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Interest in Research Among Physiotherapy Undergraduate Students: A Cross-sectional Survey

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Abstract

Background: Research is a pillar in garnering evidence in Health Sciences. It is important to impart clinical and research skills to students persuing medical and allied branches. Physiotherapy treatments are becoming evidenced based and there is a need to train Physiotherapy students in research studies. The study aims to evaluate the interest of Physiotherapy students in research activity as therapists and as academicians. *Methods:* A cross-sectional survey was carried out at a Physiotherapy College affiliated to a Tertiary care Academic Institute. After obtaining ethical clearance from IEC of institute, UG students of Physiotherapy from I to IV B.P.Th were asked to respond to a locally developed self-administered questionnaire with 11 items related to research. Data was analyzed using Graph Pad version. *Results:* Total of 133 Physiotherapy students with mean age of 19.84 ± 2.14 completed the questionnaire. On being asked about interest in continuing research after graduation, 54.88% showed their interest while, 44.36% wanted to pursue an academic career. A majority of 96.24% showed clinical practice as important aspect of their training and only 3.75% considered research as their priority. Half of the students who were aware about research being part of their curriculum, 44.30% knew research as an integral part of academic career while 50.37% were not sure about its importance. On being asked about knowledge of publication, small percent were aware about its relevance. *Conclusion:* Although interest in research is present among students, measures should be taken to orient the students about research activities right from 1st B.P.Th and should be reflected in the curriculum.

Keywords: Physiotherapy students; Research; Undergraduate curriculum; Learning, Motivation.

Introduction

Continued progress in any field is fundamentally dependent on the evidence based work presented by the researchers. There is a valuable contribution of research scientists in the medical field owing to the training given to such professionals. It was proposed that early inclusion of professional college students in the scientific research during their academic training will help medicos to decide to focus on scientific activity.[1]

It is very important to develop both clinical and scientific skills in students admitted to health science courses. Modern medicine is evidence based and all health science professionals should know about research in order to understand the process of formation of evidence.[2] Also, the number of graduate students from physiotherapy schools who choose to pursue a career in academics and/or scientific research is unknown. Although the physiotherapy education depends on understanding the formation of scientific evidence, the lack in this aspect may have an impact on the profile of graduates, the education system is producing.

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Modern physiotherapeutic practice is based on search for evidence leading to a specific diagnosis and delivering appropriate therapy and for this reason, physiotherapy students should know about research in order to understand the process for the formation of evidence.[2] This close relationship is the basis that research fundamentals have been presented during the final year and internship of undergraduate PT program. But, it still remains unclear whether undergraduate students from 1st to 4th year are inclined towards research or is it just a compulsion to submit their project as a part of their curriculum. Hence, it is essential to evaluate the interest of undergraduate students towards research and to enumerate the factors that are responsible for the disinterest.

Aims and Objectives

The present cross-sectional study sought to identify the interest in research among physiotherapy undergraduate students of V.S.P.M's College of Physiotherapy.

Materials and Methods

All the undergraduate students from 1st to 4th year of B.P.Th course who were not exposed to research activity and never participated in scientific research were considered eligible to participate. After the purpose of the study was explained to the students, informed consent was obtained from those who were willing to volunteer for the study. We used a descriptive survey study design to investigate the research interest from 1st to 4th year cohorts of undergraduate PT students. A locally developed, self-administered questionnaire on research interest approved by the institutional review board was administered to the students. The survey consisted of 5 questions on general information such as age, gender, academic year, presence of Physicians in the family and involvement in scientific project at school or college level. 11 questions pertaining to interest in research were asked. Respondents were asked to choose one alternative out of Yes/No/Not sure. It took 5 min to complete the survey. Data was collected and spread on excel sheet and were analyzed with prism 6 (Graph Pad software, Inc.). The responses were recorded in percentages and represented in tables. At the end, students were asked to state their reasons for disinterest in research and their responses were recorded on a checklist (Table 3).

