KNOWLEDGE OF AND ATTITUDE TOWARDS PRIMARY HEALTHCARE AMONG UNDERGRADUATE MEDICAL STUDENTS

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ABSTRACT:

***OBJECTIVES**:*

To assess undergraduate medical students' knowledge of and their attitudes towards primary healthcare and to compare the knowledge and attitudes of students in public and private medical colleges as well as between different demographic groups of students.

METHODOLOGY:

A descriptive cross-sectional survey was conducted in public and private medical colleges after an ethical approval was granted. Data was collected from 201 undergraduate medical students through a validated (by Chalmers et al. 1997) Primary Health Care Questionnaire (PHCQ) utilizing an online data collection platform of Google Forms. The link to Google Form was distributed via emails and social media links of participating colleges. Data was exported from Google Form into SPSS version 24 and analyzed.

RESULTS:

The total knowledge score of students ranged from 8 to 17 with the mean knowledge score of 12.62 (SD: 1.398). The total attitude score ranged from 59 to 82 for all the participants with the mean attitude score of 71.12 (SD=4.382). Comparison of knowledge scores showed higher scores in females than males (p=0.004), and significantly higher attitudes scores among private medical students than public (p=0.037).

CONCLUSION:

Medical students' gender and setting of their medical studies showed significant influence on their knowledge of and attitudes towards primary healthcare.

***KEYWORDS:** Knowledge, Attitude, Primary Health Care, Medical, Students, Gender*

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INTRODUCTION:

"Healthcare is not a privilege; it is a right. It's a right as fundamental as civil rights"–Rod Blagojevich. Primary Health care (PHC) is of utmost importance because it is the very first step that provides services to the individuals. As it is the first level of contact of an individual, family or community with the health system. Therefore, communities and countries, which invest highly in primary healthcare, have an improvised health system. It varies and there is a visible and huge divide between urban and rural areas[1]. Globally, over the years, primary healthcare has been advocated as the fundamental concept to improve healthcare at community level towards the greater cause of building national healthcare systems[2]. Although primary healthcare is considered of central

importance in reorienting healthcare services from curative to preventive practices, especially in developing and low-income countries, however, the shift has faced tremendous challenges in achieving the desired goals[3]. One of the reasons could be the deficient focus on primary healthcare in the medical curricula, which mostly strive to prepare doctors of tomorrow in the context of curative practices. Effective medical education programs with community based curricular reforms could be sought to integrate basic concepts of primary healthcare in the curriculum to inculcate novel practice ideas in the doctors of tomorrow[3]. Primary healthcare undoubtedly improves community health through equitable and accessible healthcare services, lower costs and overall better health outcomes. However, there is a drastic deficit of primary care providers and an upward trend towards specialist care providers as career choices, and the challenge is ubiquitously prevalent in developed as well as developed nations creating undesired health disparities[4]. A study conducted reported low interest of students in primary health care as a career choice. The factors contributing to low interest of medical students in primary healthcare are reported to be poor role modeling despite its integral importance to healthcare, low wages as primary care providers, negative attitudes towards primary care, limited inclusion of primary healthcare concepts in curriculum as well as no guided community-based placements and preceptorship programs during their medical training[5,6]. A study in 2012 also reported varying levels of students' knowledge regarding PHC, its advantages and disadvantages, however, the PHC models failed to raise their interest in PHC as a career choice[7]. The rationale for undertaking this study was that we believe doctors are at the forefront of our health system, and they are the initial caregivers. Students who are pursuing medicine need to be thoroughly aware of the importance of primary healthcare. Therefore, the primary objective of this study was to assess the knowledge and attitude regarding primary healthcare among undergraduate medical students studying in the public and private medical colleges of Khyber Pakhtunkhwa.

METHODOLOGY:

The study was conducted from January 2020 to June 2020. Data was collected from both public and private medical colleges of the province, Khyber Pakhtunkhwa. Ethical approval was obtained from the independent ethics committees of Northwest School of Medicine Peshawar and Gajju Medical College Swabi. This was a quantitative descriptive survey, and we used a cross-sectional design to study the knowledge of and attitude towards primary healthcare among undergraduate medical students in Khyber Pakhtunkhwa Pakistan. Our target population was all the undergraduate medical students enrolled in different public and private medical colleges of Khyber Pakhtunkhwa. Those students who were not willing to participate were excluded. The Primary Health Care Questionnaire (PHCQ), developed and validated by Chalmers et al, in 1997, was used to collect data[8]. Slight changes were made to tailor the instrument in Pakistani healthcare context. As our data collection timeline fell into the global coronavirus pandemic and an unpredictable lockdown with all the educational institutions closed for an indefinite time, we had to rely on online data collection for our project. Therefore, Google form was created with clear instructions regarding consent and confidentiality of the data, and the link was distributed among all the students through emails and social media links. Responses were accepted throughout the month of April 2020. As a result, 201 completed responses were received in the given period. SPSS version 24 was used for statistical tests. The demographic variables were analysed through descriptive statistics. Total knowledge and attitude scores were calculated by summing up the subscale items into new computed variables. Means, standard deviations and mean difference of knowledge and attitude scores were calculated. Differences in knowledge and attitudes between student groups were analyzed through an independent sample t-test with p-value (set at 0.05) and 95% confidence intervals reported.

