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## Perspectives regarding the quality of supervision among dental postgraduate students in Bengaluru city, Karnataka

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### ABSTRACT

**Introduction:** Supervision is an important pillar in supporting learning environment throughout post graduate education. It is also one of the most important contributors to the successful completion of a higher education degree and to student's positive academic experience. **Objectives:** The aim of the present study was to assess the perspectives regarding the quality of supervision among dental post graduate students in Bengaluru city, Karnataka. **Methods:** From a total of 18 dental colleges, 9 colleges were randomly selected using a lottery method. All the post graduate students from these selected dental colleges were included in the study. A total of 297 students were participated in the study. The results were analyzed using SPSS, version 19 (SPSS Inc. Chicago, IL, USA) in frequencies and percentages described as basic information. **Results:** Overall, majority of the post graduate students were satisfied with the supervision they received and had similar perspectives about all the domains. **Conclusions:** The study concluded that post graduate students were satisfied with the overall supervision they received. The main elements contributing to a positive supervision experience were support, guidance, availability and good communication between supervisees and supervisors.

**Keywords—** Post Graduate Students, Supervision, Dental Students, Quality of Supervision.

### 1. INTRODUCTION

Supervision is an important pillar in supporting learning environment throughout higher education<sup>1</sup>. Previous literature indeed identified supervision as one of the most important contributors to the successful completion of a higher education degree and to students' positive academic experience<sup>2</sup>. Postgraduate student's main expectations towards their supervisors are guidance and support throughout their training. Successful graduate experience has been correlated with early establishment of supervisor – supervisee communication with their mutual expectations being negotiated and opened to change over time<sup>3</sup>. The quality of mentorship should therefore be assessed to ensure the training of high-quality researchers and academicians<sup>4</sup>

Data regarding post graduate student's satisfaction of their educational climate is very sparse. The gap in the literature is even more evident when we compare studies specially focusing on post graduate supervision in the dental education with other health professions.<sup>5</sup> There is a strong consensus in both dental education literature<sup>6</sup> and higher education literature which projects that the which explore student perceptions are important because students have distinctive perspectives of teaching and learning, and they can offer in-depth information on their learning experiences<sup>7</sup>.

Recent evidence has suggested that the learning environment in health-sciences education significantly influences the development of intellectual and professional skills in future practitioners<sup>8</sup>. However, relatively little published research has examined post graduates' learning experiences in postgraduate dental education, and none from the India context. Student perceptions of their educational environment and overall learning experiences are important for informing the development and modification of pedagogical practices and curricula<sup>9</sup>.

Initiatives that rationalize a research focus on 'student voice' emphasize that students should be given opportunities to influence their education<sup>7</sup>. The student voice literature is against students' exclusion from educational policy discussions and institutional control over students as if they are passive receivers of knowledge<sup>10</sup>. Thus, scholars interested in student voice argue for effective student participation in discussions about teaching and learning, suggesting that the authority to influence pedagogical philosophies and practices does not rest exclusively with academic staff and educational researchers<sup>7</sup>.

In an effort to enhance the educational experience for students, many studies have previously examined the dental learning environment, especially in relation to undergraduate dental education. Findings from previous qualitative research have invariably showed that the instructor characteristics considered by students to be important include availability, approachability, encouragement, constructive feedback, demonstrations, the student–staff relationship, supportiveness and organization<sup>11</sup>.

These findings are also echoed in the quantitative dental education research literature on student perceptions of their dental education<sup>12</sup>, medical education<sup>12</sup>, and higher education<sup>13</sup>. The aim of the present study was to assess the perspectives regarding the quality of supervision among post graduate students of dental colleges in Bengaluru city, Karnataka.

## **2. MATERIAL AND METHODS**

A cross-sectional study was designed to assess the perspectives regarding the quality of supervision among dental post graduate students of Bengaluru.

### **2.1. Ethical clearance and informed consent**

This study was approved by the institutional review board of VS Dental College & Hospital.

### **2.2. Informed consent**

A written and verbal informed consent was obtained from all the study participants.

