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## **The Hidden Struggles: Exploring the Mental and Physical Health Challenges of PhD Students**

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### **Abstract**

Given the requirements of the modern world, the demand for doctoral degree has increased tremendously. The growing need for getting higher education has placed many young professionals under enormous pressure to enhance their academic qualification. In such a scenario the struggle for acquisition of a PhD degree is more challenging for students of developing countries to complete their research degree in the stipulated time, without psychological and physical exhaustion. The current research, therefore, aimed to study the psychological and physical health challenges faced by PhD students in the developing country Pakistan. Qualitative research design was used to explore the causes and impact of psychological and physical health problems among PhD students. Data was collected from a sample of 71 research students through 14 focus group discussions, conducted in various universities of major cities of the country. Reflexive Thematic Analysis was used to analyze the data, revealing two overarching themes: 1) psychological health determinants (psychological distress, psychological pressure, personality traits, motivation, aggression, and psychosomatic symptoms); and 2)

physical health determinants (physical health, physical fitness, and traveling). The findings of this study provide an evidence that PhD students endure many psychological and physical health struggles during their doctoral journey, exclaiming the need for practical steps to be taken by academia and policy makers in an effort to restore and ensure the wellbeing of this category of academic workers.

**Keywords:** *Psychological Health, Physical Health, PhD Scholars, Reflexive Thematic Analysis.*

## **Introduction**

Doctoral studies play a significant role in the intellectual, economic, cultural and scientific advancement of any nation, producing sustainable developments and cutting-edge technologies, however numerous researches have shown that this journey is hurred by countless struggles and challenges on the way. Amongst the most commonly reported research findings indicate that mental health and wellbeing of young researchers especially PhD students seems detrimental with respect to general population.

Several studies have identified doctoral studies to be rigorous, time consuming and a tough experience resulting in high attrition rates with significant financial and human costs (Catalano & Radin, 2021; Marais et al., 2018), therefore less than 2% of world's population earns a doctoral degree (US Bureau) and this proportion is less than 1% in developing nations. Countries where mental health of PhD students has been studied, there is a consensus that doctoral students are being susceptible to mental health illnesses in varying degrees.

Existing research on doctoral students' wellbeing has consistently narrated higher levels of stress (Vekkaila, Virtanen, Taina, & Pyhalto, 2018; Kernan, Bogart, & Wheat, 2011; Wyatt & Oswalt, 2005), psychological distress and mental health concerns such as depression, anxiety, and frustration (Evans et al., 2018; Pallos, Yamada, & Okawa, 2013; Hyun, Quinn, Madon & Lusting, 2006), and aggravating physical health symptoms (Walsh, Richardson, & Morley, 2012; Kernan et al., 2011; Pallos et al., 2005) among PhD scholars. The issue of psychological and physical health, and overall wellbeing of this specific 'hybrid' population is complex, intricate and multidimensional, requiring in-depth and protract investigations (Bouabid, Hassine, & Pacini, 2021).

A recent study in Germany by Friedrich et al. (2023) has indicated that one-third of a large sample (589) of PhD students fall beyond the depression cut-off score. Another study by Satinsky et al., (2021) showed 24% prevalence for depression and 17% for anxiety, whereas a comprehensive study by Evans et al., (2018) represented a mounting toll of psychological distress indicating a prevalence of 39% for depression and 41% for anxiety among the doctoral students. Levecque et al. (2017) conducted a large scale study with a sample of 3659 PhD students in Belgium. The study indicated 51% of respondents experiencing at least two symptoms of poor mental health and 32% reporting at least four depressive symptoms; twice as much when

compared with highly educated group, consequently proposing the notion of "mental health crisis" in higher education.

