

Identifying Patient Centeredness in Students of Healthcare Professions

Nadupuru Neha¹, Nallapu Samson Sanjeeva Rao²

¹Senior Resident, Department of Community Medicine, NRI Medical College, Guntur, Andhra Pradesh, India (Corresponding Author)

DOI: <https://doi.org/10.52403/ijhsr.20250301>

²Professor and HOD, Department of Community Medicine, NRI Medical College, Guntur, Andhra Pradesh, India

Abstract: ***Introduction:** As partners, patients must be seen clinically and also from emotional, mental, spiritual and social perspectives. Patient centered care involves shared decision making and addresses their specific health needs and desired health outcomes. Encouraging a patient centered attitude is necessary in training health care professionals. The Patient Practitioner Orientation Scale (PPOS) assesses such attitudes within the health professionals and patient relationship. **Objectives:** To identify patient centric attitudes of health professional students. To compare attitudes between students from different healthcare courses. **Methodology:** This cross-sectional study involved 296 students (122 MBBS, 95 nursing and 79 physiotherapy students) from NRI medical college, Guntur. After obtaining IEC clearance and informed consent, they were administered the PPOS questionnaire (permission obtained from author). The data collected was entered in MS- Excel and expressed in percentages. Important findings were subjected to 't' test and single factor ANOVA at 5% level of significance. **Results:** The overall mean score was 61.8 (highest score - 108) where 159 students (53.7%) had scores below average. There was no significant difference between male (62.6) and female students (61.5). However, physiotherapy students had a significantly higher patient centric score (mean score 64.5, p .0008). **Discussion:** Like in this study, other studies have shown healthcare students to have low patient centered attitudes. It is postulated here that physiotherapy students are more practically involved with their patients and therefore the higher scores. **Conclusion:** Patient centeredness enhances healthcare quality. Efforts must be made to inculcate patient centeredness in healthcare professionals.*

Keywords: Patient centric care, Health professional students, Patient practitioner orientation, medical education

1. Introduction

Patient centered care is a partnership between the healthcare professional and their patients. It empowers patients in shared decision making and participating in their own care in line with their values and preferences. As partners in their healthcare, patients are not only seen clinically but also from emotional, mental, spiritual and social perspectives. Patient centered attitudes must be encouraged in the training of all Health Care Professionals (HCP) ¹.

The word "patient-centered medicine" was originally coined by Balint in 1969 to express the belief that each patient "has to be understood as a unique human-being" and how physicians should interact and communicate with patients ². According to the American Medical Association (AMA), Patient and Family Centered Care (PFCC) also called as "Patient-Centered Care" is a two-way partnership which emphasizes respect for patient values in healthcare decisions as well as the role of patients and families as advisors and essential partners in improving care practices ³.

The Picker Institute, a British healthcare research institute, developed eight core principles of patient-centered care to address and meet patients' needs. The principles being respect for patients' values, preferences, and expressed needs; coordination and integration of care; information, communication, and education; physical comfort; emotional support and alleviation of fear and anxiety; involvement of family and friends; transition and continuity and access to care ⁴. The Picker Commonwealth Program for Patient-Centered Care Research (1988), was set to identify the aspects of care most valued by patients ⁵.

While patients are known to stress the importance of interpersonal skills, health providers give more importance to technical expertise and knowledge i.e. competence and performance. Patients however are more concerned about the ineffective communication with their providers and the resulting misunderstandings and decreased satisfaction. A common complaint is that their physicians do not listen to them. While physicians rate problem solving ability, reliability and trustworthiness higher in the doctor patient relationship, they tend to disregard the "softer" interpersonal aspects such as caring and empathy which patients value ⁶.

Patient-centered nursing care is an approach to patient care that involves a holistic approach which shows empathy, compassion, and respect for patient's individual wants taking into consideration, their needs, beliefs, and values and responding appropriately ⁷.