### **2.3. Duration of study**

The study was conducted during Jan -March 2017.

### **2.4. Study tool**

A self-administered, structured questionnaire designed in English consists of 22 close ended questionnaires to record the demographic details, perception and opinion of dental post graduate students regarding the supervision<sup>14</sup>. The questionnaire was administered personally by the investigator to the participants. The questionnaire was used to collect the following information:

- Socio-demographic information (age, sex, education,)
- Perception of dental post graduate student regarding their supervision.

### **2.5. Sampling method**

A random sampling was used to select the study participants.

### **2.6. Sample estimation**

From a total of 18 dental colleges in Bangalore city, Karnataka, 9 dental colleges were randomly selected using a lottery method. All the post graduate present on the day of study from these selected dental colleges were included in the study. A total of 297 students were participated in the study.

### **2.7. Source of data**

Post graduate from the selected dental colleges were asked to fill the self-administrated questionnaire. The average time taken to fill the questionnaire by the post graduate student was around 8- 10 minutes.

### **2.8. Statistical Analysis**

The results were analyzed using SPSS, version 19 (SPSS Inc. Chicago, IL, USA) in frequencies and percentages described as basic information. Continuous variables were expressed as mean  $\pm$  standard deviations. Categorical variables were expressed in percentage and underwent a chi square test. The level of statistical significance was defined as  $P < 0.05$ .

## **3. RESULTS**

The mean age for the study participants was found to be  $26.42 \pm 2.39$ . Majority of the study participants (48%) belongs to the 20-25 age group while only 9% are greater than 30 years. of the study participants were female (69%). (**Table no. 1**).

Eighty-four percentage of the study participants were persuading their master's degree while only 15% belong to diploma level. First and second year of dental post graduate were equal number among the study participants (48%) while only 3% belongs to third year. (**Table no.2**)

Fifty-one percentage of the participants have weekly discussion with their supervisor. All of the participants agrees that it is easy for them to contact their supervisor. Eighty-seven percentage of the participants agrees that their supervisor give feedback in a timely and constructive manner. Sixty percentage of the study participants were satisfied with the amount of time you spend interacting with your supervisor. Majority of the study participants (75%) responded the research expected by their supervisor as appropriate. Regarding supervisor response after a meeting, with respect to scheduling next one, 36% responded as supervisor expects them to set a subsequent meeting, while 36% responded as supervisor on-the-spot sets for the next meeting.

For the supervisor effectively communicated their expectations regarding level of formality, mode of contact between meetings, and available hours, from the outset of the supervisory relationship, 90% responded as agree somewhat agree and neutral. Sixty-three percentage of the study participants agrees that the supervisor is responsible for providing support and encouragement to the postgraduate student. Regarding supervisor help in choosing research topics, 87% responded as yes. (**Table no.3**)

Regarding questions/issues the participants are comfortable in discussing with their supervisor, 51% responded as professional while 49% as academic issues. Only 9% of the participants experienced any conflicts or serious difficulties with their supervisor

that affected their work and 6.7% feels that their conflict was satisfactorily resolved. None of responded how their resolved their issues with their supervisor. Everyone agrees that their supervisor encourage them to present their work at seminars/conferences. **(Table no.4)**

Regarding the requirements that are need to move towards post-graduation, 54% of the participants knows somewhat. Sixty percentage of the participants feels that regarding, setting deadlines and goals, ensuring deadlines are met and maintaining motivation in writing the dissertation are Equal responsibility of the students and the supervisors. Regarding the responsibility of mechanics of writing– sentence structure, grammar etc., 63% of the participants responded as student’s responsibility. **(Table no.5)**

Seventy-two percentage of the participants were agreed regarding supervisors should encourage students to attend, submit and/or review proposals and present at relevant academic conferences in their field. Sixty-nine percentage of the participants agreed regarding supervisors should discuss general career goals with the students they supervise. Forty-two percentage of the participants agreed regarding the supervisor aid in the career development outside of the supervisory relationship. **(Table no.6)**

