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Relationship between Psychological Flexibility and Burnout Among Research Students

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Abstract

The study investigates the relationship between psychological flexibility and burnout among MPhil research students in Islamabad and Rawalpindi universities. Data from both genders (n = 166 males, n = 134 females) was collected using purposive sampling technique. Psychological Flexibility Scale for University Students and Maslach Burnout Inventory Student Survey measured study variables. Results indicate a negative correlation between psychological flexibility and burnout, with competence positively correlated with psychological flexibility, while exhaustion and cynicism were negatively correlated. Gender differences emerged, with males scoring higher on psychological flexibility and females on burnout. Age showed no significant differences, but married participants scored higher on burnout, while unmarried scored higher on psychological flexibility. Employed students had higher burnout, while unemployed scored higher on psychological flexibility. Nuclear family background correlated with higher psychological flexibility and exhaustion. Social science students scored higher on psychological flexibility and competence. Supervisor's support correlated with increased psychological flexibility, competence, and decreased exhaustion and cynicism, enhancing research students' overall well-being.

Keywords: psychological flexibility, burnout, exhaustion

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Introduction

This study explores the link between psychological flexibility and burnout in M. Phil research students, addressing a gap in research focused on this specific cohort, especially in non-Western cultural contexts. Higher education is pivotal for personal growth, societal advancement, and plays a key role in individual well-being. Research, an integral part of education, drives innovation, knowledge development, and societal progress. Despite its importance, conducting research poses challenges that can impede students's growth and well-being. Burnout among research students may lead to academic disengagement and hinder progress (Hayes et al., 2006; Maslach et al., 2001). Effective mentorship, collaboration, and time management are crucial, yet resource limitations and inadequate support systems can hinder development. Psychological flexibility, characterized by adaptability and resilience, plays a vital role in managing stress and achieving academic success. Understanding its complex relationship with burnout is essential for promoting students' well-being (Etzkowitz, 2003; Metzger, 1955; Storr, 1952). M. Phil research students, transitioning from classroom to advanced research, offer a strategic sample for in-depth investigation. The study aims to provide insights into factors influencing well-being and academic success, contributing to tailored interventions. In conclusion, it seeks to elucidate the dynamics between psychological flexibility and burnout, offering a foundation for effective support systems for research students.

Psychological flexibility

Psychological flexibility, rooted in Acceptance and Commitment Therapy (ACT), is vital for the well-being of research students in academia. It involves adapting to diverse situations, maintaining balance, and aligning actions with personal values despite challenging thoughts or emotions (Biglan et al., 2015). Components like acceptance, cognitive diffusion, contact with the present moment, self-as-context, committed actions, and values contribute to this concept. Gender differences, stress levels, cognitive fusion, emotional control, social contexts, and cultural norms influence psychological

flexibility in research students (Gloster 6 et al., 2011). Males may exhibit higher levels due to evolving societal norms valuing emotional expression. Stress can hinder flexibility, and ineffective emotional control may limit adaptability. Social expectations and cultural stigmas impact individuals' readiness to accept flexibility. Psychological flexibility acts as a protective factor against burnout and psychological distress, aiding students in managing stress, pursuing meaningful goals, and maintaining well-being. Studies link it to increased quality of life, self-efficacy, and prosocial behavior while reducing psychological distress. In the academic context, it plays a crucial role in concentration, problem-solving, resilience, and goal-directed behavior for research students (Bond & Flaxman 2015; Bunce, 2018). Fostering psychological flexibility enables effective stress management, maintains motivation, and aligns actions with academic goals, enhancing both performance and overall well-being (Chaker & Hummel, 2001; Gloster & Klotsche, 2002; Hoyer, 2011; Kashdan & Rottenberg, 2010).