It is essential for health care providers to note that an individual's specific health needs and desired health outcomes are the driving force behind healthcare quality and all health care decisions. Patient-centered care is seen to improve disease outcomes and quality of life. It is critical in addressing racial, ethnic, and socioeconomic disparities in health care and health outcomes ⁸. Patient-centered practice is also seen to increase healthcare efficiency by bringing down the use of diagnostic tests and referrals ⁹. It helps in aligning the healthcare systems' mission, vision, values, leadership and quality control to meaningful person-centered care and decision making, leading to individualized and comprehensive care plans ¹⁰.

Patient centered care is collaborative, coordinated, and accessible and provided accurately at the right time and

place with a focus both on physical comfort as well as emotional well-being. The patients’ preferences, values, cultural traditions, and socio-economic conditions are respected. They are encouraged and facilitated to be a part of the healthcare team and play a role in all decisions after being given the full information in a timely manner. Not only do the patients benefit, but providers and health care systems benefit as well, through improved patient and family satisfaction, improved reputation, morale and productivity of providers, better resource allocation and improved financial margins ¹¹.

Medical paternalism with more concentration on the curative aspect, neglecting the promotive and preventive aspects, is an outdated approach in medical care. There is need to recognise the importance of patient centered care and design educational programmes and workshops to train the future healthcare workforce such as doctors, nurses and therapists so that they may deliver services with a patient centred attitude ¹². The aim of the present study is to recognize the attitude of health professional students towards patient centric care, the objectives being to identify patient centric attitude of health professional students and to compare attitudes between students from different healthcare courses.

2. Materials & Methods

This cross-sectional study involved 296 students (122 MBBS, 95 nursing and 79 physiotherapy students) from NRI Medical College, Guntur, India. The students were administered a questionnaire comprising socio demographic characteristics and the Patient-Practitioner Orientation Scale (PPOS) scale after obtaining IEC clearance and informed consent. The PPOS was used after obtaining necessary permission from the author. The PPOS is an 18-item measure with two subscales i.e. Sharing and Caring with 9 items each. Responses are scored on a 6-point Likert Scale (strongly disagree to strongly agree) ¹³.

The sharing section of the PPOS deals with sharing of information between the providers and the patients and addresses their decision-making power. The caring section of the PPOS looks at treating patient as a whole person rather than as medical condition. The data collected was

entered in MS- Excel and expressed in percentages. Important findings were subjected to ‘t’ test and single factor ANOVA at 5% Level of Significance.

3. Result

The overall mean score was 61.8 (highest score - 108) where 159 students (53.7%) had scores below average. Single factor ANOVA showed that students hailing from an urban background had a significantly higher PPOS score than their rural counterparts (F 5.16, p 0.005). When communication skills were self-rated as good, the scores were significantly higher (F 4.8, p 0.01). Gender difference was seen with women students (mainly in female medical students) having higher PPOS score (F 5.94, p 0.003).

Caring refers to the extent that respondents believe that caring about emotions and good interpersonal relations is a key aspect of the medical encounter and whether practitioners should care about the patient as a whole person rather than as a medical condition (Table 1).

Sharing scores reflect the extent to which the respondent believes that practitioners and patients should share power and control on a relatively equal basis and whether practitioners should share as much information with their patients as possible (Table 2).

Physiotherapy students had a significantly higher patient centric score (mean score 64.5, p .0008). Their Sharing scores were higher (5.18, 0.006) and their Caring scores were also higher (6.83, p 0.0010) when compared to the MBBS and Nursing students.

Using t test for significance, it is seen that Sharing scores are significantly higher than caring scores in all categories of students both male and female (p values ranging from 0.001 to 0.0001).

Observations/Results of your study should be written in this section along with tables/charts/figures etc. write serial numbers and appropriate heading/title of tables and legend/caption of figures.

