

Impact of Procrastination on College Management: A Gender-Based Comparative Study of Government Colleges in Khyber Pakhtunkhwa

Naeem Akhtar¹, Tahir Naseem², Azhar Mehmood³

ABSTRACT

This study aims to assess and compare the level of procrastination among principals and vice Principals of public sector colleges operating under the Higher Education Department across various districts of Khyber Pakhtunkhwa. A structured questionnaire was administered to 100 randomly selected respondents—50 from male colleges and 50 from female colleges—drawn from districts including Abbottabad, Mansehra, Haripur, Battagram, Swabi, Peshawar, Swat, Malakand, Dir, Kohat, and Chitral. The instrument focused on measuring procrastination in decision-making under pressing circumstances, utilizing a Procrastination Quotient (PQ) calculated from weighted responses across four agreement levels. Data were analyzed using Microsoft Excel 2013, and findings were presented through descriptive statistics, tables, and graphs. Results reveal a significant prevalence of procrastination among college administrators, with male college principals demonstrating relatively lower PQ scores compared to their female counterparts. This suggests that male administrators exhibit more effective time management and decision-making practices. In contrast, higher procrastination levels in female colleges may be influenced by a combination of psychological, institutional, and socio-familial factors. While the current study focuses specifically on gender-based differences in procrastination, future research may extend to broader institutional, psychological, and organizational dynamics influencing college leadership performance. The study concludes that procrastination is a key barrier to efficient college administration, particularly in female-led institutions. It provides a foundation for future research and underscores the need for targeted administrative training, leadership development, and time management interventions to enhance governance in KP's higher education sector.

Keywords: Public sector colleges, Female colleges, Male Colleges, Procrastination Quotient

INTRODUCTION

Education is directly related to the development of an individual and the community. It is the most important single factor for economic development as well as social emancipation (Patil,

¹ Professor, Government Degree College Khanpur, Haripur, Pakistan. **Corresponding Author's Email: naeemakhtar725@gmail.com**

² Government Degree College Khanpur, Haripur, Pakistan.

³ Government Postgraduate College Mandian, Abbottabad, Pakistan

2012). Education is one of the influential instruments of social change, economic development and solution of our problems. It has led to the mobilization of peoples' aspirations for development and change. Thus, in modern complex national societies, education can neither be regarded as a controlling force conserving cultural heritage, nor could it be viewed as an agent of social change. Only quality education can ensure economic, social, mental, psychological and emotional growth of individuals on the right direction (Nawaz et al 2011). It can only be regarded as a force in bringing about changes in the society, but conditionally if the educational institutes have good management. Decision making capability improves the management of an organisation (Rajput, 2004).

There are many factors which negatively affect the efficiency of college management. One of those factors is procrastination. Our review of literature reveals that no research work is available on this important issue.

Procrastination, broadly defined as the voluntary delay of important tasks despite foreseeable negative consequences, has been widely studied in educational contexts. It is increasingly recognized not just as an individual behavioral issue but as a systemic organizational concern (Hen, 2018). In academic institutions, procrastination affects not only student performance but also the efficiency and effectiveness of administration.

Hen (2018) analyzed procrastination in unique educational workplaces and found it closely tied to workplace stress, decision avoidance, and unclear task structuring. Similarly, Cömert and Dönmez (2019) identified procrastination and workload mismanagement as critical challenges facing school administrators. These issues can lead to long-term inefficiencies, burnout, and diminished institutional output.

Litvinova et al. (2019) argued that procrastination represents a threat to the psychological security of the educational environment, particularly when displayed by those in leadership roles. Other studies such as Sirin (2011) and Fentaw, Moges, and Ismail (2022) emphasized how lack of motivation and poor time management skills contribute to the delay of both academic and administrative responsibilities.

Afzal and Jami (2018) observed a high prevalence of academic procrastination in university students, while Abu and Saral (2016) suggested that faculty procrastination behaviors also influence institutional culture. This becomes particularly important in hierarchical institutions where leadership behavior sets the tone for organizational discipline.

Özberk and Kurtça (2021) conducted a cross-cultural study using latent profile analysis and concluded that procrastination tendencies are not only shaped by personal attributes but also institutional expectations. Gender also plays a role: studies by Saplavaska and Jerkunkova (2018) and Ayub et al. (2025) point to the impact of social roles and familial obligations on increased procrastination among female educators and administrators.

Additional research by Balkis and Duru (2017), Steel (2007), and Tuckman (2002) further underlines that procrastination correlates with poor performance, higher stress, and reduced satisfaction—especially when left unaddressed in positions of authority.