Researchers have shown that there are many factors that affect the wellbeing of these aspiring adults. Friedrich and his colleagues (2023) found perceived stress, self-doubt, job insecurity and deficient supervision as the prominent predictor of mental health deterioration among PhD students. Other investigators have predicted financial instability, high competitiveness, frequent evaluations, imbalanced work-life responsibilities, constant pressure to publish, heavy workload and strict deadlines, place young researchers under enormous mental health challenges affecting their progress and wellbeing negatively (Naumann et al., 2022; Marais et al., 2018; Devos et al., 2016; Schmidt & Umans, 2014).

Levecque and her colleagues (2017) contended for three main reasons to consider the mental health of PhD students a matter of concern. Firstly because doctoral students through their work represent a significant source of scientific progress, dissertations are prerequisite for academic careers (Roach & Sauermann, 2010) and academic output (Hagen, 2010; Miller, 2013), therefore any mental health suffering might result in compromise of overall quality and quantity of students' research output. Secondly, PhD students facing mental health challenges can result in a substantial financial burden for research institutions and teams (Lee et al., 2015; Goh et al., 2015a; Goh et al., 2015b). Thirdly, the mental health issues experienced by PhD students impact both the influx of talent into the research industry and individuals' continuity in it. Policies within organizations linked to mental health problems may lead to the abandonment of PhD programs or prompt individuals to exit the research industry altogether, causing great human and financial loss (Stubb et al., 2012; Rindermann & Thompson, 2011; Podsakoff et al., 2007).

In this plethora of research, most of the studies have been conducted in Western, Educated, Industrial, Rich, and Democratic (WEIRD) Countries and very little is known about Low and Middle Income Countries (LAMICs) (Hendriks et al., 2018), indicating a void of knowledge about the existing situation of higher education and graduating students from developing countries. The current research, therefore initiated qualitative methodology to investigate the extent and nature of psychological and physical health issues and their precursors among PhD students in Pakistan.

### **Research Question**

- What are the risk factors affecting psychological health of PhD students.
- What are the risk factors affecting physical health of PhD students.

### **Methods**

The qualitative research design has the capacity to elucidate the assumptions and interpretive frameworks that inform research problems, exploring the "meanings" attributed by individuals

and groups to a social or human issue(Creswell, 2013).Therefore, to understand students’ perspectives and experiences related to their course of getting a PhD degree, the current research adopted a constructivist paradigm with phenomenology as the theoretical perspective (research approach). This framework guided both the methodology (research design) and the methods (ways) employed to achieve the research objectives.

**Participants**

A purposive sampling strategy was used to recruit the sample for the current study from major cities of the country. 14 Focus Groups were conducted, constituting 71 PhD students (33 male, 38 female), with an average age of 37 years, from Federal Capital, Punjab, Sindh, KPK, Baluchistan, Gilgit Baltistan and state of Azad Jammu and Kashmir. Demographics of the participants are given in table 1.

*Table 1:*

*Demographic Characteristics of sample (N=71)*

FG#	No of Participants	Province/ State	Gender		Average Age	Marital Status	
			Male	Female		Married	Single
1	4	ICT	1	3	35 years	2	2
2	5	Baluchistan	5	0	43 years	4	1
3	4	Punjab	2	2	36 years	2	2
4	4	ICT	3	1	41 years	2	2
5	8	Punjab	3	5	34 years	5	3
6	5	Punjab	3	2	36 years	3	2
7	4	Punjab	1	3	34 years	2	2
8	6	Punjab	0	6	37 years	6	0
9	5	Punjab	1	4	33 years	2	3
10	5	KPK	4	1	39 years	2	3
11	5	Sindh	4	1	44 years	4	1

12	7	Punjab	1	6	38 years	4	3
13	5	Azad Jammu & Kashmir	2	3	33 years	2	3
14	4	Gilgit Baltistan	3	1	34 years	2	2

**Data collection**

Focus groups were conducted to collect data from participants, using a focus group guide. Focus group discussions were intended to elicit responses that could produce a detailed account of psychological and physical health issues of PhD students in Pakistan. Focus group guide included the following questions:

1. Are there any mental health problems you have faced during your PhD studies?
2. Are there any physical health problems you have faced during your PhD studies?