Table 3: Distribution of Caring scores according to Student course

Q. No.	PPOS - Sharing Questions	BPT (n=79)		BSc N (n= 95)		MBBS (n= 122)		F Anova single factor	p value
		Mean Score	No. > mean (%)	Mean Score	No. > mean (%)	Mean Score	No. > mean (%)		
Q2	Less personal care is a small price to pay for medical advances.	3.4	38 (48.1)	3.2	38 (40.0)	3.1	40 (32.8)	0.9	0.4
Q3	physical exam is the most important part of a medical visit	1.8	13 (16.5)	2.1	31 (32.6)	2.3	40 (32.8)	2.9	0.1
Q6	Asking patients questions about their background, is prying too much	4.4	46 (58.2)	3.6	46 (48.4)	4.6	67 (54.9)	12.5	0.00001
Q7	When HCP are experts, the way they relate to patients is not important.	4.7	50 (63.3)	4.5	56 (59.0)	4.3	55 (45.1)	1.7	0.2
Q11	If a doctor’s primary tools are being open and warm, the doctor will not have a lot of success.	4.9	57 (72.2)	4.0	62 (65.3)	3.9	68 (55.7)	13.8	<.00001
Q13	A treatment plan cannot succeed if it is in conflict with a patient’s lifestyle or values.	4.0	36 (45.6)	4.2	40 (50.5)	4.4	64 (52.5)	1.5	0.2
Q14	Most patients want to get in and out of the doctor’s office as quickly as possible.	1.8	25 (31.7)	2.1	29 (30.5)	2.5	49 (40.2)	4.2	0.02
Q16	It is not that important to know a patient’s culture	4.6	52 (65.8)	3.5	48 (50.5)	4.7	78 (63.9)	14.4	<0.0001

	and background in order to treat the person's illness.								
Q17	Humor is a major ingredient in the doctor's treatment	4.3	44 (55.7)	4.3	55 (57.9)	4.2	52 (42.6)	0.2	0.8
All	Overall score (9 to 54)	33.9	45 (57.0)	31.5	32 (33.7)	33.8	67 (54.9)	6.8	0.001

* Scores - Strongly disagree score 6 / Strongly agree score 1 - higher the score more the patient centeredness

Table 2: Distribution of Sharing scores according to Student course

Q. No.	PPOS - Sharing Questions	BPT (n=79)		BSc N (n= 95)		MBBS (n= 122)		F Anova single factor	p value
		Mean Score	No. > mean (%)	Mean Score	No. > mean (%)	Mean Score	No. > mean (%)		
Q 1	The doctor should decide what gets talked about during a visit	4.9	55 (69.6)	3.0	28 (29.5)	3.08	45 (36.9)	20.0	<0.0001
Q 4	Best for patients not to have a full explanation of their medical condition.	4.8	52 (65.8)	3.9	40 (42.1)	4.16	54 (44.3)	7.3	0.0008
Q 5	Patients should rely on their health professional's knowledge	3.7	42 (53.2)	3.9	55 (57.9)	3.11	50 (41.0)	6.1	0.003
Q 8	Many patients continue asking unnecessary questions	3.4	34 (43.0)	2.7	48 (50.5)	2.95	78 (63.9)	5.4	0.005
Q 9	Patients should be treated as if they were partners, equal in power and status.	3.6	43 (54.4)	4.4	59 (62.1)	3.87	75 (61.5)	4.5	0.011
Q 10	Patients generally want reassurance rather than information	2.9	41 (51.9)	2.4	39 (41.1)	2.5	59 (48.4)	2.8	0.06
Q 12	Patients disagreeing is a sign that they do not respect / trust their HCP	3.2	31 (39.2)	3.1	38 (40.0)	3.16	44 (36.1)	0.1	0.94
Q 15	The patient must always be aware that the doctor is in charge	2.6	32 (40.5)	2.4	39 (41.1)	2.66	63 (51.6)	0.8	0.45
Q 18	When patients look up medical information on their own, this usually confuses more than it helps.	1.9	43 (54.4)	2.8	50 (52.6)	2.31	41 (33.6)	8.8	0.0002
	Overall scores (9 to 54)	30.6	55 (69.2)	28.6	51 (53.7)	27.8	55 (45.1)	7.3	0.0008

