

Attitude of physiotherapy students towards patient-centered care: An observational study

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Abstract

Objectives: *The primary aim of this study was to investigate physiotherapy students' perspectives regarding attitude of a patient-centered approach during their academic curriculum. The secondary objective of this study was to investigate undergraduate and post-graduate physiotherapy students' perspectives regarding their attitude of a patient-centered approach during their academic curriculum and also to assess how their attitude changes as they progressed to higher classes from first year BPT_h. to MPT_h.*

Methods: *In this observational, cross-sectional study, 201 physiotherapy students of the DVVPF's College of Physiotherapy were included in the study using the Purposive sampling method. They were interviewed for patient centered care approach using the Patient-Practitioner Orientation Scale (PPOS). Demographic information on age, gender, academic year, and duration of clinical postings were obtained from the students. Obtained data was organized as per the research objective and analyzed using Descriptive Statistics and One-Way ANOVA test.*

Results: *The results showed that the overall mean score of the Patient-Practitioner Orientation Scale was 3.7 ± 0.08 with an average Sharing and Caring score of 3.35 ± 0.13 and 4.04 ± 0.4 respectively. The highest score of 3.79 ± 0.40 was obtained by the interns and PG students. From 2nd year BPT_h onwards the PPOS scores showed a small but steady increase as the students progressed through the curriculum. The multiple comparison test between the groups showed non-significant difference amongst the groups ($p > 0.05$)*

Conclusion: *This study revealed an overall positive outlook regarding patient-centeredness in the Physiotherapy students.*

Keywords: Patient-centered care, patient centeredness, Physiotherapy students, Healthcare professional education.

INTRODUCTION

Patient-centered care is internationally recognized as a foundation of good quality patient care [1]. The Patient-centered care identifies that patient-centeredness is achieved in part by understanding patients experiences with illness and disease as well as understanding patients holistically [2]. According to Picker et al. (2015) patient centered care mainly focusses on patients' values, their preferences and expressed needs; co-ordination and integration between health care professional & patient; information and education about the diseases, physical comfort of patient; emotional support and alleviation of fear and anxiety by involvement of family and friends; continuity and transition along with access to health care [3].

Patient-centered care is beneficial to the patients as well as the healthcare providers [4]. The patients have a better emotional health [6], fewer concerns, fewer referrals and a better recovery [2, 6] and greater sense of satisfaction [5]. The providers of health care are benefitted as it improves resource allocation, reduces expenses and increases the financial margins. It also enhances the reputation of the health care providers among people. It may promote a better morale and also increase the productivity among the providers [4]

The value of patient centeredness usually develops and evolves during the completion of course. Differences in attitudes may be linked to differences in teaching methods and/or curriculum designs [8]. According to F Hafferty et al, there are three interrelated components of medical training: the formal, informal and the hidden curriculum. He proposed that the hidden curriculum needs particular exploration which will thereby help the medical educators in finding new ways to improve and refine teaching in medical schools [8]. With the evidence of the existing literature it can be said that despite of the initiatives taken to improve patient-centeredness, the students often still display a lack of patient-centeredness by the time they graduate [10] Therefore, educating future practitioners is crucial for fostering patient-centered attitudes and behaviors [1]. To establish good patient centered care, we must narrow down the barriers between the

patients and the health professionals [7]. This may be achieved through the presence of an experienced clinical staff in the clinical setting and supervised practice under them to observe, assess and treat the patients. If the clinical staff is educated about patient-centeredness and is also involved in assessment and treatment, students that need extra training will be sought out and more time can be invested in inculcating the principles of patient-centeredness in these students [11]. Moreover, the clinical exposure should commence from the beginning of the professional educational programs and it must be continued throughout the curriculum [15].

In order to give efficient physiotherapy and for development of a thorough therapeutic protocol, the shared decision making between the patients and the practitioners is important. However, a main issue is the limited acceptance of a patient-centered approach by health care professionals to patient centered health service [12-15]

Previously, a lot of literature available on explaining the relationship between various health care practitioners and the patients have proved the importance of patient centered care for the welfare of patients as well as healthcare professionals [16-27].

