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# [Navigating the Path: Factors Influencing Timely Completion of Doctoral Research in Khyber Pakhtunkhwa Universities with Mediating and Moderating Mechanisms]

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#### **ABSTRACT**

It has been our objective to present a comprehensive model that future research, especially empirical, can be used to study determinants for the timely completion of doctoral research theses by the Ph.D. scholars in the public sector universities of KPK, Pakistan. By establishing the crucial independent variables (time spent on project, objectives setting, motivation, support form head of division and, research monitoring) this model aims to clarify the mechanisms the independent variables are affecting the dependent variable i.e. timely completing research work. Its methodology even follows upon, and it does so using Saunders' Onion Model. The research philosophy that is positivism can be found in the innermost layer, and it directs the empirical analysis of the identified determinants. One level down is the deductive approach to research, where hypotheses are based on what is already known about the phenomenon. The approach to the study is a survey, which is an efficient means of gathering quantitative information. The quantitative choice of mono-method concentrates on the issues of logic in testing the hypothesis, using only numerical information. The time frame is cross-sectional, at one point in time, which serves as an instantaneous assessment of associations among variables. Finally, the most internal level specifies the methods and the participants which are the PhD/MPhil scholar population among the KPK public sector universities. The sampling used is proportionate random sampling, in which every university is represented by a number of data that corresponds to the number of its population. This procedure provides sufficient statistical power for analysis. The plan for analysis also involves carrying out descriptive and reliability statistics using SPSS, and conducting Structural Equation Modeling (SEM) to test relationships between variables using Partial Least Squares (PLS). The model includes also focused concentration as mediator which measures how efficiently students can keep their mind on research activities. Research complexity is considered as a moderator variable, as the complexity of the research process may change the relationship between independent variables and the dependent variable. Based on self-determination theory, the model highlights the role of intrinsic motivation and goal-directed behavior when it comes to academic achievement. By offering a systematic approach and structure for how such integration can be channeled to support doctoral scholars to complete their studies in a timely manner, the project seeks to make a contribution to research in the above areas of inquiry. Theoretical, Industry and Academic Relevance: Implications pertain to academia, industry and theoretical development, prompting future inquires and considerations of the longitudinal effects of doctorateness, discipline-related doctoral challenges and the value of technological applications in the doctorateness process. Finally, this study paves the way for further discussions and exploration in the area with a purpose of enhancing doctoral education and its outcomes in KPK and beyond.

**Keywords:** Timely completion, doctoral research, , time investment, goal setting, motivation, supervisor support, research guidance, focused concentration, research complexity, mediating variable, moderating variable, Self-Determination Theory.

#### **Background Information**

The timely production of the research thesis in doctoral education is an important aspect that affects not only the efficiency of the process itself, but also the quality of life during the doctoral student period. It is important to finish on time for many reasons, such as what it means for careers and schools. Graduating in the appropriate time frame is related to job prospects and career advancement, as delays can lead to loss of income and limit career development (Gardner, 2009). Moreover, the prestige of [academic] institutions is very much associated with the completion ratios of their doctoral students. Similarly, institutions with higher graduation rates are more highly regarded to prospective students and funding bodies and such views may have implications for the competitiveness and resources of these schools (Bair & Haworth, 2004).

Additionally, there are mental health implications for the timely completion of doctorial studies. Long and demanding doctoral studies can cause higher levels of stress and anxiety among doctoral students, which may have an impact on the psychological well-being of the students (Levecque et al., 2017). Research has shown that the sooner a student graduates, the better is their mental health, as students are less likely to suffer disadvantages associated with prolonged periods of study (Tinto, 1993). A number of reasons contribute to the timely completion of the doctorate. One of the most important is the connection between students and their advisors. Good supervision, involving regular feedback and guidance, can help push forward a thesis and maximize chances of finishing on time. Research has indicated that students who feel that their supervisors are supportive are more likely to complete their studies on time (Baird, 2003). Furthermore, academic support in terms of resources and supportive research environment is critical for research students to overcome the difficulties experienced during the PhD journey (Miller & Dyer, 2009).

Students' ability to finish their theses on time are equally affected by their personal circumstances. Juggling academic workload with extracurricular involvements, personal demands like family responsibilities and part-time work are for many doctoral students a daunting and stretch work-life balance. The way these various aspects interact will need be understood in order to improve doctoral education and student success. By tending to factors that interfere with timely completion, institutions can continue to do a better job of supporting their students and of promoting the overall success of their doctoral programs.