* Scores - Strongly disagree score 6 / Strongly agree score 1 - Higher the score, more the patient centeredness

Table 3: Applying the exploratory 4-factor model of Jiang Y et al to the PPOS (Questions reworded in patient centric terms)

Factors	Title	No. of students with scores > mean (agree to strongly agree)			Chi Sq	p value
		Physiotherapy (n=79) (%)	Nursing (n= 95) (%)	Medicine (n= 122) (%)		
Factor 1	Medicine is not omnipotent	36 (45.57)	34 (36.05)	47 (38.73)	1.81	0.4
Factor 2	Patient is competent to decide	40 (50.63)	47 (49.21)	54 (44.47)	0.1	0.62
Factor 3	HCPs interpersonal style matters	45 (56.96)	42 (44.21)	61 (50.0)	2.81	0.25
Factor 4	Patients' feelings matter	40 (50.93)	48 (50.53)	62 (51.02)	0.002	0.1

4. Discussion

Health professionals are those who maintain health in humans by studying, diagnosing, treating and preventing illness, injury and other physical and mental impairments as per the needs of the communities they serve ¹⁴. This study looked at the patient centered attitudes of Medical (MBBS), Nursing (BSc Nursing) and Physiotherapy (BPT) students using the PCOS questionnaire of Krupat E et al ¹³. By adopting people-centered and integrated health services, health systems can provide services that are of better quality, are financially sustainable and more responsive to individuals and communities ¹⁵.

Caring

Caring is a concept that allows consideration of the patient as a whole person rather than as a medical condition. It involves caring for the patients' emotions and encourages good interpersonal relations in every encounter ¹³.

Paternalism is when health professionals decide authoritatively how much information is given to the patient and which intervention to follow thereby forcing the patient to consent to what they consider as best. In shared

decision-making, on the other hand, there is a process of collaboration and exploration with the patient about the various treatment options and pros and cons of each one and then reach a decision together ¹⁶. Patients facing a paternalistic behaviour in their provider, experience issues such as helplessness, inflexibility, vague awareness, and lack of autonomy. While patients are usually satisfied with the support provided by their health care professional, they also feel deprived of their independence to make decisions. Therefore, emphasis on patient participation must be an essential ethical principle in patient care ¹⁷.

In patient-provider interactions, the health care professional's competence and warmth boost a placebo effect alongside active medications and treatment ¹⁸. Green J et al suggest that earning the patients' trust is as important as having medical knowledge. Having the patient's trust is professionally rewarding and fulfilling. To build this trust, the tools are communicating effectively, being compassionate, and demonstrating competence ¹⁹.

Like in this study, other studies have shown healthcare students to have low patient centered attitudes. It is postulated here that physiotherapy students are more

practically involved with their patients and therefore the higher scores. It has been suggested by Louwen C et al, that physiotherapists have a higher level of extroversion which is likely to be related to the person-oriented aspects of their role compared to other health professional groups²⁰.

To establish good patient centered care, critical barriers between clinicians and patients must be broken down. Two important barriers of patient-centered approach include communication skills and cultural competence of the treating doctor²¹. The most important attribute of patient-centered care is the active engagement of patients when fateful health care decisions must be made — when they arrive at a crossroads of medical options, where diverging paths have different and important consequences²².

Sharing

Sharing scores reflect the extent to which the respondent believes that practitioners and patients should share power and control on a relatively equal basis, and that practitioners should share as much information with their patients as possible.

Individual attitudes and behavior related to health and disease are major components of clinical encounters. These factors shape lifestyle, presentation of symptoms, access to patient care, interactions between patients and physicians, adherence to medical advice, and response to treatment²³.

In older adults, medical decisions are influenced by a variety of values which are a result of various health experiences, cognitive and physical health status, and sociocultural backgrounds. HCPs should take time to elicit, understand, and reassess the different types of values of older adults²⁴.