RESULTS:

The demographic data shows the mean age of study participants was 22.30 years (Standard Deviation SD: 1.405) with minimum age of 19 and maximum 27 years.

Table 1: Mean and Mean Difference of Knowledge Scores among Different Student Groups

Group	N	Mean (+SD)	Mean Difference	P-Value	95% CI of the Mean Difference
All Participants	201	12.62			
Gender Male Female	 79 122	 12.27 (1.560) 12.85 (1.237)	-.573	0.004	-.965 - .182
College Setting Public Private	 149 52	 12.52 (1.412) 12.92 (1.326)	-.399	0.07	-.841 - .042
Year of Study 3rd Year 4th Year	 49 101	 12.53 (1.487) 12.67 (1.289)	-.142	.547	-.609 - .324

Table 2: Correctly Answered Knowledge Items

Item	Correct	Incorrect
Top Five Correctly Answered Knowledge Items		
Accessibility to health care is a basic concept of primary health care	98.5%	1.5%
One major emphasis of primary healthcare is disease prevention	97.5%	2.5%
The World Health Organization (WHO) considers primary healthcare to be the best way to achieve "Health for All"	96.5%	3.5%
Improved health education is a key concept in primary healthcare	95.5%	4.5%
The World Health Organization considers that primary healthcare is equally important for both industrialized and developing countries	94.5%	5.5%
Top Three Incorrectly Answered Knowledge Items		
A primary healthcare system is based on the belief that if enough effort is spent developing healthcare technology systems, quality of life is enhanced	12.9%	87.1%
Primary healthcare emphasizes the importance of a biomedical approach to healthcare	17.9%	82.1%
An increase in physicians is needed in Pakistan to fully implement primary healthcare	18.9%	81.1%

Table 3: Mean and Mean Difference of Attitude Score Among Different Student Groups

Group	N	Mean (+SD)	Mean Difference	P-Value	95% CI
All Participants	201	71.12			
Gender Male Female	 79 122	 71.13 (4.477) 71.11 (4.339)	.024	0.96	-1.22 – 1.27
College Setting Public Private	 149 52	 70.74 (4.651) 72.21(3.303)	-1.46	0.037	-2.84 - -.086
Year of Study 3rd Year 4th Year	 49 101	 70.89(4.421) 71.21 (4.105)	-.319	0.66	-1.76 – 1.12

Table 4: Highest and Lowest Mean Scores and SDs of Attitude Items

Item	Mean	SD
Attitude Items with Highest Mean Scores		
Access to good healthcare is a fundamental right of all people	3.57	0.545
Each person has a responsibility to maintain his/her own health	3.52	0.633
All healthcare professionals have a role in primary healthcare	3.29	0.662
People should have liberal access to health information from doctors and nurses so they can participate fully in decisions affecting their health	3.20	0.586
All people in a country should have access to basic healthcare even if it means that some people would receive fewer services than they currently receive	3.18	0.720
Attitude Items with Lowest Mean Scores		
More healthcare finances should go towards developing technological equipment to diagnose disease	1.76	0.652
Increased medical specialization is needed to improve the community's health	1.83	0.724
Most children need "well child" care from a paediatrician rather than from a general practitioner (i.e., family doctor)	1.94	0.661
The physician is the best person to keep people well	2.14	0.656
Many tasks that physicians currently perform could be carried out equally well by nurses	2.53	0.728

DISCUSSION:

The findings of this survey show that undergraduate medical students in Pakistan have good knowledge of the key concepts of primary health care and overall positive attitude towards primary healthcare. This is very encouraging particularly in the context of a developing country with constrained resources and more so, limited expenditure on overall healthcare services. The mean knowledge score of female students was higher compared to male students with statistical significance. The feminization of primary healthcare could be explained through research findings that female caregivers spend more time listening to their patients compared to their male counterparts. Subsequently, there is more involvement of patients in the decision-making process of their care, which is an important principle of primary healthcare. Hence, more interest in and inclination of females towards primary healthcare[7, 9, 10]. Students who were studying in private medical schools were more likely to have a better mean knowledge score of primary healthcare compared to those studying in public medical colleges. However, this mean difference was statistically not significant. Private medical schools in Pakistan have a more integrated approach to designing medical curricula culminating in holistic patient care (including health promotion, disease prevention, cure, rehabilitation, and palliation) which is a critical component of primary healthcare[8, 11-13]. This study also compared the PHC knowledge of students of 4th year with that of 3rd year as during these two clinical years the students are mostly exposed to the concepts of primary health care through their community medicine teaching, placements, and attachments at the basic and rural health centers. There was no significant difference noticed showing that students actually retain their prior knowledge of PHC taught in earlier years. An Australian nurse students' study on their PHC knowledge and attitudes showed that mature students with advancing years of study were more likely to have higher knowledge of PHC compared to younger students and early years of medical education[9, 14-16]. Accessibility and availability of healthcare services are the two basic principles of primary healthcare and almost all of the students recognized this fundamental right of patients seeking care. Students showed good knowledge of better access to healthcare especially for the vulnerable communities including children and women. The comprehensiveness of PHC with patient centered and population friendly approach is a cornerstone of primary healthcare. This, however, has a long way to go especially in the developing countries where even access to safe drinking water is still a dream[10]. The collaborative efforts of healthcare professionals, policy makers and involvement of communities will prove beneficial if

implemented in true essence[11, 17-19]. It was interesting to notice that there was some knowledge deficiency on students' parts as well, especially the technological and biomedical aspects of healthcare. The students showed poor knowledge in these domains. A primary healthcare involves a wide range of stakeholders and multisectoral approach to address the social, cultural, economic, industrial and environmental determinants of health and well-being. A strong PHC incorporates an integrative and responsive approach to educate communities, promote health, prevent disease, cure illness, reduce hunger and poverty, promote gender equality, and engage population. Students showed overall positive attitudes towards primary healthcare. Contrary to the knowledge score, there was no significant difference in the attitude scores of male and female students, which is very important that the future healthcare providers consider PHC as the fundamental concept to provide the best possible care to their patients. The positive attitudes show promising outcomes for patients in future with quality, equitable, accessible and responsive care. Moreover, the students at private medical colleges showed better attitudes towards PHC compared to public sector colleges. This is of great concern and explains the abysmal situation of healthcare services provided at public healthcare facilities. Improvement of PHC services is the dire need of the hour in developing countries for the continuous provision of quality care. One way to achieve success in this regard is contracting Non-Governmental Organizations' (NGOs) for better management and effective delivery of healthcare services at PHC level[12]. Majority of the students showed very encouraging attitudes towards primary healthcare, such as accessibility, availability and affordability of healthcare to all populations with timely, equitable and patient-centered care. On the other hand, policy makers and healthcare professionals are finding it difficult to make this possible. Some negative attitudes towards primary healthcare were also observed among students. For example, students scored extremely low on the diagnostic and specialized care items of the attitude scale where the majority of the students considered the diagnostic, technological and specialized care being given more importance in primary healthcare, which is against the principles of PHC. A study by Elizabeth et al on premedical students in the USA regarding their attitude towards PHC showed concerns and misconception about PHC. Primary healthcare is the first contact, collaborative care of communities with a holistic approach, effective, efficient and equitable care involving all healthcare professionals working in coordination towards positive health outcomes. The stronger the primary healthcare, the less expenditure on health and higher quality of care[13, 20]. In the wake of few misconceptions of students about PHC, we put forward the recommendation that along with strong PHC curriculum being taught in the preclinical and clinical years, it should be mandatory for all the students to have at least 12 weeks of mandatory elective or clinical placement in the PHC centers so that the future doctors understand the real-world healthcare dynamics at the community level. This will give them an insight into the deeper understanding and evaluation and subsequent incorporation of PHC principles in their practice as successful future healthcare providers. It is suggested that more studies should be conducted, especially qualitative, to explore medical students' perceptions on a deeper level regarding PHC.

CONCLUSION:

Undergraduate medical students have overall good knowledge of the principles of primary healthcare. They also showed good attitudes towards primary health care. However, it was found that medical students' gender and setting of their medical studies showed significant influence on their knowledge of and attitudes towards primary healthcare.

LIMITATIONS:

We encountered some limitations. First this was a cross sectional survey done online, second the sample size was smaller, third an equal number of students from all years and settings couldn't be enrolled. Therefore, the results may not be generalizable to all the undergraduate medical students. In future, we should collect data from a larger sample with equal representation of all years and settings with qualitative components as well.

CONFLICT OF INTEREST: None

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