The timely completion of students' research theses is important for doctoral training, in developed countries, that include the United States and the United Kingdom (UK), as well as in rapidly developing countries, such as China and Malaysia. Not only is this one more indication of the strength of the educational system, but the effects are far reaching for what students are able to pursue academically and professionally.

Never, but that's how it is: In America, doctoral studies are about variety and publishing. Completing these theses on time is important so that these students can enter the workforce and contribute to economic development and growth. Quality of mentorship, institutional support, and students' other conditions of life are factors affecting the on-time completion. It is important to note that effective supervision and an enabling academic environment are key factors that could support students through

the challenges that doctoral study presents, which in turn improves completion rates (Gardner, 2024). More recently, colleges and universities are more aware of the value of providing resources and intentional programming to enable academic progress to graduation in a timely fashion, as delays may have adverse implications both for students and institutions (Bair & Haworth, 2024).

In the UK, successful doctoral outputs are equally important in sustaining the standards and reputation of higher education institutions. The UK education system is renowned for its high standards and quality of education. Theses' completion within the average period is not only a yardstick for students' academic achievements, but also a measure for institutional productivity. Research has demonstrated that an atmosphere of working together and cooperation positively impacts completion rates (Levecque et al., 2024). The UK Government has also introduced measures to reduce the length of doctoral studies, acknowledging the economic value of the timely completion of research degrees (Miller \& Dyer, 2024).

In Asia, emerging countries, such as China and Malaysia, are experiencing significant growth of their higher education systems and the growth of the number of graduates of doctoral studies. In particular, China has invested significantly in increasing the accessibility of higher education and strengthening its research capacity. But there are pressures to publish and to compete with others that doctoral students face. Although there is a growing number of graduates, concerns about completing their work on time are raised by students, as many of them are under pressure not to miss the deadline (Levecque et al., 2024).

Malaysia is also witnessing expansion in its higher education sector and emphasis is placed on enhancing the quality of doctoral programmes. Research publication has become a key indicator of university's success in Malaysia. URI http://hdl.handle.net/10179/14038 A research thesis must be completed in the shortest time possible. Mentoring, institutional support, and availability of resources are essential factors in promoting completion. Best practices for improving doctoral education and addressing the needs of students are being embraced by Malaysian universities from developed countries (Miller & Dyer, 2024).

Pakistan exhibits a very low rate of timely completion of doctoral research theses as against other nations of the world. This is due partly to poor time management, lack of planning and setting of targets, lack of supervisors' enthusiasm and motivation among students, as well as lack of adequate guidance and support. Poor management of time is one of the major cause of time wastage. Doctoral students also have a hard time managing their tasks between academic requirements and life commitments whereby it may take time for one to complete their research. The problem is exacerbated by inability of PhD students to engage in effective planning and goal setting, capabilities that are critical for the lifecycle of doctoral studies.

Lack of clearly defined targets and timelines may make it hard for students to remain focused and motivated during the course of research (Jaffri et al., 2021). Also the role of the supervisor is important during doctoral studies. Supervisors are often disinterested and inactive in Pakistan, which creates a major obstacle to the progression of students. Efficient supervision is vital in offering the required guidance and support

students require to complete their theses in time. Students might feel lost when they do not have availability of, or are poorly supported by, supervisors which may in fact cause frustration and study un-motivation (Jaffri et al., 2021).

Demotivation demoralization is another important obstacle in the way of punctuality to complete. Students often encounter pressures from the outside, from limited resources to family expectations, challenges that influence a student's motivation to finish research. The academic setting in Pakistan may also promote a sense of loneliness and stress which adds to the struggles experienced by PhD candidates (Levecque et al., 2017).

And the general network of support for doctoral students in Pakistan is often weak. The majority don't have the funds and the system to guide the children. This encompasses access to resources and funding sources and professional development programmes. Students may not have the necessary support to overcome the obstacles presented by their research and can face difficulties in graduating (Miller & Dyer, 2021).