In Khyber Pakhtunkhwa, the Higher Education, Archives and Libraries Department (HEA&LD) is tasked with overseeing and enhancing higher education and research across the province. Colleges are the frontline institutions of this department and are instrumental in providing accessible higher education to the youth in their respective districts.

Each Government Postgraduate College is managed by a Grade-20 senior professor as the principal, supported by a vice principal. The hierarchical structure, as given in Fig. 1, defines clear administrative roles but often faces functional inefficiencies.

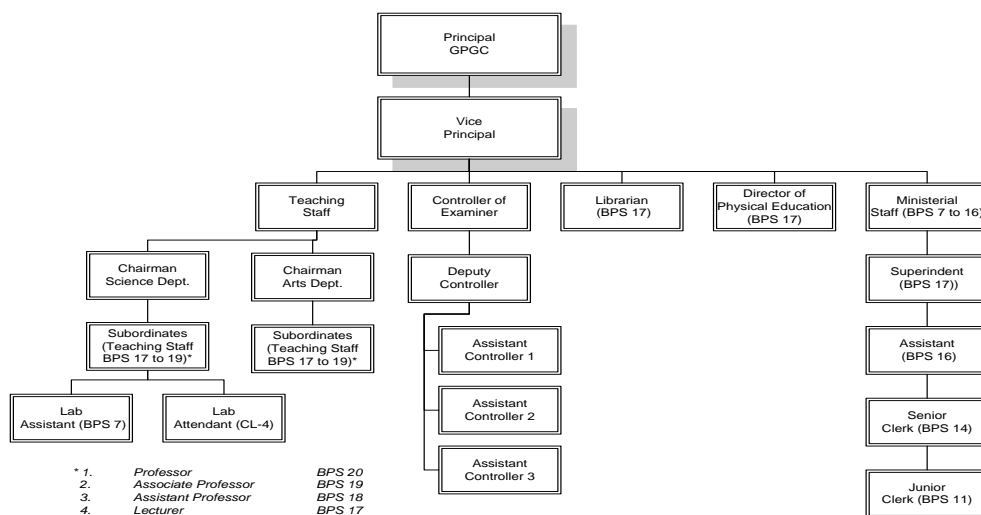


Figure 1. Hierarchy of College Management (anonymous 2014).

However, in practical terms, these responsibilities are often undermined by administrative challenges such as poor time management, crisis handling, and decision paralysis. One significant and under-addressed issue is procrastination, especially among college principals and senior faculty. The lack of awareness regarding time utilization leads to delays in academic planning, budget approvals, and resource allocation—ultimately contributing to stress and inefficiency.

This context highlights the need for a closer examination of procrastination in college management to assess its impact and suggest organizational interventions.

While substantial literature exists on student procrastination and faculty behavior, there remains a notable lack of empirical studies on procrastination among college administrators,

especially within the public sector in developing regions like Khyber Pakhtunkhwa. Despite the crucial role of principals in operationalizing education policy and guiding institutional direction, their behavioral patterns—including procrastination—remain underexplored.

Moreover, few studies have compared procrastination tendencies across male and female college administrators, even though existing evidence suggests gendered differences due to varying psychological, professional, and familial pressures. This study fills that gap by quantitatively assessing procrastination among college leadership in KPK, offering insights for policy, training, and administrative reform to improve organizational efficiency in the public higher education sector. The research is theoretically influenced by behavioral decision-making and time management theories, which frame procrastination as a self-regulatory failure that hinders timely action and effective leadership. These frameworks guide our understanding of procrastination not merely as an individual flaw but as an organizational behavior that has implications for institutional performance and administrative outcomes.

Objectives of the Study

The primary objectives of this study were:

- i. To assess the extent of procrastination among principals and vice principals of public sector colleges in Khyber Pakhtunkhwa.
- ii. To compare the procrastination levels between the leadership of male and female government colleges in the region.

Hypothesis

The following hypothesis was formulated for the research study (Hen, 2018; Litvinova et al., 2019; Cömert & Dönmez, 2019; Afzal & Jami, 2018; Özberk & Kurtça, 2021):

“Procrastination significantly affects college management in public sector colleges of Khyber Pakhtunkhwa, and the level of procrastination (as measured by PQ) differs notably between male and female principals.”

RESEARCH METHODOLOGY

This research employed a quantitative survey method to assess the degree of procrastination among college administrators. Data was gathered using a structured questionnaire adapted from Ferner (2003) from a sample of 100 respondents—comprising 50 male and 50 female Principals and Vice Principals—working in government colleges under the Higher Education Department of Khyber Pakhtunkhwa (KPK).

The primary objectives of this study were:

- i. To assess the extent of procrastination among principals and vice principals of public sector colleges in Khyber Pakhtunkhwa.