Results

The research population consisted of 133 Physiotherapy students from VSPM College of Physiotherapy. The average age of the population was 19.84 ± 2.14 years. 9 Participants were male and 124 were female. Students from all four years of PT course participated (Table 1). 75.18% (100 students) of the respondents declared that they had an interest in research. 30.07% (40 students) were not aware that they had to carry out research work during theirundergraduate curriculum. 54.88% (73 students) stated that they had an interest in continuing research activities after graduation whereas 44.36% (59 students) stated they had a desire to pursue an academic career (Table 2). When asked to rank the importance of the items, "research" "theory" and "practice" for physiotherapy training, only 3.75% (5 students) of respondents put research in first place, 96.24% of the sample choose practice as the pillar of greatest important to their training. 48.12% of students were aware that they had to work with research in their undergraduate program. 44.36% of students knew that research is an integral aspect of academic career options. When asked to grade research in context of importance or relevance in physiotherapy curriculum, 50.37% of students were not sure of the importance. 29.32% declared that they had heard about publications and only 5.26% of students thought that research is only limited to publications and paper work and has no relevance to patient outcome measures whereas

Table 1: Shows year-wise demographic characteristics of the population

Year	*N*	Male	Female	Mean age
I BPTh	39	3	36	18.33 ± 2.54
II BPTh	35	1	34	19.37 ± 1.98
III BPTh	27	1	26	20.51 ± 2.76
IV BPTh	32	4	28	21.65 ± 2.42
Total	133	9	124	19.84 ± 2.14

Table 2: Shows percentage of responses to questions on interest in research

Sr. No.	Question	Yes	No	Not sure
1.	Are you interested in research?	100 (75.18%)	16 (12.03%)	17 (12.78%)
2.	Are you aware that you have to carry out research work during your undergraduate curriculum?	64 (48.12%)	40 (30.07%)	29 (21.8%)
3.	If given a choice do you intend to continue working with research after graduation?	73 (54.88%)	08 (6.01%)	52 (39.09%)
4.	Do you intend to pursue a teaching career?	59 (44.36%)	34 (25.56%)	40 (30.07%)
5.	Do you know that research is an integral aspect of teaching career options?	59 (44.36%)	35 (26.31%)	39 (29.32%)
6.	In your opinion which is the most important for PT training? Theoretical knowledge/Practice or hands on skill/Research	128 (96.24%) Practice/Hands on skill	05 (3.75%) Research	
7.	Do you think scientific research helps in improving your knowledge as a health care professional?	107 (80.45%)	4 (3.07%)	22 (16.54%)
8.	Do you think research helps in improving patient care?	121 (90.97%)	11 (8.27%)	1 (0.75%)
9.	Have you ever heard about publication or do you know about publishing research work?	39 (29.32%)	26 (19.54%)	68 (51.12)
10.	Are you aware of funding agencies or agencies coordinating medical research?	7 (5.26%)	105 (78.94%)	21 (15.78%)
11.	Do you think research is only limited to publications and paper work and has no relevance to patient outcome measures?	7 (5.26%)	92 (69.17%)	34 (25.56%)

80.45% of students thought that research is helpful for health care professionals. 90.97% of students felt that research helps in improving knowledge and patient care. 54.88% students felt that research should be made compulsory for PT students. Only 5.26% of students were aware of funding agencies in medical research.

Table 3: Shows factors responsible for lack of interest in research

Sr. No	Questions	*N* = 33	Percentage
1.	More interested in clinical work	29	87.87
2.	Lack of previous exposure/knowledge	27	81.81
3.	Not knowing how to start a research	26	78.78
4.	Inadequate funding/financial support or availability of instruments	25	75.75
5.	Difficulty finding a mentor	23	69.69
6.	Lack of information on research opportunities	23	69.69
7.	Prefer other extra-curricular activities	21	63.63
8.	No motives or incentives	20	60.6
9.	Not having found a research partner or research group	18	54.54
10.	Uncooperative/unapproachable faculty	17	51.51
11.	I am afraid to conduct a research	11	33.33
12.	Faculty forced research	9	27.27
13.	I find research useless	4	12.12
14.	Lack of internet facilities	3	9.09

Discussion

In this cross sectional study with students from all years of B.P.Th. course at VSPM's college of physiotherapy, it was noted that a large proportion of students is interested in research activities during their training. Even though 75% students were interested, only 44% of the students want to pursue an academic career in research. Our results are in line with other preliminary studies which demonstrated high levels of interest in research among medical students.[3] Although PT schools have integrated scientific activities in their curriculum, including a projectin subject of community physiotherapy in their 4th B.P.Th. however, students do not understood the benefits of research during their training period. Even though a greater proportion of physiotherapy students showed interest in research (100/133), half of the sample population did not intend to pursue an academic career? Our results are in line with the studies which have effectively verified a decreasing number of new medical researchers in recent years.[4,5]

