

Perception of Students of Master and Supervisors about Online Research Supervision in Medical Education

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ABSTRACT

Introduction: People from different specialty backgrounds and experiences join masters program every year. Therefore, they face novel situations and come across new problems as they are not aware of the subject earlier

Objective: To explore the perception of master's students and supervisors about Online Research Supervision in Medical Education and how things can be improved to make Online Research Supervision more effective.

Methods: A qualitative phenomenological approach was adopted in this study by using homogenous purposive sampling whereby ten students and seven supervisors of Masters in Medical Education were interviewed-semi structured, which were transcribed. The data was analyzed thematically to make themes and subthemes.

Results: The qualitative analysis of semi-structured interviews taken from the students and supervisors generated three broad themes and thirteen subthemes: the advantages of online research supervision to be convenience, availability, cost effectiveness and role of technology while the disadvantages of online research Supervision to be technological failure and lack of computer skills, strained student supervisor relationship, non-serious attitude and time constraints. The Recommendations for Improvement included students' attitude, students' diversity, planning, implementation of policies and technology literacy.

Conclusion: In online mode, a continuous motivational effort is required on the part of the student. Online Supervisors should be vigilant to the educational and experience related differences among the students in Medical Education that can affect understanding and expectations between their students and themselves. At the beginning of the study program, productive orientation sessions should be organized by the educational institutions to acclimatize students with the online environment and use of technology.

Keywords: Online Research supervision, Master's supervision, Perceptions, Effective supervision, Medical Education

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INTRODUCTION

Master of Science in Medical Education in Pakistan is a two years degree program with six contact sessions for health professionals. After contact sessions, the students have to do educational research to qualify for master's degree. As there is no bachelor's degree for Medical Education in Pakistan, so, the people from different specialty backgrounds and experiences join this program every year. Therefore, they face novel situations and come across new problems as they are not aware of the subject earlier. Research is a diverse academic process generating uneasiness for the student (Albertyn and Bennett.,2021). They presume research as a difficult concept which is intensified in their minds causing delay, discontinuation or substandard research. Universities quantify postgraduate students' success by the timely accomplishment of their degree. But the students believe that the ineffective research supervision is the main problem causing delay in their degree program. Many students discontinue their degrees or cannot finish their research in time due to ineffective supervision (McCallin and Nayar.,2012). The type of supervision the student gets is the most significant aspect which decides the timely completion of postgraduate research. Numerous studies have been conducted previously which have explored the perceptions of students about research supervision with their main focus on PhD students. This study will focus on the perceptions of post graduate masters' students about

online research supervision in Medical Education This study would be useful for the students for improving their research work in postgraduate studies in Medical Education and will solve their several problems enabling them to timely complete their degrees. It would also improve the standard of research and researcher identity development. This study will also explore the perceptions of the supervisors in Medical Education about Online Research Supervision which would help to make Online Research Supervision more effective for the students in Medical Education.

METHODS

This is a Qualitative Phenomenological study to explore in detail the perception of post graduate master's students and supervisors about Online Research Supervision in Medical Education. This study was conducted at University of Lahore Ethical Approval for the study was taken from University of Lahore (Ref: ERC/77/21/12). Participation in this study was voluntary and there was no penalty for withdrawal at any stage The duration of this study was six months started in December 2021 till May 2022.

Purposive homogenous sampling was done. Literature review was done and a discussion guide including a series of open-ended questions was prepared for participants prior to the interviews. The questions were sent for validation via email to the research supervisor. The questions were sequenced and rephrased in accordance with the expert review and piloted on three participants. Individual semi structured interviews were taken online on zoom from ten post graduate students doing masters in Medical Education at University of Lahore and

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seven supervisors. For this study, Supervisors were considered as Medical Educationists working fulltime in the field and have an experience of more than five years as supervisors in Medical Education. The timings of the interviews were set according to availability of participants. The interviews time ranged between 15 to 20 minutes and they were recorded on zoom. The saturation of data was achieved after the conduction of ten interviews of students and seven interviews of supervisors. The entire audio conversations were transcribed manually which were read in detail. Then the initial codes were generated according to the similarity in data. After that, analysis of the coded data was done to look for potential themes of broader significance. This study aims to generate themes from preexisting framework so a deductive coding framework was utilized. Once the thematic map was defined, potential sub-themes were identified, and broader themes were analyzed by researcher and the supervisor to finalize their names and definition. The summary of the results generated after data analysis was shared with the study participants for member checking through email and they were asked to ascertain if the analysis truly represented their perceptions and thoughts.

RESULTS

Of the ten students interviewed, seven were demonstrators, one was assistant professor, one was clinical consultant and one was not working anywhere. Of the seven supervisors interviewed five were professors and two were associate professors of Medical Education.