Burnout

Burnout, a psychological syndrome identified by Freudenberger in the 1970s, encompasses emotional exhaustion, depersonalization, and reduced personal accomplishment (Leiter, 1996; Maslach & Jackson, 2001). In the academic context, termed academic burnout for research students, it manifests as feelings of alienation, incompetence, emotional exhaustion, and diminished success. The three components identified by Maslach and colleagues include emotional exhaustion, depersonalization or cynicism, and reduced personal accomplishment. These arise from the demands of research work, negative attitudes towards academic activities, and doubts about one's skills, affecting confidence and motivation (Tosevski & Milovancevic, 2010; Gajic, 2010).

Factors contributing to burnout in research students include high workload, stress, resource limitations, unclear prospects, and gender differences, with females being particularly vulnerable. Strategies to alleviate burnout encompass social support, mentorship, academic facilities, and adequate time for research tasks. Supervisors play a crucial role in creating a

positive research environment (Jackson & Maslach, 1982; Leiter & Maslach, 1988; Schaufeli & Enzmann, 1998; Shirom, 1989).

Psychological flexibility, characterized by acceptance, cognitive diffusion, and alignment with personal values, mitigates burnout by enabling stress management, maintaining motivation, and adapting to challenges. Acceptance and Commitment Therapy (ACT) interventions enhance psychological flexibility, promoting improved mental health and work performance. Understanding and addressing burnout among research students is vital, impacting their academic success and well-being. Burnout affects productivity, relationships, and overall progress, making it essential to address individual coping mechanisms and institutional support networks. In summary, burnout is a complex phenomenon in research students, necessitating strategies that focus on social support, mentorship, and psychological flexibility for improved well-being and academic performance (Lloyd, 2013).

Theoretical background

Acceptance and Commitment Theory (ACT) posits that psychological flexibility, encompassing acceptance, cognitive diffusion, and values, plays a crucial role in well-being and adaptive functioning. Through six interconnected processes, including acceptance, diffusion, being present, self-as-context, choosing behavioral change direction, and using change-facilitating techniques, ACT enhances psychological flexibility (Bond & Bunce, 2000; Flaxman & Bond, 2010). This framework enables individuals to perceive thoughts and emotions as mere sensations rather than reality, fostering a non-judgmental awareness of the present moment. Psychological flexibility promotes adaptive actions by addressing experiential avoidance and cognitive fusion. Studies utilizing ACT highlight its role in reducing burnout by enhancing individuals' ability to accept distressing emotions, disengage from negative thoughts, and align actions with personal values. This aligns with ACT's emphasis on resolute action in accordance with one's values despite challenging emotions or thoughts (Kashdan & Rottenberg, 2010).

Rationale

The study delves into the challenges faced by M.Phil research students in Pakistan, particularly focusing on the interplay between psychological flexibility and burnout. It recognizes that while conducting independent research projects has become integral to graduate and postgraduate degrees worldwide, students encounter various obstacles that hinder their research process and contribute to burnout. These obstacles include reduced personal accomplishment, limited financial resources, inadequate research infrastructure, a lack of mentorship opportunities, experiences of self-doubt, anxiety, and feelings of isolation. The study aims to establish a connection between these factors and analyze how they impact research productivity.

One significant gap in existing literature is the lack of extensive research on burnout among research students in the Pakistani context. While studies in the West have explored similar issues, there's a need to understand how these factors manifest in a different cultural and socioeconomic context, such as Pakistan. Additionally, previous research has primarily focused on the academic performance of students, with limited attention given to the psychological well-being and burnout specifically within the research process. Therefore, this study aims to fill this gap by examining how burnout affects research students' ability to complete their studies, particularly focusing on M.Phil research students who are transitioning from classroom learning to advanced research. Furthermore, the study seeks to explore the role of demographic factors such as marital status, work status, and phases of the research process in contributing to burnout among research students. It acknowledges that married research students may face additional challenges in balancing research commitments with family duties, potentially increasing their risk of burnout. Similarly, employed research students may experience higher levels of stress and time constraints, impacting their well-being. Gender differences in burnout experiences are also highlighted, with women often facing the "double burden" of managing job and family responsibilities, contributing to increased stress and burnout. Moreover, the study aims to evaluate the influence of research supervisors and other demographic characteristics on

research students' burnout. While previous research has acknowledged the importance of supervisors in facilitating quality research, there's limited understanding of how their characteristics and support contribute to mitigating burnout among students. By addressing these gaps, the study aims to provide valuable insights for interventions and support systems to enhance research students' well-being and academic success.

