



ATTITUDE, PERCEPTION AND BARRIERS FACED AMONG TEACHING STAFF REGARDING MANDATORY RESEARCH IN THE UNDERGRADUATE B.P.TH. COURSE AT COLLEGES AFFILIATED WITH A RECOGNIZED UNIVERSITY.

¹Onkar Chhabra, Dr. Ankita Mane ², Dr. Jaywant Nagulkar ³

¹Intern, ²Assistant Professor of Community-Physiotherapy Department, ³Principal

Department of Physiotherapy,

at Dr Ulhas Patil College of Physiotherapy, Jalgaon, India

ABSTRACT:

Aim- To study the Attitude, Perception and Barriers Faced among Teaching Staff Regarding Mandatory Research in The Undergraduate B.P.Th. Course at Colleges Affiliated with A Recognized University. **Relevance of study-**The research in the physiotherapy undergraduate course is only possible with the guidance of a teacher. The guide may have their own attitude towards mandatory research in physiotherapy, which could impact the way they approach teaching and guiding students. **Methodology-** In this study 66 undergraduate teachers of age group between 30 to 50 years, of different specializations, designations and work experiences were selected, according to the inclusion and exclusion criteria. Written consent was taken from the subjects prior to the study. The entire procedure was explained to the participants and demographic details of the patient were taken. The teachers were provided online forms via email and messaging applications. **Result-** Among teachers 100% have positive attitude towards research. Among teachers 71.43 have significant barriers towards research. Among teachers 94.64 have positive perception. **Conclusion-** From the study it can be concluded that teachers generally have a positive attitude and perception towards the mandatory research project in the undergraduate physiotherapy program, however they encounter significant barriers that should be addressed or taken care of.

(Index Terms - Attitude, Perception, Barriers, Undergraduate Research, Physiotherapy Research)

INTRODUCTION

The long-term survival of an academic institution is determined by the way its future researchers are groomed, which is one of the key distinguishing features of such institutions.[1] Research is “a systematic process of collecting, analyzing and interpreting information in order to increase our understanding of phenomena of interest” (Leedy & Ormrod, 2010: 2). Qualitative research is characterized by five principles which includes accepting multiple realities, being committed to identifying an approach which supports the research, remaining committed to participants’ perspectives, conducting the study in a way that limits the disruption

of a phenomenon's natural context, reporting the data in a way that supports participant commentaries.[2] Professional research is the foundation of advancement in technology and medicine. With the consistent growth and variety of professions within Physical Therapy, it is important for medical imaging professionals to stay current on technological advances, as well as comprehending and generating additional research in their area of practice. Growth of their practice will enhance the level of patient care. Thus, the strength of physical therapy depends on research to expand its scientific basis for practice and patient care, leading to research-based practice or clinically oriented practice, a vision advocated by the American Physical Therapy Association (APTA) involved in research among physical therapists.[3] Students are being educated by medical institutes not only to meet accreditation standards but also to support their career aspirations and to generate a pool of researchers. Medical institutes have reformed their research curricula to train students in research, which has now become a requirement for obtaining a bachelor's degree. Promoting research activities among medical students at the undergraduate level has become a challenge as well as a priority for medical academics and educators. [4]

In the field of physiotherapy, research is essential for developing evidence-based practices that can improve patient outcomes. However, implementing mandatory research requirements among teaching staff can present various challenges, including attitudes, perceptions, and barriers. Attitude can be defined as a multidimensional construct that comprises three components: emotional response, beliefs towards the topic, and behavior towards the topic. For instance, an individual's attitude towards a particular topic is defined in a more comprehensive way by taking into account the emotions associated with the topic (whether positive or negative), their beliefs towards the topic, and how they behave regarding the topic.[6] In essence, Papanastasiou asserts that the identification of attitudes towards research is crucial to cultivate a positive outlook among students. By doing so, it will help to facilitate their learning in turn.[5] The undergraduate students generally hold a negative view towards research methods courses. Nevertheless, it is crucial to comprehend these attitudes to enable instructors to facilitate research learning for their students. By doing so, instructors can help create a more positive attitude towards such courses among the students.[7] For intrinsic motivation regarding engaging in research, a positive attitude is required. To increase basic as well as clinical healthcare related research, number of researchers and to develop a proper center for research in our country, a positive attitude as well as students' motivation is needed to be enhanced and established.[7]

