

Navigating stress, anxiety, and mentorship: Challenges for students working on dissertations in the pandemic era

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ARTICLE INFO

Article history

Received: May 12, 2024

Revised: May, 30, 2024

Accepted: June 1, 2024

Keywords

Challenge

Anxiety and stress experience

Improvement strategy

Online supervision

ABSTRACT

PhD students often encounter significant challenges, stress, and anxiety throughout their academic journey, particularly in their final year. This study explores the common difficulties faced by PhD students conducting thesis research at Chinese universities, focusing on their experiences with online supervision during the COVID-19 pandemic. A survey was conducted with ten full-time PhD students from selected Chinese universities, utilizing a combination of scaled, closed, and open-ended questions. The results indicate that students faced considerable challenges during online supervision, mainly due to inadequate funding and irregular, delayed supervisor feedback. Significant sources of stress and anxiety included thesis writing, supervisor relationships, and socioeconomic issues. However, adequate supervision, timely feedback, and purposeful guidance were found to mitigate these challenges. The study concludes that online supervision during the pandemic has intensified the difficulties faced by PhD students, negatively impacting the quality of their research and completion rates. To improve the supervision process, students recommended enhancing communication, increasing supervisor accessibility, and providing prompt feedback to support timely dissertation completion.

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1. Introduction

The coronavirus pandemic and crisis are profoundly shaping and changing the academic sector. While innovative ways of carrying out research or other educational projects in a crisis context have been found, current and prospective PhD students are often in a dilemma, silently bearing the brunt of the ongoing challenges, anxiety/uncertainty, or stress. Due to the contemporary disease, some have deliberately compelled many to cancel, postpone, or change their research trajectory. Writing a dissertation is undoubtedly tedious and time-consuming, and many would encounter similar or distinct problems. Writing differs from speaking because what you write can last longer and be retrieved repeatedly. Academic thesis writing is one of the other mandatory assignments in the form of writing students have to be involved in before getting awarded their degrees. It is the most potent test or symbolic example research project executed by each student (Rohmatillah, 2014; Gbettor et al., 2015). Such spaces of opportunity and scale are where students express their knowledge, skills, attitude, confidence, perseverance, and research spirit. For the record, the academic thesis can be considered the ultimate number of essential and complex systematic empirical steps and elements introduced to students during their shelf life on the school bench (Abdulai & Owusu-Ansah, 2014).

Yet, many PhD students face challenges following such a systematic process before completing their dissertations. For example, Momeni et al. (2011) assert there is overwhelming evidence that a substantive portion otherwise a number counted between 40% to 50% of PhD candidates are reported to concede on the non-completion rate of their work in UK Universities

(Rauf, 2016). In tandem, Gbetor et al. (2015) stated in the research done by Dunkerley and Weeks in 1994 that over 40% of 1,969 in the postgraduate degree program surrendered and gave up on conducting mandatory undergrad final work before graduation. Meanwhile, Garcia et al., (1988) set up significant reasons and delays regarding the completion pace for PhD dissertation writing, which revealed that it takes significantly longer than expected for the high proportion of those who complete their research degrees. According to Kangai & Mapolisa (2012), three critical significant challenges are found to be correlated with the quality and completion rate of research work, namely instructor factor or tutor-related challenges, student-related challenges, and institution-related challenges (Ikram-Uniten & Anwar, 2013). However, most of the existing literature significantly highlights the perspective of students with little attention to supervisors, whose role is indispensable in such a process. Supervision assigned to a research supervisor is considered one of the most influential factors in any doctoral experience. One of the most effective ways to render possible dissertation writing is by creating a smooth learning process and good relationships between students and supervisors. Specifically in the thesis supervision process, to empower the tutor for adequate supervision, creating a professional relationship, urging the students to study, helping them in research topic selection and sometimes involving in preliminary design research, assisting them in their personal and general problems identification and last not the least helping them in implementing and completing the survey are among the vital pillar to adhere on.