Most studies related to Patient-Centered Care have focused on factors such as gender, religious background, work experience [16, 17, 18, 19]. Patient perceptions regarding patient-centered care have also been studied [27]. Some studies focused on correlational results between career plans [16,17,18,19]. There are few studies found which focused on different professional programs like medical, nursing students, speech and hearing, physiotherapy and emphasized their attitudes and perceptions regarding patient-centeredness. These studies established the factors that enhance or inhibit the learning of patient-centeredness [10, 17, 24, 25, 26]. It has been recorded that students develop more doctor-centered and disease-centered attitudes as they progress through the curriculum [18, 20, 21, 22]. How patient-centeredness is taught and learned in the curriculum has been far less studied [23].

Although many studies have been done on this subject globally, there is little information on this subject in the Physiotherapy students, thus making it necessary for us to carry out this study. Also, how the perceptions regarding patient-centeredness change during the academic program in UG as well as PG students has not been the center of attention by many.

Hence, this study aims to investigate the attitudes of Patient-Centered Care among the undergraduate and postgraduate Physiotherapy students. It also intends to assess the attitude changes towards patient-centeredness in the students as they progressed to higher classes.

METHODOLOGY

1) Research design and setting:

This study is an observational, cross-sectional study conducted in the DVVPPF's College of Physiotherapy, Ahmednagar, Maharashtra, India. This institution runs the BPTH (Bachelors of Physiotherapy) and MPTh (Masters of Physiotherapy) programs of which the duration of BPTH program is 4.5 years (including internship) and MPTh is 2 years.

2) Target population:

The participants included students from 1st year to 4th year BPTH, Interns, 1st and 2nd year MPTh students. The curriculum of the 1st and 2nd year students includes basic medical science subjects like Anatomy, Physiology, Biochemistry, Pathology, Microbiology, and Pharmacology and so on. The clinical years commence from the 3rd year which includes learning and application of various therapeutic modalities, kinesiotherapy, learning about various medical conditions and surgeries, etc. The clinical postings includes assessment of patients suffering from various ailments and observation of various equipment used in clinical settings, ICU and wards; observation of various therapeutic interventions and techniques used for a patient and so on. In the 4th and the final year of BPTH, Physiotherapy management of various Neurological, Cardio-respiratory, Musculoskeletal and Obstetric and Gynaecological conditions is learnt and applied. It also includes Community rehabilitation which comprises of topics like Disaster Management; Industrial therapy which in turn includes subtopics like Ergonomics, Job analysis, Environmental stresses, Mechanical stresses and Psychological stresses in a job; Disability management and Geriatric care. The internship program is a part of the undergraduate course, the total duration of which is 6 months. These 6 months are further divided into 1.5 months of clinical postings in the departments of Neuro-

physiotherapy, Musculoskeletal Physiotherapy, Community Physiotherapy and Cardio-pulmonary physiotherapy. The 2 year PG curriculum comprises of clinical postings, case presentations, research and thesis writing, micro-teaching, and so on.

3) Outcome Measure:

The assessment of Patient-Centred attitudes was done using the Patient Practitioner Orientation Scale (PPOS) in the English language.

The PPOS assesses two components of patient-centred attitudes which are sharing and caring. The sharing component indicated an extent to which the participants of the study believe in sharing a good amount of information with the patients as possible and also promote equal sharing of power and control. Whereas, the Caring component refers to emotions and interpersonal relationships. The PPOS comprises of 18 items in a 6-point Likert scale put down from left to right ranging from strongly disagree to strongly agree.

Higher scores (those approaching 6) indicate a more patient-centred response while lower scores (those approaching 1) indicate a more doctor-centred or a disease-centred response [19].

4) Validity and reliability of the Outcome Measure:

It is a valid and reliable outcome measure that has been previously used with students from different healthcare disciplines such as medicine, physiotherapy, nursing and SALT [24, 25, 26].