The study aims to contribute to the existing literature by examining burnout among M.Phil research students in Pakistan and exploring the impact of various factors on their research productivity and well-being. By addressing gaps in previous research, particularly in the Pakistani context, the study aims to provide valuable insights for interventions and support systems to foster a healthier research environment for students.

The objectives and hypotheses of the current study are outlined as follows. After that the operational definition of the variables, sample, research design, instruments used for study, and procedure of the study are discussed in detail. **Objectives**

1. To examine the relationship between psychological flexibility and Burnout among research students.
2. To study the differences on the study variables based on demographic variables (age, gender, Family system, Discipline/Department, Marital Status, job status, Monthly Income and Supervisory relationship).

Hypotheses

1. There will be a negative relationship between Psychological flexibility and burnout among research students.
2. Psychological Flexibility will be negatively correlated with Exhaustion and Cynicism.
3. Psychological Flexibility will be positively correlated with Competence.
4. Male research students will score less on the burnout scale as compared to females.
5. Female research students will score less on the psychological flexibility scale as compared to males.
6. Married students will score higher on burnout as compared to unmarried students.
7. Unmarried students will score higher on Psychological flexibility as compare to married students.

8. Employed students will score higher on burnout as compare to unemployed students.
9. Unemployed students will score higher on psychological flexibility as compare to employed students.
10. Students from joint family system will score high on psychological flexibility.
11. Students from Nuclear family system will score higher on Exhaustion.

Method

Research Design

The current study is a correlation, and cross-sectional study using a quantitative approach. For data collection survey method is used.

Psychological Flexibility

Hayes et al. (2006), defines psychological flexibility as the ability to adapt and adjust one's thoughts, emotions and behaviors in the face of challenging or stressful situations. It requires being open and receptive to one's experiences, while also maintain a sense of clarity and direction in line with one's values and goals. Higher scores on the rating scale are an indicator of greater levels of psychological flexibility, which shows that individuals possess the ability to adapt, manage stress and maintain a sense of purpose and direction in their lives.

Burnout

Zhang et al. (2007) refers academic burnout with exhaustion, cynicism, detached attitude towards one's academics, and feeling of incompetency as a student due to high study demands. The phenomena of academic burnout have been studied in the context of research call research related burnout in the current study. Burnout related to research can be defined as cynicism, exhaustion, and feeling of incompetency that researcher experience during their research because of the high demands of research process. For the current research, according to the research scenario, the modified version of Maslach Burnout Inventory by Amna, 2106 is used to measure burnout related to research. Therefore, a modified scale is used to measure it and

high scores indicate that the researchers are experiencing high levels of burnout during their research.

Instruments

All the instruments used in the study were in English language, and are as follow:

Demographic Sheet

For the present study a detailed demographic sheet was devised to fetch information for the demographic variables which include age, gender, department/discipline, marital status, family system, job status, and monthly income of the participant. Moreover, variables related to research supervisors (supervisor's helpfulness, time and information provided to research participants, and satisfaction with participant's pace and quality of research) during the research process stage were identified based on literature and as a result were included in the demographic sheet.

Psychological Flexibility Scale for University Students (PFS-US)

The PFS-US was developed by Chaudhary and Rafiq in 2021 and is a self-report measure designed to assess psychological flexibility among university students. Both exploratory and confirmatory factor analysis were employed while developing the scale to test its construct validity. The scale consists of a total of 29 items, rated on a 4-point Likert-type scale ranging from 1 (Never) to 4 (Always). Some items in the inventory are like "Think as positive as possible" and "Appreciate others on their success". The internal reliability of the scale was found to be high, with a Cronbach's alpha of .90 for the total scale and ranging from .76 to .87 for the six factors.