Apart from that, some recent studies have demonstrated that in addition to the challenges above, many PhD candidates undergo psychological disturbances like stress symptoms, anxiety, and even depression during their academic life at college and worsen during thesis writing (Asif et al., 2020; Bazrafkan et al., 2016). Some evidence available, especially in recent decades, has revealed high levels of these aforementioned cognitive disturbances (stress and anxiety/uncertainty) brooded by tertiary students from different disciplines. For instance, medical students showed prominent scores for tiredness, headaches, frustration, stress, and eating problems during their research (Jordan et al., 2020; Niemi & Vainiomäki, 2006). It is generally believed that PhD manifest more signs of stress and anxiety than in other stages of their academic life, particularly during thesis writing and supervision. It is asserted that various factors and reasons are bonded to such a process in which thesis supervisors, personal time, work field, part-time jobs, role conflict, and social support are pointed out to be among other significant reasons advanced by students to be the leading cause of the problem (Bazrafkan et al., 2016). Furthermore, to our knowledge, no study has explored differences in the evaluative viewpoints of PhD students related to challenges and supervisors regarding the different aspects/factors audited above. Concerning PhD students in Asia, especially in China, a concrete omission in empirical research is the difficulty students in other programs face when writing dissertations and actions, especially during the online lead singing of the coronavirus pandemic. The present researcher has eluded sufficient rational and tangible investigations about the gaps in this scientific writing.

This research deliberately executed is critical and needed because the findings will help secure informative and insightful inputs into policy reforms that search to eradicate the difficulties or impediments attributed to and foster educational standards and success. Therefore, this study was conducted to endeavour to explore some challenges. Whether they have ever faced such mental disturbance and strategies, PhD students employ once they face anxiety and stress during dissertation writing. Additionally, identifying some hints from both sides (students and supervisor) can help improve such process and reduce psychological-related problems.

2. Method

The work entitled A Survey of Ph.D. Students in the Different Academic Years and Dissertation Writing Process of Challenges/problems, stress and Anxiety Experience and Strategies and the Proposed Opinion in the Wake of Improving the Mentorship (student-supervisor) to fasten the academic completion rate. The study used a mixed-method (qualitative and quantitative) design with a sequential design approach. According to Warfa (2016), the so-called sequential design in any particular research implies a mandatory consecutive data collection and treatments in which collecting data is deliberately performed separately from one step to another. That said, once the data are quantitatively collected, they are analyzed before proceeding to qualitative data gathering. This quantitative data consists of demographic information, multiple-choice questions, and Likert scale alternatives that were initially collected and later on qualitative requisite details. Such an

approach is appropriate for this study because it allows the researcher to get more informants qualitatively and quantitatively, which sequentially helps to complement what one method would not be able to. On the side of informants, it provides a spare space to express substantially their opinions. The population for the study was selected in a non-probabilistic way. It was comprised of 10 PhD students from the following distinct universities in China that are Harbin Normal University, Shanghai University, Harbin Institute of Technology, Harbin Normal University, Nanjing Normal University, Southwest University, Nanjing Normal University, NENU, Xi'an Jiao Tong University, Yunnan Agricultural University, Kunming, China. The sample consists of 10 participants from among the universities above. Most were male or seven from 10 or 70% against three females.

The self-administered questionnaire was employed to collect primary qualitative and quantitative data for the study. This method is beneficial because each informant or participant has the same right and number of questions to respond to the same number of statements in a predetermined order (Gbettor et al., 2015). Moreover, this method is less instructive, enables more privacy, and induces less time pleasure. Closed-ended questions in the form of five (5) point item Likert scale (strongly disagreed, disagreed, neutral, agreed, strongly agreed) were used to determine the viewpoint and experiences of students towards the dissertation writing process and their perception of the supervisors. All questionnaire content was designed to evaluate forty-eight (48) statements categorized under six main factors: demographic data (3 statements), multiple-choice questions /yes or no questions (4 items), Likert scale questions (25 statements), and eventually, the open-ended questions (7 items). Specifically for the Likert scale (3-points with agree, neutral, disagree) questions, 21 among them were used to evaluate the three main factors related to challenges PhD students mostly encountered during dissertation writing, namely institutional-related factors (6 statements), student-related factors (8 statements), and supervisor associated factors (7 statements) that impact either positively or negatively on student writing and completion of the research process. The questionnaire was administered to the respondents. A total of 10 out of 12 questionnaires sent to the field were retrieved and found to be useful for data analysis. This latter number of respondents represents an 83,3% response rate. Subsequently, the useful questionnaires were extracted from Excel software and sent to SPSS 26th edition after passing through manual coding to ease the analysis.