Clinicians need to make an assessment their patients' global values at the initial encounter even before a medical decision is made. Continuity of care allows patients and clinicians to incorporate identified values on an ongoing basis²⁵.

An individual's health beliefs and interaction with the health system is influenced largely by his/ her cultural background. Cultural competence, in health care delivery, means adapting care to fit the patient's social, cultural, and language needs. When medical providers understand and accommodate these beliefs, values, traditions, and practices, they are more likely to achieve patient satisfaction and improved health outcomes. Cultural competence in practice can be imparted in medical education to ensure health services aligned to meeting the needs of all patients²⁶.

Humor has an important use in medical practice provided that medical professionals are trained to use it thoughtfully and in a non-abusive fashion. Combined with clinical sympathy, humor applied in a respectful manner towards their patients can continue to be a positive force in the physician patient interaction²⁷.

When patients seek health information on their own from the internet, physicians may react by feeling threatened and respond defensively feeling that their expert opinion is being questioned. Instead, a net-friendly clinician would be to help

the patients analyze the information objectively and also direct them to reliable web sites²⁸. As patients today are engaged in health decision making and also have access to health information through many sources, traditional models of the patient-provider communication strategies must be revisited²⁹.

It is necessary for health professionals to be aware of their individual personality traits, behaviour styles and emotional intelligence which are non-cognitive characteristics of health professionals. The understanding of these traits will aid health professionals to better interact with other co-workers and also their patients²⁰.

The Exploratory 4-factor model of Jiang Y et al uses the same questionnaire divided into 4 factors such as level of belief in medical technology, whether the patient is competent to participate in their own treatment, doctor's interpersonal style (personality and communication) and whether the patient's feelings matter during the treatment process³⁰.

Analysis of only medical students found similar mean PPOS score as overall healthcare students indicating that attitudes may not differ widely between healthcare professions. Our results suggest that healthcare students have low attitudes towards patient centered care when measured by the PPOS.

5. Conclusion

Patient centeredness enhances healthcare quality. Efforts must be made to inculcate patient centeredness in healthcare professionals. The study showed low patient centered attitude of health professional students as observed in other studies. There was a relatively higher level of caring compared to sharing. Physiotherapy students have higher mean scores as compared to other groups which may be due to their constant and long-term interaction with the patients.

There is a need to shape the curriculum to promote patient centered care through role plays and discussions to help students see the patient as a person, to share power and responsibility and create a therapeutic alliance³¹.

Supportive student-doctor relationships, student-centered education and guidance that addresses the needs of the doctor-as-person are central to the development of patient-centeredness. Medical education requires patient-centered, self-caring and self-aware role models³².

When students lack self-efficacy or when they are surrounded by non-patient-centered role models, they lose their patient-centered focus. Building the self-efficacy of health care professional students involves mastery experiences, social modeling, social persuasion and choice processes which affect the quality of their cognitive, motivational, affective, and decisional processes³³.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

