p-ISSN: 2708-2113 | e-ISSN: 2708-3608

DOI(Journal): 10.31703/gesr DOI(Volume): 10.31703/gesr/.2024(IX) DOI(Issue): 10.31703/gesr.2024(IX.I)



## GLOBAL EDUCATIONAL STUDIES REVIEW HEC-RECOGNIZED CATEGORY-Y

# VOL. IX, ISSUE I, WINTER (MARCH-2024)



Double-blind Peer-review Research Journal www.gesrjournal.com © Global Educational Studies Review



Doi:https://dx.doi.org/10.31703



#### Article Title

Factors Influencing the Slow Rate of Postgraduate Degree Completion: A Case of University of Peshawar, Pakistan

#### **Global Education Studies Review**

p-ISSN: 2708-2113 e-ISSN: 2708-3608 DOI(journal): 10.31703/gesr

Volume: IX (2024)

DOI (volume): 10.31703/gesr.2024(IX)

**Issue:** I (Winter-March 2024)

DOI(Issue): 10.31703/gesr.2024(IX-I)

Home Page www.gesrjournal.com

Volume: IX (2024) https://www.gesrjournal.com/Current-issues

Issue: I-Winter (March-2024) https://www.gesrjournal.com/Current-issues/9/1/2024

Scope https://www.gesrjournal.com/about-us/scope

Submission https://humaglobe.com/index.php/gesr/submissions



#### Visit Us



#### Abstract

The study examines the factors that contribute to the slow rate of postgraduate degree completion at the University of Peshawar-Pakistan. For this purpose, the perspectives of 52 students, both male and female at different postgraduate levels were gathered using a survey questionnaire. The findings reveal that personal factors, such as untimely correction submissions, research topic selection problems, and funding constraints significantly contribute to the slow rate of postgraduate degree completion. Additionally, the student-supervisor relationship and institutional factors including bureaucratic processes, communication gaps, and complicated evaluation processes play crucial roles in the delay. Our study recommends that research competencies, secure financial resources, and flexible study models should be enhanced for the students. Moreover, supervisors are urged to refine their supervision skills, while the institute should create a supportive research environment and reconsider outdated evaluation processes.

Keywords: Contributing Factors, Completion Rate, Postgraduate Students, IER, Pakistan

#### Authors:

Maryam Begum: (Corresponding Author) MPhil Scholar, Institute of Education and Research, University of Peshawar, Peshawar, KP, Pakistan.

(Email: <u>maryamsabeeh@uop.edu.pk</u>) **Parveen Khan:** Assistant Professor, Institute of Education and Research, University of Peshawar, Peshawar, KP,

Sabeeh Ullah: Institute of Business and Management Sciences, the University of Agriculture, Peshawar, Peshawar, KP, Pakistan.

Pages: 107-120

DOI:10.31703/gesr.2024(IX-I).12

DOI link: https://dx.doi.org/10.31703/gesr.2024(IX-I).12

Article link: http://www.gesrjournal.com/article/A-b-c

Full-text Link: https://gesrjournal.com/fulltext/

Pakistan.

Pdf link: https://www.gesrjournal.com/jadmin/Auther/31rvIolA2.pdf



This work is licensed under the Attribution-Noncommercial- No Derivatives 4.0 International.





Humanity Publications (HumaPub)



www.humapub.com Doi:https://dx.doi.org/10.31703

#### Citing this Article

		Factors Inf	luencing the S		stgraduate De eshawar-Pakis	-	letion: A Case of	f University of			
12		Author	Maryam Begum Parveen Khan Sabeeh Ullah		DOI		gesr.2024(IX-I).1	2			
Pages		107-120	Year	2024	Volume	IX	Issue	Ι			
APA       Begum, M., Khan, P., & Ullah, S. (2024). Factors Influencir         Postgraduate Degree Completion: A Case of University of H         Educational Studies Review, IX(I), 107-120. https://doi.org						of Peshawar-Paki	stan. <i>Global</i>				
	CHI	(CAGO	Begum, Maryam, Parveen Khan, and Sabeeh Ullah. 2024. "Factors Influencing the Slow Rate of Postgraduate Degree Completion: A Case of University of Peshawar-Pakistan." <i>Global Educational Studies Review</i> IX (I):107-120. doi: 10.31703/gesr.2024(IX-I).12.								
Styles	HA	RVARD	BEGUM, M., KHAN, P. & ULLAH, S. 2024. Factors Influencing the Slow Rate Postgraduate Degree Completion: A Case of University of Peshawar-Pakistan. <i>Glow</i> <i>Educational Studies Review</i> , IX, 107-120.								
Referencing & Citing Styles	MH	RA	Begum, Maryam, Parveen Khan, and Sabeeh Ullah. 2024. 'Factors Influencing the Slow I of Postgraduate Degree Completion: A Case of University of Peshawar-Pakistan', <i>Gl</i> <i>Educational Studies Review</i> , IX: 107-20.								
Referencii	ML.	A	Postgraduate		tion: A Case of	University	ctors Influencing of Peshawar-Paki				
	OXI	FORD	Rate of Postgr	Begum, Maryam, Khan, Parveen, and Ullah, Sabeeh (2024), 'Factors Influencing the Sl Rate of Postgraduate Degree Completion: A Case of University of Peshawar-Pakistan', <i>Global Educational Studies Review,</i> IX (I), 107-20.							
	TUI	RABIAN	Postgraduate Educational S		tion: A Case of X, no. I (2024):	University 107-20.	ctors Influencing of Peshawar-Paki				





e-ISSN: 2708-3608	<b>Volume:</b> IX (2024)	Issue: I-Winter (March-2024)	<b>p-ISSN</b> : 2708-2113
GESR	www	tional Studies Review .gesrjournal.com x.doi.org/10.31703/gesr	
Pages: 107-120	URL: https://doi.o	rg/10.31703/gesr.2024(IX-I).12	Doi: 10.31703/gesr.2024(IX-I).12
	Check for updates Cite Us	<ul> <li>Image: Second sec</li></ul>	

#### Authors:

Maryam Begum: (Corresponding Author)

MPhil Scholar, Institute of Education and Research, University of Peshawar, Peshawar, KP, Pakistan.

(Email: <u>maryamsabeeh@uop.edu.pk</u>) **Parveen Khan:** Assistant Professor, Institute of Education and Research, University of

Peshawar, Peshawar, KP, Pakistan. Sabeeh Ullah: Institute of Business and Management Sciences, the University of Agriculture, Peshawar, Peshawar, KP, Pakistan.