3. Results and Discussion

3.1. Result

The results of this study provide valuable insights into the challenges faced by PhD students conducting thesis research at universities in China, particularly during the COVID-19 pandemic. Through a survey involving ten full-time PhD students from various universities, this study identifies key sources of stress and anxiety that emerged during the online supervision process. This introduction will guide us through a deeper understanding of how these students' experiences are reflected in the survey data, focusing on issues such as limited funding, relationships with supervisors, and difficulties in receiving timely and effective feedback during the dissertation writing process. Table 1 describes the sociodemographic characteristics and the distribution of requisite respondents.

Table 1. Sociodemographic characteristics, and distribution of requisite respondents

Age	Gender	University Names	Stage of Ph.D. programs
20-30	Female	Harbin Normal University	Early: I haven't completed my confirmation seminar
31-40	Male	Shanghai university	Mid/Final: I am in the middle stage of my Ph.D.
41-50	Male	Harbin Institute of Technology	Mid/Final: I am in the middle stage of my Ph.D.
41-50	Male	Harbin Normal university	Early/Mid: I have just completed my confirmation seminar
41-50	Female	Nanjing Normal University	Mid/Final: I am in the middle stage of my Ph.D.
31-40	Female	Southwest University	Final: I am writing my Ph.D. thesis
31-40	Male	Nanjing Normal University	Mid/Final: I am in the middle stage of my Ph.D.
31-40	Male	NENU	Final: I am writing my Ph.D. thesis
31-40	Male	Xi'an Jiao tong University	Mid/Final: I am in the middle stage of my Ph.D.
31-40	Male	Yunnan Agricultural University	Final: I am writing my Ph.D. thesis

3.2. Appraisal of institutional, student, and supervisor-related factors

Six (6) institutional factors deemed to influence the writing and completion rate of dissertations in different universities in China were evaluated, and the results are depicted in Table 2 below. In the view of 70 % of respondents with an average value equal to 2.62, PhD students in different years of their programs receive research guidelines on time, and guidelines contain adequate directives (M=2.81) to direct them in dissertation writing. However, regarding time allocated, there has been a significant disparity in opinion on such a statement. Of the respondents, 50 % agreed that the time set aside for writing a dissertation was adequate, whilst an almost equal proportion of 40.0 % disagreed with the same statement. It is worth also mentioning that, though students face miscellaneous challenges during the final year of their project, our results also showed that only a majority of respondents agreed that students have easy access to online scholarly journals and articles (80%), textbooks (70%), internet facilities (90%) and other helpful literature (80%) when writing their dissertations.

Eight (8) student-related factors that influence the writing and the completion of dissertations for Ph.D. students in China are shown in Table 3. From the content of the table itself, it is evident that a more significant proportion (80%) of informants agreed that they had inadequate funding during the dissertation writing process. More than half of the alias 70% agreed with the same statement that students are somehow reluctant and lack commitment and motivation to write their dissertations in allocated times.

Table 2. Descriptive statistics for challenges related to institutional factors

Items Codes	F	% in agreement	% in disagreement	Mean Value
RWP:	9	70.0	20.0	2.62
RQI:	10	80.0	0.00	2.81
RQU:	10	60.0	10.0	2.36
TAC:	9	50.0	40.0	2.00
SAL:	10	80.0	2.00	2.76
SAI:	10	90.0	0.00	2.79

N.B: Mean scores were calculated on a re-categorized Likert scale of 3 points (from 3= Agree to 1 = Disagree)

RWP: Research writing protocols are provided on time;

RQI: Research guidelines is informative

RQU: Research guideline is easy to understand

TAC: Time allocated for dissertation completion and submission is adequate

SAL: Students have easy access to literature (textbooks and journal articles)

SAI: Students have easy access to internet facilities

Table 3. Table 3. Descriptive statistics for student-related factors

Factors codes	F	% in agreement	% in disagreement	Mean Value
IFD	10	90	10	2.82
LCM	10	70	20	2.69
LBI	7	60	10	2.46
PTM	10	80	20	2.42
FCS	9	80	10	2.39
FPP	10	90	10	2.82
LUP	10	70	20	2.35

N.B: Mean scores were calculated on a re-categorized Likert scale of 3 points (from 3= Agree to 1 = Disagree)