5) Ethical consideration:

Ethical approval was obtained from the Institutional Ethical Committee before the commencement of data collection.

6) Procedure and Data Collection:

The data was collected in January 2020. For the students that meet the inclusion criteria, a brief orientation lecture about the purpose of the study and potential benefits was conducted. A Patient-Practitioner Orientation scale was administered to the students in the form of Google forms and they were be given a brief explanation of the questions and instructions on how to fill up the questionnaire. Demographic details regarding their name, age, gender, contact number, name of course (BPTH. or MPTH.), year of education, history

of previous clinical exposure (if any) which includes duration of clinical exposure and place of previous work was collected. Time was given to the students to fill up the questionnaire. Any doubts while the completion of the questionnaire were rectified accordingly. Appreciation for time, participation and co-ordination was done. The data collected from the questionnaire was organized in an Excel sheet in the form of a master chart and the results were analysed.

7) Statistical Analysis:

The data was analysed using Descriptive Statistics and One-Way ANOVA test. A multiple comparison amongst the groups was done using the Post Hoc Tukey-Kramer Multiple Comparison Test.

RESULTS

Table 1: Demographic Data

Demographic Data			
		Frequency	Percentage
Age	below 20 years	108	53.73
	21-25 years	84	41.79
	25-28 years	9	4.47
Batch	1st year	45	22.38
	2nd year	36	17.9
	3rd year	37	18.4
	4th year	28	13.9
	Interns and PGs	55	27.3
	Total	201	
Gender	Male	32	15.9
	Female	169	84.07

Table 1 represents the demographic characteristics of the participants of the study. Overall 201 responses were extracted from the Google Forms. The age of the participants spans from 17-28 years. As reflected on the table the majority (53.73%) of the participants belonged to 17-20 years. Out of 201 participants, the Interns and PG students comprised of 27.3% of the total population. An overwhelming majority of the participants (84.07%) were females.

Table 2: Average Scores of PPOS among the Groups

Class	Sharing	Caring	Total
1st year	3.98 ± 0.52	3.10 ± 0.69	3.54 ± 0.47
2nd year	4.03 ± 0.54	3.37 ± 0.44	3.70 ± 0.39
3rd year	4.02 ± 0.44	3.42 ± 0.53	3.72 ± 0.52
4th year	4.05 ± 0.48	3.44 ± 0.52	3.75 ± 0.38
Interns+PG	4.13 ± 0.56	3.45 ± 0.56	3.79 ± 0.40
Average	3.35 ± 0.13	4.04 ± 0.4	3.7 ± 0.08

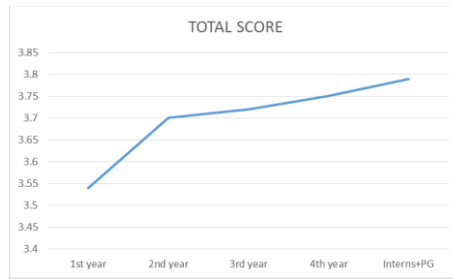


Table 2 comprises of the mean of the Sharing component, Caring component and their total mean score. The average overall PPOS score was 3.7 ± 0.08 . The average score for the Sharing component of the PPOS was 3.35 ± 0.13 whereas for the Caring component it was 4.04 ± 0.4 . However, the highest score of 3.79 ± 0.40 was obtained by the interns and PG students.

Table 3: Comparison Of PPOS Scores Amongst Groups using One-Way ANOVA Test

BATCH	1st year	2nd year	3rd year	4th year	Interns+PG	p Value
TOTAL SCORE	3.54	3.7	3.72	3.75	3.79	0.0694

ANOVA results demonstrated a non-significant difference (p value > 0.05) among all the groups. The multiple comparison between the groups was done using Post Hoc Tukey- Kramer Multiple Comparison Test which showed non- significant difference amongst the groups ($p > 0.05$)

DISCUSSION

From the findings of this study, we can say that the Physiotherapy students had a positive attitude towards patient centered care and they were in favor of a patient centered approach to health care

delivery. The overall mean PPOS score in this study was found to be 3.7 ± 0.08 with an average of sharing and caring scores of 3.35 ± 0.13 and 4.04 ± 0.4 respectively.