#### Contents

- <u>Introduction</u>
- Objectives
- Literature Review
- Personal Factors
- Supervisor Factors
- Institutional Factors
- Material and Methods
- <u>Sample Size and Procedure</u>
- Analysis Procedure
- <u>Results</u>
- <u>Discussion</u>
- <u>Conclusion and Policy Implications</u>
- <u>References</u>

Factors Influencing the Slow Rate of Postgraduate Degree Completion: A Case of University of Peshawar-Pakistan

Title

#### Abstract

The study examines the factors that contribute to the slow rate of postgraduate degree completion at the University of Peshawar-Pakistan. For this purpose, the perspectives of 52 students, both male and female at different postgraduate levels were gathered using a survey questionnaire. The findings reveal that personal factors, such as untimely correction submissions, research topic selection problems, and funding constraints significantly contribute to the slow rate of postgraduate degree completion. Additionally, the student-supervisor relationship and institutional factors including bureaucratic processes, communication gaps, and complicated evaluation processes play crucial roles in the delay. Our study recommends that research competencies, secure financial resources, and flexible study models should be enhanced for the students. Moreover, supervisors are urged to refine their supervision skills, while the institute should create a supportive research environment and reconsider outdated evaluation processes.

Keywords: <u>Contributing Factors</u>, <u>Completion Rate</u>, <u>Postgraduate</u> <u>Students</u>, <u>IER</u>, <u>Pakistan</u>

#### Introduction

Pursuing a postgraduate degree is a significant and crucial stage in the academic journey. It represents an in-depth expertise of the subject matter and a gateway to numerous career opportunities. Universities offer Postgraduate degree programs that can lead to the development of scholars in various fields (Chidi & Sylvia, <u>2021</u>). Through various degree programs, universities produce quality postgraduate students and charge for them (Mkhai, <u>2023</u>). In Pakistan, postgraduate degrees are in two forms: i) coursework-based and ii) a combination of coursework and research work. The provision of a research-based postgraduate degree requires that the student complete a research thesis/dissertation under the





supervision of the research supervisor. Universities in different countries have different requirements for the postgraduate program. (Chidi & Sylvia, 2021). Students in postgraduate research-based degree programs identify a problem worth investigating. The identified research problem must match the student's competency, available financial resources, and time. For the award of a degree, these students are expected to complete and submit their thesis as part of partial fulfillment requirements within the stipulated time.

However, despite the charm of advanced education, it is no secret that many postgraduate students experience prolonged durations to degree completion, mostly never reaching the finish line. Prior studies reported that about 50% of the students at the master's and PhD levels fail to match the stipulated time frame and take longer time to complete their degrees (McCallin & Nayar, 2012; Ndayambaje, 2018). Similarly, Chidi and Sylvia (2021) documented that students cannot graduate on time due to delays in completing their thesis. Jones (2013) revealed that 70% of postgraduate students in the sample never completed their degree. In addition, Castelló, Pardo, Sala-Bubaré, and Suñe-Soler (2017) reported that about 33% of the sample enrolled postgraduate students intend to drop out at some point. While taking a sample from the Netherlands, van de Schoot, Yerkes, Mouw, and Sonneveld (2013) revealed that only 10% of postgraduate students completed their degrees in the stipulated time.

The completion rate of postgraduate degrees varies across different fields of study, universities, and countries. The slow completion rate can create problems for universities and students (van de Schoot et al., 2013). For Universities, the success of their degree programs, the quality of their students, and their reputation depend on their student's timely completion of degrees (Sverdlik, Hall, McAlpine, & Hubbard, 2018; Viđak, Tokalić, Marušić, Puljak, & Sapunar, 2017). Akparep, Jengre, and Amoah (2017) argued that a slow completion rate could create worries not only among continuing students but also among prospecting students and stop them from applying due to fear of abandonment of the program or graduating in the stipulated time. Evangu, Bagire, and Kibrai (2014) added that a slow completion rate increased university costs. A slow completion rate enhances educational wastage regarding resources, energy, and time offered to the students during the program (Chidi & Sylvia, 2021). Delay in completion is highly problematic for students as well. Because it can create dissatisfaction in students (van Rooij, Fokkens-Bruinsma, & Jansen, <u>2019</u>), lower productivity and loss of income (Enders, <u>2002</u>), mental issues such as stress, anxiety, worry, and exhaustion (Pyhältö, Stubb, & Lonka, <u>2009</u>), and loss of job and delay in promotion (Mosanya et al., <u>2022</u>).

The slow completion rate of postgraduate degrees provides a multifaceted and complex challenge within higher education. Despite the substantial investment of resources and time by both institutions and students, many postgraduate students experience prolonged degree completion or, in some cases, fail to complete their degrees.

This phenomenon is a cause for concern for several reasons. First, the slow completion rates have been the focus of considerable academic inquiry, as they hold profound implications for students, institutions, and the broader landscape of higher education. The growing concern about postgraduate students' well-being and the consequences and associated costs necessitates the examination of the slow rate of degree completion of postgraduate students (Mkhai, 2023; Pitchforth et al., 2012). Second, contemporary studies focused on a particular discipline or institution (for example, (Castelló et al., 2017; Chidi & Sylvia, 2021; Mkhai, 2023), which limits the generalizability of findings. Skopek, Triventi, and Blossfeld (2022) recommended that research consider other postgraduate institutes to address the generalizability of the results. There is a need for more comprehensive studies that consider the varying completion rates and associated factors across program types (e.g., master's, doctoral). Third, Prior studies determined various personal and systemic factors contributing to the slow completion rate. These factors are divided into three categories: i) students related factors (i.e., research skills, interest, and availability of time), ii) supervisor-related factors, and iii) institutional or environmental factors (Chidi & Sylvia, 2021; Manathunga, 2005; Mugendi & Githae, 2021; van de Schoot et al., 2013). Most existing literature has examined institutional and personal factors contributing to slow postgraduate degree completion. Still, there is a scarcity of research that comprehensively explores the impact of systemic factors, including the supervisor role. In the same line, Amani, Myeya, and Mhewa (2022) recommended that future studies should examine the supervisor-related factors towards a slow rate of completion and compare the results across disciplines using a quantitative approach. Lastly, the issue of the slow completion rate is not an exception in the University of Peshawar, particularly at the Institute of Education and Research (IER). For the MS/MPhil degree program, the required completion time is two years, whereas most successful students spend an average of 3.8 years to complete their degree. Similarly, PhD students spend, on average, 8.4 years, which is more than the maximum time for the PhD program. Such delay resulted in complex challenges for the students and the institute, including increased costs, discontinuing the program and study, and a bad image of the institute and university in the community.

Given the significance and complexity of the issue, it is necessary to examine various factors contributing to the slow rate of postgraduate degree completion and shed light on why many postgraduate students in different programs encounter delays in pursuing advanced degrees. Specifically, the study has the following

#### **Objectives**

- 1. To determine student-related factors' contribution to the slow degree completion rate of postgraduate students in IER, University of Peshawar.
- 2. To determine supervisor-related factors' contribution to the slow degree completion rate of postgraduate students in IER, University of Peshawar.
- 3. To determine institution-related factors' contribution to the slow degree completion rate of postgraduate students in IER, University of Peshawar.
- 4. To analyze the variations in factors' contribution to slow degree completion across gender and different academic disciplines.

