Efficacy			-	-.56*	.63*
4. Academic Procrastination				-	-.38*
5. Academic Achievement					-

Note: *p < .05

The results of this correlation analysis are presented in Table 3 for the relationship among locus of control, academic self-efficacy, academic procrastination, and academic achievement among schoolchildren (N = 400). Internal locus of control showed a moderate positive relationship with academic self-efficacy ($r = .40$, $p < .05$) and academic achievement ($r = .43$, $p < .05$), but it was weak negative correlation with academic

procrastination ($r = -.25, p < .05$). External locus of control exhibited a moderate negative association with academic self-efficacy ($r = -.35, p < .05$) and academic achievement ($r = -.48, p < .05$), while having a moderate positive relationship with academic procrastination ($r = .46, p < .05$). Moreover, there was a high positive correlation between scores on measures of academic self-efficacy and academic achievement ($r = .63, p < .05$) and a moderate negative correlation between scores on measures of academic procrastination ($r = -.56, p < .05$). Such that Academic Procrastination is weak negatively correlated with Academic Achievement ($r = 0.38, p < .05$). The current findings support Hypothesis 3,4 that internal locus of control, external locus of control, academic self-efficacy, and academic procrastination are significantly related to students' performance in school.

Table 4 Multiple Regression Analysis Predicting Academic Achievement (N=400)

Predictor Variable	B	SE	β	t	p
Internal Locus	0.32	0.07	0.28	4.57**	.008
External Locus	-0.29	0.06	-0.25	-4.83**	.005
Academic Self-Efficacy	0.41	0.05	0.37	8.20**	.003
Academic Procrastination	-0.26	0.08	-0.21	-3.25**	.006
Model statistic: $F(4, 395)$; $R^2 = 0.53$					

The result of the table 4 show multiple regression analysis reveals that internal locus of control, external locus of control, academic self-efficacy, and academic procrastination are significant predictors of academic achievement among school students (table 4). The results suggested internal locus of control and Academic self-efficacy which positively predict academic achievement, while external locus of control and academic procrastination negatively predicted academic achievement. These results support the hypothesis of the study.

Table 5 Independent Sample T-Test for Gender Differences on the Scale of Locus of Control, Self-Efficacy, Academic Procrastination and Academic Achievement (N=400)

Variables	Boys (n = 200) M $\pm$ SD	Girls (n = 200) M $\pm$ SD	t (398)	p	Cohen's d
Internal Locus	3.75 $\pm$ 0.65	3.90 $\pm$ 0.60	-2.45*	<.04	0.24
External Locus	4.10 $\pm$ 0.70	4.00 $\pm$ 0.66	1.50	>.07	0.14
Academic Self-Efficacy	3.55 $\pm$ 0.68	3.70 $\pm$ 0.64	-2.30*	<.025	0.23
Academic Procrastination	3.00 $\pm$ 0.71	2.85 $\pm$ 0.69	2.15*	<.031	0.22
Academic Achievement	75.80 $\pm$ 10.50	78.20 $\pm$ 9.80	-2.55*	<.041	0.26

In Table 5, results of independent samples t-tests indicated gender disparity in internal locus of control, academic self-efficacy, academic procrastination, and academic achievement among school students. Girls had significantly higher scores than boys as regards the internal locus of control ($t(398) = -2.45, p = 0.04, d = 0.24$), academic self-efficacy ($t(398) = -2.30, p = 0.025, d = 0.23$), and academic achievement ($t(398) = 2.55, p = 0.041, d = 0.26$). Conversely, boys had significantly higher scores than girls on academic procrastination ($t(398) = 2.15, p = 0.031, d = 0.22$). The gender difference was not significant in the external locus of control ($t(398) = 1.50; p > .07$).

Table 6 Differences between Low- and High-Grade Achievers on Locus of Control, Self-Efficacy, and Procrastination and Academic Achievement among School Students (N=400)

Variables	High Grade (M $\pm$ SD)	Low Grade (M $\pm$ SD)	t (398)	p	Cohen's d
Internal Locus	3.95 $\pm$ 0.60	3.60 $\pm$ 0.65	5.60**	<.006	0.56
External Locus	3.80 $\pm$ 0.70	4.20 $\pm$ 0.68	-5.20**	<.003	0.52
Academic Self-Efficacy	3.80 $\pm$ 0.65	3.50 $\pm$ 0.68	4.70**	<.006	0.47
Academic Procrastination	4.75 $\pm$ 0.69	3.15 $\pm$ 0.71	-6.00**	<.004	0.60
Academic Achievement	80.0 $\pm$ 8.5	60.00 $\pm$ 9.00	19.80**	<.002	1.98

Regarding locus of control, academic self-efficacy, academic procrastination, and academic achievement among school students (N = 400), Table 6 compares the high- and low-grade achievers. Internal locus of control scores was significantly better in high grade achievers than low grade while external locus of control scores was higher in low grade achievers compared to high grade achievers. High grade achievers scored significantly high in academic self-efficacy, whereas low grade achievers had high level of academic procrastination when compared to high grade ones. Finally, there was a considerable difference in academic achievement between the two groups. The results support the H1 and H2 hypothesis.