In order to comprehend the scores of the students in a better way, it is competent to compare our findings with the findings available to us through existing literature in which the same outcome measure (PPOS) is used. This overall mean score was marginally similar to the score (3.81) obtained in Physiotherapy students in a study involving different healthcare programs like SALT, Nursing, Medical and Physiotherapy students. However, in the studies conducted in medical students, the overall mean scores were reported to be 4.1^[29] and 4.66^[30]. Another study conducted among chiropractic students showed an overall mean score of 4.18^[1].

On comparison of our reported values with other studies, we observed that the overall mean score of Physiotherapy students was lesser than that of students from other healthcare programs. This result is justified as the Physiotherapy students have been recorded to be more task oriented and hence they focus more on getting the patients to perform better to accomplish their goals. Their approach to health care is more rational and realistic which is why a patient-centered approach may not always be possible^[17]. This discrepancy may also be due to other factors such as philosophical differences, lack of awareness for Physiotherapy among the patients in rural Maharashtra. High workload and multiple demanding responsibilities may also be a causative factor^[17]. The influence of hidden curriculum, lack of experienced clinicians in the OPD/IPD, inadequate support from the mentors or disputes with colleagues/ seniors^[17]. Lack of time and resources, less clinical and practical hours in the earlier years, lack of communication skills due to language barriers, Un-cooperation from the patients' side may also result in a doctor or disease-centered attitude^[31].

The sharing sub-score measures the extent to which students believe in just and unbiased relationship with their patients whereas caring sub-score measures the extent to which the students consider the patients emotions and lifestyles important^[30]. The sharing sub-scores in the medical and chiropractic students ranged from 3.8 to 4.10 and the caring sub-scores ranged from 4.4 to 5.20^[1, 29, 30]. Whereas, in the present study, the Sharing as well as Caring scores of the students of Physiotherapy were lesser than that of other

professional courses. This finding was supported by the multidisciplinary study which showed statistically significant difference between the PPOS scores of other courses and Physiotherapy [17].

In current study, the mean Sharing score was observed to be lower than that of the Caring score. This finding was in accordance with the study conducted on medical students in Brazil in which students favored patient emotions and interpersonal relationship; however, they are not in the favor of sharing power, control and a good amount of information with the patients [30]

Our ANOVA results of comparison amongst the batches (1st, 2nd, 3rd, 4th year UGs, Interns & PGs) revealed a non- significant difference in overall mean, sharing and caring scores ($p>0.05$). This suggests that there was almost similar attitudes of patient-centeredness amongst all the batches (1st year UG to PGs). However, the descriptive statistics showed a linear increase in the overall mean score year by year. In spite of the fact of these differences being small, they indicate that the students are more patient-centered in the later years of learning than the earlier years. This finding was contradictory to the finding obtained in the recent study done on Chiropractor students by Karin Hammerich et al in the year 2019 in which the attitudes did not significantly differ by program year/ semester [1] and also a study done on medical students by Haidet et al.(2002) [13]. Whereas, this finding was supported by the study done on medical students in Brazil by Maria Monica Freitas Ribeiro et al [30] and also with the studies by Monchy et al in 1988 and Figueiredo in 1992. These differences, although small on the metric scale, may prove to have sizeable effects [32]. Woloschuk et al. suggested that exploring the hidden and the null curriculum would help to better understand the influence of curriculum on students' attitudes [33]

The strength of this study was to use the Patient-Practitioner Orientation Scale as an instrument to test the Physiotherapy student's attitudes towards patient-centeredness in Maharashtra, India. This scale has been profusely used by various authors in their studies to study the attitude regarding patient-centeredness across various health care disciplines.