The study contributes significantly to the existing body of literature in several ways. First, the study offers a comprehensive understanding of the personal, institutional, and supervisor-related factors influencing degree completion rates of postgraduate students of IER. Second, the study bridges the disciplinary gap by examining the MS/MPhil and PhD completion rates, allowing for a more nuanced examination and differences between the program types. Lastly, the study intends to provide recommendations for policymakers and institutions, particularly IER, to enhance postgraduate program outcomes and efficiency.

The remaining paper is as follows: Section 2 reviews the prior literature, section 3 elaborates on the materials and methods, section 4 presents the results and discussions, and section 5 concludes the study and presents the implications.

#### Literature Review

Postgraduate education represents a critical stage in the academic journey, offering advanced learning opportunities and shaping future professionals. However, the persistent factors that prior researchers have identified contribute to the slow completion rates and have garnered significant scholarly attention. For instance, Hitchcock and Hughes (1995); Rudestam and Newton (2014), and Sharp, Peters, and Howard (2017) reported that lack of sufficient resources and inadequate supervision are the major factors of slow completion rate. Additionally, Gall, Borg, and Gall (1996); Rudestam and Newton (2014); Sharp et al. (2017), argued that students face different challenges during their studies, such as failure to find a research topic, lack of motivation, and illness, which have a negative influence on the completion rate of their degrees. Moreover, Mosanya et al. (2022) found that financial constraints, inability to take study leave, delay in topic selection, and departmental approval by the students could contribute to the slow completion rate of postgraduate degrees. This study explores the multifaceted factors associated with postgraduate degree completion, including personal, supervisor, and institutional-related factors.

#### **Personal Factors**

Studies have consistently identified personal factors as influential contributors to postgraduate completion rates. Prior studies identified several demographic factors for the slow completion rate. Many studies have reported that factors such as family obligations, mental and physical health issues, and financial problems are the main problems of the slow completion rate of postgraduate degrees (Litalien & Guay, 2015; Mugendi & Githae, 2021). Mugendi and Githae (2021) documented that various demographic factors like gender, marital status, finances, and discipline are the main drivers of non-completion among postgraduate students. Demographic characteristics, including age, gender, and cultural background, have been shown to impact students' progress (A. El Refae, Kaba, & Eletter, 2021; Brown et al., 2020). Mouton (2011) reported that attrition occurred due to student's lack of ability, personal reasons, motivation or skills, and lack of financial support. Motivational factors, such as intrinsic motivation and goal clarity, are crucial in sustaining student commitment to program completion (Cardona, 2013). While studying public sector university students in Kenya, Mugendi and Githae (2021) found that financial issues are the main factor in the non-completion of students' degrees. Tanzania and Mkhai (2023) noted that students' financial constraints and lack of research skills lead to a slow completion rate. Furthermore, Sulandari et al. (2020) stated that the slow completion rate of postgraduate degrees is influenced by personal factors such as time availability, lack of interest in research, and research skills. To increase the completion rate of postgraduate degrees, universities should pay attention to the high workload of postgraduate students (Rooij et al., 2021).

#### **Supervisor Factors**

The role of a supervisor is central throughout the postgraduate degree completion because students during their academic journey encounter many challenges, such as a lack of familiarity with the research topic, research methodology, and a lack of guidelines and information in the field (Ndavambaje, 2018). Supervisors are expected to mentor and coach students, guiding, advising, and teaching the research for several years (Nulty, Kiley, & Meyers, 2009). However, supervision extends beyond a simple academic framework and encompasses more complex human and social relationships (Dimitrova, 2016). Additionally, the academic and personal relationship between the student and supervisor is crucial (van Rooij et al., 2021). Mosanya et al. (2022) reported that the relationship between the supervisor and student and the commitment of the supervisor to the research topic are the main factors that can support postgraduate students in completing their degrees on time. However, from the student's perspectives, prior studies reported different views. Emilsson and Johnsson (2007) noted that inadequate supervision is the major problem of timely completion. Similarly, the effectiveness of the working relationship between student and supervisor is the primary determinant of student success (Gill & Burnard, 2008). Universally, there is no agreed definition of an effective supervisor; however, an effective supervisor should have good communication and writing styles, open-mindedness to people's characters, and the capability of encouragement (Ismail, Abiddin, & Hassan, 2011). In addition, the relationship between student and supervisor demands emotional and intellectual (Thompson, Kirkman, Watson, & Stewart, 2005). de Valero (2001) documented that poor supervision negatively influences timely completion. Ndayambaje (2018) found three factors, namely lack of supervisor-student relationship, delayed feedback from supervisors on student work, and inappropriate technical

guidance from supervisors, hinder the timely completion of postgraduate degrees. Netshitangani and Machaisa (2021) reported that poor relationships between students and their supervisors, especially due to negative feedback, lead to losses of students' self-esteem, which ultimately influences their success.

#### **Institutional Factors**

Institutions play a pivotal role in shaping the postgraduate experience. Research has highlighted the significance of faculty support, resources, and program flexibility in influencing completion rates. Peng and Zhang (2021) reported that institutional factors are essential because universities influence the degree completion time of students. Recent studies emphasize the role of mentorship programs and tailored academic advising in fostering a supportive environment (Amani et al., 2022). Institutional resources are essential for the student's achievement to create a supportive environment (Goenner & Snaith, 2004). A hostile and unwelcoming institutional culture contributes to students' withdrawal and isolation (Engineering, National Academies of Sciences, & Medicine, 2016). Using a sample of 76 research students and 17 supervisors in Zimbabwe, Chabaya, Chiome, and Chabaya (2009) highlighted that the institution has no follow-up to identify how the students are progressing in their research. They recommended that universities conduct workshops and seminars for the students and supervisors so that they could complete their work on time. Furthermore, Pitchforth et al. (2012) noted that the research environment at the institutional level is the most influential factor that directly influences the timely completion of postgraduate degrees. Moreover, the design of the educational procedures and structure of the program hinders the research students from completing the postgraduate degree on time (Castelló et al., 2017).

#### Material and Methods

The study intends to identify the factors (personnel, supervisor, and institutional) contributing to the slow rate of degree completion of postgraduate students (both MPhil/MS and PhD) and to gain insight into to what extent these factors are relevant to the completion rate in different disciplines and gender. For this purpose, a descriptive research design is carried out at the Institute of Education and Research (IER), University of Peshawar, Pakistan. The selection of the IER is because the institute is currently experiencing a delay in postgraduate degree completion.

#### Sample Size and Procedure

There are various rules of thumb, tables, and formulas for determining an appropriate sample size for survey research. Sekaran and Bougie (2016) suggest that for survey research, the sample size should ideally be ten times the number of study variables. Zhang, Peters, Janzing, and Schölkopf (2012) recommend a sample size of 400 for survey studies. Krejcie and Morgan (1970) and Yamane (1973) offer formulas for sample size calculation based on population numbers. Green (1991) proposes using a sample-to-items ratio. While these methods can help determine sample size, they may also increase the chance of Type I and Type II errors (Hair, Risher, Sarstedt, & Ringle, 2019; Memon et al., 2020).