Perception is the process of identifying and inferring the environment and implications of sensory stimuli. It is important to note that perception can be influenced by cognition and may occur subconsciously, without conscious awareness. Barriers refer to circumstances that hinder the progress of clinical research in a particular field. In the context of physical therapy, common barriers include inadequate experience, lack of motivation, and limited mentorship opportunities. Other obstacles that may impede clinical research progress include the inability to dedicate revenue-generating time to research and a lack of administrative and financial support. Despite efforts to address these challenges, clinical research in physical therapy continues to face significant obstacles.[8] Faculty can simultaneously enhance student learning and advance their own research program. By incorporating their research interests into their teaching, they can provide students with up-to-date knowledge and skills while also advancing their own scholarly pursuits. Additionally, faculty members can involve undergraduate and graduate students in their research, providing them with valuable research experience and mentorship opportunities. Through this symbiotic relationship, both students and faculty can benefit from a successful research program.[4] The process of guiding students in research involves a significant amount of mental and physical exertion for teachers. They need to carefully plan and organize research projects, communicate effectively with students, provide guidance and feedback, and address any challenges that arise. Additionally, teachers may have to spend long hours reviewing and evaluating research proposals, literature reviews, and final reports. This can lead to mental fatigue, stress, and burnout, which can have a negative impact on their physical and mental health. Given the importance of undergraduate research in promoting critical thinking, problem-solving, and communication skills, many educational institutions have made it mandatory for students to complete research projects. However, no information is available about the attitude, perception and barriers faced by the teachers regarding the mandatory research in physiotherapy. Studying this topic can help identify the challenges that teachers face while guiding students.

NEED OF STUDY

The research in the physiotherapy undergraduate course is only possible with the guidance of a teacher. The guide may have their own attitude towards mandatory research in physiotherapy, which could impact the way they approach teaching and guiding students. The attitude of teachers towards mandatory research can vary widely depending on their personal beliefs and experiences. Similarly, teachers' perception of the value of research in physiotherapy can influence their motivation to guide students in this area. In addition to attitude and perception, teachers may face several barriers while guiding students in mandatory research in physiotherapy. These can include a lack of time and resources, limited experience in research, and difficulty in engaging students in the research process. Furthermore, students may also face challenges, such as a lack of knowledge or interest in research, which can make it challenging for teachers to guide them effectively. Attitude, perception, and barriers play a critical role in determining the successful completion of mandatory research in physiotherapy. Some staff may view it as a valuable opportunity to develop their critical thinking and problem-solving skills, while others may perceive it as an unnecessary burden. Similarly, teachers' perception of the value of research in physiotherapy can influence their motivation to guide students in this area. There are more articles available on the attitudes, perceptions, and barriers faced by students in physiotherapy research, while there are fewer or no articles on the same topic for teaching staff who guide and supervise the research. Hence, the purpose of our study is to investigate the attitudes, perceptions, and barriers faced by teaching staff with regards to mandatory undergraduate research in the field of physiotherapy.

RESEARCH METHODOLOGY

Full time teaching staff having a minimum experience of 3 years working under physiotherapy colleges affiliated to Maharashtra University of Health Sciences. were included, the study design is Observational study, and the method of sampling was Convenient method sampling. The minimum sample size for the study was, 56 therefore the sample size in this study was taken 56. Study duration was six months. The criteria for inclusion Teachers working under physiotherapy colleges affiliated to Maharashtra

University of Health Sciences., Full time working teaching staff who have a minimum experience of 3 years. and the participants were excluded if the teaching staff working in physiotherapy colleges is affiliated to other universities and Physiotherapy instructors who are visiting or part time faculty.