- ii. To compare the procrastination levels between the leadership of male and female government colleges in the region.

In addition to measuring and comparing procrastination, the study also aimed to establish a baseline for future research on administrative time management in public sector education. The findings are expected to raise awareness among educational policymakers and practitioners regarding the impact of procrastination on institutional effectiveness. Furthermore, the results inform practical recommendations for leadership training and time management strategies, to enhance administrative efficiency in government colleges.

Participants were selected through random sampling from various districts, including Abbottabad, Mansehra, Haripur, Battagram, Swabi, Peshawar, Swat, Malakand, Dir, Kohat, and Chitral. The primary objective was to evaluate how these administrators handle decision-making under pressure and to quantify their level of procrastination.

The questionnaire was developed based on a previously validated framework for procrastination behavior, adapted from Ferner (2003). This tool has been used to assess procrastination in managerial and professional settings and was customized here to reflect the specific administrative context of government colleges.

Each item was designed to capture behavioral tendencies in decision-making under administrative pressure. The four-option Likert-style responses (Strongly Agree to Strongly Disagree) were selected to avoid neutral choices and encourage clear self-reflection, consistent with suggestions by Afzal & Jami (2018) and Özberk & Kurtça (2021).

The questionnaire consisted of an Opinion Pool comprising 10 items, each targeting common procrastination-related behaviors. For each statement, respondents selected one of four options:

- Strongly Agree
- Mildly Agree
- Mildly Disagree
- Strongly Disagree

Each response was assigned a weighted score according to a scale adapted from Ferner (2003). The total score for each participant was calculated by multiplying the frequency of each response category with its corresponding weight and summing the results across all items. This cumulative score was labeled the Procrastination Quotient (PQ).

A sample of the Procrastination Quotient Opinion Pool Form is presented in Table 1. The resulting PQ values were later categorized to identify participants as Non-Procrastinators ($PQ \leq 20$), Mild Procrastinators ($PQ 21-30$), or Severe Procrastinators ($PQ \geq 31$).

Microsoft Excel 2013 was used for data entry and analysis. Descriptive statistics (frequencies and percentages) were employed to interpret and present the findings in both tabular and graphical formats.

Table 1: Procrastination Quotient Questionnaire.

Sr. No	Statement	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
1	I invent reasons and look for excuses for not acting on a tough problem.				
2	It takes pressure to get on with a difficult assignment.				
3	I take half-measures that avoid or delay unpleasant or difficult action.				
4	There are too many interruptions and crises that interfere with big jobs.				
5	I avoid straightforward answers when pressed for an unpleasant decision.				
6	I have neglected the follow-up aspects of important action plans.				
7	I try to delegate unpleasant assignments to others.				
8	I schedule big jobs late or postpone them to evenings or weekends.				
9	I have been too tired or emotionally unwell to address difficult tasks.				
10	I prefer to clear minor tasks before starting difficult assignments.				

Scoring Method:

- Strongly Agree $\times 4$
- Mildly Agree $\times 3$
- Mildly Disagree $\times 2$
- Strongly Disagree $\times 1$

After tallying the responses and applying the weightage, compute the Total Score (PQ):

Procrastination Quotient (PQ) = Sum of all weighted responses.

DATA ANALYSIS

This study utilized a structured quantitative approach to assess the extent and severity of procrastination among college principals and vice principals in public sector institutions across Khyber Pakhtunkhwa. Data was collected through a ten-item questionnaire from 100 respondents—50 from male colleges and 50 from female colleges—selected through random sampling from multiple districts.

Operational Definitions of Variables

To ensure consistency and clarity in measurement, the following key variables were operationally defined:

Procrastination: Defined as the deliberate delay in initiating or completing essential administrative tasks, despite the anticipation of negative outcomes (Hen, 2018; Ferner, 2003). In this context, it reflects the tendency of college administrators to postpone decisions and actions under institutional pressures.

Procrastination Quotient (PQ): A quantifiable score derived from the respondents' answers to a ten-item questionnaire, each rated on a 4-point Likert scale (Strongly Agree = 4, Mildly Agree = 3, Mildly Disagree = 2, Strongly Disagree = 1). The total score reflects the level of procrastination and is classified as follows:

- **Non-Procrastinators:** $PQ \leq 20$
 - **Mild Procrastinators:** $21 \leq PQ \leq 30$
 - **Severe Procrastinators:** $PQ \geq 31$
- (Adapted from Ferner, 2003; Afzal & Jami, 2018)

College Management Efficiency: Although not directly measured, this construct is inferred through the PQ. A lower PQ indicates better time management, decisiveness, and overall administrative efficiency (Litvinova et al., 2019; Cömert & Dönmez, 2019).