Recently, studies have recommended using power analysis to determine the sample size (Hair et al., 2019; Memon et al., 2020). Power analysis gives the minimum

Table 1

#### Postgraduate students' strengths in IER

predictors (F. Hair Jr, Sarstedt, Hopkins, & G. Kuppelwieser, 2014; Roldán & Sánchez-Franco, 2012). The study used the G\*power tool to perform a power analysis for sample size determination. The required information for power analysis is power, effect size, significance level, and allocation ratio to calculate the minimum sample size needed. The study took a power of 0.80, an effect size of 0.80 (Large effect), a probability of 0.05, and an allocation ratio of 1.2 (based on PhD to M.Phil students ratio). The analysis revealed that the sample size for this research is 52 faculty members chosen from 140 postgraduate enrolled students in IER. Of these, 64 are MPhil/MS students, and 76 are PhD students. These students are currently enrolled in their coursework or research work at the MPhil/MS or PhD levels. A convenient sampling technique was used to sample 52 postgraduate students of IER, University of Peshawar, who were readily available at the institute when the study was undertaken. Figures 1-2 and Table 1 present the sample size and power analysis details.

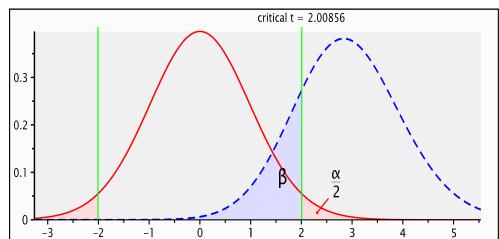
sample size by taking the model's most significant number of

υ	υ			
Gender	MPhil/MS	PhD	Total Population	Sample Chosen
Male	18	43	61	23
Female	46	33	79	29
Total	64	76	140	52

Source: Administration Section of IER

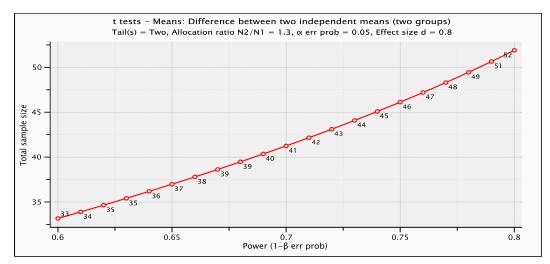
#### Figure 1.

Power Analysis



### Figure 2.

Sample Size by Using G\*Power



#### Instruments

For data collection, a closed-ended survey questionnaire was adopted from the study of Chidi and Sylvia (2021) and Mkhai (2023) with minor changes to fit within the context of IER, University of Peshawar, Pakistan. The survey questionnaire consists of 31 items, divided into 6 demographic items, 9 student-related items, 11 supervisor-related items, and 5 institution-related items. All these items except demographic-related ones were structured on a five-point Likert scale of strongly agree, Agree, Neutral, Disagree, and Strongly disagree, coded 5, 4, 3, 2, and 1, respectively. The online questionnaire (using Google form) was administered using email and social media app (WhatsApp) to collect the data from the postgraduate students. In addition, the questionnaire is distributed in person to the postgraduate students to reach the final sample of 52.

#### **Analysis Procedure**

The two-step approach was employed for the analytical procedure. The scale adopted in this study for the personal-related, supervisor-related, and institution-related factors that contribute to the slow completion rate of postgraduate degrees were assessed in the first step for the constructs' reliability and validity using factor loadings, Cronbach's alpha, average variance extracted (AVE), and composite reliability (CR). An internal reliability greater than 0.70 indicates that the items used for the constructs are reliable. Bagozzi and Yi (1988) documented that the instrument has reasonable reliability when the average variance extracted

(AVE) and composite reliability are more than 0.50 and 0.70. In the second step, the analysis was carried out using frequency, percentages, means, standard deviation, and graphs. Additionally, Independent sample t-tests were used to compare these contributing factors based on program discipline (MPhil/MS and PhD) and gender (Male and Female).

#### Results

The demographic information of the respondent students who participated in the data collection is presented in Table 2. The results indicate that the respondents involved in the study are 24 (46.2%) male and 28 (53.7%) female students. Of these, 31 (59.6%) are enrolled in MPhil/MS, and 21 (40.4%) are enrolled in the PhD program. A substantial number of respondents were aged between 21 and 40 years, and fewer were above 40 years. Furthermore, 31 (59.6%) respondents were doing a job while 21 (40.4%) were unemployed. Moreover, most of the respondents fulfill their academic expenses from their salary, own savings, or their parent's income.

Apart from the demographic information, the study also intends to highlight the available study facilities for postgraduate students in the IER. Study facilities within the institute for research students are the key factors in facilitating the postgraduate students. The results listed in Figure 3 depict that the number of respondents who reported the available facilities in the institute are computer laboratory 23 (44.2%), stable and free Internet 30 (57.7%), Open-access e-resources 22 (42.3%), Support from librarians 25 (48.1%), Stable power supply 15 (28.8%), Conducive-to-study areas 12 (23.1%), Transport services 4 (7.7%), and Accommodation services 12 (23.1%).

The study sought out students' views about the factors contributing to the slow rate of their postgraduate degree completion, and the results are presented in Table 3. Table 3 depicts the students' factors that contribute to the slow pace of degree completion, including that students agree on untimely submission of correction (15, 28.8%), problems in the selection of research topic (29, 55.8%), poor research skills (11, 21.1%), time availability (17, 32.7%), balance between work and research (22, 43.3%), anxiety problems (13, 25%), and funding problems (19, 36.5%).

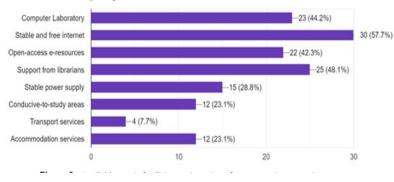
#### Table 2.

Respondents Demographic Information

Category		N	%
Gender	Male	24	46.2
	Female	28	53.8
	21-30	23	44.2
Age group	31-40	20	38.5
	41–50	08	15.4
	51 and above	01	1.9
Level of education	MPhil/MS	31	59.6
	PhD	21	40.4
Employment status	Employed	31	59.6
	Not employed	21	40.4
		01	1.0
	Loan	01	1.9
	Salary	19	36.5
Mode of Academic Financing	Scholarship	-	-
	Parents	16	30.8
	Brothers	01	1.9
	Spouse	03	5.8
	Own Saving	12	23.1

#### Figure 3

Available study facilities and services for postgraduate students





The students also raised concerns about the factors related to the supervisor's role contributing to the slow completion rate. Of these, the most prominent are supervisor availability (6, 11.6%), poor guidance on the research topic (7, 13.5%), and student-supervisor relationship issues (10, 19.2%). Most students give less weight to believe that the supervisor is the main contributing factor to the slow rate of postgraduate degree completion. Moreover, Table 3 documented the institutional factors contributing to the slow degree completion rates. A handful number of students perceived several institutional issues, including bureaucracy in the research clearance (15, 28.8%), lack of coordination from administration (11, 21.2%), lack of books and journals (13, 25%), communication gap with the students (11, 21.1%), and lengthy and complicated students research evaluation process (19, 36.6%). The internal consistency of the scale adopted is reliable, with Cronbach's alpha greater than 0.70.