**Procedure**

Permission was taken from the authorities to conduct the research. Participants were briefed about the nature and purpose of the study, and informed consent was taken from every participant, insuring the confidentiality of their responses. Focus groups were conducted in an isolated and comfortable place. Discussions were initiated with general discussion to build the rapport. Probes and prompts were actively used with questions to get detailed responses. All the focus group discussions were audio recorded with participants' permission and transcribed later.

**Analysis**

The data collected from Focus Group discussion was analyzed through reflexive thematic analysis (RTA) by Braun and Clarke (2020). An inductive approach was used to analyze data, working with the data from the bottom-up (Braun & Clarke, 2013), evaluating participant views and the contexts in which the data were generated. All six steps of RTA were followed to analyze the data. These six steps are i) data familiarization (by transcribing and reading the interviews multiple times), ii) generating initial codes (by coding data line by line), iii) generating initial themes (generating initial themes from the coded data), iv) reviewing potential themes (a recursive review of the potential themes with the codes), v) refining, defining, and naming themes (naming each theme and creating a thorough analysis of each theme) and vi) writing the report (analysis is studied concerning existing literature). Two overarching themes (psychological determinants and physical determinants) with main themes and sub-themes

related to factors affecting mental health and well-being of PhD scholars emerged through analysis. The findings of the qualitative analysis are presented in Table 2 and 3.

**Table 2:**

***Psychological Health Determinants, Themes and Codes***

<b>Overarching Theme:</b> "Psychological Health Determinants"	
<b>Themes</b>	<b>Codes</b>
1. Psychological Distress	Stress Anxiety Depression Concentration Difficulties Sleep Quality/ Time Suicidal Ideation
2. Psychological Pressure	Intrinsic Pressure Extrinsic Pressure
3. Personality Traits	Procrastinator Perfectionist Anxiety Prone Personality Change in Personality
4. Motivation	Demotivation Extrinsic Motivation Intrinsic Motivation
5. Aggression	Frustration Displacement
6. Psychosomatic Symptoms	Body Pains Muscular Pains/ Stiffness Stomach Issues Fatigue and Insomnia

**Table 3:**

***Physical Health Determinants, Themes and Codes***

<b>Overarching Theme:</b> "Physical Health Determinants"	
<b>Themes</b>	<b>Codes</b>
1. Physical Health	Physical Issues Physical Illness

2. Physical Fitness	Work Style
	Body Fitness
3. Traveling	Fatigue
	Health issues
	Time waste

**Discussion**

Studies have presented extensive data depicting the declining mental health of doctoral students worldwide, yet the portrayal of PhD students from Pakistan remains relatively overlooked in these researches. Consequently, the current study sought to delve into the intricacies of numerous underlying risk factors impacting the mental health and well-being of PhD students in Pakistan. To picture the perspectives of these scholars, data from 14 focus groups conducted across Pakistan provided rich information for the analysis. To create a comprehensive overview and enhance understanding, the data was categorized into determinants (overarching themes), main themes, and sub-themes (codes) after analysis.

The findings of Reflexive Thematic Analysis yielded two overarching themes that are psychological health determinants and physical health determinants emerging (in the indigenous data) from the perspective of Pakistani context.

**Psychological Health Determinants Affecting Mental Health and Wellbeing of PhD Students**

The psychological determinants associated with risk factors for the mental health and well-being of PhD scholars reflect the nature of psychological challenges faced by doctoral students throughout their PhD journey. Psychological health determinants are further categorized into five themes that are psychological distress, psychological pressure, personality traits, motivation, aggression, and psychosomatic symptoms.