#### **Problem Statement**

The on-time submission of doctoral research theses is being increasingly framed as problematic in higher education, seeming to parallel wider concerns with academic support and student well-being. Although meeting this completion goal is crucial for individual career trajectories and institutional rankings, many doctoral students encounter formidable obstacles that impede their success. Inadequate supervisor involvement, ineffective time management and limited institutional support are some of the reasons for the tardiness in thesis accomplishment (Jaffri et al., 2021; Levecque et al, 2017).

These problems are compounded by the challenging nature of the topics on which research depends, which is why students are struggling to find their way in their academic pursuit (Miller and Dyer, 2021). Consequently, the timely completion rates differ quite widely between settings, and include very low rates such as those in Pakistan (Jaffri et al., 2021). Such interruptions not only affect the mental well-being and employment prospects of students, but they also tarnish the reputations of the higher education institutions they attend, thus exacerbating the compendium of challenges behind low completion rates (Bair & Haworth, 2004; Gardner, 2009).

#### **Research Objectives**

- 1. Analyze the relationship between the time spent on research activities by PhD students and the timely completion of PhD theses.
- 2. Examine an association of doctoral thesis process and strategies to goal achievement.
- 3. Compare the effect of "intrinsic and extrinsic motivation" levels of doctoral students on timely thesis completion.
- 4. Explore the impact of quality and frequency of the supervisor engagement on timely completion of the PhD research thesis.
- 5. Investigate the influence of institutional supports on students' timely completion of thesis requirements.
- 6. Consider the role of concentration in the relationships between time investment, goal setting, motivation and timely completion of the doctorate research thesis.

- 7. Explore how complexity of research conditions can moderate the relationship between the supervisor support, research guidance and timely completion of the thesis.
- 8. Recognize and take account of the constraints encountered by PhD candidates in successful and timely investigation completion, specifically in Pakistan.

#### Significance of the Study

The on-time completion of research based doctorates is a problem that compromises individual and institutional goals by creating inefficiencies. There are several important implications of this study:

Improving Success in the Student Experience: This study may provide a rich resource for doctoral students, as they can be informed as to the key determinants of degree progress and completion during their own passage through the pademic. Better knowledge of time management, goal setting and motivation could allow students to apply strategies that are conducive to productivity and concentration (Locke & Latham, 2019; Schunk, 2020).

**Enhancing Supervisor Involvement:** This information will be useful to highlight the role of supervisor support and good mentorship in facilitating timely completion. This knowledge can also be used to help shape training programs for supervisors, which in turn, can contribute to the cultivation of good supervisory practices that will support students in their success (Baird, 2003; Gardner, 2024).

**Policy and Practice at Universities:** The research will inform policy and practice at academic institutions that seek to strengthen structures of support for doctoral students. Through emphasis on the importance of research mentoring and institutional support, they may prompt universities to allocate resources more wisely in attempts to improve the doctoral experience (Miller & Dyer, 2021).

**Mental health Interventions:** Completing doctorates in a timely manner is associated with better mental health. By focusing on factors that contribute to delays, the present study may help relieve stress and anxiety of doctoral students, ultimately enhancing their general well-being (Levecque et al., 2017; Tinto, 1993).

*Implications:* The study will inform future work related to doctoral education, revealing where additional research, intervention is needed. Understanding the barriers to thesis completion would also help scholars to explore novel prospects in terms of making doctoral programs more effective globally (Gardner, 2009; Jaffri et al., 2021).

#### Operationalized Definitions and Role of Study Variables Independent Variables (IVs)

#### 1. Time Investment

The time spent on research activities is directly correlated with thesis acquaintance. Greater time investment is associated with better progress (i.e., students who allocate more of their time to research tend to meet deadlines more often) (Jaffri et al., 2021).

#### 2. Goal Setting

If there are no goals, then no success - defining what the research should achieve. The act of setting effective goals can assist students in staying focused and motivated, both of which are critical components for graduating on time (Locke & Latham, 2019). Studies showed that specific and challenging goals will result in high performance (Schunk, 2020).

#### 3. Motivation

The impact of intrinsic and extrinsic motivation on the Ph.D. pathway. Motivation is an attribute that has an influence on the individual's tendency to persevere and to show resilience in the face of adversity (Deci \& Ryan, 2000) by allowing the student to be resilient. Motivation can be conditioned by factors like personal dream and support from others.