The study further undertook the contributing factors of the slow rate of postgraduate degree completion based on gender and program discipline and presented the results in Table 4 and Table 5. The results in Table 4 revealed no significant difference in the mean score of male and female postgraduate students for all the factors. Similarly, the results in Table 5 show no significant difference between the mean scores of MPhil/MS and PhD students except for the personal related factors such as students who have poor research interest and feel anxiety when reaching a supervisor. The pvalue of these two factors is less than 0.05 significance level, indicating a statistical difference in the mean score across MPhil/MS and PhD programs.

#### Discussion

The study comprehensively examined the contributing factors (personal, institutional, and supervisor-related factors) to the slow rate of postgraduate degree completion at the University of Peshawar, specifically at the Institute of

#### Table 3.

Factors towards slow rate of Postgraduate degree completion

Education and Research (IER). Overall, the findings from the study revealed that personal factors like students' untimely submission of corrections, problems in the selection of research topics, poor research skills, time availability, balance between work and research, anxiety problems, and funding problems are responsible for the slow rate of degree completion among postgraduate students. Prior studies revealed a slow degree completion rate due to personal factors. For instance, Mouton (2011) reported that attrition occurred due to student's lack of ability, personal reasons, motivation or skills, and lack of financial support. Mkhai (2023) and Mugendi and Githae (2021) noted that students' financial constraints and lack of research skills lead to a slow completion rate. Furthermore, Sulandari et al. (2020) stated that the slow completion rate of postgraduate degrees is influenced by personal factors such as time availability, lack of interest in research, and research skills.

Similarly, supervisor availability, poor guidance on the research topic, and relationship with the students also delay the completion of students' degrees. It has been noted that the supervisors are busy with other activities rather than supervision. As a result, students did not get enough time and guidance on their topic, ultimately affecting them academically. The study also revealed that the studentsupervisor relationship acts as a barrier to the studentlearning process, leading to a slow rate of degree completion. Prior studies revealed similar findings of slow degree completions. For instance, Mkhai (2023) and Ndayambaje (2018) reported that a lack of supervisor-student relationships, delay in supervisor feedback on student work, and inappropriate technical guidance hinder the timely completion of postgraduate degrees. Netshitangani and Machaisa (2021) documented that poor relationships between a student and their supervisor lead to losses of students' self-esteem, which ultimately influences their success.

Items	Agree	Agree Neutral			l Disagr		Cronbach's Alpha
items	N	%	n	%	n	%	
Personal Factors							
Poor interest	6	11.5	9	17.3	37	71.2	0.837
Untimely submission	15	28.8	12	23.1	25	48.1	0.837
Difficulty in topic selection.	29	55.8	5	9.6	18	34.6	

Factors Influencing the Slow Rate of Postgraduate Degree Completion: A Case of University of Peshawar-Pakistan

Items —		]	Neutr	al	Disagree		Cronbach's Alpha
		%	n	%	n	%	
Poor research skills.	11	21.1	10	19.2	31	59.6	
Insufficient time	17	32.7	13	25	22	42.3	
Difficulty in balancing work and research.	22	43.3	11	21.2	19	36.5	
Anxiety problem	13	25	11	21.2	28	53.8	
Insufficient funds	19	36.5	8	15.4	25	48.1	
Health problems	4	7.7	8	15.4	40	76.9	
Supervisor Factors							
Insufficient research skills.	3	5.7	4	7.7	45	86.5	
Inaccessible when needed	6	11.6	10	19.2	36	69.2	
Delayed reading my submitted works.	5	9.6	8	15.4	39	75	
Imposed the topics on me.	2	3.8	4	7.7	46	88.5	
Poor guidance in topic selection	7	13.5	2	3.8	43	82.7	0.834
Poor knowledge of the topic	2	3.8	5	9.6	45	86.5	0.834
Frequently change my research topic	5	9.6	1	1.9	46	88.5	
Failed to keep the time scheduled for discussion	7	13.5	6	11.5	39	75	
My supervisor has poor feedback on my work progress	3	5.7	6	11.5	43	82.7	
Failed to provide additional information	6	11.5	3	5.8	43	82.7	
Poor interpersonal relationship with supervisor	10	19.2	3	5.8	39	75	
Institutional Factors							
Bureaucracy in processing research clearance	15	28.8	17	32.7	20	38.5	
Poor cooperation from the coordination office	11	21.2	12	23.1	29	55.8	0.794
Lacks relevant books and journals	13	25	9	17.3	30	57.7	0.784
Poor communication with the research students	11	21.1	10	19.2	31	59.6	
Complicated and lengthy evaluation process	19	36.6	14	26.9	19	36.5	

#### Table 4.

Mean comparison between male and female postgraduate students on the factors contributing to the slow rate of degree completion.

Thomas	Male		Fem	nale	t-	<b>n</b> malua
Items	Mean	SD	Mean	SD	statistic	p-value
Personal Factors						
Poor interest	2.040	0.955	2.320	0.983	1.037	0.305
Untimely submission	2.920	1.060	2.680	0.983	-0.840	0.405
Difficulty in topic selection.	3.380	1.013	3.180	1.219	-0.625	0.535
Poor research skills.	2.460	1.021	2.680	0.983	0.791	0.433
Insufficient time	3.250	1.152	2.710	0.854	-1.922	0.060
Difficulty in balancing work and research.	3.170	1.007	2.930	0.979	-0.863	0.392
Anxiety problem	2.460	1.103	2.820	1.090	1.191	0.239
Insufficient funds	3.130	1.227	2.680	1.249	-1.295	0.201
Health problems	2.000	0.978	2.000	0.816	0.456	0.520
Supervisor Factors						
Insufficient research skills.	1.630	0.924	1.750	0.928	0.485	0.630
Inaccessible when needed	2.040	0.955	2.210	1.287	0.554	0.582
Delayed reading my submitted works.	1.880	0.741	2.290	1.272	1.446	0.155

		Mar	yam Begun	n, Parveen	Khan, and S	Sabeeh Ullah
Imposed the topics on me.	1.630	0.495	1.930	0.900	1.472	0.147
Poor guidance in topic selection	1.710	0.751	2.110	1.397	1.307	0.198
Poor knowledge of the topic	1.670	0.637	1.890	1.100	0.887	0.379
Frequently change my research topic	1.790	0.833	1.860	1.239	0.220	0.827
Failed to keep the time scheduled for discussion	1.960	0.999	2.210	1.258	0.803	0.426
My supervisor has poor feedback on my work progress	1.880	0.850	1.960	1.036	0.336	0.738
Failed to provide additional information	1.920	0.881	2.040	1.170	0.409	0.684
Poor interpersonal relationship with supervisor	2.210	1.021	2.140	1.268	-0.203	0.840
Institutional Factors						
Bureaucracy in processing research clearance	2.670	1.049	3.040	0.962	1.323	0.192
Poor cooperation from the coordination office	2.540	0.884	2.680	1.188	0.465	0.644
Lacks relevant books and journals	2.830	1.167	2.390	1.166	-1.358	0.181
Poor communication with the research students	2.790	1.141	2.460	1.105	-1.049	0.299
Complicated and lengthy evaluation process	3.330	1.239	2.790	1.228	-1.596	0.117

#### Table 5.

Mean comparison between program-wise postgraduate students on the factors contributing to the slow rate of degree completion.