*Psychological distress* was the predominant concern reported by almost all the focus group participants in the current research. Previous researches have also indicated that high level of psychological distress is experienced by a large proportion of graduating population (Hazell et al., 2021; Scott & Takarangi, 2019; Evans et al., 2018; Levecque et al., 2017). Stress, anxiety, depression, concentration difficulties, sleep quality, and suicidal ideation are the subthemes of the psychological distress in the present study.

A large majority of PhD scholars shared as having varied degrees of stress during their PhD studies. As one participant reported that “stress start from the time you get enrolled and continues until you complete”(4.P2M), another participant stated, “Stress is definite because of the long duration” (3.P2M). Feeling of anxiousness and anxiety were also reported by many participants exclaiming that it reduces the ability to progress and make work to move forward, as a respondent shared, “the ever increasing anxiety has ceased my work” (8.P2F). Many symptoms

of depression were also reported by the participants with varying intensity, moreover 3 participants informed about receiving treatment for the said cause. This reflects a tendency of higher academic to fall into the pray of depression, as previous literature also sheds light over the same concern. A large scale meta-analysis by Hazell and his colleagues (2020) depicted chronic stress, anxiety, depression and emotional distress among graduating population in the West.

Concentration problems and sleep issues were also common concern among the participants of the present study. As one participant reported “my family issues keep bothering me all the time, causing difficulty for me to concentrate on my studies” (9.P2F). Another student shared, “Form the last 4 months I am under constant pressure to complete my experiments but I am unable to do so.... Because of this I am having very disturbing dreams and I wake up several times at night” (1.P2F). These finding are analogous to prior research indicating problems to concentrate on study related issues and reduction in sleep quantity and quality among doctoral students (Amanda,2021; Allen et al., 2020; Walker, 2017;Mckinzie et al., 2006).

Suicidal ideation has been the least reported problem in the present study perhaps due to the cultural norms because thoughts or action to end one’s own life is considered immoral and severely condemned by the society, onlya single student shared this information exclaiming to have heard it from students in her university talking about death, dying and suicidal thoughts with no further information (11.P4F).

**Psychological pressure** is manifested when an individual perceives any excessive or stressful demand, whether real or imagined, that influences their thoughts, feelings, and actions in a particular manner. Psychological pressure and its sub-themes intrinsic pressure and extrinsic pressure emerged as distinct from the existing literature. Participants pointed out the fact that they feel more of extrinsic pressures than the intrinsic as their families, friends and others around demand their presence as before their indulgence in their studies (8.P2F, 9.P1F, 10.P2M).

**Personality traits** emerged as the second main theme of the psychological health determinants. Personality traits are manifestation of an individual's enduring, relatively steady, and consistent patterns of thoughts, emotions, and behaviors.Procrastinator, perfectionist, anxiety prone personality and change in personality were the sub-themes that appeared from the data.

Participants emphasized the behavioral aspects of personality more than the emotional components or thought patterns. Previous researches haveexplained that procrastinators and perfectionists students face immense problems that negatively affects their mental health and wellbeing (Moate et al., 2019; Sichan-He, 2017). In the current study participants also shared the same findings that being a procrastinator or a perfectionist adds up to the mental toll (6.P3M, 8.P2F, 13.P3F, 14.P2M).

Anxiety prone personality and change in personality are an addition to existing literature. Anxiety prone personality was reported by female participants who are prone to get anxious over inconsequential matters (4.P2F, 10.P1F, 14.P3F).Some participants contended that changes in



behavior happen gradually and unconsciously, eventually becoming integral to one's personality (5.P5F, 7.P3F, 13.P4M).

**Motivation** emerged as an important theme with intrinsic, extrinsic and demotivation as the sub-themes. Motivation is the mechanism that commences, directs, and sustains behaviors geared towards achieving specific goals. Some of the students mentioned motivation as central factor for success in their PhD journey (9.P4M, 10.P3F, 14.P1F). Few students shared intrinsic motivation for getting the higher degree, whereas most of the students discussed about the external source of motivation navigating their progress (7.P4M, 8.P6F, 12.P2F). Long duration of study, unachievable or difficult research objectives and topics, and critique attitude of supervisor, were identified as the demotivating factors (2.P3F, 4.P4M, 11.P3M). A participant reported “critique and lack of appreciation from supervisor demotivate the most” (5.P5F).