References

- [1] Stagno S, Crapanzano K, Schwartz A. Keeping the Patient at the Center: Teaching About Elements of Patient-Centered Care. *MedEdPORTAL*. 2016; 12:10500. https://doi.org/10.15766/mep_2374-8265.10500
- [2] Balint E. The possibilities of patient-centered medicine, *R Coll Gen Pract*.1969;17:269–276.
- [3] Millenson ML, Shapiro E, Greenhouse PK, DiGioia AM. Patient- and Family-Centered Care: A Systematic Approach to Better Ethics and Care, *AMA J Ethics*.2016;18(1):49-55. doi: 10.1001/journalofethics.2017.18.1.stas1-1601.
- [4] Rawson JV, Moretz J, Patient- and Family-Centered Care: A Primer, *J Am Coll Radiol*, 2016;13:1544-1549.
- [5] Edgman-Levitan S, Schoenbaum SC. Patient-centered care: achieving higher quality by designing care through the patient's eyes. *Isr J Health Policy Res*. 2021 Mar 5;10(1):21. doi: 10.1186/s13584-021-00459-9.
- [6] Berger R, Bulmash B, Drori N, Ben-Assuli O, Herstein R. The patient-physician relationship: an account of the physician's perspective. *Isr J Health Policy Res*. 2020 Jun 30;9(1):33. doi: 10.1186/s13584-020-00375-4. PMID: 32605635; PMCID: PMC7325021.
- [7] Faubion D, What is Patient-Centered Care in Nursing? (With Examples, Key Principles, Importance, & Challenges), <https://www.nursingprocess.org/patient-centered-care-in-nursing.html>
- [8] Epstein RM, Fiscella K, Lesser CS, Stange KC. Why the nation needs a policy push on patient-centered health care. *Health Aff (Millwood)*. 2010 Aug;29(8):1489-95. doi: 10.1377/hlthaff.2009.0888.
- [9] Stewart M, Brown JB, Donner A, McWhinney IR, Oates J, Weston WW, Jordan J. The impact of patient-centered care on outcomes. *J Fam Pract*. 2000 Sep;49(9):796-804.
- [10] Schellinger SE, Anderson EW, Frazer MS, Cain CL. Patient Self-Defined Goals: Essentials of Person-Centered Care for Serious Illness. *Am J Hosp Palliat Care*. 2018 Jan;35(1):159-165. doi: 10.1177/1049909117699600. Epub 2017 Mar 23.
- [11] What Is Patient-Centered Care? Explore the definition, benefits, and examples of patient-centered care. How does patient-centered care translate to new delivery models? *NEJM Catalyst*, 2017
- [12] Rosewilliam S, Indramohan V, Breakwell R, Skelton J. Learning to be patient-centred healthcare professionals: how does it happen at university and on clinical placements? A multiple focus group study. *MedEdPublish* (2016). 2020 Mar 26; 9: 53. doi: 10.15694/mep.2020.000053.1.
- [13] Krupat E, Yeager CM, Putnam S, Patient role orientations, doctor-patient fit, and visit satisfaction. *Psychology and Health*, 2000; 15(5):707-719
- [14] Transforming and Scaling Up Health Professionals' Education and Training: World Health Organization Guidelines 2013. Geneva: World Health Organization; 2013. Annex 1, Definition and list of health professionals. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK298950/>
- [15] Madhan, B., Rajpurohit, A.S. and Gayathri, H. (2011), Attitudes of Postgraduate Orthodontic Students in India Towards Patient-Centered Care. *Journal of Dental Education*, 75: 107-114.<https://doi.org/10.1002/j.0022-0337.2011.75.1.tb05029.x>
- [16] Fleisje A, Four shades of paternalism in doctor-patient communication and their ethical implications, *Bioethics*, 2024; 38 (6): 539 – 548. <https://doi.org/10.1111/bioe.13307>
- [17] Pourgholam N, Shoghi M, Borimnejad L. Patients' Lived Experiences of the Paternalistic Care Behavior: A Qualitative study. *J Caring Sci*. 2022 Feb 15;11(3):163-171. doi: 10.34172/jcs.2022.10.
- [18] Howe LC, Leibowitz KA, Crum AJ. When Your Doctor "Gets It" and "Gets You": The Critical Role of Competence and Warmth in the Patient-Provider Interaction. *Front Psychiatry*. 2019 Jul 4;10: 475. doi: 10.3389/fpsyt.2019.00475.
- [19] Greene J, Wolfson D, “Physician Perspectives on Building Trust with Patients,” in “Time to Rebuild: Essays on Trust in Health Care and Science,” ed. Lauren A. Taylor, Gregory E. Kaebnick, and Mildred Z. Solomon, special report, *Hastings Center Report* 53, no. 5 (2023): S86-S90. DOI: 10.1002/hast.1528
- [20] Louwen C, Reidlinger D, Milne N. Profiling health professionals' personality traits, behaviour styles and emotional intelligence: a systematic review. *BMC Med Educ*. 2023 Feb 18;23(1):120. doi: 10.1186/s12909-023-04003-y.
- [21] Bhutani J, Bhutani S, Kumar J. Achieving patient centered care: Communication and cultural competence. *Indian J Endocrinol Metab*. 2013 Jan;17(1):187-8. Doi: 10.4103/2230-8210.107886.
- [22] Barry MJ, Edgman-Levitan S, Shared Decision Making — The Pinnacle of Patient-Centered Care, *N Engl J Med*2012;366 (9):780-781. DOI: 10.1056/NEJMp1109283
- [23] Fava GA, Cosci F, Sonino N, Guidi J, Understanding Health Attitudes and Behavior, *The American Journal of Medicine*, 2023; Volume 136, Issue 3, 252 - 259
- [24] Kurasz AM, Smith GE, Curiel RE, Barker WW, Behar RC, Ramirez A, Armstrong MJ. Patient values in healthcare decision making among diverse older adults. *Patient Educ Couns*. 2022 May;105(5):1115-1122. doi: 10.1016/j.pec.2021.08.031. Epub 2021 Aug 28.
- [25] Armstrong MJ, Mullins CD. Value Assessment at the Point of Care: Incorporating Patient Values throughout Care Delivery and a Draft Taxonomy of Patient Values. *Value Health*. 2017 Feb;20(2):292-295. doi: 10.1016/j.jval.2016.11.008.
- [26] Li S, Miles K, George RE, Ertubey C, Pype P, Liu J, A critical review of cultural competence frameworks and models in medical and health professional education: A meta-ethnographic synthesis: *BEME Guide No. 79*. 2023, *Medical Teacher*,45(10), 1085–