DISCUSSION

The aim of the current study was to explore the difference between locus of control, academic self-efficacy, academic procrastination, and academic achievement among school students in Pakistan, with a focus on comparing public school students and private school students. These variables exhibited significant differences, as public-school students performed better in terms of external locus of control, whereas their counterparts scored higher in internal locus of control, academic self-efficacy, and academic achievement. The obtained results are like those reported in various national and international research studies, implying that the school environment significantly determines how students behave academically. In this regard, Pakistani education researchers have carried out extensive studies into the concept of locus of control, primarily within the context of educational achievement. The first hypothesis in this study was to see there is likely to be significant relationship between locus of control, academic self-efficacy, academic procrastination, and academic achievement among school students. In Table 3, the correlation analysis showed significant relationships between internal locus of control, academic self-efficacy, academic procrastination, and academic achievement. Concretely, academic achievement was positively correlated with both internal locus of control and academic self-efficacy, while it was negatively correlated with academic procrastination. They also agree with other research findings that assert that students who have confidence in their abilities and think they have influenced their outcomes academically do better (Albert & Dahling, 2016). On the contrary, procrastinating students tend to perform poorly academically, as noted by Steel (2007) about the negative effects of procrastination on academics. Notably, the external locus of control had a positive relationship with academic procrastination but a negative one with academic performance. It shows that students who believe they owe their success or failures in education to outside influences like chance or destiny are more likely to postpone studying tasks and fail. These results reinforce previous studies within similar educational settings where an external locus of control has been linked to low motivation levels and poor grades (Hosseini et al., 2016).

According to second hypothesis, the locus of control, self-efficacy, and procrastination predicts of academic achievement among school students. The regression analysis (Table 4) shows the significant predictors of academic achievement in school students are internal locus of control, academic self-efficacy, and academic procrastination. The positive predictors were found to be internal locus of control and academic self-efficacy, while academic procrastination was a negative predictor. These findings emphasize that students with a high level of self-confidence about their learning skills and those who believe they influenced their success rate within the field are more likely to perform well academically. This conclusion is in line with Bandura's (1997) theory on sense of self, which states that, those students who have strong belief in their own capabilities will take on difficult tasks and persist through adversity. Academic self-efficacy has consistently emerged as an important predictor of academic outcomes since students with higher levels of this measure assess themselves as being more capable at learning, setting higher goals for themselves, using better learning strategies, and being able to bounce back from setbacks (Peng & Kievit, 2020).

Furthermore, Gafoor and Ashraf (2012) note through their research that there is a connection between self-efficacy and not only scholastic performance but also intrinsic motivation development, thereby culminating in better grades. The literature also supports a positive association between internal locus of control and academic achievement. Students believe that if things do not go as planned, it is because they did not try hard enough or study adequately. This personal responsibility plays an important role in promoting students' achievement, hence empowering them to seek out resources as well as support whenever necessary. Eckert et al. (2016) stated that "students who accept personal responsibility for learning seek information actively." At the same time, individuals holding this belief tend to exhibit higher persistence rates compared to others, thereby helping them achieve highly (Cheng, 2020).

On the other hand, results showed that academic procrastination was a significant negative predictor of academic achievement. This finding is consistent with a substantial body of research demonstrating that procrastination is detrimental to academic performance (Fleet, 2017). It often reveals into lower grades,

higher stress levels, and an increased likelihood of dropping out. This usually involves putting off starting and finishing assignments, which consequently leads to hurriedly done work with poor quality and lateness in submission time (Goroshit, 2018). Moreover, according to Hayat et al. (2020), procrastination also leads to low self-efficacy for academic task completion and a preference for avoidance as a coping strategy. In this context, procrastination lowers the level of self-efficacy towards schoolwork, leading students to delay it even further. Therefore, addressing issues such as goal setting, time management, or association regulation is necessary interventions to enhance academic performance (Honicke & Broadbent, 2016).