Materials: Questionnaire, Consent form, Dependable internet connection, Case record form

PROCEDURE

Ethical clearance will be taken from the ethical committee of permission has been taken from Institutional ethical committee. First, a self-made questionnaire comprising '18' number of questions was created. The questionnaire underwent both FACE validity and reliability assessment. The validity score was 71%, while the reliability scores for attitude-related questions were 0.83, for perception-related questions were 0.80, and for barriers-related questions were 0.79. An observational study will be administered and subjects will be screened on the basis of inclusion – exclusion criteria. The teachers were provided online forms via email and messaging applications, ensuring proper consent. After data collection, data entry was done in MS Excel. Statistical analysis was done in MS Excel.

OUTCOMES MEASURES

A self-designed questionnaire utilized a 5-point Likert scale to assess attitudes, perceptions, and perceived barriers among teachers. The Likert scale ranged from 1 (Never) to 5 (Always), with intermediate scores of 2 (Rarely), 3 (Sometimes), and 4 (Often). The responses were categorized into groups for attitudes and perceptions, divided into positive and negative, while barriers were classified into five groups: not a barrier, minor barrier, somewhat of a barrier, significant barrier, and major barrier.

STATISTICAL ANALYSIS

All data was collected through online mode and entered into Microsoft Excel. All the results are shown in tabular as well as graphical format to visualize the statistically significant difference more clearly. All the data was analyzed using MS Excel.