One of the limitations of this study was that the PPOS was used in the English language so it was unrevealed if the culture and language of Maharashtra, India affected the perception of the

questions. Another limitation was that the curriculum was not analyzed, therefore it is difficult to say if the curriculum design or delivery has impacted the results and the sample size was not estimated as all the students of the institute who were willing to participate were included in the study. Also, gender based differences were not established due to a significantly lesser population of male participants. Data was collected at only one institution. Other factors such as spirituality, cultural background, specific training elements [17] and philosophical differences were not taken into consideration for this study.

Future scope could investigate patient-centeredness in Physiotherapy programs across different institutes. Also, studies can be done on how Physiotherapy students' attitudes and perceptions regarding patient-centeredness influence the health outcomes of the patients. The curricular aspects could be explored to establish its effect on the attitudes of patient-centered care among students. The findings from these studies could in turn help the providers of education to have a hand in positively influencing the patient-centeredness among the students.

This study suggests that as the popularity of patient-centered health care increases, the patients will become more engaged and satisfied with the delivery of their Physiotherapy care. Educational UG & PG Physiotherapy programs should be established that focus on reinforcing communication, empathy skills and patient-centered attitudes by exploring and emphasizing on the hidden curriculum.

As per our knowledge, this is the 1st study to be done in Maharashtra, India that assess and contributes the reference data regarding attitudes of Patient-Centered Care. The efforts in positively influencing patient-centeredness in students should not just have an educational or a curricular approach. It is unique and individualistic from person to person. Hence, the ways of inculcating these principles or philosophies in oneself should also be autodidactic.

CONCLUSION

This study revealed an overall positive outlook regarding patient-centeredness in the Physiotherapy students.

REFERENCES:

- 1) Hammerich K 2019. Assessing attitudes of patient-centered care among students in international chiropractic educational programs: a cross-sectional survey. *Chiropr Man Therap.* 2019 Sep 12;27:46.
- 2) Stewart M, Belle Brown J, Weston WW, McWhinney IR, McWilliam CL, Freeman TR. *Patient-Centered Medicine Transforming the Clinical Method.* 2. Abingdon: Radcliffe Medical Press; 2003.
- 3) Gerteis M, Edgman-Levitan S, Daley J, Delbanco TL, *Through the Patients Eyes.* San Francisco: Jossey-Bass; 1993.
- 4) NEJM Catalyst January 1, 2017 What Is Patient-Centered Care?
- 5) Krupat E, Rosenkranz SL, Yeager CM, Barnard K, Putnam S, Inui TS. The practice orientations of physicians and patients: the effect of doctor–patient congruence on satisfaction. *Patient Education & Counseling.* 2000;39:49–59.
- 6) Rathert C, Wyrwich MD, Boren SA. Patient-centered care and outcomes: a systematic review of the literature. *Med Care Res Rev.* 2012;70(4):351–379.
- 7) Office of Patient Centered Care and Cultural Transformation. *Whole health – It’s all about you; a report by the VHA Office of Patient Centered Care and Cultural Transformation.* Washington: Department of Veterans Affairs; 2017.
- 8) Hafferty F W. Beyond curriculum reform: confronting medicine’s hidden curriculum. *Academic Medicine:* April 1998 - p 403-7
- 9) Jaikrit Bhutani, et al, 2013. Achieving patient centered care: Communication and cultural competence *Indian J Endocrinol Metab.* 2013 Jan-Feb; 17(1): 187–188.
- 10) Elize Archer. December 2016. *Engaging patient-centredness in an undergraduate medical curriculum.*
- 11) Myriam Deveugele *Teaching communication skills to medical students, a challenge in the curriculum? Patient Education and Counseling Volume 58, Issue 3, September 2005, Pages 265-270*
- 12) Department of Health (DoH) *Equity and excellence: liberating the NHS.* London: Her Majesty’s Stationery Office; 2010.
- 13) Department of Health (DoH) *Patients first and foremost-the initial government response to the report of the mid Staffordshire NHS Foundation trust public inquiry.* Norwich: The Stationery Office; 2013.
- 14) Department of Health. *The NHS constitution.* London: Department of Health; 2013.
- 15) Joint Committee of the Group on Resident Affairs and Organization of Resident Representatives *Report on patient safety and graduate medical education.* Association of American Medical Colleges; 2003.
- 16) Patient-centered attitudes among medical students: gender and work experience in health care make a difference. Wahlqvist M, Gunnarsson RK, Dahlgren G, Nordgren S *Med Teach.* 2010; 32(4):e191-8.
- 17) Sheeba Rosewilliam, Vivek Indramohan, Richard Breakwell, Bernard Xian Wei Liew, and John Skelton *Patient-centered orientation of students from different healthcare disciplines, their understanding of the concept and factors influencing their development as patient-centered professionals: a mixed methods study.* *BMC Med Educ.* 2019; 19: 347.
- 18) Haidet, P., Dains, J.E., Paterniti, D.A., Hechtel, L., Chang, T., Tseng, E. and Rogers, J.C., 2002. *Medical student attitudes toward the doctor–patient relationship.* *Medical education,* 36(6), pp.568-574.
- 19) Krupat E, Hiam CM, Fleming MZ, Freeman P *Patient-centeredness and its correlates among first year medical students.* *Int J Psychiatry Med.* 1999; 29(3):347-56.
- 20) Bombeke, K., Symons, L., Debaene, L., De Winter, B., Schol, S. & Van Royen, P. 2010. *Help, I’m losing patient-centeredness! Experiences of medical students and their teachers.* *Medical Education,* 44(7):662–673.
- 21) Lee, K.H., Seow, A., Luo, N. & Koh, D. (2008). *Attitudes towards the doctor-patient relationship: A prospective study in an Asian medical school.* *Medical Education,* 42(11):1092–1099
- 22) Tsimtsiou, Z., Kerasidou, O., Efstathiou, N., Papaharitou, S., Hatzimouratidis, K. & Hatzichristou, D. 2007. *Medical students’ attitudes toward patient-centered care: A longitudinal survey.* *Medical Education,* 41(2):146–153.