IFD: Insufficient funding to support dissertation writing and data collection

LCM: Lack of commitment and motivation in dissertation writing

LBI: Limitation in background information to do independent research work

PTM: Poor time management attitude during dissertation writing,

FCS: Failure to regularly consult supervisors

FPP: Failure to prepare a clear research proposal

LUP: Lack of understanding and poor writing skills of research methods

As depicted in Table 3 above, 90% of students agreed with the statement that there is a lack of funding to support their dissertation to improve writing skills in the section of the research methods, especially during data collection. In comparison, only 10% rejected the assertion. Another 90 % of the sample concurred that students failed to prepare the research proposal. Regarding students' limitations in background information when doing independent research work, 60% agreed

with the statement, and only 10% or one individual rejected it. Interestingly, 70% of them asserted a lack of understanding and poor writing skills in research methods. These above findings corroborated the existing studies that stress the insufficient or paucity of funding, reluctant lack of motivation during dissertation writing, and failure in time management to be critical concern areas to students in the conduct (Shazia & Khan, 2015), and dissertation completion by affecting stress level (Muraraneza et al., 2020; Gbetor et al., 2015). The same authors also suggested that the cost dimension is influential in dissertation writing because the students' progress adheres to it. Regular consultation with supervisors must be organized and executed to keep all these students updated.

Table 4 evaluates seven (7) statements deemed necessary about supervisor-related factors in research writing and completion. Over half (60%) of students agreed that supervisors do not make time for regular contact with students. Like the statement that supervisors do not provide quick feedback on students' work, 70% of 90% agreed. Of the respondents, 40% agreed that supervisors do not have time to guide and assist students in their dissertation writing. In tandem, 70% of students disagreed that supervisors lack research skills. About 60% of the students dismissed the contention that supervisors impose research topics on students. Likewise, another 80% of respondents believed supervisors objectively criticized students' dissertations.

Table 4. Items codes, and descriptive statistics for supervisor-related factors

Factors codes	F	% in agreement	% in disagreement	Mean values
SFM	10	80	10	2.39
LPF	10	70	30	2.49
STS	8	70	10	2.31
SLS	10	20	70	2.33
SRT	10	40	50	1.89
STS	9	70	20	2.41
SMP	10	50	30	2.01

N.B: Mean scores were calculated on a re-categorized Likert scale of 3 points (from 3= Agree to 1 = Disagree)

SFM: Supervisors mostly fail to meet students regularly

LPF: Lack of providing prompt feedback

STS: Supervisors do not have enough time for supervision

SLS: Supervisors lack research skills

SRT: Supervisors impose research topics on students

STS: Supervisors treat students as peers and equals

SMP: Supervisors do not monitor the progress of students' dissertations.

Finally, regarding supervisor-related factors, it is evident that some students undergo difficulties related to the unavailability or marked by the busy life of supervisors, exceptionally long delays, and await to securing responses in the form of comments and critiques. Not only did our findings reveal poor feedback on dissertations, (Mutula, 2011) also asserted that in the context of postgraduate students, incredibility and provision of poor feedback were highlighted as among the causes of dissatisfaction in supervision. For example, on the accessibility of supervisors known as incredibility, a study conducted (Ezebilo, 2012), on three Swedes PhD along with four internationals in Sweden demonstrated that the inaccessibility of supervisors is a significant challenge faced during dissertation supervision. On the aspect of feedback, Corral et al., (2021) reported that immediate feedback is sustained by many to be more effective compared to delayed responses during the dissertation process. It is, therefore, essential that maximum attention is required and devoted to determining the length of time the work of students and boosting the pace of dissertation completion as the best intervention to navigate this challenge.

Table 5. Multiple choice questions answers distribution

Items	Yes %	No %
Avoiding physical interaction is one of the impacts of covid-19; had the pandemic influenced you to change the research topic of your thesis?	40	60
Is the pandemic decreased your motivation for your dissertation or academic projects?	80	20
During the dissertation writing and progress, have you ever felt the stress level regarding failure to gather data for the dissertation due to the pandemic?	60	40
Have you ever felt, a level of anxiety or feeling stressed about extending graduation from the university?	90	10