Gender: Used as a categorical variable (male or female) to enable comparative analysis of procrastination levels across male and female college administrators.

These definitions formed the basis for analysis, helping contextualize the relationship between procrastination and college management.

Data Analysis Procedure

After data collection, responses were organized, coded, and entered into **Microsoft Excel 2013**. Each questionnaire response was scored using the weighted scale, and the **Procrastination Quotient (PQ)** was computed for every participant by summing their individual scores across the 10 items.

The resulting PQ scores were grouped into three categories to facilitate analysis:

- **Non-Procrastinators:** $PQ \leq 20$
- **Mild Procrastinators:** $21 \leq PQ \leq 30$
- **Severe Procrastinators:** $PQ \geq 31$

The distribution of PQ scores was analyzed in terms of **frequency and percentage**, and the findings were presented in both **tabular** (Table 2 and Table 3) and **graphical formats** (Figures 2–6). This allowed for a comprehensive comparative analysis between male and female college administrators in terms of procrastination behaviors.

This analytical framework enabled the identification of procrastination trends and their implications for administrative effectiveness in KPK's public college sector.

RESULTS AND DISCUSSIONS

This study was conducted to evaluate and compare the degree of procrastination among principals and vice principals of male and female government colleges in Khyber Pakhtunkhwa (KPK). The sample consisted of 100 respondents (50 male and 50 female), selected from different districts including Abbottabad, Mansehra, Haripur, Battagram, Swabi, Peshawar, Swat, Malakand, Dir, Kohat, and Chitral.

Data were collected using a standardized questionnaire designed to measure the Procrastination Quotient (PQ) based on respondents' decision-making behavior in various administrative scenarios. Each response was assigned a weight (Strongly Agree = 4, Mildly Agree = 3, Mildly Disagree = 2, Strongly Disagree = 1), and scores were totaled to compute each respondent's PQ.

Procrastination Quotient (PQ) Scores across Colleges

The PQ scores of each of the 100 colleges (male and female) are shown in Table 2. These scores were categorized based on a standardized criterion into three levels: Non-Procrastinators, Mild Procrastinators, and Severe Procrastinators.

Table 2: PQ values of different male and female colleges of Khyber Pakhtunkhwa.

Male Colleges	PQ	Female Colleges	PQ
MC1	11	FMC1	15
MC2	17	FMC2	11
MC3	18	FMC3	39
MC4	19	FMC4	35
MC5	20	FMC5	32
MC6	22	FMC6	12
MC7	20	FMC7	20
MC8	22	FMC8	30
MC9	20	FMC9	31
MC10	22	FMC10	12
MC11	20	FMC11	21
MC12	23	FMC12	29
MC13	20	FMC13	30

Male Colleges	PQ	Female Colleges	PQ
MC14	23	FMC14	29
MC15	20	FMC15	28
MC16	23	FMC16	29
MC17	26	FMC17	11
MC18	27	FMC18	29
MC19	25	FMC19	27
MC20	24	FMC20	28
MC21	29	FMC21	28
MC22	28	FMC22	25
MC23	28	FMC23	26
MC24	28	FMC24	15
MC25	28	FMC25	23
MC26	27	FMC26	22

Male Colleges	PQ	Female Colleges	PQ
MC27	29	FMC27	23
MC28	30	FMC28	22
MC29	29	FMC29	20
MC30	31	FMC30	22
MC31	30	FMC31	38
MC32	35	FMC32	21
MC33	32	FMC33	37
MC34	35	FMC34	11
MC35	39	FMC35	32
MC36	32	FMC36	17
MC37	24	FMC37	20
MC38	21	FMC38	36
MC39	19	FMC39	38

Male Colleges	PQ	Female Colleges	PQ
MC40	22	FMC40	38
MC41	29	FMC41	21
MC42	31	FMC42	21
MC43	21	FMC43	32
MC44	21	FMC44	35
MC45	33	FMC45	36
MC46	36	FMC46	31
MC47	33	FMC47	30
MC48	35	FMC48	32
MC49	21	FMC49	28
MC50	16	FMC50	38

Summary of Procrastination Levels

The scores from Table 2 were categorized and summarized in Table 3, showing the distribution of procrastination levels.

Table 3: Categorization of Procrastination Levels in Government Colleges of Khyber Pakhtunkhwa.

Procrastination Level	Range of PQ	Number of Colleges	Percentage
Non-Procrastinators	$PQ \leq 20$	23	23%
Mild Procrastinators	$21 \leq PQ \leq 30$	50	50%
Severe Procrastinators	$PQ \geq 31$	27	27%

Interpretation of Findings

Non-Procrastinators (23%): These college heads demonstrated strong decision-making capabilities and effective administrative management. Their institutions may serve as models for best practices across the province.