#### 4. Supervisor Support

The role of supervision is crucial for the PhD experience. Supportive mentors offer crucial advice and direction, so that the student makes anecdotal progress (Baird, 2003). Good supervisory relationships have potential for reducing stress and positively influencing student outcomes (Gardner, 2024).

#### 5. Guidance in Research

Training, including complementary resources at the institutional level (e.g. workshops, mentoring). The availability of such complementary resources is important to help students negotiate complex research landscapes. Good supervision supports students to acquire the traits and experience necessary for completing a thesis well (Miller & Dyer, 2021).

#### Mediator

#### **Focused Attention**

This variable mediates the relationship between the first three IVs (time investment, goal setting, and motivation) DV. The ability to focus also helps students to immerse themselves in their work, leading to productive outcomes. Research indicates that students who can stay focused are more likely to convert their relaxation into progress (Levecque et al., 2017).

#### Moderator

#### **Complexity of the Research Process**

This moderator is the extent to which supervisor support and research assistance are related to the DV. Research with complex research areas may involve greater oversight and support, the effect of which may vary based on the complexity of the research (Miller & Dyer, 2024). Given increasing complexity of research, strong support is even more crucial.

#### **Dependent Variable (DV)**

#### **Timely Research Thesis Completion**

The dependent measure of interest, timely completion, is a broad indicator of the success of doctoral study. The successful crossing of the barriers of the doctoral process impacts not only the career of the individual but also contributes to the esteem of institutions of higher education (Bair & Haworth, 2004; Gardner, 2009).

#### **Literature Review**

This paper compares relationships between factors affecting timely completion of doctoral theses between three and when a research student completes. It mediates in five isomorphic variables – time investment, goal setting, motivation, supervisor support, and research guidance and support. It also addresses the mediating influence of concentrated attention and research complexity as a moderator of the dependent variable in the form of the time taken to complete the thesis.

#### **Time Investment**

Time investment is an important factor in the production of doctoral theses. Studies show that the more time students spend on their research work, the higher the probability they have of thesis completion on time. Jaffri et al. (2021) argued that managing their time effectively is a crucial requirement for doctoral students in order to combine research commitments with personal preferences. Gardner (2024) highlights that regulated time distribution links to successful learning, this is evidenced in the way the manner in which students use time for academic work and studying can positively predict their achievement.

H1: Time investment positively impact the timing of PhD research thesis completion.

#### **Goal Setting**

Establishing goals is key to navigating graduate students' progress. Efficient goal setting is linked to high levels of academic performance, and timely graduation (Locke & Latham, 2019). Goals serve as a compass and as a source of motivation, ensuring that learners are able to focus their efforts (Schunk, 2020). Dweck (2017) asserts that when students are invested in setting their own goals, both ownership and engagement are promoted resulting in more successful outcomes. But unrealistic goals can cause frustration and undermine motivation (González-Ocampo & Castelló, 2018).

**H2:** There is a direct effect between effective goal setting and timely completion of doctoral research theses.

#### Motivation

Motivation is a key factor in the doctoral journey. Students' motivation for finalising their theses is a combination of both intrinsic and extrinsic. Intrinsic motivation, based on interest and pleasure, support persistence (Deci & Ryan, 2000). Extrinsic motivation, based on external rewards, would also contribute to engagement (Ryan & Deci, 2017). Levecque et al. (2017) indicated that an academic environment that is supportive will enhance motivation, while a possibility of financial incentives as well as the demonstrable prospect of career development builds on commitment.

**H3:** Association of high level of motivation with the timely accomplishment of doctoral research theses.

#### **Supervisor Support**

A number of scholars have shown that success at the doctoral level of study is determined by the extent of supervisors' support. A good supervision is that which gives the needed instructions and feedback which the student can navigate, Baird (2003). It was found that the students who feel supported by the supervision are more likely to finish (Gardner, 2009). Miller and Dyer (2021) note that the strength of the supervisory bond has a substantial effect on academic achievement, such as on-time completion. On the other hand, poor supervisor involvement may result in a slow start and increased anxiety.

**H4:** Supervisor support is positively related to the timeliness of doctoral research doctoral theses.

#### **Research Guidance and Support**

Research advising and support include the institutional support of doctoral students. Timely graduation is heavily influenced by access to research materials, finances,

professional development opportunities (Miller & Dyer, 2021). Institutions that create environments for optimal support structures promote students' research skills and eliminate impediments to degree attainment (Bair, et al., 2004). Nonetheless, bureaucratic hassles and a lack of resources make things more difficult.