After initial analysis by merging familiar codes and removing redundant, a total of three themes and thirteen sub themes were emerged from the thematic analysis of data. This is the collective result of the perception of both students and supervisors. Data was analyzed separately for students and supervisors but many views were similar so results of the views of students and supervisors were mentioned together. However, the difference in views of both has been added. The main themes and sub themes were given below:

Theme 1: Advantages of Online Research Supervision:

Under this theme, four major sub themes were identified which included convenience, availability, cost effectiveness and role of technology.

Convenience: Students and supervisors both perceived that Online Research Supervision was more convenient for them.

“Meeting my supervisor online is more convenient for me. I can talk to my supervisor in the comfort of my own home” [Student 3]

Availability: According to the students, the biggest advantage of Online Research Supervision is the availability of Supervisor

“I think the biggest advantage is the availability of the supervisor to the student. In online mode, a student can get the support of his supervisor whenever he needs” [Student 5]

Cost effectiveness: The students and Supervisors said that Online

Research Supervision reduces the money spent on travels for both of them.

“Online Research Supervision is a time and resource saving process” [Supervisor 4]

Role of technology: Technology has made Online Research Supervision better than the face-to-face Research Supervision

“The content that is taught to us online we can get the recording of that content and we can revisit that content whenever we like” [Student 4]

“I would say zoom has made Online Research Supervision very easy. Student can share his screen and show his work to his supervisor.” [Supervisor 3]

Theme 2: Disadvantages of Online Research Supervision:

Under this theme, four major sub themes were identified which included Technological failures and lack of computer skills, strained student supervisor relationship, non-serious attitude and time constraints.

Technological failures and lack of computer skills: Failures in technology can occur at any time. It can interrupt the communication which disturbs the whole learning process

“The biggest disadvantage, I think, is technical problem due to interrupted electric supply or internet speed issues. But the lack of knowledge and skills about computer technology can also affect the process” [Student 1]

Strained student supervisor relationship: According to both students and supervisors, in Online Research Supervision, the interaction of the students with their supervisors decreases, so, the exchange of information is more difficult.

“Relationship of the student with the supervisor cannot be built online. In online mode, they meet for a while and just talk about work” [Student 4]

“The expression and the good body language can only be assessed in face-to-face research supervision” [Supervisor 7]

Non-serious attitude of students: According to the students, they feel more relaxed and relieved in online mode. They can switch off their mikes and cameras and get busy in other work.

“I feel more casual and informal in Online Research Supervision. I often get late. In the meantime, if I had another work at home to do I switch my camera off and mute my mike and do that work first”. [Student 9]

Time constraints: Students and supervisors have opposite views. According to the students, in Online Research Supervision, supervisors have limited time.

“When we meet someone physically, we can take their attention and time in a much more immersive manner”. [Student 8]

“I am always available for my student. The quality of supervision is same in both modes.” [Supervisor 6]

Theme 3: Recommendations for Improvement:

Under this theme, five sub themes are identified: Student's Attitude, Student's Diversity, Planning/ Learning Contracts, Implementation of Policies and Technology Literacy. Student's Attitude: Student's attitude is very important in making the Online Research Supervision effective. They should be self-motivated. One Supervisor said,

"Some students are very diligent and they take initiatives in having effective discussions and not letting that communication gap become wider. A student who takes interest in his research project and works consistently, is likely to finish his project on time."

Students' Diversity: In Masters in Medical Education (MME), students from different educational backgrounds join this program every year. According to the supervisors:

"In MME, students are thoroughly interviewed at the time of giving admission where all kinds of challenges are discussed. Unfortunately, some students are unable to do Master's program. The students who are struggling should be identified in the early module and should be allowed to graduate with a diploma."

Planning/ Learning Contracts: Effective planning in the beginning of the research will help the student to finish his project in time. One of the supervisors narrated:

"There should be a learning contract between the students and the supervisor about the time commitments, expectations from student, about the timelines when they are supposed to submit their work and the supervisors should know when they are supposed to give feedback. Both should be flexible enough to make a move towards the plan that has been agreed upon between two parties."

Implementation of Policies: Policies given by Higher Education Commission (HEC) should be implemented. One Supervisor said:

"HEC has a policy that each supervisor should not have more than 12 students to supervise. These policies should be implemented."

Technology Literacy: The quality of information technology should be improved. Both students and supervisors should know how to use computers and internet to make Online Research Supervision effective for them.

One Supervisor said:

"Technology and tools used for communication should be improved. Students and supervisors should be technology literate. They should know how to use computer and internet."

