

Perceptions And Attitudes of Postgraduate Students towards Thesis Work in A Medical College in Delhi

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Abstract :

Introduction : Research forms the backbone of rapidly evolving world of medical sciences. In the existing medical curriculum, every student pursuing MD/MS Degree has to conduct a research study and submit a write up in the form of thesis as an essential requirement to earn the degree of Masters of Medicine/Surgery. There is thus a need to identify perceptions, attitudes, motivational factors and barriers among these postgraduate students in carrying out their thesis work in medical colleges.

Materials and Methods : This was cross sectional study, conducted in a Medical College of Delhi, in February 2017 among 247 MD/MS post-graduate students. Self-administered questionnaire was used to assess perceptions, attitudes, motivating factors and barriers towards doing thesis work.

Results : Almost 70% postgraduate were motivated towards doing their thesis work but still, 62.8% perceived that thesis should be made optional. Major motivating factors included support from the supervisors, satisfaction towards career aspiration and advancement in the current field. Major barriers included unavailability of samples, difficulty in following up patients, lack of internet access in the department and lack of time.

Conclusion : Even with knowledge regarding the importance of research in the field of medicine, barriers outnumbered the motivations towards conducting thesis work. Overcoming these barriers in various forms will help enable a greater number of students to pursue research.

Keywords : Barriers, Motivating factors, Perceptions and attitude, Research, Thesis work

Introduction :

Research forms the backbone of rapidly evolving world of medical sciences. Developing interest and pursuing a future research career in the field of medicine requires appropriate priming during the undergraduate period. The idea behind conducting any kind of research in medical education not only helps the students in enhancing their knowledge of disease but also help in building critical thinking skills. With the current prevailing system of medical education in India, research doesn't form an essential component of undergraduate curriculum. However, as per Medical Council of India (MCI), a postgraduate student can earn the title of Masters of Medicine/Surgery only after carrying out research work and compiling the write up of their research in the form of a thesis.^[1] Thus, designing a thesis is usually the first step towards the field of research in medicine in Indian

setting. Even though, multiple platforms are available to encourage research like Indian Council Of Medical Research (ICMR) study grants at undergraduate level, lack of exposure during the undergraduate program forms a major obstacle towards postgraduate research.^[2] Other factors including inadequate knowledge of newer research methods, shortage of research staff and lack of funds also form barriers in carrying out medical research.^[3] Besides these external barriers, it is also important to find out post graduate students' own perceptions and attitude towards their thesis work in order to identify motivating factors/barriers among them towards their thesis work. As thesis forms the first stepping stone for them in medical research, assessment of these factors may be of great help in developing a good attitude and interest toward research in the field of medicine.

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Materials and methods:

This was cross sectional study, conducted in a Medical College of Delhi in February 2017. The institution imparts various medical and paramedical courses which includes MBBS, MD, MS, B.Sc (Radiology).

Data collection :

The study population comprised of all the postgraduate students from every department pursuing MD/MS degree course. A total of 334 MD/MS postgraduates were listed and were eligible for inclusion in the study. Students pursuing BSc radiology, Diploma or PhD courses were excluded from the study. Out of the total 334 participants, 87 participants either refused or could not be contacted. Hence, 247 postgraduates participated in the study. Pre-tested self-administered questionnaire was used as a data collection tool.

Questionnaire :

The questionnaire was prepared after performing an extensive literature search on medical research perceptions, motives and barriers among medical students. The questionnaire was pretested on 15 post graduate students and the final questionnaire (after incorporating changes after pretesting) was used for data collection. The questionnaire comprised of 3 sections including questions regarding general information of the participants, perceptions and attitude regarding research work and motives and barriers faced by the students in carrying out the thesis work. Perceptions and attitude of the study participants towards conducting thesis was assessed on Likert scale. 4 additional questions were added especially for 2nd and 3rd year post graduate students keeping in mind better exposure of them towards thesis writing. Semi-open ended questions were asked to assess the motives and barriers that occurred while carrying out thesis work. The questionnaire was self-administered after obtaining informed written consent from the study participants. Confidentiality of the information was also maintained.

Ethical approval :

Permission was obtained from the Principal of the Institution and ethical clearance was obtained from the Institutional Ethics Committee.

