

# Students' Attitude towards Patient-Centered Care: A Comparative Study between Traditional and Integrated Curriculum

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## ABSTRACT

**Background:** The patient being the focus of all medical sciences therapy, patient-centered care is found to be more beneficial in improving the efficacy of care. It is now being emphasized that this competency of patient-centered care should be developed at the level of undergraduate. It is hoped that with time and experience medical students may develop this competency as a reflex in their clinical practice. Data about the attitude of medical students towards patient-centered care is variable. As well as comparative data as to which curriculum (*i.e.* traditional versus integrated) enhances this quality is also insufficient.

**Objective:** The objective of this study is to compare the “patient-centered care” attitude of medical students from an integrated versus traditional curriculum.

**Methods:** A cross-sectional, comparative study was conducted at Liaquat national hospital and Medical College from June to December 2017. The sampling technique was non-probability convenience sampling. The calculated sample size was 110 participants in each group. Group A had medical students from the final year current batch and passed out batch (traditional curriculum) while Group B had medical students from current fourth and final year (Integrated curriculum). After consent, a validated questionnaire *i.e.* patient-physician orientation scale (PPOS) was given to students. Data was analyzed by SPSS version 23. Descriptive analysis was done to compute central tendencies and standard deviation and the Students' t-test, was applied. A P-value of 0.05 was considered significant.

**Results:** Out of 350 students participating in the study, male and female participants were 29.14% and 70.85% respectively. The mean age was 21.99 ±1.73. Traditional curricular medical students had significantly better total PPOS scores as compared with integrated curriculum students (3.45±0.51 versus 3.33±0.47, p=0.01). Females also had significantly better scores than males (3.42 versus 3.31, p=0.040).

**Conclusion:** Results suggest that an integrated medical curriculum should be reviewed and strategies that promote patient-centered care should be incorporated into all phases of student learning

**Keywords:** Patient-centered care, traditional curriculum, integrated curriculum, medical students, attitude.

## INTRODUCTION

“Patient-centered care” (PCC) is a complex, evidence-based approach to care delivery that is being used widely in healthcare. The concept of patient-centeredness was first introduced by Balint in 1969 as ‘understanding the patient as a unique human being’ [1]. Patient-Centered care is a standard of practice that demonstrates respect for the patient, as a “person” not as a “disease”. It takes into consideration the patient's needs, preferences and circumstances in the decision-making process. Other aspects include communication and information, integrated care, emotional support, family involvement and access to services [2]. The patient-centered care model places the patient at the center of the delivery of care resulting in the enhanced overall efficacy of care [3]. Studies show that patient-centered care results in increased adherence to management protocols reduced morbidity and improved quality of life for patients.

Worldwide, medical educators and accrediting bodies are giving increasing importance to inculcating patient-centered care at both undergraduate and postgraduate levels. In the USA, ACGME has included “patient care” as one of the important desired competencies [4]. Similarly, Canmeds and GMC competencies emphasize patient-centered practice [5, 6]. In response, medical institutes are adapting their curricula for teaching and learning patient-centered care. Experts suggest the integration of a patient-centered perspective in a student-centered learning relationship throughout clinical education as well as the postgraduate level [7]. A wide range of curricular initiatives has been claimed as promoting patient-centeredness, including workshops, simulated patients, reflection, small-group discussions, e-learning, peer role-play/drama/surrogate, narratives/storytelling/art, clinical experiences and mindfulness training [8].

In Pakistan, two major types of curricula are followed; the traditional discipline-based and integrated curriculum [9]. There is a paucity of data regarding the development of attitudes towards patient-based care in medical undergraduates studying through these curricula [10]. To inform curriculum reforms for the development of

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“patient-centered care” competency it is essential to know about the current “patient-centered care” attitude of medical students. This study was conducted to compare the attitudes regarding “patient-centered care” of medical students studying under two different curricula *i.e.* traditional and integrated.

## METHODOLOGY

This cross-sectional study was conducted from June to December 2017 after approval from Ethical Review Committee. The calculated sample size was 220. Sample size calculation was done with the following parameters; 95% confidence interval, 80% power, group one had a mean score of  $4.45 \pm 0.43$  and Group two had a mean score of  $4.62 \pm 0.46$  (18). The sampling technique was convenience sampling. Students were to be divided into two groups of at least 110 each. Group A comprised of final-year students (current and previous batch) from the traditional curriculum and group B consisted of fourth and final-year students from the integrated curriculum. Verbal consent was taken from students. Students who did not give consent were not included.