Table 1. Themes and sub themes emerging from the data

| Themes | Sub themes |
|---|---|
| Advantages of Online Research Supervision | <ul style="list-style-type: none"> • Convenience • Availability • Cost effectiveness • Role of technology |

| Themes | Sub themes |
|--|---|
| Disadvantages of Online Research Supervision | <ul style="list-style-type: none"> • Technological failure and lack of computer skills • Strained student supervisor relationship • Non-serious attitude • Time constraints |
| Recommendations for improvement | <ul style="list-style-type: none"> • Students attitude • Students' diversity • Planning • Implementation of policies • Technology literacy |

DISCUSSION

From the data, it became evidently clear that participating students perceived online research supervision better than face-to-face research supervision. According to the supervisors, there should be a blend of both face to face and online research supervision. The finding focusing on the advantages of online research supervision concurs with the literature (Nasiri and Mafakheri,2014) where the students and supervisors rate online research supervision favorably because of its convenience and cost-effectiveness. According to the students and supervisors, technology plays a very important role in the successful online research supervisory process. They can keep a record of their interactions with each other which eliminates the need of writing things for the students told by the supervisors (Eman.,2021). The use of screen sharing during videoconferences for data discussion, data analysis, and clarifying students' questions has been perceived as useful by both students and Supervisors(N. N. Kumar et al.,2021). Technical failures due to the interrupted power supplies, internet issues, and lack of knowledge and skills with computer-based technology are the biggest challenges in online research supervision (Netshitangani and Machaisa., 2021). The absence of personal knowledge and face-to-face contact do not let supervisor and student relationship develop (Bengtson and Jensen.,2015).Often the supervisors make use of the asynchronous ways of communication for feedback and guidance. But as reported by Glover and Stenbnicki, some problems are specific to asynchronous ways of communication (like emails) like a misunderstanding of the remarks and feedback given by the supervisor due to lack of non-verbal communication like facial expressions, eye contact and body language. Where students and the Supervisors are in different time zones, a suitable common time across time zones that works for both student and Supervisor should be chosen (Nelson et al.,2010). Online supervisors should be aware of the academic differences among the students in medical education that can influence understanding and expectations between their students and themselves. The data highlights that ambiguous hopes of supervisor and student may cause difficulties in their relationship. To avoid such issues, the student and supervisor should understand their responsibilities and duties clearly(Mushoriwa and Nyakutse.,2014). The supervisor should help the students according to their needs and should not believe that similar sort of supervision would serve purpose of all students as it will not produce the effective results (Davis., 2019). Students perceived small group mentoring arranged by the supervisors as an added opportunity for communication with the supervisors and peers. As in the master's program of

medical education, students are not at the same educational level, they can benefit from affiliating to a group and creating a community, sharing their difficulties, experiences, refining their research proposals and helping each other intellectually and psychologically (S. Kumar and Coe.,2017). The supervisor should arrange online peer meetings with the students presenting their work for others and getting feedback from them (Agricola et al.,2020). Support and guidance should be given from the start of the study till the end. Supervisors should provide links to supportive sites or articles related to students' research projects that can help them. Proactive communication and timely response to the students' queries are the approaches perceived to be effective by the students about online research supervision in the master's program. Expressive feedback like praise and offering suggestions are very useful to motivate and increase the self-esteem of the student (Ribau.,2020). A blend of various feedback strategies should be used. Sending them written comments with a document (asynchronous feedback) gives them the time to revise their work and devise questions and then contact them in real-time for consultation (synchronous feedback). Students desire effective mentorship in a paternal way (Devos et al.,2015). Students acknowledged the organization of fortnightly or monthly group meetings by the Supervisors where they can share their progress and clarify their queries with the Supervisors and peers. In online mode, a continuous motivational effort is required on the part of the student. Students with high self-efficacy finish their research work well in time (Zaheer and Munir., 2020). Students' diversity is based on the educational backgrounds and experiences of students which make online supervision more challenging for supervisors. Supervisors can supervise the students up to a certain level. So, there should be at least one meeting at the start of the research project and at frequent intervals between the student and supervisor where they should decide about the challenges they would be facing in the planning of research and then actual conducting of research (Netshitangani and Machaisa.,2021). They should deliberate what kind of advice is expected by the supervisor and what kind of help the student is seeking. Policies given by Higher Education Commission (HEC) regarding research supervision should be implemented. Technology and tools used for interaction should be improved. Both student and supervisor should know how to use technology. The choice of platform is determined by their access to technologies and their expertise in using those platforms of technology (N. N. Kumar et al.,2021).

CONCLUSION

This study focuses on the Master's Program in medical education. This is important because the master's program in medical education is distinct in many ways (predominantly research-focused, short timeline and students' diversity), although many of the same issues have been highlighted in doctoral supervision. In online mode, a consistent motivational effort is required on the part of the student. Students with high self-determination finish their research work well in time. The significance of external factors which affect the postgraduate online research should also be acknowledged and addressed by the supervisors In Pakistan, in some educational institutions,

the quality of information technology is not up to the mark. So, in such institutions, there should be a blend of both face to face and online research supervision. Once the online system is well established in all the institutions, then, we should shift to online research supervision.

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DECLARATION OF INTEREST

The author declare no conflict of interest.

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AUTHOR'S CONTRIBUTION

1.A.L: Created concept and design of the research, prepared initial draft, collected data, interpreted the results and generated discussion and conclusion.

2.U.M: Critical review and addition of important content.