1107.
<https://doi.org/10.1080/0142159X.2023.2174419>
- [27] Hardy C. Humor and sympathy in medical practice. *Med Health Care Philos.* 2020 Jun;23(2):179-190. doi: 10.1007/s11019-019-09928-0.
- [28] Wald HS, Dube CE, Anthony DC. Untangling the Web--the impact of Internet use on health care and the physician-patient relationship. *Patient Educ Couns.* 2007 Nov;68(3):218-24. doi: 10.1016/j.pec.2007.05.016.
- [29] Tan SS, Goonawardene N. Internet Health Information Seeking and the Patient-Physician Relationship: A Systematic Review. *J Med Internet Res.* 2017 Jan 19;19(1):e9. doi: 10.2196/jmir.5729.
- [30] Jiang Y, Wei J, Shi L, Cao J, Zhu B, Hong X. A 4-factor perspective of the patient-practitioner orientation scale (PPOS): a deeper understanding of patient-centeredness. *BMC Med Educ.* 2022 Nov 29;22(1):818. doi: 10.1186/s12909-022-03867-w.
- [31] Bejarano G, Csiernik B, Young JJ, Stuber K, Zadro JR, Healthcare students' attitudes towards patient centered care: a systematic review with meta-analysis. *BMC Med Educ* 22, 324 (2022). <https://doi.org/10.1186/s12909-022-03371-1>
- [32] Bombeke K, Symons L, Debaene L, De Winter B, Schol S, Van Royen P. Help, I'm losing patient-centredness! Experiences of medical students and their teachers. *Med Educ.* 2010 Jul;44(7):662-73. doi: 10.1111/j.1365-2923.2010.03627.x. PMID: 20636585.
- [33] Bandura, A. (2012). On the Functional Properties of Perceived Self-Efficacy Revisited. *Journal of Management,* 38(1), 9-44. <https://doi.org/10.1177/0149206311410606>

Suggested citation

Nadupuru Neha, Nallapu Samson Sanjeeva Rao. Identifying Patient Centeredness in Students of Healthcare Professions.

Int J Health Sci Res. 2025; 15(3):1-13. DOI:

<https://doi.org/10.52403/ijhsr.20250301>