## QUESTIONNAIRE

The questionnaire had two parts. The first part dealt with demographic information including age, gender, year of study and type of curriculum. The second part comprised the English version of the Patient-Physician Orientation Scale (PPOS) [11]. Permission from the author was taken. “PPOS” is an 18-item questionnaire, related to the patient-physician relationship. Nine of 18 PPOS items are related to sharing attitude and the remaining nine items are related to caring attitude. The nine sharing items revealed the respondent’s attitude about the patient’s need for information sharing and decision-making. The other nine items reflected the belief and respectful attitude of a respondent to care about the patients’ feelings and his expectation during the process of treatment. Each item is rated from 1 (strongly agree) to 6 (strongly disagree) points on the Likert scale. “1 score” means the attitude of the respondent is toward a doctor-center approach and “6 score” means the respondent’s attitude is towards a patient-centered approach. Medical students with a mean PPOS score of more than “5” will be labeled as having a high score for patient-centered care attitude. While those who have a mean score between “4.5 to 5” as moderate scorers and below “4.5” will be considered low scorers for patient-centered care (or doctor-centered) attitude respectively. The purpose and method of the study were explained to the participants. Questionnaires were distributed among students after lectures. Filled questionnaires were collected at the same time. The principal investigator was present to answer any queries.

## DATA ANALYSIS

SPSS version 23 was used for data analysis. Descriptive analysis was done to obtain the frequencies and percentages for categorical variables. As data

was normally distributed, descriptive analysis was also done to find central tendencies (*i.e.* mean) and standard deviation of quantitative variables such as age and PPOS score and sub-score. The assumption of normality was tested with the Shapiro-wilk test. An independent t-test was used for comparing the PPOS score of medical students from integrated and traditional curricula and among males and females. A P-value  $\leq 0.05$  was considered significant.

## RESULTS

350 students gave consent to participate in this study. The mean age was  $21.99 \pm 1.73$  years. Male participants were 29.14% (102) and female members were 70.85% (248) (**Table 1**). The total number of medical students from the traditional curriculum was 177 (50.57%) while the number of medical students from the integrated curriculum was 173 (49.43%).

**Table 1:** Demographic data distribution in both groups.

Demographics	Integrated Curriculum	Traditional Curriculum
Age (Mean $\pm$ St.dev)	20.98 $\pm$ 1.53	22.97 $\pm$ 1.28
No. of students according to a type of Curriculum, n(%)	173(49.42)	177(50.57)
<b>No of students in each Batch</b>		
CURRENT 4th year, n(%)	91(52.6)	0(0)
CURRENT 5th year, n(%)	82(47.4)	87(49.2)
PREVIOUS 5th year, n(%)	0(0)	90(50.8)

The reliability of the overall questionnaire was 0.63. The overall PPOS scores were found to be low (3.39) with low sharing and caring scores (3.19, 3.58). The analysis also showed that students in the traditional curriculum had significantly higher total mean score ( $p=0.01$ ) and score on the “caring” sub-scale as compared to students in the integrated curriculum (**Table 2**).

**Table 2:** Comparison of mean PPOS scores based on curriculum type.

Variables	Integrated Curriculum Mean (SD)	Traditional Curriculum Mean (SD)	p-value
Sharing score	3.16(0.56)	3.22(0.63)	0.380
Caring score	3.49(0.57)	3.66(0.54)	0.001
Total score	3.33(0.47)	3.45(0.51)	0.010

Females had higher mean total and subscale scores with a significantly higher total score of 3.42 than males who have a mean score of 3.31 ( $p=0.040$ ) and a score on the “caring” sub-scale of 3.47 vs 3.62 ( $p= 0.020$ ).

## DISCUSSION

“Patient-centered care” attitude is the pivotal approach in the modern era of the health care system where it impacts a lot in the progress of mentally and/or physically suffered patients. This study has demonstrated the perception of the medical students regarding their patient-centered care stance. The result of this study showed that medical students have a doctor-centered attitude with low PPOS scores. These were in contrast

with the results of other international studies [12, 13], but similar results were obtained in a local study by Ahmed *et al.* It demonstrated that there is no improvement in the patient-centered care attitude over the period of five years [10]. The propensity towards doctor-centered care and low sharing scores may be due to the design of the undergraduate curriculum in which there is increased focus on the doctor's leading role in a doctor-patient relationship. This may also be accentuated by the social norms that in an "ideal" doctor-patient relationship" the decision-making process is doctor-centered [14].