	MPhi	l/MS	Ph	D	t-	p-
Items	Mean	SD	Mean	SD	statistic	value
Personal Factors						
Poor interest	2.450	1.060	1.810	0.680	2.661	0.010
Untimely submission	2.940	1.031	2.570	0.978	1.275	0.208
Difficulty in topic selection.	3.420	1.148	3.050	1.071	1.176	0.245
Poor research skills.	2.740	1.064	2.330	0.856	1.466	0.149
Insufficient time	3.000	0.966	2.900	1.136	0.325	0.747
Difficulty in balancing work and research.	3.100	0.944	2.950	1.071	0.513	0.610
Anxiety problem	2.900	1.248	2.290	0.717	2.259	0.028
Insufficient funds	2.970	1.278	2.760	1.221	0.580	0.564
Health problems	2.000	0.966	2.000	0.775	0.485	0.644
Supervisor Factors						
Insufficient research skills.	1.740	1.064	1.620	0.669	0.469	0.641
Inaccessible when needed	2.160	1.186	2.100	1.091	0.203	0.840
Delayed reading my submitted works.	2.130	1.088	2.050	1.071	0.266	0.791
Imposed the topics on me.	1.770	0.762	1.810	0.750	-0.165	0.870
Poor guidance in topic selection	1.840	1.157	2.050	1.161	-0.638	0.526
Poor knowledge of the topic	1.770	1.055	1.810	0.680	-0.135	0.893
Frequently change my research topic	1.870	1.231	1.760	0.768	0.360	0.720
Failed to keep the time scheduled for discussion	2.130	1.147	2.050	1.161	0.250	0.804
My supervisor has poor feedback on my work progress	1.900	0.870	1.950	1.071	-0.182	0.856
Failed to provide additional information	1.970	1.048	2.000	1.049	-0.109	0.914
Poor interpersonal relationship with supervisor	2.190	1.108	2.140	1.236	0.154	0.878
Institutional Factors						
Bureaucracy in processing research clearance	3.000	1.033	2.670	0.966	1.172	0.247
Poor cooperation from the coordination office	2.580	1.119	2.670	0.966	-0.287	0.775
Lacks relevant books and journals	2.580	1.119	2.620	1.284	-0.114	0.909

Factors Influencing the Slow	Rate of Postgraduate Degree	e Completion: A Case of Univ	versity of Peshawar-Pakistan
0			

Poor communication with the research students	2.520	1.092	2.760	1.179	-0.771	0.444
Complicated and lengthy evaluation process	2.970	1.329	3.140	1.153	-0.491	0.625

Moreover, the study also depicts the institutional issues that hinder postgraduate students from completing their degrees on time. The findings demonstrated several institutional matters, including bureaucracy in the research clearance, lack of coordination from the coordination office, lack of books and journals, communication gap with the students, and lengthy and complicated evaluation process of student research. The institutional factors are essential because they influence the student's degree completion time (Peng & Zhang, 2022). A supportive academic environment fosters the timely completion of postgraduate degrees (Amani et al., 2022; Johnston, Sampson, Comer, & Brogt, 2016). Furthermore, Pitchforth et al. (2012) noted that the research environment at the institutional level is the most influential factor that directly influences the timely completion of postgraduate degrees. Moreover, the design of the educational procedures and structure of the program hinders the research students from completing the postgraduate degree on time (Castelló et al., 2017).

#### **Conclusion and Policy Implications**

The current study examined various factors contributing to the slow rate of postgraduate degree completion from students' perspectives. It shed light on why many postgraduate students in different programs encounter delays in pursuing advanced degrees at the University of Peshawar, particularly in the Institute of Education and Research. Our findings revealed that most students felt that personal factors such as students' untimely submission of corrections, problems in the selection of research topics, poor research skills, time availability, balance between work and research, anxiety problems, and funding problems are responsible for the slow rate of their degree completion. In addition, the student-supervisor working relationship, supervisor availability, and guidance of research topics contribute to the slow pace of postgraduate degree completion. Moreover, institutional factors like bureaucracy in the research clearance, lack of coordination from the coordination office, communication gap with the students, and lengthy and complicated evaluation process of student research hinder students from completing their degrees on time.

Our study provides an understanding and highlights some policy recommendations for the students and the institute to build a supportive research environment for the students and supervisor. On the part of the students, it is essential to enhance research competency skills by participating in seminars, conferences, and workshops so that they can complete their mandatory research requirements for their postgraduate degree on time. Students should also establish financing channels to cover the cost of their postgraduate degree. In addition, to ensure their availability and minimize stress, students should select study models (part-time) that can favor them and allow them to perform several tasks simultaneously. Furthermore, supervisors should enhance supervision skills by attending workshops on research supervision and encouraging them to provide timely guidance to their students on research topics to avoid unnecessary delays. It is also recommended that a good working relationship between the students and supervisor should be established to improve the research process within the institute. Moreover, the institute should establish a supportive and effective research environment for the postgraduate students. The institute should revisit the old, ill research evaluation process to ensure the timely completion of postgraduate degrees.

The study has some limitations that need to be addressed in future studies. Our study is limited to IER, University of Peshawar; future studies should extend it to other departments and universities to generalize the findings. The study investigates the contributing factors to the slow degree completion rate from the student's perspective. Therefore, a mixed-method approach should used to get a more in-depth understanding of the challenges from the perspective of supervisors.



#### References

- Refae, G. G. a. E., Kaba, A., & Eletter, S. (2021). The Impact of Demographic Characteristics on Academic Performance: Face-to-Face Learning versus Distance Learning implemented to prevent the spread of COVID-19. *International Review of Research in Open and Distance Learning*, 22(1), 91–110. <u>https://doi.org/10.19173/irrodl.v22i1.5031</u> <u>Google Scholar Worldcat Fulltext</u>
- Akparep, J. Y., Jengre, E., & Amoah, D. A. (2017). Demystifying the blame game in the delays of graduation of research students in Universities in Ghana: The case of University for Development Studies. *European Journal of Business and Innovation Research*, *5*(1), 34-50.
  Google Scholar Worldcat Fulltext
- Amani, J., Myeya, H., & Mhewa, M. (2022). Understanding the motives for pursuing postgraduate studies and causes of late completion: Supervisors and supervisees' experiences. SAGE Open, 12(3), 215824402211095. <a href="https://doi.org/10.1177/21582440221109586">https://doi.org/10.1177/21582440221109586</a>