Analysis :

Data was entered in Microsoft Excel datasheet and cleaned. The cleaned datasheet was analysed using SPSS version 20.

Descriptive frequency tables were made.

Results :

A total of 247 out of 334 participants filled the questionnaire with a response rate of nearly 74%. Table 1 shows the demographic profile of the study participants. Both first and second year students constituted 34% in each group and third year students constituted 32% of the study participants. Both male and female postgraduate were almost equally distributed. (Table 1)

Eighty three percent of the study participants were pursuing speciality of their choice. Although, current satisfaction towards the pursued speciality was reported by more than 90% of the study participants, only 38.9% were interested in pursuing a career in research. Only one fifth of the study participants were exposed to research during their undergraduate period. Thesis topic were allotted by the supervisor/ co-supervisor by nearly three-fourth of the study participants. Sixty one percent of the study participants were allotted dedicated time for doing thesis work. Nearly half of the study participants received some kind of intramural or extramural grant.

Perception towards thesis work :

Almost 70% postgraduate were motivated towards doing their thesis work. More than half of the study participants (62.8%) perceived that thesis should be made optional. Nearly three-fourth agreed to the fact that it helped towards academic learning. Almost 60% of the study participants thought that thesis work acted as a positive input towards curriculum vitae. More than half of the participants perceived thesis work contributed towards patient welfare. (Table 2).

Perception of 2nd and 3rd year postgraduates towards thesis :

Almost 50% perceived that doing thesis increased their understanding towards the subject and increased their awareness towards issues in the subject area. Nearly one third of the study participants reported thesis to be a motivating factor towards developing interest in research. Forty three percent of the study participants agreed that thesis work had helped them in developing analytical skills. (Table 2)

Motivating factors towards thesis work :

Motivating factors among the post graduate students included support from supervisors (71.7%), support from

Table 1: Demographic profile of the study participants(n=247)

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Age (Mean±SD)	26.9 ± 1.7 years	
Year of postgraduation	First year	84 (34%)
	Second year	84 (34%)
	Third year	79 (32%)
Gender	Male	120 (48.6%)
	Female	127 (51.4%)
Marital Status	Married	49 (19.8%)
	Unmarried	198 (80.2%)

Table 2: Perceptions and attitude of post graduate students towards thesis work(n=247)

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	Agree	Neither agree/ nor disagree	Disagree
Thesis should be made optional	155 (62.8%)	33 (13.4%)	59 (23.9%)
Helps improvement in academic learning	178 (72.1%)	44 (17.8%)	25 (10.1%)
Helps improvement in curriculum vitae	153 (61.9%)	61 (24.7%)	33 (13.4%)
Future enhancement of scientific knowledge	178 (72.1%)	39 (15.8%)	30 (12.1%)
Contribution towards patient's welfare	138 (55.9%)	70 (28.3%)	39 (15.8%)
For 2nd and 3rd Year Post-Graduates only(n=163)			
Increased understanding of the subject	128 (51.8%)	19 (7.7%)	16 (6.5%)
Increased awareness of problems and issues in subject area	114 (46.2%)	28 (11.3%)	21 (8.5%)
Stimulated interest and enthusiasm for research	80 (32.4%)	48 (19.4%)	35 (14.2%)
Research shaped analytic skills	107 (43.3%)	30 (12.1%)	26 (10.5%)

Table 3: Motivating factors towards thesis work(n=247)

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Support from the supervisors	177 (77.1%)
Supportive colleagues in department	112 (45.3%)
Advancement in my field	102 (41.3%)
Satisfaction towards career aspiration	100 (40.5%)
Motivation to carry out further research	73 (29.6%)
Satisfaction with high quality of research	61 (24.7%)
To impress the faculty	36 (14.6%)

(*Multiple responses marked by the study participants)

colleagues (45.3%), satisfaction towards career aspiration (40.5%), advancement in the current field (41.3%) and impressing the faculty (14.6%). (Table 3)

Demotivating factors/ barriers towards thesis work:

