

THE ATTITUDE OF PHYSICAL THERAPY STUDENTS TOWARDS RESEARCH



**In the partial fulfilment for the degree of
Doctor of Physical Therapy**

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1. INTRODUCTION :

Research plays a significant role in our daily life. Research is a systematic progress by which we can achieve new knowledge, science or invention by using standardised methods (1). Research is a the process of collecting and analysing the information in order to understand the phenomenon under study (2). In present time , scientific progress is related to the research situation in the scientific communities (3). Research has become one of the most intellectual possessions a human being have to change his ways of life according to the needs and demands of society (4).

Attitude is either a positive or negative feeling towards a particular subject. Comprehensive definition of attitude includes emotions, beliefs, behaviours and interactions (5). It is important to find the attitudes of students towards research so that a positive attitude can be built in them and that can facilitate in learning (6).

Undergraduate students usually have negative attitudes and feelings towards research related courses. These attitudes have been documented in numerous studies in relation to the courses in research, statistics, and mathematics (6). It is observed that these negative attitudes have been associated with poor performance in such courses.

There are problems that were believed to be associated with negative attitudes of students towards research such as difficulty of research, the number of workloads given to students and the anxiety towards research (4). Those students who find research difficult are more prone to anxiety which affects the grades of these students.

Past literature illustrated that having a more positive attitude towards a academic subject, there are higher possibility for a person to perform well academically (7). Further a study was conducted on medical students for the attitudes towards research and found that majority of students thought that research would be helpful in their carrier but fewer were found to have involved in research activity during their medical school (8)

Elena C. Papanstasiou found negative attitudes towards research in undergraduate students (6). Siemens, Punnen and associates found that medical students of fourth year have more involvement in research as compared to 2nd year medical students (8). Zan and Martino also found that performance of postgraduate students in research was better than that of undergraduate students (5). Postgraduate students may take research more positively as they may think that this would help them in their professional life (6).

Sabzwari, Kauser and Khuwaja conducted a study in junior faculty in medical profession in Pakistan and found that although they have a positive attitudes but most of them perceive research a difficult process (9). Hassan khan et al. found that medical students demonstrate moderate level of knowledge and attitude towards health research (10).

With the best of researchers' knowledge there are limited researches available on attitude of physical therapy students towards research, but the current study intended towards finding the attitudes either positive or negative in undergraduate physical therapy students, further measures can be taken to improve the barriers or problems related to the negative attitudes of students towards research.

2. LITERATURE REVIEW:

Khalid M. AlGhamdi in 2014 studied the perceptions, attitudes and practices toward research among senior medical students at the King Saud University, Riyadh, Saudi Arabia. 172 students were given a self administered questionnaire with 97 males (65.5%). The majority of the students responded that research is important in medical field (97.1%, 167/172). A total of 67.4% (116/172) believed that research should be compulsory for all medical students. Only 55.3% (88/159) took part in research, during medical school (11).

Mahtab Memarpour, Ali Poost foroush Fard and Roghieh Ghasemi in 2015 conducted the research on evaluation of attitude to, knowledge of and barriers on 410 students out of which 384 students returned the completed questionnaire. Mean student scores for attitudes, knowledge and barriers were (68.97+_12.56), (70.99+_20.97) and 75.27+_15.38 respectively. Undergraduate students (70.27+_12.00) showed more positive attitudes towards research than postgraduate students (65.57+_13.06)(p=0.001) (12).

Faustino E. Oguan Jr., MerleneM. Bernal, Maria Christine D. Pinca used the ATR scale devised by Papanasatasiou in 2005 to study the attitudes and anxiety of students towards research and its influence on their academic achievement. 338 students from College of Arts and Science, who already had done research. Participants' responses were analysed through mean, and correlation using SPSS version 20. Overall students had a positive attitudes but still most of them showed negative attitudes on difficulty of research. Males were more positive than females. The students also showed that research is stressful (4).

In 2005 Elena C. Papanastasiou did the study on the purpose of development of "Attitude towards Research Scale" and to verify the dimensions of attitudes of undergraduate students who participated in introductory research courses. 226 students were present who had completed the research methods course. Based on factor analysis, five factors were identified that showed the attitudes towards research (6).

Hassan khan in 2006 conducted the study on 220 medical students of Aga Khan University, Karachi. A pre tested questionnaire was given to the students. In this study

knowledge and attitudes towards health research were to be measured. Mean scores of knowledge and research were 49.0% and 53.7% respectively. Medical students showed moderate level of knowledge and attitudes towards health research (10).

3. OBJECTIVE:

To assess the undergraduate students' attitudes towards research in relation to the gender on five factors: research usefulness, research anxiety, positive attitudes, relevance to life and difficulty in research.

4. OPERATIONAL DEFINITIONS:

Attitude:

A settled way of reasoning or feeling about something

Physical therapy:

The treatment of disease, injury, or deformity by physical methods such as massage, heat treatment, and exercise rather than by drugs or surgery is known as physiotherapy (6).