In the present study, we noted that most of the PT students who responded to the survey stated that they had an interest in research activities and a more equitable and homogenous distribution was found throughout the different academic years. We also noted that 30% of the study population especially 1st year, 2nd year, and 3rd year were not aware that they have to work with research during their Undergraduate program and 42% of them were not sure whether conducting a scientific research is important in Undergraduate physiotherapy training. Also, 50% of the students stated that they are not sure about relevance of research in PT curriculum. However 54.88% of the students stated that research should be made compulsory for PT students. We found that 51% (68 students) have not heard about publication and did not know about publishing research work. However, only 5% of them stated that research is only limited to publication and paper work and has no relevance to patient's outcome measures. But, 90% of the students stated that research may be helpful in improving their knowledge and patient care. It was quite surprising to note that only 12 out of 32 in 4th B.P.Th. (showed intentions) intended to continue working with research after their graduation. And an equal numbers intended to pursue an academic career. This is quite alarming that even though they have a compulsory project to be done as a part of their curriculum at 4th B.P.Th. level, all the final year students felt that practice and hands on skill is most important for PT training rather than theory or research activity.

Among the final year students, only 50% of them considered research as an integral aspect of academic career options and wanted to conduct a scientific research in future. Our study showed that PT students (80%) in the second year are more eager to participate in research as compared to other year students. A total of 100/133 students of PT showed interest in research, only 53% thought that it is important in UG training and 96% believed that practice is most important in PT training. It must be proposed that those students stating their interest in research must put into practice what they have learned in their respective study. Previous studies demonstrate high levels of interest in research among medical students, with the intention of integrating scientific activity with their curricular activity. However, the authors stated that the students do not understand the benefits of research during their training period.[6] Moreover, better guidance for PT students to conduct scientific studies must be considered crucial, so that they can publish their work and maintain their interest in scientific research.[7] Our results are in line with David William[1] who stated thatthose who do not wish to pursue an academic career can even be benefitted from the experience of scientific research in their professional practice.

Analyzing the interest in research seen in different academic year of the PT course, there is a relatively homogenous and high distribution across all years and did not vary between academic years. The inclusion of a compulsory project work in 4th B.P.Th. curriculum could have led to positive impact on student's perception in relation to research interest. But, initiatives must be taken with an aim of encouraging quality research among PT students and stimulating interest at early stages of PT training. Analyzing the results of our research involving physiotherapy students, the importance given to research for PT training draws our attention, as it has been put in last place on a scale of priorities that also includes theory and practice as instruments for training. Only 3.75% of respondents put research in first place in level of importance to their PT training.This findings is corroborated by the fact that majority of physiotherapy students choose practice as the pillar of greatest importance to their training. Our results are in accordance with a technicist trend within medical education,[8-10] in which the incorporation of technology and ability to understand have replaced more intuitive medicine which were based more on methods than technology.

An interest in research does not necessarily imply a choice of a future academic career. When considered well, an interest in research means understanding its importance to PT training and considering a commitment to active participation in educational training itself. Guiding the students for their project work at final year level plays a fundamental role in developing their interest in research. Introductory course especially aimed at encouraging and focusing on research right from 1st B.P.Th. year, may contribute to the awakening of new scientific vocation among PT students. A study showed that medical students who begin research in pre-clinical semesters express stronger long term research interest compared with students who start later.[11] 33 (24.81%) of students who did not show interest in research were enquired about disincentives and factors responsible for their lack of interest in research. Students mainly stated more interest in clinical work, followed by lack of previous knowledge/exposure regarding research, not knowing how to start a research, lack of information on research opportunities and no motives or incentives to conduct a research as important reasons for not having interest in research (Table 3).

Limitations

Data was collected using a non-validated self-administered questionnaire. Sample comprised of PT students of one institute only. However, as the objective of this work was to provide an overview about interest of PT students in research, these possible limitations do not negate the value of the study's findings. First, it has been undertaken only in one college and using a cross sectional methodology. It is difficult to make generalized conclusions. Second, this study has not collected binary answers. To analyze the complexity of social and academic issues that might influence the level of interest in research, a stronger more detailed study design would be valuable.

Conclusion

The study concluded that PT students at VSPM's college of physiotherapy are inclined towards research activity. However, it was not possible to identify which factors hold an influence on this inclination. Thus, we imply that the students must understand the importance of their research work in their UG curriculum and must publish their scientific work. Measures should be taken at undergraduate 1st B.P.Th. level to introduce students to fundaments of research.

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