   Google Scholar
   Worldcat
   Fulltext
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. <u>https://doi.org/10.1007/bf02723327</u>
   <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Brown, J., McDonald, M., Besse, C., Manson, P., McDonald, R., Rohatinsky, N., & Singh, M. (2020). Nursing students' academic success factors. *Nurse Educator*, 46(2), E23–E27. <u>https://doi.org/10.1097/nne.00000000000882</u>
  <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Cardona, J. J. (2013). Determined to succeed: Motivation towards doctoral degree completion. *Deep Blue (University of Michigan)*. <u>https://hdl.handle.net/2027.42/99774</u> <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Castelló, M., Pardo, M., Sala-Bubaré, A., & Suñe-Soler, N. (2017). Why do students consider dropping out of doctoral degrees? Institutional and personal factors. *Higher Education*, *74*(6), 1053–1068. <u>https://doi.org/10.1007/s10734-016-0106-9</u> <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Chabaya, O., Chiome, C., & Chabaya, R. A. (2009). Students' failure to submit research projects on time: a case study from Masvingo Regional Centre at Zimbabwe Open University. *Open Learning, 24*(3), 211–221. <u>https://doi.org/10.1080/02680510903201615</u> <u>Google Scholar Worldcat Fulltext</u>

- Chidi, N., & Sylvia, O. A. (2021). Determination of Factors that Contribute to Postgraduate Students' Delay in their Thesis/Dissertation Completion. *The Universal Academic Research Journal*:, 2(2), 78–86. <u>https://doi.org/10.17220/tuara.2020.02.3</u> <u>Google Scholar Worldcat Fulltext</u>
- De Valero, Y. F. (2001). Departmental factors affecting Time-to-Degree and completion rates of doctoral students at one Land-Grant research institution. *Journal of Higher Education/~the œJournal of Higher Education, 72*(3), 341–367. <u>https://doi.org/10.1080/00221546.2001.11777098</u> <u>Google Scholar Worldcat Fulltext</u>
- Dimitrova, R. (2016). Ingredients of good PhD supervision evidence from a student survey at Stockholm University. *Utbildning Och Lärande / Education and Learning, 10(1), 40-52, 10*(1), 40–52. <u>http://du.divaportal.org/smash/record.jsf?pid=diva2:1257192</u> <u>Google Scholar Worldcat Fulltext</u>
- Emilsson, U. M., & Johnsson, E. (2007). Supervision of supervisors: on developing supervision in postgraduate education. *Higher Education Research & Development/Higher Education Research and Development, 26*(2), 163–179. <u>https://doi.org/10.1080/07294360701310797</u> <u>Google Scholar Worldcat Fulltext</u>
- Enders, J. (2002). Higher Education, 44(3. *Higher Education*, 44(3/4), 493–517. <u>https://doi.org/10.1023/a:1019850524330</u> <u>Google Scholar Worldcat Fulltext</u>
- Engineering, N. A. o., National Academies of Sciences, E., & Medicine. (2016). Barriers and Opportunities for 2-Year and 4-Year STEM Degrees: Systemic Change to Support Students' Diverse Pathways. Washington, DC: The National Academies Press.
  Google Scholar Worldcat Fulltext
- Eyangu, S., Bagire, V., & Kibrai, M. (2014). An examination of the completion rate of Masters programs at Makerere University Business School. *Creative Education*, 05(22), 1913–1920. <a href="https://doi.org/10.4236/ce.2014.522214">https://doi.org/10.4236/ce.2014.522214</a>
   Google Scholar Worldcat Fulltext
- Hair, J. F., Jr, Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, *26*(2), 106–121. <u>https://doi.org/10.1108/ebr-10-2013-0128</u>
  <u>Google Scholar Worldcat Fulltext</u>
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An Introduction.* Allyn & Bacon. <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>

Factors Influencing the Slow Rate of Postgraduate Degree Completion: A Case of University of Peshawar-Pakistan

Gill, P., & Burnard, P. (2008). The student-supervisor relationship in the PhD/Doctoral process. *British Journal of Nursing, 17*(10), 668–671. <u>https://doi.org/10.12968/bjon.2008.17.10.29484</u> <u>Google Scholar Worldcat Fulltext</u>

- Goenner, C. F., & Snaith, S. M. (2004). Predicting Graduation Rates: An analysis of student and institutional factors at doctoral universities. *Journal of College Student Retention*, 5(4), 409–420. <u>https://doi.org/10.2190/lkjx-cl3h-1aj5-wvpe Google Scholar Worldcat Fulltext</u>
- Green, S. B. (1991). How many subjects does it take to do a regression analysis?. *Multivariate Behavioral Research, 26*(3), 499–510. <u>https://doi.org/10.1207/s15327906mbr2603\_7</u> <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. <u>https://doi.org/10.1108/ebr-11-2018-0203</u>
  Google Scholar Worldcat Fulltext
- Hitchcock, G., & Hughes, D. (1995). *Research and the teacher: A Qualitative Introduction to School-based Research.* Psychology Press. Google Scholar Worldcat Fulltext
- Ismail, A., Abiddin, N. Z., & Hassan, A. (2011). Improving the development of postgraduates' research and supervision. *International Education Studies*, 4(1). <u>https://doi.org/10.5539/ies.v4n1p78</u> Google Scholar Worldcat Fulltext
- Johnston, L., Sampson, K., Comer, K., & Brogt, E. (2016). Using doctoral experience survey data to support developments in postgraduate supervision and support. *International Journal* of Doctoral Studies, 11, 185–203. https://doi.org/10.28945/3505 <u>Google Scholar Worldcat Fulltext</u>
- Jones, M. (2013). Issues in Doctoral Studies Forty Years of Journal Discussion: Where have we been and where are we going? *International Journal of Doctoral Studies*, *8*, 083–104. <u>https://doi.org/10.28945/1871</u> <u>Google Scholar Worldcat Fulltext</u>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610. <u>https://doi.org/10.1177/001316447003000308</u> <u>Google Scholar Worldcat Fulltext</u>
- Litalien, D., & Guay, F. (2015). Dropout intentions in PhD studies: A comprehensive model based on interpersonal relationships

and motivational resources. *Contemporary Educational Psychology*, *41*, 218–231. <u>https://doi.org/10.1016/j.cedpsych.2015.03.004</u> Google Scholar Worldcat Fulltext

- Manathunga, C. (2005). Early warning signs in postgraduate research education: a different approach to ensuring timely completions. *Teaching in Higher Education*, 10(2), 219–233. https://doi.org/10.1080/1356251042000337963
   <u>Google Scholar Worldcat Fulltext</u>
- McCallin, A., & Nayar, S. (2012). Postgraduate research supervision: a critical review of current practice. *Teaching in Higher Education*, 17(1), 63–74.