Mild Procrastinators (50%): Representing half of the sample, this group reflects common managerial inefficiencies but not severe dysfunction. With appropriate training and administrative support, their performance could be significantly improved.

Severe Procrastinators (27%): This is an alarming proportion that requires immediate intervention. Colleges falling into this category are likely suffering from weak administrative oversight, delayed decisions, and poor responsiveness to pressing challenges.

These trends are shown in Figure 2 below.

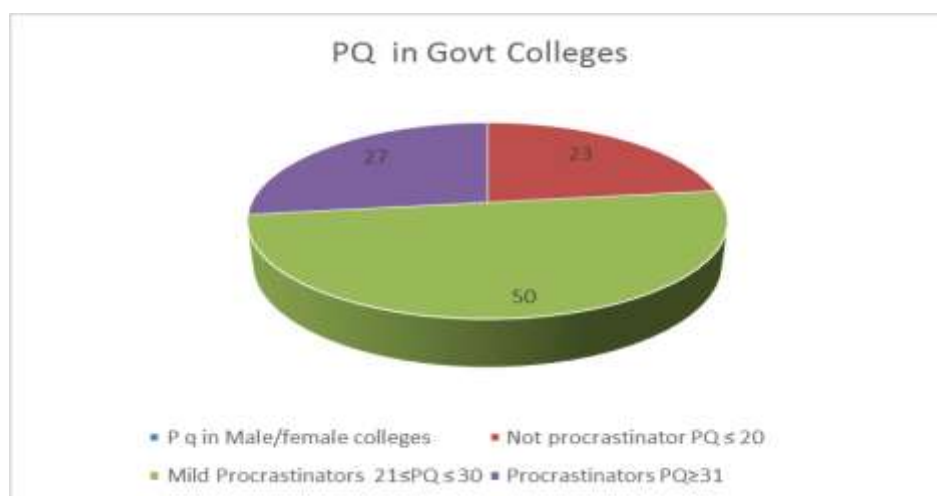


Figure 2: General Procrastination in Government Colleges of KPK.

Comparison of Male and Female College Administrators

To further understand the distribution of procrastination behavior, a comparative analysis between male and female college management was conducted.

Procrastination in Female Colleges

Out of 50 female colleges it is observed that:

- 11 (22%) are Non-Procrastinators
- 23 (46%) are Mild Procrastinators
- 16 (32%) are Severe Procrastinators

The detail is presented in the form of table 4 which is given as under.

Table 4: Procrastination Range in Female Colleges.

Procrastination Category	PQ Range	No. of Colleges	Percentage
Non-Procrastinators	$PQ \leq 20$	11	22%

Procrastination Category	PQ Range	No. of Colleges	Percentage
Mild Procrastinators	$21 \leq PQ \leq 30$	23	46%
Severe Procrastinators	$PQ \geq 31$	16	32%