Factors that led to demotivation of students towards their thesis work included interference with clinical work (29.6%), lack of significance in clinical practice (16.6%), lack of

recognition in authorship (13%) and lack of guidance from the supervisor (13%). Other barriers included difficulty in following up of the patients (69.2%), lack of access to internet in the department (48.2%), stress (46.2%), time consuming (44.1%), unavailability of samples/ patients (42.9%), lack of inter departmental coordination (37.2%), lack of funding (27.1%), difficulty in obtaining approval from various departments (26.7%), inadequate library facilities (25.9%) and lack of facilities for statistical analysis (18.6%). (Table 4)

Table 4: Demotivating factors/ barriers towards thesis work(n=247)

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Difficulty in following up with the patients.	171 (69.2%)
Lack of internet access in the department.	119 (48.2%)
Stressful	114 (46.2%)
Time consuming	109 (44.1%)
Unavailability of samples / patients	106 (42.9%)
Lack of inter departmental coordination	92 (37.2%)
Interference with academic/ routine clinic work	73 (29.6%)
Lack of funding	67 (27.1%)
Difficulty in obtaining approval from various department	66 (26.7%)
Inadequate library facilities	63 (25.9%)
Publication barriers	54 (21.9%)
Lack of facilities for statistical analysis	46 (18.6%)
No or little significance in clinical practice	41 (16.6%)
Lack of recognition in authorship	32 (13%)
Lack of guidance provided by supervisor	32 (13%)
Lack of transport	32 (13%)

Experience while working with thesis by 3rd year students :

More than two third of the study participants (68.4%) had a good experience while doing their thesis. Almost half the study participants attended workshop for thesis writing. Nearly one fourth study participants were not able to submit their thesis on time. Perception of more than half of the study participants towards research improved over time. Presentation of the thesis work in scientific conferences was done by 63.3% of the study participants with 39.2% had their thesis work sent for publication.

Discussion :

Thesis work being the usual first exposure for a post-graduate medical student in the field of medical research, their perceptions, barriers and experiences towards conducting thesis becomes an important aspect in building and improvising research practices among post-graduate residents. Most of the studies that are conducted in this domain focuses on the perceptions, motives and barriers faced by the medical students towards overall medical research. The current study draws light towards these factors as not many studies have been conducted highlighting the perceptions, motives and barriers towards conducting their thesis, rather than focusing on overall medical research.

Although majority of the study participants perceived thesis to be a booster in academic learning with almost 70% of the students motivated towards their thesis, only 38.9% of the participants showed interest in pursuing a career in research and more than half of the study participants believed that thesis should not be a compulsory part for passing MD degree. Similar finding has been reported by multiple studies conducted in the country as well as internationally.^[3-5] Lack of exposure to research during the undergraduate period as reported by multiple studies as well as the current study could be one of the factors towards low level of interest in research.^[6,7] More than 50% of the study participants believed thesis contributed to patient welfare as has also been reported by Purushottam et al. and Pranav et al. in Maharashtra.^[8,9]

The current study reports support from the supervisors and colleagues and advancement in the field of speciality pursued to be the major motivating factors towards doing thesis. Other studies have also reported similar results.^[3,6,10]

Barriers include difficulty to follow up patients, inadequate facilities, stress, lack of time, lack of funding and lack of facilities for statistical analysis. Similar findings were reported by many other studies done in the country.^[3,5,6,8,11]

Thesis as an interference in clinical work, was also reported by nearly 30% of the participants in the current study. Even though almost 60% of the study participants were allotted separate time for doing thesis work, 44% still believed lack of time to be a significant barrier towards thesis and more than 20% of the study participants were unable to submit their thesis on time.

Conclusion and recommendations :

In light of current study and other multiple studies conducted at various places, evidence shows that even with knowledge regarding the importance of research in the field of medicine, barriers outnumber the motivations towards conducting thesis work. Overcoming these barriers in various forms will help enable a greater number of students to pursue research. Conducting workshops to develop skills in research methodology could be very fruitful in overcoming these barriers. Evidence shows a decline in the number in physician-researchers in the country.^[12] Barriers towards research as also reported in the current study are much more prevalent in developing nations like India. Although mandating thesis submission and its presentation in one national/international conference is a step towards development of interest in medical research, introduction of basic research methodology as a part of undergraduate curriculum would also encourage in building future researches as also seen in developed nations.

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