As we deal with the ongoing crisis, we have seen that this pandemic keeps impacting human behaviors differently. Although the vast majority of our respondents asserted that the coronavirus did not influence change in the research topic of their dissertation, 4 out of 10 affirmed this statement. Regarding whether the pandemic decreased students' motivation during dissertation writing or academic projects, 80% of respondents opined that their motivation was drastically reduced. Results also showed that many respondents felt stress and anxiety regarding failure to obtain data for their research study, as well as stress about extending the graduation period from the university. In other words, 60% of respondents experienced the feeling of stress grounded by the current pandemic whereas the rest 90% felt stressed about expanding graduation times. Our findings concurred with the ones conducted by Bazrafkan et al., (2016) who found thesis writing to be a staple determinant of stress and anxiety commotions, the no networking and interaction between supervisor and students, and so forth. In tandem, Ergin & Şahan (2021) put their interest into seeking and examining generic issues mostly experienced by postgraduate nursing students at the thesis stage in distance learning, especially during the contemporary pandemic of the coronavirus. Among the findings highlighted related to loss of motivation and experiencing stress and anxiety, they experience high levels of stress on matters such as extending graduation from school, failure to get institutional research consent, and failure to gather data as wished.

Table 6. The values of internal consistency reliability for each item and its Mean values

Item-Total Statistics	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Mean	Std. Deviation	N
1. My supervisor is available when needed and provides timely feedback.	51.10	.843	.882	3.80	1.398	10
2. My supervisor is friendly and approachable	51.00	.866	.881	3.90	1.449	10
3. My supervisor makes a real effort to understand the difficulties I face.	50.90	.836	.883	4.00	1.247	10
4. My supervisor provides additional information relevant to my topic.	51.00	.825	.884	3.90	1.197	10
5. I was given good guidance in topic selection and refinement.	51.20	.842	.882	3.70	1.418	10
6. This supervisor provides helpful /quality feedback.	50.80	.779	.885	4.10	1.287	10
7. I'm happy with the meetings scheduled by my supervisor.	51.00	.802	.884	3.90	1.370	10
8. My supervisor encourages me to attend conferences and other research events.	51.00	.612	.892	3.90	1.101	10
9. My supervisor encourages me to write articles	50.80	.787	.885	4.10	1.370	10
10. My supervisor thinks about my goals rather than the publications that will be generated from my research.	51.10	.814	.886	3.80	1.033	10

Reliability, especially for data collected qualitatively, is broadly portrayed as the consistency of the internal degree to which statements or research items are designed to measure the same way each time it is used (Mohajan, 2017) under the same condition with the same subject (Djamba & Neuman, 2002). A reasonable criterion for the Cronbach alpha reliability value should be at least $\alpha=0.70$ (Mat Nawi et al., 2020). All items we used in this research were reliable and provided the necessary information with values above .07. Then, the implication of these values suggests that the reliability of the survey items has been established and valid.

Apart from the values of Cronbach alpha presented in the table above, the overall average and standard deviations for all ten items were calculated to reveal students' perceptions during dissertation writing and supervisors. Based on the 5-point Likert scale values, calculations showed that the statement's highest mean fund equals 4.10. My supervisor encourages me to write articles and statement sounds. This supervisor provides helpful /quality feedback. That means between the categories of agreeing and strongly agreeing. In other words, PhD students are satisfied with the support of their supervisors through encouragement and the quality of feedback. Meanwhile, among the ten statements employed, the lowest means addressed was between the neutral and "agree"

categories, which is 3.70. In the statement, I was given good guidance on topic selection and refinement; not all students were given reasonable directives during the topic selection.

Table 7. The values of internal consistency reliability for each item

Item-Total Statistics	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Mean	Std. Deviation	N
1. My Supervisor has intellectual interests that match mine	53.20	.242	.901	1.70	.823	10
2. My Supervisor Is doing interesting research / offered me an interesting project	53.00	.254	.901	1.90	.876	10
3. My Supervisor has a reputation of being a good researcher	52.90	-.218	.913	2.00	.943	10
4. Has a reputation of being a good supervisor	53.00	.073	.905	1.90	.876	10
5. My Supervisor has a reputation of getting students through the process in a timely manner	53.10	.344	.899	1.80	.789	10
6. My Supervisor has knowledgeable in the techniques and methods I will employ	52.90	.000	.908	2.00	.943	10
7. My Supervisor can write a good reference letter that will help me find a job in the future	52.70	.397	.898	2.20	.789	10
8. My supervisor was recommended to me by other people	52.60	.158	.903	2.30	.823	10