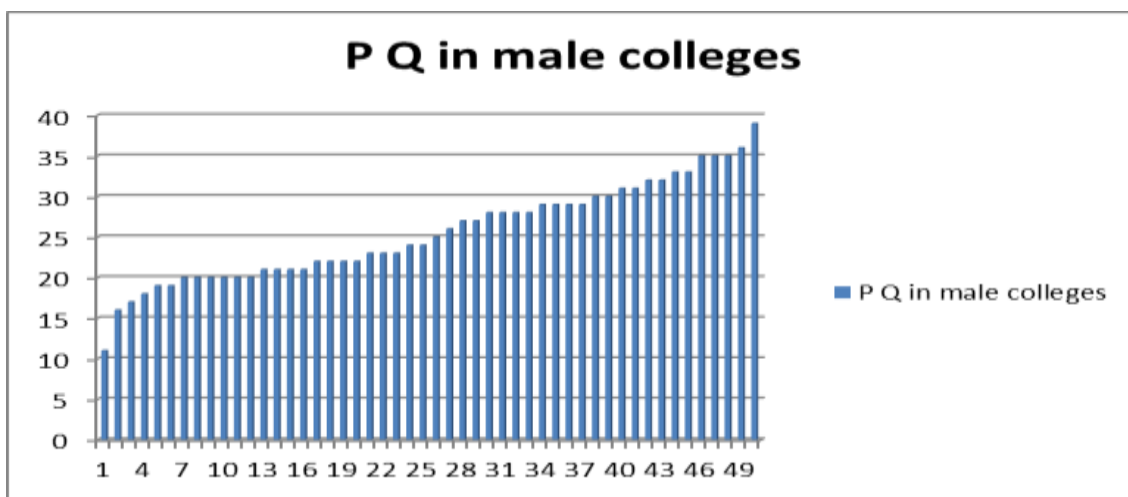


Figure 3: PQ Level in Female Colleges Administrators

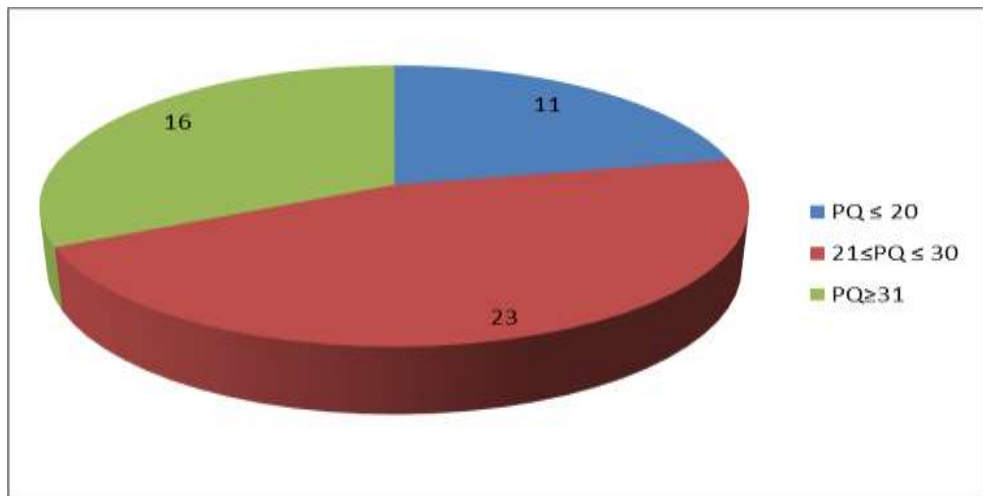


Figure 5: Procrastination in Female Colleges

Figures 3 and 5 show a concerning trend, where nearly one-third (32%) of the female college leadership demonstrate high procrastination behaviour. While 46% fall into the mild category, the existence of a substantial percentage of Severe Procrastinators raises concerns about the effectiveness of institutional leadership, and highlights the need for support mechanisms or professional development for female administrators.

Procrastination in Male Colleges

For the male colleges:

- **12** (24%) are Non-Procrastinators
- **27** (54%) are Mild Procrastinators
- **11** (22%) are Severe Procrastinators

The above data is presented in the Table 5 as:

Table 5: Procrastination Range in Male Colleges.

Procrastination Category	PQ Range	No. of Colleges	Percentage
Non-Procrastinators	$PQ \leq 20$	12	24%

Procrastination Category	PQ Range	No. of Colleges	Percentage
Mild Procrastinators	21 \leq PQ \leq 30	27	54%
Severe Procrastinators	PQ \geq 31	11	22%