Maslach Burnout Inventory Student Survey (MBI-SS)

The inventory, based on Schaufeli et al. (2002), includes 16 items rated on a 7-point scale. It features three subscales: Exhaustion (items 1, 2, 3, 4, 6), Cynicism (items 8, 9, 13, 14, 15), and Competence (5, 7, 10, 11, 12, 16). Reverse scoring on

competence contributes to an overall incompetence score. High exhaustion and cynicism, coupled with low competence, indicate burnout. The reliability of this inventory, reported across Spain, Portugal, and the Netherlands, ranges from .65 to .86 (Schaufeli et al., 2002). Amna (2016) adapted the inventory for research context, modifying statements like "I feel emotionally drained by my studies" to "I feel emotionally drained by my research process." Minor changes tailored the scale to measure burnout related to research among university students.

Sample

The sample comprises of 300 University students from Islamabad and Rawalpindi, including males and females. Data collection was done from Bahria University, Quaid-i-azam University and NUML University. It was taken into consideration that the data was collected only from those students that were doing research. Purposive sampling technique was used to collect data. The age of the individuals ranges from 21 to 34 (M=24.9, S. D=2.39)

Table 1
Demographic Characteristics of Variables (N=300)

Variables	Categories	*F*	*%*
Age	21-25	174	57.8
	26-34	126	41.9
Gender	Male	166	45.1
	Female	134	44.5
Marital Status	Married	108	35.9
	Unmarried	192	63.8
Employment status	Employed	114	87.9
	Unemployed	186	61.8
Discipline	Humanities	43	14.3
	Social Sciences	104	34.6

	Natural Sciences	97	32.2
	CS and IT	56	18.6
Monthly income	20,000-4,00,000	29	9.6
	4,00,000-10,00,000	66	21.9
Family System	Nuclear	169	56.1
	Joint	131	43.5

Note. *F*= Frequency; % = Percentage.

Age, gender, marital status, employment status, discipline, monthly income, and family structure, all are listed in Table 1. Ages in the sample ranged from 21 to 34. Table 1 shows that there are 159 men, 141 women, 85 married, and 215 unmarried individuals. The bulk of participants (employed=90, unemployed=210) are jobless. Fewer participation, mostly from the natural sciences field, than from the humanities field. The range of monthly earnings was Rs 20,000 to 100,000. Most of the participants come from nuclear families. The table lists the demographics' proportion, frequency, mean, and standard deviation.

Procedure

The Head of the Psychology Department at Quaid-i-Azam University Islamabad provided an authority letter, confirming the researcher's association with the department for a study related to partial fulfillment of a BS in Psychology. Information was gathered from research students in Islamabad and Rawalpindi after obtaining their informed consent. Participants were assured of anonymity, confidentiality, and the right to withdraw. They received printed instructions, were encouraged to ask questions, and were thanked at the study's conclusion. The data collected was then evaluated to test the hypothesis.

Results

The present study on psychological flexibility and burnout among research students is detailed in this section. Data analysis was conducted using SPSS 25 for Windows, employing descriptive and inferential statistics. Descriptive statistics include mean, standard deviation, skewness, kurtosis, range, and Cronbach's alpha coefficients. Inferential analysis utilized Pearson Product Moment correlations, one-way ANOVA, and independent sample t-tests to explore relationships between variables and differences in factors and demographics. Findings are presented visually through tables in the chapter, offering empirically based insights into the study's outcomes.

Table 2
Alpha Coefficient Reliabilities and Descriptive Statistics of study variables (N= 300)

Scales	*k*	*Cronbach's a*	*M*	*SD*	*Skewness*	*Kurt*	Range	
							Potential	Actual
PFS-US	29	.96	86.88	17.38	-.70	-.18	29-116	39-116
MBI-SS	16	-	-	-	-	-	-	-
Exhaustion	5	.90	18.54	7.82	.52	-.71	5-35	5-35
Cynicism	5	.70	18.26	6.31	.75	.19	5-35	7-35
Competence	6	.87	25.08	8.77	.16	1.04	6-42	6-42

Note. PFS-US= Psychological Flexibility Scale for University Students); MBI-SS= Maslach Burnout Inventory Student Survey.