**Table no. 1 Distribution of participants according to demographics**

Age	Frequency	Percentage
20-25 yrs	144	48.0
26-30 yrs	126	43.0
>30 yrs	27	9.0
Gender		
Male	90	31.0
Female	207	69.0
	297	100

**Table no. 2 Distribution of participants according to level of studies**

Level of studies	Frequency	Percentage
Master’s level	252	84.0
Diploma level	45	15.0
Current year of post graduate		
1 yr	144	48.0
2 yr	144	48.0
3yr	9	3.0
Total	297	100

**Table no. 3 Distribution of participants according to their response regarding their relationship with the supervisor.**

Variable	Frequency	Percentage
Frequently of discussion with the supervisor.		
Weekly	153	51.0
More than weekly	36	12.0
Scheduled as needed	108	36.0
Is it easy to contact the supervisor?		
Yes	297	100
No	0	0
Does the supervisor give feedback in a timely and constructive manner?		
Yes	261	87.0
No	36	12.0
Are you satisfied with the amount of time you spend interacting with your supervisor?		
Very unsatisfied	27	9.0
Unsatisfied	9	3.0
Neutral	54	18.0
Somewhat satisfied	27	9.0
Very satisfied	180	60.0
Research expected by your supervisor appropriate		
Somewhat appropriate	72	24.0
Appropriate	225	75.0
Supervisor response after a meeting, with respect to scheduling next one		
Your supervisor expects you to set a subsequent meeting	108	36.0
Your supervisor immediately sets a time (on-the-spot) for the next meeting	108	36.0
Your supervisor contacts you shortly thereafter to set up a subsequent meeting	81	27.0
Do your supervisor effectively communicated his/ her expectations regarding level of formality, mode of contact between meetings, and available hours, from the outset of the supervisory relationship?		

Somewhat disagree	27	9.0
Neutral	90	30.0
Somewhat agree	90	30.0
Agree	90	30.0
Is supervisor responsible for providing support and encouragement to the postgraduate student?		
Somewhat disagree	9	3.0
Neutral	63	21.0
Somewhat agree	36	12.0
Agree	189	63.0
Does your supervisor help in choosing research topics?		
Yes	261	87.0
No	36	12.0
<b>Total</b>	<b>297</b>	<b>100</b>

**Table no. 4 Distribution of participants according to their response regarding conflict resolution with their supervisor .**

Which questions/issues you are comfortable in discussing with your supervisor		
Academic	144	49.0
Professional	153	51.0
Have you experienced any conflicts or serious difficulties with your supervisor that affected your work?		
Yes	27	9.0
No	270	90.0
Did you seek help in resolving the conflict or difficulty?		
No answer	27	9.0
Are they Encourage you to present your work at seminars/conferences?		
Yes	297	100
Did you feel that the conflict was satisfactorily resolved?		
Yes	20	6.7
No answer	7	2.3

**Table no. 5 Distribution of participants according to their response regarding their progress /dissertation writing.**

How well do you know the requirements that you need to move towards post-graduation?		
Very little	9	3.0
Somewhat	162	54.0
Quite a lot	90	30.0
Very much	36	12.0
What is your opinion regarding, setting deadlines and goals, ensuring deadlines are met and maintaining motivation in writing the dissertation?		
Equally the responsibility of the student and the supervisor	180	60.0
Mostly the student's responsibility	117	39.0
Mechanics of writing– sentence structure, grammar, etc. – are correct in the dissertation should be whose responsibility.		
Mostly the supervisor's responsibility	9	3.0
Equally the responsibility of the student and the supervisor	99	33.0
Mostly the student's responsibility	189	63.0
<b>Total</b>	<b>297</b>	<b>100</b>

**Table no. 6 Distribution of participants according to their response regarding career development.**

Items	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree
Do you agree supervisors should encourage students to attend, submit and/or review proposals and present at relevant academic conferences in their field?	0(0)	0(0)	54(18)	27(9)	216(72)
Do you agree supervisors should discuss general career goals with the students they supervise?	0(0)	0(0)	27(9)	63(21)	207(69)
Did your supervisor aid in your career development outside of the supervisory relationship?	27(9)	9(3)	45(15)	90(30)	126(42)
<b>Total</b>	<b>297(100)</b>				