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- 23) Bleakley, A. & Bligh, J. 2008. Students learning from patients: Let's get real in medical education. *Advances in Health Sciences Education*, 13(1):89–107.
- 24) Grilo AM, Santos MC, Rita JS, Gomes AI. Assessment of nursing students and nurses' orientation towards patient-centeredness. *Nurse Educ Today*. 2014;34(1):35–39.
- 25) Attitudes of physical therapy students toward patient-centered care, before and after a course in psychosocial aspects of care .Ross EF, Haidet P *Patient Educ Couns*. 2011 Dec; 85(3):529-32.
- 26) Preferences to Patient-Centeredness in Pre-Service Speech and Hearing Sciences Students: A Cross-Sectional Study. Dockens AL, Bellon-Harn ML, Manchaiah V *J Audiol Otol*. 2016 Sep; 20(2):73-9
- 27) Yera Hur, A Ra Cho, and Chang Jin Choi. 2017. Medical students' and patients' perceptions of patient-centered attitude. *Korean J Med Educ*. 2017 Mar; 29(1): 33–39
- 28) Institute of Medicine. 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: The National Academies Press.
- 29) Lee KH, Seow A, Luo N, Koh D. Attitudes towards the doctor-patient relationship: a prospective study in an Asian medical school. *Med Educ*. 2008; 42(11):1092–1099.
- 30) Ribeiro MM, Krupat E, Amaral CF. Brazilian medical students' attitudes towards patient-centered care. *Med Teach*. 2007;29(6):e204–e208.
- 31) Kitson A, Marshall A, Bassett K, Zeitz K. What are the core elements of patient-centered care? A narrative review and synthesis of the literature from health policy, medicine and nursing. *J Adv Nurs*. 2013;69(1):4–15.
- 32) Cohen J. *Statistical power analysis for the behavioral sciences*. 2. New York: Lawrence Erlbaum Associates; 1988.
- 33) Woloschuk W, Harasym PH, Temple W. Attitude change during medical school: a cohort study. *Med Educ*. 2004;38:522–534.