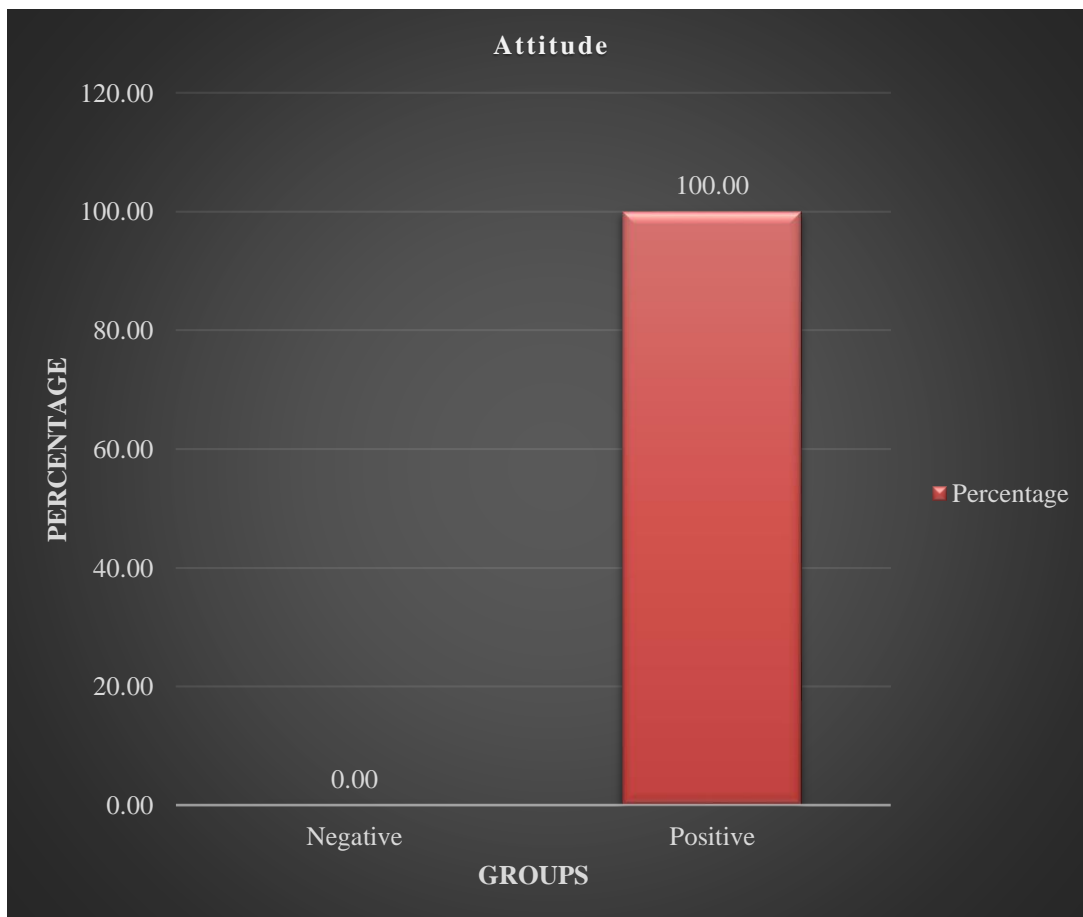
RESULTS

Sr. No.	Variable	Groups	Frequency	Percentage
1	Age	Below 30	4	7.14
		31-40	23	41.07
		41-50	24	42.86
		above 50	5	8.93
2	Specialization (Physiotherapy)	Neuro	13	23.21
		Cardiovascular respiratory	17	30.36
		Musculoskeletal	17	30.36
		Community	7	12.50
		Sports	2	3.57
3	Designation	Assistant Professor	17	30.36
		Associate Professor	21	37.50
		Professor	16	28.57
		Principal	2	3.57
4	Work experience	Below 10	29	51.79
		11-20.	23	41.07
		21-30	3	5.36
		above 30	1	1.79

Attitude

Attitude (5-25)	Min	Max	Mean	SD
	16	24	19.32	1.55

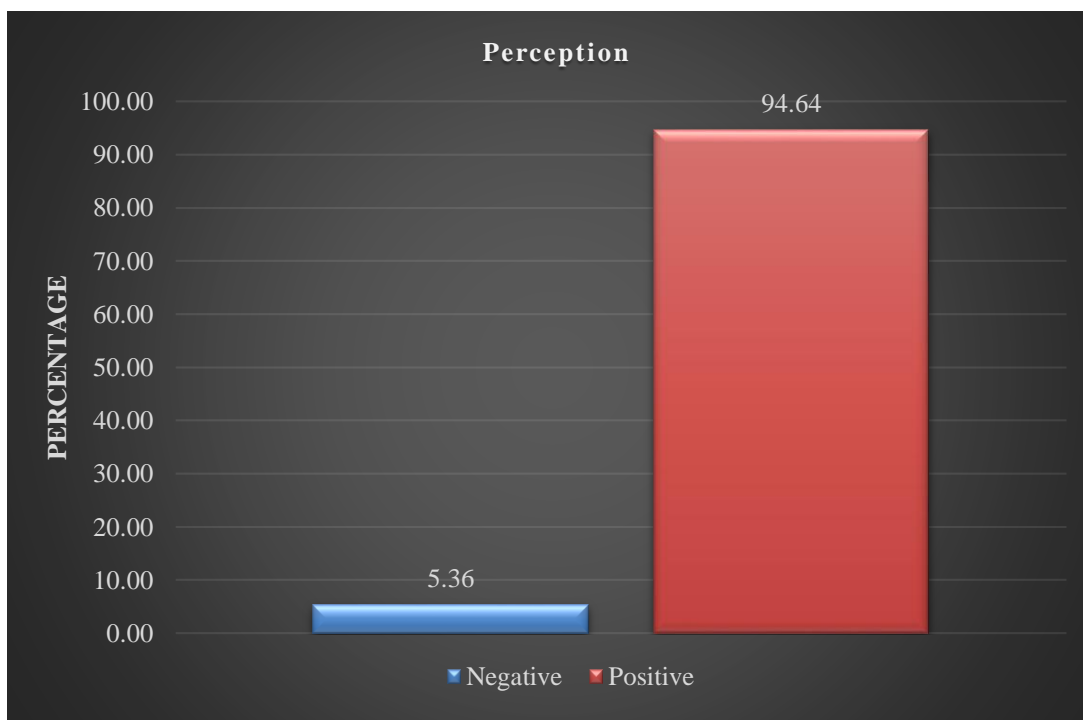
Inference: Among teachers 100% have positive attitude towards research.