Likewise, Cronbach alpha values of all items rotate between 0.9 and 0.8, which means all items are reliable. Regarding the mean value, the score closest to the 3-point is 2.30. The implication of this latter data, primarily through this statement (My supervisor was recommended to me by other people), is that most students have supervisors, not from their choice but recommended by others. Similarly, with scores of 1.70, 1.90, and 1.80, resulting from different items, 40% of respondents have supervisors as the second option. The findings concerning students' choice of supervisors in this study align with the findings of (Zhao, Golde, & McCormick, 2007) both investigate the criteria and main reasons why the USA college students choose their supervisors during their final project of study in twenty-seven universities. The overall findings showcased the two main reasons related to the supervisors' research under process and their intellectual interests. It is worth mentioning that both the criteria employed in selecting a supervisor and reported advisor behaviors are more robust predictors of satisfaction than individual characteristics during dissertation writing.

3.3. Students' issues faced while writing your dissertation especially during virtual learning induced by the current pandemic

In the survey, students were also asked to list personal issues they faced while writing their dissertations. The reason to ask such a question is to extend the horizon by expressing themselves about challenges or issues each experienced during the process. Based on their answers, four matters were recapped that is financial issues (Financial issues which have ultimately hindered me from attending some seminars and workshops and can't make article publication), research reference material, language issues since lectures were delivered in Chinese language (Trouble in giving a speech for my dissertation inputs); data collection challenges (mental health problem, disengaged supervisor).

Question 2: On a scale of 1 to 5, where one is low, and 5 is high, how would you rank your overall satisfaction with your supervisor?

Assertion 2: four respondents' choice was 5, two choose 4, 3, 2 respectively as the overall ranking of students' satisfaction with their supervisors.

Data addressed shows that PhD students recruited to be the source of information in the present study have a sense of satisfaction with the overall supervision process (i.e., chose 4 or 5). However, the rest 20% disagreed with the statement (i.e., 2). Also, 20% of the respondents were neither satisfied nor dissatisfied. In the same vein, respondents were also asked whether they would recommend their supervisors to a friend wanting to conduct research aligned with the supervisor's research area. About 80% responded with a yes alternative, though one mentioned that yes, if no other supervisors, with 20% would not.

The depiction of the present findings exhibits a lower level of college students' satisfaction with the dissertation supervision process in some selected universities in China compared to other institutions. For example, Heath (2002) conducted a research survey of students in the postgraduate programs at Queensland University, where the gist of the findings reported that 85% were satisfied with their supervisors. Likewise, (Bolt & Kett, 2010) carried out a study involving doctoral students in which at the end of the day, 75% of them were satisfied with the process of supervision during dissertation writing. Yet, among the three students in the final year of their Ph.D. programs, only 10% or one student was satisfied, whereas the percentage of satisfied students in the middle stage of Ph.D. were close to 50%. Likewise, divergent opinions were also found by asking students whether they would recommend their supervisors to a friend interested in the same field, with some saying yes while others refused. Justification, such as poor-quality supervision and supervisors with which the final year students could have a higher expectation of their supervisors.

3.4. Question 3: Based on your intuition and experience, list the three (3) best aspects of a supervisor in your opinion.

Assertion 3: most comments were related to the excellent communication between student and supervisor, friendliness, knowledge, skills, experience and reputation in the field, mentor and guardian, and giving feedback on time. Whereas aspects of supervisors that need improvement enumerated by students were hard work, focus, qualitative method, responsibility, tools, lack and money support, helping students with issues related to university procedures and regulations, engagement, motivation, feedback, and fast response were listed by students.

We noticed that the two aspects were recapped by the PhD students as the best aspects of supervisors or qualities of an effective supervisor are aligned with the ones listed as substances that need improvement for the betterment of the dissertation writing process. This exhibits or manifests the extent of the importance of such aspects in a supervision process during dissertation progress in the view of the PhD candidates in Chinese universities. Also, such elements have been highlighted and outnumbered by (Bacwayo et al., 2017) under the list of eleven out of most aspects of supervision expectations of tertiary scholars. Turn to the facts, the present results are also corroborated with the ones found by (Stappenbelt & Basu, 2019; McAlpine & McKinnon, 2013), who saw the most crucial factor which helps to avoid frustration in students is the supervisor's intellectual knowledge.