These findings are relevant within the Pakistani context, where there is a cultural attachment to academic success and high expectations from families and society. Analyzing research conducted in Pakistan has shown that those students with an internal locus of control and higher self-efficacy tend to excel academically since students are more likely to embrace their learning while persisting despite challenges (Hen & Goroshit, 2018). On the other hand, procrastination is one key issue faced by students in Pakistan, which worsens with stressors within the education system, leading to poor academics and mental health problems (Mushtaque et al., 2021). In the third hypothesis it is examined gender differences on the scale of locus of control, self-efficacy, and procrastination and academic achievement among school students. When examined in terms of gender (Table 5), these findings are consistent with previous research, which has shown that female students have higher levels of self-efficacy for learning and tend to attribute their success or failure to their own efforts (Sisk et al., 2018). The low levels of academically procrastinating behaviors among male respondents are the part of the reason why they do poorly in school, as this is often associated with poor grades as well as academic problems (Steel, 2007). These gender differences show the need for gender-specific interventions to help students change their educational behaviors so that they can improve performance.

In the current research in fourth hypothesis, it was hypothesized that differences low- and high-grade achievers of locus of control, self-efficacy, and procrastination and academic achievement among school students. In Table 6, a comparison between low- and high-grade achievers showed notable variations in locus of control, academic self-efficacy, academic procrastination, and academic achievement. High achievers had higher scores for internal locus of control and academic self-efficacy and lower scores for academic procrastination compared to low achievers. These differences imply that high achievers are more likely to believe that they could control their outcomes in academics, have more confidence in their abilities as learners, and have fewer tendencies to put things off.

These findings are consistent with previous research, which has established that internal locus of control and self-efficacy correlate positively with academic performance, while procrastination is a common tendency among underperformers (Türel & Dokumaci, 2022). This study has highlighted the negative consequences for educational quality as well as the resources that are available in public schools relative to private schools within Pakistan. This means that most of the time they have better teachers who are more qualified because they are trained by professionals instead of an automated system that does not work perfectly with all its members. Other features include small class sizes, thus creating a conducive learning environment where most children can learn effectively. The better internal locus of control observed among private school-going students is due to such factors as smaller numbers in classes, the availability of highly skilled tutors, and more resources both online and offline for extracurricular activities. It is important to note that these findings are useful as future research directions since this country has a large enough sample size. However, overcrowded classrooms, a lack of individual attention, and inadequate teaching materials often characterize learning environments in public schools, thereby hampering student progress academically. In such circumstances, students developed an external locus of control whereby they believe their grades are governed by fate or teachers' favoritism rather than personal efforts (Yokoyama, 2019). Despite that, it is vital to highlight that learners who struggle with time management link it to external attributions, more specifically low motivation believing that unless they are lucky enough to attain credits without any effort or are not chosen for discrimination by a tutor, studying will not yield anything, and this is reflected in their poor academic performance seen among government institution attendees.

Limitations of study

This study involved four hundred students of selected public and private schools, which may not represent all students in different parts of the country or educational contexts. As a result, this makes the generalizability of the findings problematic. The data were collected at one point in time in such a way that it becomes difficult to understand how shifts in locus of control, self-efficacy, procrastination, and academic achievement have evolved over time. Information was collected through self-reported questionnaires, which can introduce bias into responses due to social desirability response set or lack of insight into self.

Future Research Suggestion

In later research, students from different places and education systems should be used so that there are more generalizable results found. Conduct studies that follow students over time to understand how changes in locus of control, self-efficacy, and procrastination affect academic achievement. Use objective data like academic records and behavioral observations along with self-reports to avoid bias and improve accuracy. Different cultural and educational settings could also be examined by comparing findings with similar studies carried out elsewhere to identify models for variables affecting achievement across nations. Examine other factors like familial supportiveness, teacher effectiveness, and socioeconomic class, among others, to obtain a more comprehensive understanding of what affects school performance.

CONCLUSION

Psychological factors play a major role in academic success, as indicated by this study. An internal locus of control and academic self-efficacy emerged as significant positive predictors of academic success, highlighting the need to foster students' sense of personal control and competence. Conversely, an external locus of control and academic procrastination were found to have negative effects on academic performance which implies that it is counterproductive to attach blame to external forces and avoid academic tasks. Gender differences were shown whereby girls tended to possess qualities that support their success in school such as a stronger internal locus of control and higher self-efficacy while boys tend toward procrastination. In view of these findings, it is suggested that educational interventions should focus on promoting students' internal locus of control and self-efficacy while at the same time addressing procrastination tendencies. This would enable instructors to provide psychological tools necessary for better student performance academically thus improving educational outcomes over time.

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