Perception

Perception (5-25)	Min	Max	Mean	SD
	14	22	19.1	1.73

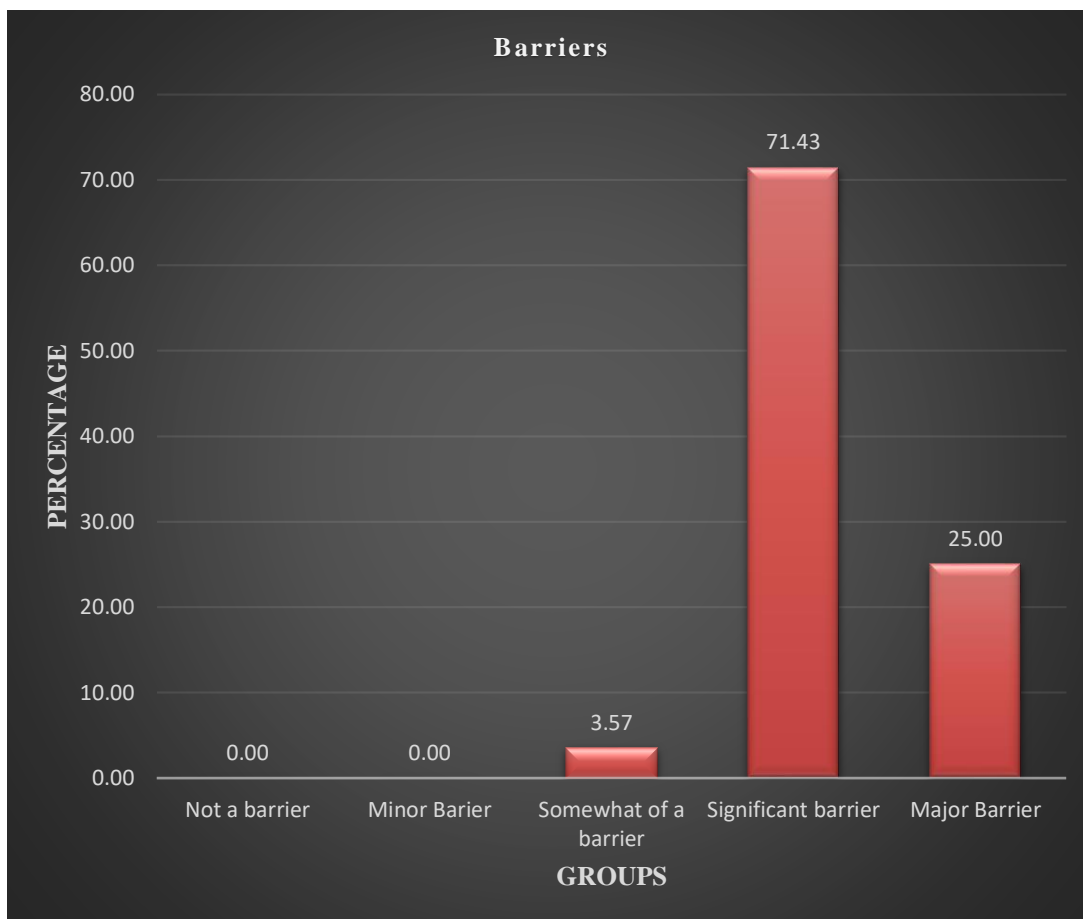
Inference: Among teachers 94.64 have positive perception towards research.



Barriers

Barriers (8-40)	Min	Max	Mean	SD
	24	35	29.62	2.59

Inference: Among teachers 71.43 have significant barriers towards research.



DISCUSSION

The main objective of the undergraduate research program is to familiarize students with the principles of research and inspire them to independently pursue research projects in the future. This present study was conducted on teachers to understand their attitudes, perceptions, and barriers concerning research in the field of physiotherapy.