Table 2 illustrates the descriptive statistics, including Cronbach's alpha coefficients, means, standard deviation, skewness, kurtosis and score range, details. It has been found that the Psychological Flexibility Scale for University Students (PFS-US) and Maslach Burnout Inventory Student Survey (MBI-SS) have shown an acceptable range of reliability for the

current study. In addition, values of mean and standard deviation also provide evidence of the normal distribution of data. The skewness and kurtosis values indicate that the data is within the acceptable range.

Table 3
Correlation Between Study Variables (n= 300)

	Scales	1	2	3	4	5
1	**PFS-US**	-	-.321**	-.541**	-.483**	.225**
2	**MBI-SS**					
3	Exhaustion			-	.794**	-.036
4	Cynicism				-	.198**
5	Competence					-

*Note. * p<.05, **p<.01.* PFS-US= Psychological Flexibility Scale for University Students); MBI-SS= Maslach Burnout Inventory Student Survey.

Table 3 represents the correlations among the study variables psychological flexibility and burnout with its subscales (exhaustion, cynicism and competence). Analysis indicates that psychological flexibility has a negative significant correlation with burnout. Psychological flexibility also illustrates the relationship between burnout and its subscales. Psychological flexibility indicates a significant negative relationship with exhaustion and cynicism. Results also demonstrate the significant positive relationship between psychological flexibility and competence.

Table 4
Mean Differences Based on Gender for Each Scale and Its Subscales (n=300)

Variables	Males (n=166)		Females (n=134)				Cohen's
	M	*SD*	*M*	*SD*	*t*	*p*	*d*
PFS-US	89.76	13.93	83.30	20.37	-3.25	.00	.37
MBI-SS							
Exhaustion	16.68	6.47	20.85	8.72	4.74	.00	.54
Cynicism	17.03	5.04	19.78	7.33	3.83	.00	.43
Competence	24.14	8.46	26.23	9.02	2.06	.04	.23

Note. $p < .05$, PFS-US = Psychological Flexibility Scale for University Students); MBI-SS = Maslach Burnout Inventory Student Survey

Table 4 illustrates psychological Flexibility and burn out along its sub scales (exhaustion, cynicism and competence) based on gender. Results demonstrated significant mean differences on psychological flexibility and burnout with its sub-scales. Male mean scores are significantly high on psychological flexibility as compared to females and female mean scores are significantly high on burnout scale.

Table 5
Mean Differences Based on Marital Status for Each Scale and Its Subscales (N=300)

Variables	Married (n=108)		Unmarried (n=192)				Cohen's
	M	*SD*	*M*	*SD*	*t*	*p*	*d*
PFS-US	82.22	20.81	89.50	14.52	-3.54	.00	.00
MBI-SS	67.50	19.46	58.72	13.70	4.56	.00	.52
Exhaustion	21.30	8.87	16.98	6.71	4.74	.00	.54
Cynicism	20.69	7.72	16.89	4.86	5.22	.00	.22
Competence	25.50	9.12	24.83	8.57	.63	.52	-

Note. p < .05, PFS-US = Psychological Flexibility Scale for University Students); MBI-SS = Maslach Burnout Inventory Student Survey

Table 5 illustrates psychological Flexibility and burn out along its sub scales (exhaustion, cynicism and competence) based on marital status. Results demonstrate significant mean differences on psychological flexibility and burnout with its sub-scales. Married individuals scored significantly high on burnout. Whereas Unmarried individuals scored high on psychological flexibility. Exhaustion and cynicism are significantly high in married individuals.