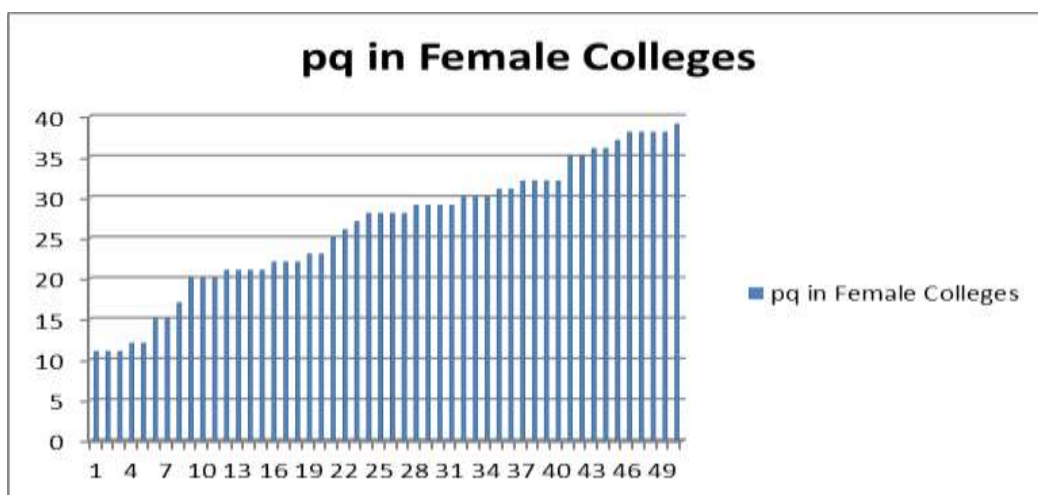


Figure 4: PQ Level in Male College Administrators

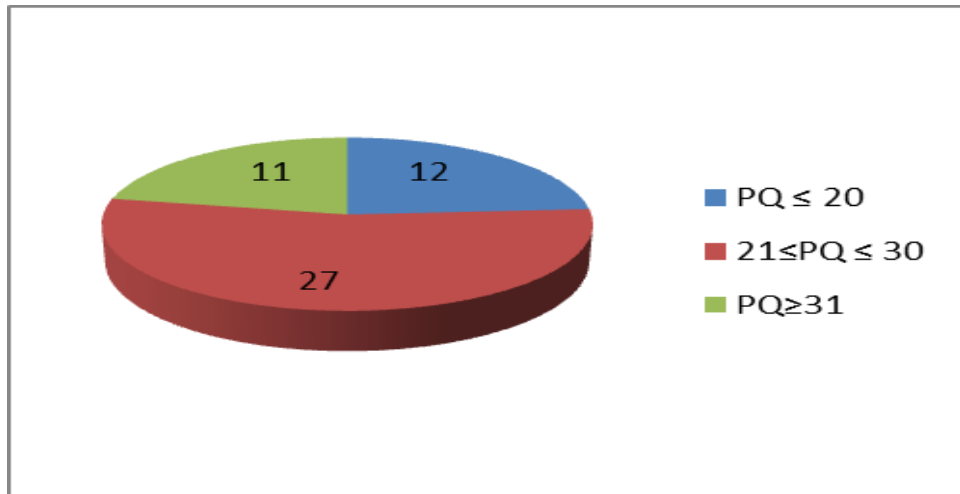


Figure 6: Procrastination in Male Colleges

Figures 4 and 6 indicate that while a majority of male college administrators are mild procrastinators, the percentage of severe procrastinators (22%) is slightly lower than that of female administrators. This suggests relatively better time and task management among male administrators but still highlights significant room for improvement.

Implications

The data reflect a significant management issue across Khyber Pakhtunkhwa's public colleges. Delays in administrative action due to procrastination can hinder academic performance, disrupt policy implementation, and affect institutional integrity. The findings call for interventions such as:

- Leadership development programs
- Time management training
- Performance-based accountability measures
- Enhanced administrative autonomy, particularly for female colleges.

CONCLUSION

Based on the findings of this study, it is evident that procrastination poses a significant hindrance to effective management in government colleges across Khyber Pakhtunkhwa. The data confirm the initial hypothesis that procrastination is a critical challenge in the administrative performance of college leadership, affecting both planning and decision-making processes.

The analysis of Procrastination Quotient (PQ) scores from 100 colleges—comprising equal representation from male and female institutions—revealed that approximately 23% of administrators fall within the non-procrastinator category ($PQ \leq 20$), 50% exhibit mild procrastination ($21 \leq PQ \leq 30$), while a concerning 27% demonstrate severe procrastination ($PQ \geq 31$). These results underscore a widespread presence of procrastination tendencies, with potentially negative implications for institutional productivity and governance.

A gender-based comparison further revealed that principals and vice principals in female colleges exhibit a higher proportion of severe procrastination (32%) compared to their male counterparts (22%). This disparity may be attributed to a combination of psychological stressors, institutional constraints, and increased familial obligations that disproportionately affect female administrators. Conversely, the relatively lower PQ scores in male colleges suggest stronger time management, task prioritization, and decision-making capabilities.

These insights highlight an urgent need to address procrastination as a systemic managerial concern. Strengthening leadership skills through targeted professional development, time management workshops, and organizational support mechanisms is essential. Institutions should also consider mentorship programs and policy interventions to mitigate administrative delays and improve overall governance efficiency.

In conclusion, this study provides a foundational understanding of how procrastination affects educational leadership in KPK's government colleges. It invites policymakers, educationists, and stakeholders to recognize procrastination not merely as a personal trait, but as an organizational issue requiring structural solutions. Future research may build upon this baseline to explore causal factors and intervention strategies tailored to specific institutional contexts.

RECOMMENDATIONS

In light of the findings from this research on procrastination among principals and vice principals of government colleges in Khyber Pakhtunkhwa, the following recommendations are proposed to enhance administrative efficiency and minimize procrastination-related challenges:

Capacity Building through Targeted Training

- i. Organize mandatory training workshops on time management, decision-making, and leadership skills for college administrators across Khyber Pakhtunkhwa.
- ii. Incorporate modules on procrastination awareness and behavioral self-regulation into existing professional development programs.

Mentorship and Peer Learning Programs

- i. Establish mentorship programs where experienced, non-procrastinating principals support and guide those exhibiting higher procrastination levels.
- ii. Facilitate regular peer-learning forums for sharing best practices in academic and administrative management.