The study used a self-made questionnaire which includes 5 questions of both attitude and perception and 8 questions of barriers. The self-made questionnaire underwent FACE validity and reliability evaluation.

Reliability score for attitude was 0.83 for perception it was 0.80 and for barrier it was 0.79.

ATTITUDE

Regarding attitude, which reflects a person's predisposed mindset towards a value, we found that teachers play a crucial role in research. The survey revealed that most teachers are willing to guide students regardless of their own specialization, with 71.43% indicating a readiness to allow students the freedom to choose their research topics which enhances student's motivation & engagement in their research projects. Also, it reflects passion in the guide & facilitates personalized learning experience for them. Furthermore, our analysis indicated that teachers exhibit patience when students repeatedly ask same questions if not understood. This demonstrates a positive attitude towards mentoring because of their commitment to support student learning and development

by creating a safe and supportive environment where questions are encouraged and valued. The teachers have shown a positive attitude that the student's regularity in doing research work affect your interest and enthusiasm. When students consistently engage in research activity, it encourages them to provide complete assistance to the students. Additionally, teachers demonstrated their ability to effectively manage multiple students as mentors, ensuring punctual lectures following research sessions with their mentees which highlights their ability to multitask and manage time efficiently. A similar study conducted by S. Ganvir in 2016 states positive attitude of students towards mandatory research in undergraduate curriculum.

PERCEPTION

Perception is a process where people take in sensory information from the environment and make sense of the surrounding with the information in order to give an appropriate response. The perception of teaching staff regarding the importance of research in the undergraduate B.P.Th. course is crucial for shaping the educational experience of future physiotherapists. Teachers predominantly perceive that their effectiveness in guiding students is often influenced by online mode as they may feel less effective in online environments. Also, it is often more difficult to maintain student engagement in online mode compared to face-to-face interaction. They tend to prefer a specific type of research for their mentee because they find few study designs as easier to be conducted at under graduate level & in their available study settings. Most of the time, they can manage the burden of meeting their mentees' academic deadlines, but 3.57% have difficulty handling it on rare instances which may be due to their other work load, professional commitments or lack of efforts by the students. Also, the recently increased demand of other administrative tasks in academic field have impacted their quality to guide the student in the research work. Only a small percentage (1.79%) disagree with the idea of integrating the introduction and basics of research into the third-year curriculum as they may feel that the curriculum is already overloaded and adding research would be a lot of more burden, whereas the ones who showed positive perception may recognize the importance of research for students' academic and professional development. Research being the internal subject is one of the ignored subjects in undergraduate curriculum where lecture schedule is not followed time to time. Thus, timeline of the theory classes in research subject does not run hand in hand with the actual timeline of research which results in lack of basic knowledge & motivation among students. Also, adding research to the third-year syllabus may lessen the burden of mentor to guide each mentee from the very beginning or basic like teaching the student how to perform literature search or title formation at individual level. Regarding the student-to-guide ratio, a majority (57.14%) express satisfaction as they feel that they can adequately provide personalized attention and support to their students within the current ratio, while a significant minority (35.71%) remain neutral as they may feel that the ratio somewhat meets their need but could be improved and for effective guidance. Improved guide to student ratio can relieve their divided attention and let them enhance their focus on limited research topics which would eventually improve the quality of guidance. It can also give them extra time for other academic activities.

BARRIERS

Barriers are obstacles that impede the progress of clinical research within a specific field.

In the Undergraduate Bachelor of Physiotherapy (B.P.Th.) course, barriers play a significant role in influencing how teaching staff approach and engage with mandatory research requirements at colleges affiliated with recognized universities.

Often, newly allotted guide develops interest issues when a previously allotted guide leaves the college & the departure creates a temporary imbalance in workload distribution and resource allocation, contributing to time management challenges for the guide.