Table 6

Mean Differences Based on Job for Each Scale and Its Subscales (n=300)

Variables	Employed (n=114)		Unemployed (n=186)				Cohen's
	M	*SD*	*M*	*SD*	*t*	*p*	*d*
PFS-US	81.44	19.54	90.21	15.01	-4.36	.00	.50
MBI-SS	66.53	19.01	59.03	14.12	3.90	.00	.44
Exhaustion	21.38	8.80	16.80	6.61	5.12	.00	.58
Cynicism	20.42	7.60	16.94	4.93	4.80	.00	.54
Competence	24.72	8.97	25.29	8.66	-.54	.58	-

Note. p < .05, PFS-US = Psychological Flexibility Scale for University Students); MBI-SS = Maslach Burnout Inventory Student Survey.

Table 6 illustrates psychological flexibility and burn out along its sub scales (exhaustion, cynicism and competence) based on Job status. Results demonstrate significant mean differences on psychological flexibility and burnout with its sub-scales exhaustion and cynicism. Cohen's d indicates small size effect for Competence Scale. Employed scored higher on burnout than unemployed students. Whereas the unemployed scored high on psychological flexibility.

Table 7
Mean Differences Based on Family System for Each Scale and Its Subscales (n=300)

Variables	Nuclear (n=169)		Joint (n=131)				Cohen's
	M	*SD*	*M*	*SD*	*t*	*p*	*d*
PFS-US	84.82	16.80	89.53	17.80	-2.34	.02	.27
MBI-SS	62.85	15.49	60.64	17.77	1.14	.25	-
Exhaustion	19.34	7.81	17.51	7.75	2.02	.04	.23
Cynicism	18.50	6.15	17.94	6.51	.74	.45	-
Competence	25.00	8.38	25.17	9.27	-1.66	.86	-

Note. $p < .05$, PFS-US = Psychological Flexibility Scale for University Students); MBI-SS = Maslach Burnout Inventory Student Survey.

Table 7 illustrates psychological Flexibility and burnout along its sub scales (exhaustion, cynicism and competence) based on family System. Results demonstrate significant mean differences on psychological flexibility and burnout's sub-scale "exhaustion". But it does not show any significant relationship with burnout and its other sub-scales like "cynicism and competence". Cohen's d indicates small size effect for psychological flexibility and Exhaustion scales.

Table 8 shows the results of One-Way ANOVA between groups for comparing respondent's scores along their disciplines, which includes Humanities *n*=43, Natural Sciences *n*= 97, Social Sciences *n*=104 and Computer Sciences and Information Technology *n*=56. Non- significant differences were observed across burnout, cynicism and exhaustion. Significant differences were observed for psychological flexibility and competence. Eta square defines very small size effect for observed mean differences on psychological flexibility and competence.

Research demonstrates significant mean differences across discipline on psychological flexibility F= (3, 296), 4.90, p<.01. Findings revealed that mean differences are significantly high on social sciences students as compared to other disciplines. Research also demonstrates significant mean differences across discipline on competence scale F = (3, 296), 5.11, $p<.01$.

Findings revealed that mean differences are significantly high on social sciences students as compared to other disciplines.

Table 8
One-Way Analysis of Variance for Psychological Flexibility and Burnout and its Sub-Scales (N=300)

	Humanities (n=43)		
Scales	*M*	*SD*	
PFS-US	87.53	14.10	8
MBI-SS	60.27	12.36	6
Exhaustion	18.79	7.21	1
Cynicism	18.37	5.64	1
Competence	23.11	7.76	2

Note. PFS-US = Psychological Flexibility Scale for University Students; MBI-SS = Maslach Burnout Inventory Student Survey

Table 9
Correlation of Research Supervisor's related Variables with Psychological Flexibility, Burnout and its subscales (n=300)

*Note. *p<.05. ** p<.01.* PFS-US = Psychological Flexibility Scale for University Students; MBI-SS = Maslach Burnout Inventory Student Survey; EX = Exhaustion; CY= Cynicism and CO = Competence.