3.5. Recommendations and list of characteristics supervisors should bear for better supervision practices

For better supervision practices that may increase students' satisfaction, being a good motivator, humble, respectful and full of passion, emphatic, polite, helpful, encouraging, focused on students' improvement, working hard, and diligent were the main characteristics students revealed that supervisors should feature. According to Helfer, F., & Drew, S. (2019), characteristics or factors are essential for a successful supervision process. Factors close to the traditional definition of adequate supervision are acknowledged as vital factors; in other words, factors that help students complete their candidatures within a reasonable timeframe. Elements such as the availability of a

supervisor whenever needed by students, a well-structured and robust research plan, the delivery of supervision and guidance, infrastructure, and materials for the development of the research project are recognised as essential determinants in research supervision for the students. In addition to that, the authors postulated also other factors defined factors regarded as supplemental. In a broad sense, supplement factors are those acceptable factors that will help students feel pleased and enjoy the Ph.D. experience. Such factors contribute by assisting the students in developing a sense of fulfilment and satisfaction, making the doctoral experience enjoyable. For the traditional effective supervisory process, supplement factors would involve those aspects that seek enhancement, including clarifying roles in early candidature, socialisation, recognising the student's achievements, and professional development for supervisors, known as training.

4. Conclusion

Supervising students' research is not only a privilege, but being a supervisor is also a great responsibility. When students accept you to manage their research, they entrust you with a crucial stage of their development, as this experience can significantly impact their lives. Because of the knowledge students gain with supervisors, some students lose enthusiasm for research while others become great researchers. This means that addressing students' needs, interests, and expectations is very important. Therefore, it is advised that before being assigned the responsibility of becoming supervisors in any academic duty, lecturers should voluntarily manifest a sense of leadership by taking and fulfilling student expectations thoughtfully and responding to them appropriately.

One of the purposes of this research study is to explore the main challenges experienced by PhD students during dissertation supervision based on three-dimensional factors, namely instructional factors, student-related factors, and supervisor-related variables. The study identified inadequate funding, lack of commitment and motivation to write, requisite skills in writing, and poor time management as the critical factors that require attention. The unavailability of supervisors and long delays in providing feedback were other factors related to supervisors confronting the writing and completion of dissertations among PhD—students in Chinese universities used in this current research.

Stress and anxiety among PhD students in the thesis writing and supervision process are induced by the thesis itself as a significant source of stress, relationships with supervisors, and socioeconomic problems, together with the current pandemic that reduced students' motivation. Then, coping with stress and anxiety during thesis writing demands efficient communication with the supervisor, clear guidance, and financial means as well. According to the surveyed students, although items used that reveal students' position toward positive or negative aspects of supervision, knowledge, skills, humility and friendliness, and having a reputation in their fields were the components deemed by students to be positive aspects in Chinese universities. The most cited negative points of supervision in those universities were the lack of time, regular supervision, skills, etc. For the students, the main qualities of supervision to foster adequate supervision are those related to knowledge in the field, cooperation, humility, providing clear guidelines and valuable insights, experience, and reputation in the field. Concerning the perceived lack of expertise in the field, at relevant stages, the students and supervisor might openly discuss and determine the limitations of the supervisor's expertise to avoid worsening the issue. Supervisors can only be effective by keeping their students informed about their progress. This is possible if they continue to have regular meetings and discussions, effective communication, and prompt feedback about their work.

We are aware that our study has shortcomings and limitations. The study was conducted in Chinese universities based on personal experiences and previous studies. Then, it should be noted that the sample used is representative of the Ph.D. students of those institutions. Therefore, caution should be taken when generalizing these results to other PhD programs, particularly in different countries. Nevertheless, despite the sample size limitation and research setting, the results are meaningful in practice as they provide some evidence for what PhD students in those selected universities consider good and evil in supervision to enhance the quality of supervision and accelerate the completion rate. It is worth mentioning that these findings are more generic as they do not hinge on how institutions run their PhD programs and prepare their academics and PhD candidates.

Acknowledgment

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Declarations

- Author contribution** : Chen Yu He , focusing the research, explores research data, and compiles scientific articles.
- Funding statement** : Not available information about the funding statement.
- Conflict of interest** : The author declares that no conflict of interest regarding the publication of this manuscript
- Additional information** : No additional information is available for this paper.

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