Guides face a major barrier when students approach them with articles on their phones, and they find it challenging to guide such mentees when they fail to complete assigned tasks as reading lengthy articles or documents on small phone screens can hinder the ability to thoroughly analyze and discuss the content. Additionally, navigating between multiple tabs or apps on a phone may disrupt the flow of conversation and make it challenging for guides to provide focused guidance. Approximately 48.31% of samples experience environmental disturbances sometimes due to the layout of workspace or noise levels, could contribute to varying frequencies of disturbances among samples, while 26.79% encounter them rarely as they may have their own workspace. At times, guides find it difficult to keep track of every student's research including the large number of students they mentor, varying research

topics and timelines, and limited time and resources, with 23.21% of teachers experiencing this rarely as ability to provide personalized guidance effectively. Around 51.79% of teachers feel pressured to provide equal input on every student's research in terms of time and effort as teachers may feel a sense of responsibility to ensure fairness and equity in their guidance. Additionally, 39.29% experience this pressure sometimes, while 8.93% encounter it rarely as they may have a smaller number of students to guide. A lack of communication between guides and mentees poses a major barrier to publishing research as it leads to delays and errors. Moreover, inadequate communication may hinder the exchange of ideas, and limit opportunities for mentorship and skill development.

CONCLUSION

From the study it can be concluded that teachers generally have a positive attitude and perception towards the mandatory research project in the undergraduate physiotherapy program, however they encounter significant barriers that should be addressed or taken care of.

LIMITATIONS

Results cannot be generalized due to small sample size and inclusion of Only Undergraduate Guides in this study.

- Only Undergraduate guides were included.

FUTURE SCOPE

- Incorporating academicians from other universities would offer insights into their attitudes, perceptions, and encountered barriers.
- It is advisable to involve postgraduate and Doctor of Philosophy guides to obtain a comprehensive understanding of their perspectives.
- Future studies should include new academicians too.

ACKNOWLEDGEMENT

I would like to thank Dr. JAYWANT NAGULKAR, Principal, Dr. Ulhas Patil College of Physiotherapy, Jalgaon, for allowing me to conduct study. I am highly grateful to Dr. Ankita Mane, ASSISTANT PROFESSOR, DR. ULHAS PATIL COLLEGE OF PHYSIOTHERAPY, JALGAON, for his guidance, encouragement and support. I would like to thank, all my teachers for their immense support and guidance. I am thankful to all my subjects for their participation and co-operation.

REFERENCES

- [1] Ganvir, S. & Ganvir, S. Attitude of the students regarding mandatory undergraduate research study in Physiotherapy. South-East Asian Journal of Medical Education Vol. 10 no. 2, 2016
- [2] Hilla Brink, Christa van der Walt, Gisela van Rensburg. Fundamentals of Research Methodology for Healthcare Professionals. Fourth edition
- [3] Abida Arif, Muhammad Arif Siddiqui, Khalid Aziz, Ghousia Shahid, Asif Shiekh, Muhammad Faisal Fahim. Perception towards research among undergraduate physical therapy students. Volume 7 Issue 3 - 2018
- [4] Yamna Mazher, Sarah Ehsan, Hafiz Sheraz Arshad. Cross-Sectional Survey on Physiotherapy Students' Attitudes towards Research. JRCRS. 2022; 10(1):27-30.

- [5] Salvi Shah. Attitude and anxiety of physiotherapy students towards research: A crosssectional survey. VIMS J Physical Th. June 2019;1(1):2-9
- [6] Zan R, Di Martino P. Attitude toward mathematics: Overcoming the positive/negative dichotomy. The Montana Mathematics Enthusiast. 2007 Nov; 3:157-68.
- [7] Papanastasiou EC. Factor structure of the attitudes toward research scale. Statistics Education Research Journal. 2005 May; 4(1):16-26.
- [8] Mannat Madan, Saksham Gupta, Manish Samnani. Attitudes, Perception and Barriers towards Research in Occupational Therapy and Physiotherapy Undergraduate Students: A Cross-Sectional Study. International Healthcare Research Journal 2022;5(12): OR6-OR15.