Table 9 demonstrates that research stage is positively associated with psychological flexibility, burnout, exhaustion, and competence scores and negatively related to cynicism. The helpfulness of a supervisor, however, is significantly positively connected with psychological flexibility and competence, and negatively associated with burnout, exhaustion, and cynicism. The findings indicate that the supervisor's input is significantly positively correlated with psychological flexibility and competence, negatively correlated with burnout and cynicism, and significantly negatively correlated with exhaustion. This table also shows a substantial positive association between psychological flexibility and competence and supervisor satisfaction, as well as a significant negative relationship between exhaustion and a negative relationship between burnout and cynicism.

Table 10
Correlation Between Age, Monthly Income and Study Variables (n= 300)

Scales	Age	Monthly Income
PFS-US	.02	-.05
MBI-SS	.02	-.09
EX	-.02	-.01
CY	.02	-.01
CO	.07	-.13

Note. $p < .05$, PFS-US = Psychological Flexibility Scale for University Students); MBI-SS = Maslach Burnout Inventory Student Survey.

Table 10 demonstrates the relationship between psychological flexibility and burnout with its sub-scales. Study highlights the non-significant relationship of psychological flexibility with burnout and its subscales. Results do not show any significant relationship between age and study variables. Monthly income is also not significantly correlated with study variables.

Discussion

The study investigates the correlation between psychological flexibility and burnout among research students, particularly within the context of the escalating emphasis on research in educational settings. As educational institutions increasingly promote substantial research engagement, it has become a mandatory aspect of degree programs, posing challenges that can affect the well-being and academic success of students. The research focuses on 300 M. Phil research students in Rawalpindi and Islamabad, encompassing both public and private institutions. The analysis of demographic variables, including age distribution, gender ratios, marital status, employment status, discipline, income levels, and family systems, provides insightful trends about the characteristics of the study sample. These insights are crucial for understanding the potential impact of the research process on student outcomes.

In assessing the reliability and descriptive statistics of the study, the Maslach Burnout Inventory-Student Survey (MBI-SS) and the Psychological Flexibility Scale for University Students (PFS-US) were employed, exhibiting commendable reliability estimates. Descriptive statistics affirmed the internal consistency of the measures, with skewness and kurtosis values indicating a normal distribution of data.

Correlation analyses unveiled a significant negative link between psychological flexibility and burnout, while also establishing positive associations with competence and negative associations with exhaustion and cynicism. Gender disparities surfaced, revealing that female research students experienced heightened burnout levels and diminished psychological flexibility compared to their male counterparts, aligning with previous research. Additionally, married and employed individuals exhibited increased burnout levels, attributable to heightened responsibilities and challenges in managing personal and professional commitments.

The study underscored the substantial impact of supervisor-related variables on burnout and psychological flexibility, emphasizing the pivotal role of supportive supervisory relationships in research settings. Acknowledging limitations such as unequal gender representation and challenges in accessing research students, the study recommended the integration of longitudinal and qualitative research for more profound insights. The implications of the findings extend to researchers, practitioners, and academic institutions, advocating for interventions to enhance student well-being and research outcomes, supervisor training for nurturing supportive relationships, and the integration of mental health support services within research programs.

Conclusion

The study unveils surprising insights into the research process among Pakistani M.Phil students. It highlights the inverse relationship between psychological flexibility and burnout, showcasing their interdependence in academia. Psychological flexibility positively correlates with competence but negatively with cynicism and exhaustion. Gender differences reveal males scoring higher on psychological flexibility and females on burnout, emphasizing the need for gender-specific analysis. Supervisor-related factors also influence burnout and psychological flexibility, especially at different study stages. This study, involving 300 M.Phil students, not only validates existing theories but also suggests practical implications for academia. Institutions and supervisors can tailor interventions to enhance student well-being and research outcomes by recognizing the crucial role of psychological flexibility in reducing burnout and fostering research competence. Moreover, understanding gender dynamics and supervisor-related factors underscores the importance of personalized support methods to create a conducive research environment.

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