**4. DISCUSSION**

With advances in biomedical science and demands for translational research, postgraduate research degrees are increasingly performed in clinical settings. The supervisors and the students are both often senior professionals who may alter 'traditional

hierarchical models of expert/novice. The main purpose of the study was to describe dental post graduate student's perspective in regard to the quality of their supervision in the Dental colleges of Bengaluru city. To our knowledge, this is the first comprehensive study aimed at identifying dental post graduate students' views and ranking about the quality of their supervision in the Indian dental setting.

Our results show that post graduate students found to be satisfied with the supervision they are receiving in accordance with Beaudin et al<sup>14</sup>. Student's supervisory expectations and needs as outlined in this study seem to concur with researches conducted previously in the fields of social sciences and nursing, including support, guidance, availability and communication.

The study participants were satisfied in terms of contacting their supervisor, timely and constructive advice from them. They also agree that the responsibility of the dissertation topic selection and writing should be equally shared by the students and the supervisors. Only few of the post graduate student reported a serious conflict or issues they are facing with their supervisor and which in turn is affecting their work. However, mostly of them had effectively solved the issues.

As the supervisor – supervisee relationship evolves and the doctoral students approach graduation, they are getting more help from their supervisors in terms of career development<sup>15-17</sup>. A good ability to communicate and discuss various issues with supervisors appears to be both prevalent amongst the surveyed students and important in avoiding supervisory conflicts. Tracking graduate students' progress using forms or progress notes was correlated with a more concrete understanding of the requirements for graduation; graduate students need and expect direction and close follow-up throughout the process of their dissertation writing.

As the supervisor – supervisee relationship evolves and the doctoral students approach graduation, they are getting more help from their supervisors in terms of career development. There, however, appears to be a lack of guidance on that matter for Master's students; supervisory efforts must be made in order for these students to be aware of the importance of early career planning, and as expressed by a post graduate student: Supervisors should give equal opportunities to all their students and send emails about the opportunities as soon as possible and to all students<sup>18-21</sup>.

Perhaps students either missed the orientation session or were simply not notified by the supervisors on that matter. Strategies to address this problem in the future include making the orientation session mandatory as well as to provide graduate students with a syllabus to provide them with assistance and information at hand. The participation rate for the study was excellent. The format of the questionnaire facilitated data collection, analysis and interpretation, and the study question could successfully be answered. This study is, however, limited to not using a specific, valid instrument to assess the quality of supervision, as it is a subjective measure. Nonetheless, the questions used in the survey were drawn from a pool of questions used for a large scale study.

These findings cannot be generalized to every postgraduate programme; however, they may stimulate reflection in staff members from other dental institutions. Additionally, as postgraduate supervision is a complex endeavour, students' and graduates' perspectives provide only one angle on dental education. Research including other stakeholders – such as clinical and research supervisors, dental assistants and/or patients could provide a more complete picture of postgraduate dental education. Additionally, the findings can be used to develop and/or refine curriculum and design academic staff development programs. As academic staff within the same institution may not be always informed of effective and/or innovative teaching strategies like regular tracking, timely feedback used by their colleagues, approaches to initiate professional staff development may include peer observation of teaching and provision of a forum for academic staff to share their 'best' supervisory and/or mentoring practices. Post graduate student's responses provided rich, insights into their reflections and understandings of effective and ineffective approaches to supervision as it influenced their learning in the clinical and research settings. Overall, the findings from this study were largely similar to those from previous research on how dental students and graduates perceived their undergraduate and postgraduate learning experiences.

## **5. CONCLUSION**

The study concluded that post graduate students were satisfied with the overall supervision they received. Based on graduate students' perspective in their supervision, the main elements contributing to a positive supervision experience are support, guidance, availability and good communication. Mentorship being a defining feature in the formation of high-quality researchers and academicians, further studies evaluating supervision in the dental research setting are needed to identify additional tracks for improvement.

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