Research:

The systematic investigation into and study of materials and sources in order to establish certainty and reach new conclusions

5. Materials and Methods:

5.1. Setting:

Different colleges in Lahore having the facility of students of physical therapy

5.2. Duration of Study:

The study will be completed in 6 months durations.

5.3. Study Design:

Cross sectional study

5.4. Sample Size:

$$n = \frac{Z^2 p(1 - p)}{d^2}$$

5.5. SAMPLE SELECTION:

5.5.1. Inclusion criteria:

1. Students studying in Fourth or Final year of Doctor of Physical therapy.
2. Physical therapy students having knowledge of Evidence based practice and research.

5.5.2. Exclusion criteria:

1. Students who will be absents on the day of data collection.
2. Students who don't want to participate in the research program.

5.6. Sampling Technique:

Non probability / convenience sampling.

6. DATA COLLECTION:

Data will be collected from the undergraduate students of physical therapy about their attitudes towards research on 7 point likert scale using Attitude towards research scale “ATR Scale” with 32 items comprises of 5 factors showing the attitude of the students towards research.

7. DATA ANALYSIS:

The data will be analyzed by IBM SPSS STATISTICS 20. The quantitative variables will be presented as mean and standard deviation while qualitative variables will be evaluated as proportions (%). Before and after comparisons will be done using non parametric methods i.e. Wilcoxon Rank-Sum test since the data will be obtained as scores. The test results for multiple choice questions will be compared before and after using a Chi-square test. An alpha level of 0.05 will be chosen for significance.

8. Ethical Consideration:

Permission from the ethics committee of Rashid Latif College of Physical Therapy will be obtained in order to carry out study. The cultural and religious considerations will be duly taken at the time of collection of data.

Key words:

Attitude, Physical therapy students, research

9. References:

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10. APPENDIX I:

CONSENT

The study you are about to participate is the attitude of physical therapy students towards research. The study has no potential harm to the participants. All data collected from you will be coded in order to protect your identity and should not be disclosed to anyone. Following the study there is no way to connect your name with your data. Your response will not affect your academic result in anyway. Any additional information about the study results will be provided to you at its conclusion, upon your request.

You agree to participate, indicating that you have read and understood the nature of study, and that all your inquiries concerning the activities have been answered to your satisfaction.

Signature: _____

Date: _____

Cell no. (Optional) _____

11. APPENDIX II:

APPENDIX

STUDENTS' "ATTITUDES TOWARD RESEARCH" SCALE **

The following statements refer to some aspects of educational research. Please answer all the questions sincerely. DO NOT DISCLOSE YOUR IDENTITY ANYWHERE.

Circle one of the numbers opposite each of the statements that follow.

By selecting number 1 you indicate that you strongly disagree.

By selecting number 7 you indicate that you strongly agree.

	Strongly Disagree					Strongly Agree		
	↓					↓		
1. Research makes me anxious *	1	2	3	4	5	6	7	
2. Research should be taught to all students	1	2	3	4	5	6	7	
3. I enjoy research	1	2	3	4	5	6	7	
4. Research is interesting	1	2	3	4	5	6	7	
5. I like research	1	2	3	4	5	6	7	
6. I feel insecure concerning the analysis of research data *	1	2	3	4	5	6	7	
7. Research scares me *	1	2	3	4	5	6	7	
8. Research is useful for my career	1	2	3	4	5	6	7	
9. I find it difficult to understand the concepts of research *	1	2	3	4	5	6	7	
10. I make many mistakes in research *	1	2	3	4	5	6	7	
11. I have trouble with arithmetic *	1	2	3	4	5	6	7	
12. I love research	1	2	3	4	5	6	7	
13. I am interested in research	1	2	3	4	5	6	7	
14. Research is connected to my field of study	1	2	3	4	5	6	7	
15. Most students benefit from research	1	2	3	4	5	6	7	
16. Research is stressful *	1	2	3	4	5	6	7	
17. Research is very valuable	1	2	3	4	5	6	7	
18. Research makes me nervous *	1	2	3	4	5	6	7	
19. I use research in my daily life	1	2	3	4	5	6	7	
20. The skills I have acquired in research will be helpful to me in the future	1	2	3	4	5	6	7	
21. Research is useful to every professional	1	2	3	4	5	6	7	
22. Knowledge from research is as useful as writing	1	2	3	4	5	6	7	
23. Research is irrelevant to my life *	1	2	3	4	5	6	7	
24. Research should be indispensable in my professional training	1	2	3	4	5	6	7	
25. Research is complicated *	1	2	3	4	5	6	7	
26. Research thinking does not apply to my personal life *	1	2	3	4	5	6	7	
27. I will employ research approaches in my profession	1	2	3	4	5	6	7	
28. Research is difficult *	1	2	3	4	5	6	7	
29. I am inclined to study the details of research procedures carefully	1	2	3	4	5	6	7	

30. Research is pleasant	1	2	3	4	5	6	7
31. Research-orientated thinking plays an important role in my daily life	1	2	3	4	5	6	7
32. Research is a complex subject *	1	2	3	4	5	6	7

* The items with an asterisk are items whose direction has been changed in the analysis.

** This version of the questionnaire has been translated to English from Greek.