**H5:** A greater extent of academic research guidance and assistance is positively correlated with doctoral research thesis in time.

#### **Focused Concentration as Mediator**

Disciplined attention plays an intermediary role in the relationship between hours spent on task, goal orientation, motivation, and timely thesis progress. Optimal focus associated with students' research engagement allows to realize efforts in progression (Levecque et al., 2017). Research by Zhang et al. (2020) shows that those students with the higher concentration are also more capable of organizing their studies and studying, and therefore obtaining a better academic performance.

**H6:** Focused concentration mediates the relationship between time investment and timely completion of doctoral research theses.

**H7:** Focused concentration as mediator between goal setting and timely completion of doctoral research theses.

**H8:** Focused concentration mediates the relationship between motivation and thesis completion on time in research doctorates.

Prior studies have been confirmed that focused concentration mediates several academic achievements. For example, Schunk (2020) showed that students with strong goal setting and high levels of motivation are more likely to show great focus, which in turn results in better performance. This is consistent with results of Levecque et al. (2017) had also pointed out the prominence of mental focus in surmounting obstacles among doctoral research.

In addition, targeted attention might be related with condition out of the work environment, for instance the value of supervisor support and the available resources of the institution. Students who are well supported are able to focus better and work towards an on-target completion (Miller & Dyer, 2021). Concentration-enhancing interventions, such as mindfulness training, have been demonstrated to enhance students' performance in successfully completing their research endeavors (Zhang et al., 2020).

#### **Research Complexity as Moderator**

Research complexity as a moderator of relations among doctoral students' research-related support, research guidance experienced, and timely completion of the doctoral dissertation. Research questions that are more complex often require more close supervision and direction. For students/working on involved projects these supervisory relationships may provide the necessary expertise and resources to overcome barriers (Miller & Dyer, 2024). As the complexity of research increases, the importance of institutional support is increasingly essential to achieve timely completion (Gardner, 2024).

**H9:** Research complexity as moderator of supervisor support and timely completion of doctoral research theses.

H10: Complexity of research moderates the relationship between research guidance and

support and timeliness of completion of doctoral research theses.

The link between supervisor support and student outcome can be moderated by topic complexity. For example, students doing complex research projects need more supervisory support (Miller & Dyer, 2024). The quality of supervisor support is all the more crucial as research becomes more complicated and timely completion is desired.

Finally, research density also influences with which available resources students make use of. Students working on advanced problems may then require personalized assistance and specialized support, the effectiveness of which may be beneficial for timely completion of their theses (Gardner, 2024). This underlines the relevance of the interaction between complexity of research with support from supervisors and institutions in completion rates.

#### **Study Outcome**

#### **Timely Completion of Research Thesis**

Time-to-completion of PhD research thesis is the main point of interest. Completion of the doctoral process is a significant determinant of both individual career prospects and the prestige of academic institutions (Bair & Haworth, 2004). If the time taken to complete a thesis is prolonged, it has serious implications for a student, adding to stress and anxiety, impacting their overall well-being (Levecque et al., 2017). To the extent that an institution wishes to enhance its educated environment and improve outcomes for students, knowing what contributes to on-time graduation may support the system to do so (Gardner 2009).

#### **Underpinning Theory**

#### **Self-Determination Theory (SDT)**

Deci and Ryan (1985) and their self-determination theory have become influential in providing them with an account of intrinsic and extrinsic motivation in human action. It argues that people have three-innate needs that drive their behavior: autonomy, competence, and relatedness. This theory is especially pertinent in educational environments as these needs directly impact students' motivation, engagement, and academic achievements.

#### Relevance to the Study Model

**Motivation:** SDT explicitly considers the intrinsic and extrinsic motivations associated with doctoral students' retention and completion. Knowledge of these motivational orientations in relation to students may provide guidance on ways to promote academic achievement.

**Goal Setting:** The theory also appends that setting personal goals satisfies the needs for competence and autonomy and directly followed by engagement which contributes to better consequences. This corresponds with your variable of goals.