   <u>https://doi.org/10.1080/13562517.2011.590979</u>

   Google Scholar
   Worldcat
- Memon, M. A., Salleh, R., Mirza, M. Z., Cheah, J., Ting, H., Ahmad, M. S., & Tariq, A. (2020). Satisfaction matters: the relationships between HRM practices, work engagement and turnover intention. *International Journal of Manpower*, *42*(1), 21–50. <u>https://doi.org/10.1108/ijm-04-2018-0127</u>
  <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Mkhai, E. (2023). Factors contributing to slow completion rate among postgraduate students of the Information Studies Programme at the University of Dar es Salaam, Tanzania. *IFLA Journal*, 49(3), 554–563. <a href="https://doi.org/10.1177/03400352231174468">https://doi.org/10.1177/03400352231174468</a>
  <u>Google Scholar Worldcat Fulltext</u>
- Mosanya, A. U., Ukoha-Kalu, B. O., Isah, A., Umeh, I., Amorha, K. C., Ayogu, E. E., & Ubaka, C. (2022). Factors associated with the timely completion of doctoral research studies in clinical pharmacy: A mixed-methods study. *PloS One*, *17*(9), e0274638. <u>https://doi.org/10.1371/journal.pone.0274638</u>
  <u>Google Scholar Worldcat Fulltext</u>
- Mouton, J. (2011). Doctoral production in South Africa : statistics, challenges and responses. *Perspectives in Education, 29*(3), 13–29. <u>https://eric.ed.gov/?id=EJ945858</u> <u>Google Scholar Worldcat Fulltext</u>
- Mugendi, S. M., & Githae, E. N. (2021). PREVALENCE OF NON-COMPLETION AMONG POSTGRADUATE STUDENTS IN SELECTED PUBLIC UNIVERSITIES IN KENYA. *European Journal of Education Studies, 8*(12). <u>https://doi.org/10.46827/ejes.v8i12.4017</u> Google Scholar Worldcat Fulltext
- Ndayambaje, I. (2018). Effect of supervision on timely completion of PhD Programme. *Deleted Journal*, 4(2), 57–70. <u>https://www.africaneditors.org/journal/RJE/abstract/83467-97518 Google Scholar Worldcat Fulltext</u>

- Netshitangani, T., & Machaisa, P. R. (2021). Supervision

   experiences of postgraduate students at an ODL institution in

   South
   Africa. Cogent Social Sciences, 7(1).

   https://doi.org/10.1080/23311886.2021.1970442

   Google Scholar
   Worldcat

   Fulltext
- Nulty, D., Kiley, M., & Meyers, N. (2009). Promoting and recognising excellence in the supervision of research students: an evidence-based framework. *Assessment and Evaluation in Higher Education/Assessment & Evaluation in Higher Education, 34*(6), 693–707. https://doi.org/10.1080/02602930802474193
  <u>Google Scholar Worldcat Fulltext</u>
- Peng, G., & Zhang, Y. (2021). Student retention and degree completion: The moderating effects of institutional factors. *International Journal of Public Administration*, 45(16), 1147–1155. <a href="https://doi.org/10.1080/01900692.2021.1961149">https://doi.org/10.1080/01900692.2021.1961149</a>
   <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Pitchforth, J., Beames, S., Thomas, A., Falk, M., Farr, C., Gasson, S., Thamrin, S. A., & Mengersen, K. (2012). Factors affecting timely completion of a PhD: a complex systems approach. *DOAJ (DOAJ: Directory of Open Access Journals)*. <u>https://doaj.org/article/aaae648f27764093b8ded21f1486eecc</u>
  Google Scholar Worldcat Fulltext
- Pyhältö, K., Stubb, J., & Lonka, K. (2009). Developing scholarly communities as learning environments for doctoral students. *`the œInternational Journal for Academic Development, 14*(3), 221–232. <u>https://doi.org/10.1080/13601440903106551</u>
  <u>Google Scholar Worldcat Fulltext</u>
- Roldán, J. L., & Sánchez-Franco, M. J. (2012). Variance-Based structural equation modeling. In *IGI Global eBooks* (pp. 193–221). <u>https://doi.org/10.4018/978-1-4666-0179-6.ch010</u>
   <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- udestam, K. E., & Newton, R. R. (2014). *Surviving your dissertation: A comprehensive guide to content and process* (4th ed.). Sage Publications. <u>Google Scholar</u> Worldcat Fulltext
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach* (7th ed.). John Wiley & Sons. <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Sharp, J. A., Peters, J., & Howard, K. (2017). *The management of a student research project* (3rd ed.). Routledge. <u>Google Scholar</u> <u>Worldcat</u> <u>Fulltext</u>
- Skopek, J., Triventi, M., & Blossfeld, H. (2020). How do institutional factors shape PhD completion rates? An analysis of long-term changes in a European doctoral program.

Studies in Higher Education, 47(2), 318–337.https://doi.org/10.1080/03075079.2020.1744125Google Scholar Worldcat Fulltext

- Sulandari, S., Prihartanti, N., Ali, Q., Salimah, M. R., Savitri, A. I., & Wijayanti, M. (2020). Gender, research approach, type of research, and completion period of the minor thesis (Skripsi). *International Journal of Education and Literacy Studies*, 8(1), 32. https://doi.org/10.7575/aiac.ijels.v.8n.1p.32
   <u>Google Scholar</u> Worldcat Fulltext
- Sverdlik, A., Hall, N. C., McAlpine, L., & Hubbard, K. (2018). The PhD Experience: A Review of the factors influencing doctoral students' completion, Achievement, and Well-Being. *International Journal of Doctoral Studies*, *13*, 361–388. <u>https://doi.org/10.28945/4113</u>
  Google Scholar Worldcat Fulltext
- Thompson, D. R., Kirkman, S., Watson, R., & Stewart, S. (2005).

   Improving research supervision in nursing. Nurse Education Today,

   25(4),
   283–290.

   https://doi.org/10.1016/j.nedt.2005.01.011

   Google Scholar
   Worldcat

   Fulltext
- Van De Schoot, R., Yerkes, M. A., Mouw, J. M., & Sonneveld, H. (2013). What Took Them So Long? Explaining PhD Delays among Doctoral Candidates. *PloS One*, *8*(7), e68839. <u>https://doi.org/10.1371/journal.pone.0068839</u>
   <u>Google Scholar Worldcat Fulltext</u>
- Van Rooij, E., Fokkens-Bruinsma, M., & Jansen, E. (2019). Factors that influence PhD candidates' success: the importance of PhD project characteristics. *Studies in Continuing Education*, *43*(1), 48–67. <a href="https://doi.org/10.1080/0158037x.2019.1652158">https://doi.org/10.1080/0158037x.2019.1652158</a>
  <u>Google Scholar</u> Worldcat Fulltext
- Viđak, M., Tokalić, R., Marušić, M., Puljak, L., & Sapunar, D. (2017). Improving completion rates of students in biomedical PhD programs: an interventional study. *BMC Medical Education*, 17(1). <u>https://doi.org/10.1186/s12909-017-0985-1</u>
  <u>Google Scholar</u> Worldcat Fulltext
- Yamane, T. (1973). *Statistics: an Introductory Analysis.* HarperCollins Publishers. Google Scholar Worldcat Fulltext
- Zhang, K., Peters, J., Janzing, D., & Schölkopf, B. (2012). Kernelbased conditional independence test and application in causal discovery. *arXiv (Cornell University)*. <u>https://doi.org/10.48550/arxiv.1202.3775</u> Google Scholar Worldcat Fulltext