Institutional Support and Monitoring

- i. Implement performance evaluation systems with measurable administrative benchmarks to identify delays and areas requiring support.
- ii. Introduce internal accountability mechanisms such as monthly reporting or progress tracking to keep administrative duties on schedule.

Gender-Sensitive Administrative Reforms

- i. Recognize the unique challenges faced by female administrators, including work-life balance and socio-cultural pressures.
- ii. Provide flexible work policies, psychosocial support, and access to leadership networks specifically for female college leaders.

Policy-Level Interventions

- i. The Higher Education Department (HED) Khyber Pakhtunkhwa should formulate a policy framework that recognizes procrastination as a systemic issue impacting governance.
- ii. Develop institutional guidelines that encourage task prioritization, streamline delegation of responsibilities, and discourage administrative delays.

Regular Assessment of Administrative Effectiveness

- i. Conduct periodic assessments of Procrastination Quotient (PQ) across government colleges to monitor trends and progress.
- ii. Use PQ scores as an auxiliary metric in institutional audits and performance appraisals.

Integration of Technology for Efficiency

- i. Encourage the use of digital task management tools and automated scheduling systems to reduce human delay in decision-making.
- ii. Implement e-governance systems for smoother communication, documentation, and reporting.

Future Research and Monitoring

- i. Further studies should investigate the root causes of procrastination in educational leadership, including psychological, institutional, and socio-economic factors.
- ii. Establish research cells in colleges to continuously monitor and report on administrative practices and their impact on institutional outcomes.

These recommendations, if implemented strategically, can significantly enhance the decision-making capabilities and administrative efficiency of college leadership in Khyber Pakhtunkhwa, ultimately contributing to the betterment of the higher education sector in the province.

REFERENCES

- Patil, N. P. (2012). Role of education in social change. *International educational e-journal*, 1(2), 205-210.
- Niwaz, A., Khan, M. S., & Abbas, A. (2014). Managing quality education at primary level in Pakistan: current practices and future hopes. *Gomal University Journal of Research*, 30(2), 97-100.
- Rajput, R. (2004). *Self-management and leadership* (1st ed., pp. 210–211). National Book Foundation.
- Abu, N. K., & Saral, D. G. (2016). The reasons of academic procrastination tendencies of education faculty students. *The Online Journal of New Horizons in Education*, 6(1), 165–169.
- Afzal, S., & Jami, H. (2018). Prevalence of academic procrastination and reasons for academic procrastination in university students. *Journal of Behavioural Sciences*, 28(1), 51–69.
- Ayub, M., Zia, K., Ahmad, Z., & Hussain, M. (2025). Relationship of procrastination with self-efficacy and job performance among university educators. *Indus Journal of Social Sciences*, 3(1), 393–403.
- Cömert, M., & Dönmez, B. (2019). A qualitative study on the perceptions of administrators and teachers on procrastination behavior and workload of school administrators. *Journal of Education and Training Studies*, 7(2), 129–136.
- Fentaw, Y., Moges, B. T., & Ismail, S. M. (2022). Academic procrastination behavior among public university students. *Education Research International*, 2022(1), 1277866.
- Hen, M. (2018). Causes for procrastination in a unique educational workplace. *Journal of Prevention & Intervention in the Community*, 46(3), 215–227.
- Litvinova, A., Kokurin, A., Ekimova, V., Koteneva, A., & Pozdnyakov, V. (2019). Procrastination as a threat to the psychological security of the educational environment. *Behavioral Sciences*, 10(1), 1.
- Özberk, E. H., & Kurtça, T. T. (2021). Profiles of academic procrastination in higher education: A cross-cultural study using latent profile analysis. *International Journal of Psychology and Educational Studies*, 8(3), 150–160.
- Saplavaska, J., & Jerkunkova, A. (2018, May). Academic procrastination and anxiety among students. In *17th International Scientific Conference Engineering for Rural Development* (Vol. 23).

- Sirin, E. F. (2011). Academic procrastination among undergraduates attending school of physical education and sports: Role of general procrastination, academic motivation and academic self-efficacy. *Educational Research and Reviews*, 6(5), 447
- Balkis, M., & Duru, E. (2017). Gender differences in the relationship between academic procrastination, satisfaction with academic life and academic performance. *Educational Sciences: Theory & Practice*, 17(1), 1057–1072.
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133(1), 65–94.
- Tuckman, B. W. (2002). The development and concurrent validity of the procrastination scale. *Educational and Psychological Measurement*, 52(2), 473–480
- Forsyth, P. (2003). *Successful time management* (Vol. 102). Kogan Page Publishers.