**Aggression** is also a novel theme that surfaced from the indigenous data. PhD scholars recounted numerous occurrences of sudden bursts of anger, frustration, and displacement when confronted with the challenges of during their studies. A scholar shared “I have become very aggressive due to constant grilling over the past 5 years” (4.P2M)

**Psychosomatic symptoms** have also been reported in literature affecting mental health and over all wellbeing of higher academics (Stiglic, 2022; Hazell et al., 2020). In the present research many symptoms such as headaches, body pains, muscular stiffness, stomach issues, fatigue, appetite problems, nausea and unusual bodily sensations were shared by participants by identifying one, two, or more symptoms with fluctuating degrees of intensity.

### **Physical Health Determinants Affecting Mental Health and Wellbeing of PhD Students**

The physical health determinants affecting the mental health and well-being of PhD scholars delved into aspects of physical health, encompassing factors such as physical fitness and the impact of physical illness as a primary contributor to declining physical wellbeing. There is an intricate relationship between mental and physical health, where each significantly influences the other, consequently affecting the overall wellbeing of an individual. However, the existing literature has only cursorily addressed the physical health status of doctoral students, as noted by Haynes et al. (2012) and Enzor (2017).

The physical health determinants are further categories in to several theme in current study that are physical health issues, physical illness, and physical fitness. PhD scholars described their **physical health issues** experienced in terms of developing minor health issues and/or experiencing a worsening of pre-existing physical conditions throughout their academic journey. PhD scholars explained their physical health issues like eye sight problem, having dark circles, hair loss, obesity, fatigue, posture problems, and back bone ache. They also reported

physical illness like cervical and spine issues, hypertension, and diabetes during their studies. The present findings corroborate with the existing literature (Hazell et al., 2020; Haynes et al., 2012)

**Physical fitness** theme presented the problems of PhD scholars face in keeping themselves fit and healthy due to scarcity of time and nonconductive environment. Working style and body fitness issues are the sub-themes that shed light on physical fitness problems. A prior quantitative study conducted by El-Ghoroury et al. (2012) yielded comparable results, revealing that a significant majority of doctoral students, amounting to two-thirds, expressed their inability to prioritize self-care, attributing it to overarching academic pressures and a shortage of time.

The theme of **traveling** emerged as a unique aspect of physical health, often overlooked in existing literature. Numerous participants conveyed the challenges of covering extensive distances to reach their universities or workplaces and return home. The repercussions of such travel included fatigue, health issues, and a significant waste of time. Some participants, who had to endure daily commutes of 3 to 4 hours reported experiencing severe fatigue, exhaustion, and tiredness, leading to a deterioration in their physical health(9.P1F, 11.P2M, 13.P3F).

The current research has provided ample evidence about the mental and physical health risk factors that affect the overall wellbeing of PhD students in Pakistan. Understanding the precursors of deteriorating health and wellbeing of higher academics can impact several areas of higher education, including institutional policies, educational guidelines, supervision process, and personal growth. In future, quantitative research should be conducted along qualitative so that the results can be analyzed statically that as to increase its generalizability.

## **Conclusion**

Once again, this study underscores the precarious mental and physical health situation among PhD students in academia. Through an examination of the mental and physical health of PhD students in Pakistan, the present research has pointed out numerous risk factors that negatively impact the wellbeing of these aspirant individuals, aligning with findings from similar studies. The identification of key challenges and hidden struggles of PhD students, is crucial for understanding conditional factors and facilitating improvements. The study also offers valuable insights into the current state of affairs for the Universities' chair, the Graduate Committees, and other stakeholders in the academic system for benefiting research, teaching, practice, and society.

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