The underlying differences in education and socioeconomic status between physicians and patients may be another factor, as most of the students belong to higher socioeconomic strata as compared to the patients, they see a majority of which belong to lower socio-economic strata. So, they fail to understand and address their underlying individual issues. A recent study also found that the low socio-economic status of students was a significant predictor of positive attitudes toward patient-centered care [15]. In another study patients felt that a physician taking a holistic view of the patient, considering the current personal situation and the patient's social environment was a prerequisite for effective PCC [16]. Another factor may be the difficulty students face in communicating with patients. Students are taught medicine in English and patients speak other regional languages like Urdu, Sindhi, Punjabi, Balochi and Pushto. This causes a hindrance in developing a good doctor-patient relationship which is a cornerstone in patient-centered care. Similar issues were noted in Hong Kong and Singapore [13, 14]. The mean overall score on the caring subscale was higher indicating that students tend to care about the patient emotions and needs rather than involving a patient in decision-making. Similar findings were reported by Mohamed *et al.* [17].

The main objective of this study was to compare the patient-centered attitude between the students from the traditional and integrated curricula. After the literature review, it was anticipated that students from the integrated curriculum would show better results as compared to the traditional curriculum students [18]. However, the results of our study were contradictory. Traditional curriculum students showed better PPOS scores as compared to integrated curricular students. Scores of the students in the integrated curriculum were even lower than reported in studies from Saudi Arabia [12]. This was also in contrast to another study in Brazil where PPOS scores were not significantly different in different curricular models [19]. The reason could be that the current integrated curriculum model still does not focus on PCC or PCC-related components [20]. Despite the assumption that integration incorporates communication skills, the basic/biomedical, clinical, socio-humanistic, and population health sciences there may be insufficient training in these skills. Moreover, an

integrated curriculum is still a newer concept in Pakistan and students and faculty are still adapting to changes in teaching methodologies and learning systems. However, we need further research to support our assumptions. In contrast, most international medical colleges especially from the USA, Greece, and UK have been following integration in the medical curriculum for many decades. The strong educational environment, as well as their cultural norms all, can be the reason for a good PPOS score and direction towards a patient-centered attitude [21, 22].

Another important aspect of this study was the association of PPOS score with gender distribution. International research works elucidate that females were significantly better in PPOS scores as compared to the male gender [14, 23, 24]. Results of our study also supported that the female gender was more prone to a patient-centered attitude as compared to males. The reason may be that females are more empathetic or kind and have good communication skills as compared to males [14]. Also, females interact more positively than males while dealing with patients [25].

This study had several limitations. Only perceptions were measured which may lead to bias. This is a single-centered study that included medical students from one private medical college. As the composition and the socioeconomic background of the students differ among the medical colleges in Pakistan, hence this study cannot be generalizable. The study was cross-sectional and the effect of progress through medical school on student attitudes was not studied. Further studies should be conducted with a larger sample and in different institutions. Furthermore, longitudinal studies should also be conducted to analyze the change in attitude towards patient-centered care over the academic years and actual behavior in professional life.

## CONCLUSION

Patient-centered care, no doubt about it, is the cornerstone of modern medical practice. This study showed overall less preference for patients centered attitude. Results of this study suggest that curricula should be reviewed and strategies that promote patient-centered care should be incorporated into all phases of student learning. Furthermore, clinical teachers and supervisors should be trained to incorporate PCC in their teaching and training,

## ETHICS APPROVAL

Ethical approval was obtained from the Ethical Review Committee of the institution (ERC number App#0355-2017-NH-ERC) before the study's commencement. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the Helsinki declaration.

## CONSENT FOR PUBLICATION

Informed consent was taken from the participants after explaining to them the purpose of the study.

## AVAILABILITY OF DATA

Not applicable.

## FUNDING

None.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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## AUTHOR'S CONTRIBUTION

1. Dr. Shahid Karim designed the study, collected and analyzed data, contributed to and reviewed the manuscript.
2. Dr. Afifa Tabassum contributed to and reviewed the manuscript.
3. Prof. Syed Imran Mehmood contributed to and reviewed the manuscript.

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