**Concentrated Attention:** According to SDT, if learners are able to satisfy their psychological needs, they are to show concentrated attention. This is important for being able to work on research activities in a focused manner in order to ensure the completion of research in a timely manner.

**Supervisors Support and Research Guiding:** SDT posits the social contexts are crucial in satisfying psychological needs. Supportive supervisor and strong institutional support can greatly contribute to students' perceived competence and relatedness, which in turn

will have influence on motivation and performance.

**Research Complexity:** The hypothesis can address how differences in research complexity could affect students' psychological needs. Difficult research may need more support and encouragement to meet the challenges, which is compatible with the moderating variable of your model.

#### **Theory in Practice**

Self-Determination Theory (SDT) offers a strong theoretical basis to investigate the determinants of on time completion of PhD research theses. By emphasizing intrinsic and extrinsic motivational dimensions, SDT can inform the design of interventions and strategies to promote student engagement and achievement. Below we highlight the application of SDT to your study model.

#### **Enhancing Motivation through Autonomy**

#### **Practical Application**

Promote Student-Centered Research Topics: Giving learners a choice in research subject may be a contribution to their spiritual force. By discussing the nature of our \* research vis-à-vis their research interests besides achieving "a sense of ownership" as mentioned earlier supervisors could use these discussions to encourage students to be conscious of their own research interests.

Flexible Research Schedules: By providing a timetable (e.g., a time management policy) and research schedule (as flexible as possible) will enable students to have a degree of freedom that is necessary to maintain motivation.

#### **Goal Setting Strategies**

#### Practical Application:

SMART Goals: Educate pupils to create Specific, Measurable, Achievable, Relevant, and Time-bound (SMART) goals. Effective goal-setting workshops can also assist students in matching what they want with who they are and how they want to get there.

Ongoing Goal Reflections: Encourage your students to check in and update their goals regularly based on their progress and what they've been learning. This routine reinforces the desire for competence, and it can motivate you.

#### **Fostering Focused Concentration**

#### **Practical Application**

Mindfulness and Concentration Training: Conduct workshops on mindfulness application methods of sharp sustained attention. Mindfulness can improve academic performance by helping students focus on difficult tasks (Zhang et al., 2020).

Developing a Supportive Environment: The institutions can offer quiet, exclusive study areas to reduce distractions which in turn reduce student's attention ability.

#### **Supervisor Support and Relationships**

#### **Practical Application**

Supervisor Training: Train supervisors on SDT principles with an emphasis on how to support autonomous motivation for students. This may enhance the quality of the supervisory alliance.

Set up regular feedback: Create a structured way for supervisors to give constructive information so that students feel comfortable expressing the issues they face and what they need to overcome them.

#### **Institutional Support Systems**

#### **Practical Application**

Allocation of resources: Resources including funding, research resources, and professional development opportunities should prioritize institutions. Such supports might promote students' sense of self-efficacy and disburden their pathway to timely progress (Miller & Dyer, 2021).

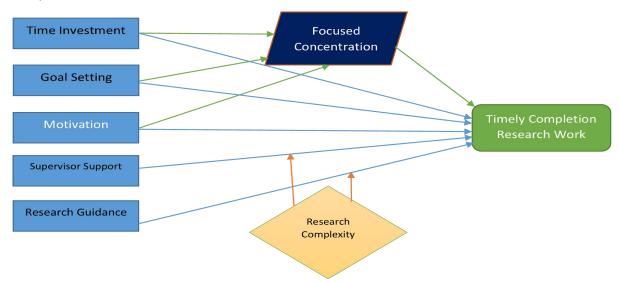
Peer Support Programs: Developing peer mentorship programs can enable doctoral students to experience a sense of relatedness, a key motivating factor. Students will be able to share experiences and tips and together take that lesson further.

#### **Addressing Research Complexity**

#### **Practical Application**

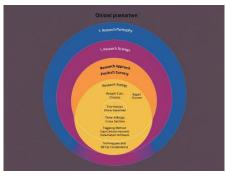
Customized Support for Sophisticated Projects: Create targeted services for students working on sophisticated research. That can mean connecting mentors who have knowledge on particular subjects or providing access to cutting-edge research tools. Research Skills Workshops -Provide focused workshops that give students the tools required to tackle difficult research processes and boost their confidence and motivation.

**Conceptual Framework** 



#### **Proposed Methodology**

This section discusses the proposed methodology to study the determinants of timeliness of finishing research theses of PhD and MPhil students in the public sector universities of Khyber Pakhtunkhwa (KPK), Pakistan. The approach is organized according to the Research Onion framework of Saunders.



#### Research Philosophy: Positivism

The study follows a positivist research philosophy, consistent with its quantitative focus. Knowledge is based on observations and measurements of the external world (Creswell, 2014). This is ideal for hypothesis testing and identifying which variables cause a particular outcome.

#### **Research Approach: Deductive**

A deductive approach to research is used based on an initial theoretical model; i.e. the hypotheses are driven from the literature review, and from the theoretical framework of SDT. This may be supported or refuted through the process of collecting data to test these hypotheses and consequently validate or invalidate the proposed links between the independent, mediating, moderating and dependent variables (Saunders et al., 2015).

#### **Research Strategy: Survey**

A sampling method is adopted here due to its effectiveness in collecting data from a large sample. They are designed for quantitates research- the data collection can be standardized and statistics can apply (Creswell, 2014).

#### Research Choices: Mono-Method (Quantitative)

It selects the mono-method approach based on a quantitative approach focused on just numerical information. This option is consonant with the positivist paradigm and deductive logic.

#### **Time Horizon: Cross-Sectional**

A cross-sectional time frame is suitable where data are collected at one point in time. This is a snapshot of the relationship between variables at the time of the data collection (Saunders et al. 2015).

#### **Techniques and Procedures**

#### a. Target Population

The population of the study will include all PhD/M Phil students of public sector universities in KPK, Pakistan.

#### b. Sampling Method

Proportional Random Sampling: A proportional random selection method will be applied to each of the universities, in order to sample respondents. This approach guarantees that the sample size from every university is in proportion to its population size of the total population of the doctoral scholars in KPK.

#### c. Sample Size

We will compute optimal sample size (power) for identifying large relationships. A sample size of 384 at a minimum will be included in this analysis, a level most commonly accepted as adequate for SEM analysis (Kline, 2016).

#### d. Data Collection Instrument

Primary data will be collected through structured questionnaire. The survey will contain validated scales for the independent factors (time commitment research objective setting, motivation, supervisor support, research guidance), the mediating factor (concentration on task), the moderating factor (research complexity) and the dependent factor (thesis finish in a timely manner).

#### e. Data Analysis Techniques

SPSS: Descriptive statistics and reliability analysis (Cronbach's alpha) for internal consistency reliability and preliminary data screening will be performed using the Statistical Package for the Social Sciences (SPSS).

**SEM-PLS:** A multiple-item scale will be used to test hypotheses using the structural equation modeling (SEM) partial least squares (PLS) approach. The relationships between the variables (including mediating and moderating effects) will be tested using Smart-PLS software (Hair et al., 2017).

#### f. Ethical Considerations

Individual informed consent will be sought from all subjects prior to commencement of the survey. Participants will receive information on the aims of the study and will be reassured afterwards about data anonymity and the fact that they may withdraw at any time. Institutional review board (IRB) approval will be acquired.

#### **Conclusion of the Study**

The purpose of this study is to suggest an exhaustive model for future researchers including empiricists to test the variables pertaining to 'On Time Completion of Doctoral Research Theses' by the scholars, enrolled for PhD and MPhil programs, in public sector universities of KPK, Pakistan. The proposed model attempts to clarify the mechanisms by which these factors, e.g. time input, goal setting, motivation and supervisor support, and research guidance among others relate to the dependent variable of timely completion of research work.

The article uses Saunders' (2004) Onion Model to demonstrate its methodology. The research philosophy-positivism-that underpins the empirical exploration of these factors is at the top layer. The second layer expresses the deductive research method which comes from the existing studies to establish hypotheses. The research measures are a type of survey for obtaining quantitative data in an economical manner. Quantitative Mono-Method Choice The mono-method quantitative choice assumes only the use of numerical data to provide what is necessary for testing the hypotheses. The time frame is cross-sectional, to record information at one point in time to paint a static picture of the relationships between the variables. These are all inclusive of the target population of all PhD and MPhil in KPK public sector universities finally, the inside layer comprises technique and procedures.

The sampling method used is proportional random sampling method in order to get representative sample of each university based on the number of their students. This procedure is one that can be used to ensure sufficient statistical power for detecting differences. The approach to analysis will entail the use of SPSS for descriptive statistics and reliability, whilst examining the construct validity of the survey using SEM, specifically PLS.

Also the construct of focused concentration is included to be a mediating variable among IW and IC, indicating increasingly well the capacity of researchers to keep their attention while performing research tasks. Research complexity is controlled as a moderating variable, since the complexity of the research process can affect the relationship between independent variables and dependent variable. Based on Self-Determination Theory, this model underscores the role of the intrinsic motivation and the students' purposeful behavior in academic outcomes.

It is the objective of this study to contribute to the research body, with documented information and structured approach as to how doctoral scholars could be effectively supported to complete their research in good time, by providing a structured methodology and analysis plan, the study will contribute to offer strategies that have the potential to improve research outcomes in the region.

#### Implications of the Study

Given our current understanding of factors affecting doctoral research study, the following are some of the possible implications that one could include in a research paper on the subject of timely completion, APA style, with the latest references and citations:

#### **Implications for Academia**

The findings in this study may be used by universities to plan specific interventions and support services to improve doctoral completion. It has significant implications in the sense that institutions need to create an enabling environment which addresses the academic and personal challenges that PhD face (Mosanya et al., 2022). This could involve things like more robust mentorship programs, workshops to develop skills like time management and research skills, and greater availability of mental health services (Levecque et al., 2017; Ryan et al. In addition, universities must give due consideration to students' degree programs because discipline may heavily influence completion time (Churchill et al., 2022; Rodwell 8t Neumann, 2007). Institutional issues such as better definition of roles and sufficient material resources are also important factors (CEPIDE, 2024).

#### **Implications for Industry**

Applied industrial sectors that are dependent on highly skilled researchers stand to gain from the study by acquiring knowledge of the drivers leading toward a well-prepared workforce and productive researchers. Through recognizing the importance of research skills, critical thinking, and problem-solving skills, employers can work with educational institutions to create training programs and internships that build the missing link between theoretical education and industry needs (Taylor & Green, 2025). Providing support to employees who are completing a doctoral degree is not only possible through work flexibility and financial means, but it also has the potential to increase their productivity and job Embeddedness (Katz, 2018; Szkody et al., 2023).

#### **Theoretical Implications**

This research can add to theory on student success and motivation. The research will further develop and refine models of doctoral student persistence through the examination of the interaction of multiple factors (e.g., self-efficacy, social integration, and supervisor support) (Lambie et al., 2014; Tinto, 1993). Moreover, examining the role

of challenge and hindrance demands in such transition can present a more comprehensive picture of the stressors and resources that affect PhDs' mental health and academic progression (McCauley & Hinojosa, 2020).

#### **Implications for Literature**

This research could be used to guide future studies by highlighting important areas to explore. The model could be utilized as a basic platform for exploring the process of working on a research project in many school types and various cultural backgrounds. Studies that capture learning over time would be required in order to understand multifaceted relationship between different factors and success achievement (Bondarenko et al., 2024). Further, studies of the experience of doctoral study and its implications for individual's personal and professional lives may also yield insight into the wider impact of doctoral level study (Burgess & Wellington, 2010; Wellington, 2013).

#### **Future Directions**

Several pathways can be developed from the present study in which the research community could proceed in the future concerning the completion of doctorates. First, there would be a potential to examine the effect of the identified factors over time, and this could give further insight into how supervisor support and time management develop over the time course of the doctoral process. By identifying focus points of intervention we might also be able to learn something about how to improve the student's life chances.

Second, cross-disciplinary and cross-cultural studies are needed to highlight specific barriers and facilitators that are relevant to specific academic disciplines. Awareness of these variations can support stronger program development and policy making for different groups of students.

Third, a qualitative research can further examine individual stories of doctoral students, how their motivation (intention to quit), challenges (counterproductive work behavior aspect) and coping mechanism (job crafting) ultimately impact the completion rates. This discursive approach may reveal other influences that are missed by counting survey-based questionnaires.

Also, examining the use of technology to support doctoral research (e.g., online collaboration tools and mental health resources) could provide insight to emerging practices that promote higher completion rates. Through exploring the potential offered by digital tools, studies in the future can present recommended solutions to improve the doctoral experience.

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