

Knowledge about primary health care among medical students from public and private medical universities of Karachi, Pakistan

Rubab Ehsan,¹ Rahul Hirani,² Nasha Homi Bhesania,³ Nosheen Zehra⁴

Abstract

Primary health care (PHC) is the best approach to achieve health goals in a country. As medical students are a prominent part of future health care providers, it is important to assess their knowledge regarding basic concepts and functions of PHC. Total 400 medical students, 200 (50%) each from public and private medical universities responded in this study. Mean score was 15.21 ± 2.43 and 14.9 ± 2.89 respectively with no significant difference ($P=0.370$). On the basis of mean score the data is dichotomized into two groups i.e. above average and average (score > 15) and below average (score < 15). Hence, 137 (68.5%) students from public and 131 (65.5%) students from the private university fell in the average and above average category. This study shows challenges related to the knowledge and the medical students' level of understanding of the functioning of PHC system.

Keywords: Primary Health Care, Medical students, Public and Private Universities, Karachi, Pakistan.

Introduction

Primary healthcare (PHC) defines as, "A set of universally accessible first-level services that promote health, prevent disease, and provide diagnostic, curative, rehabilitative, supportive and palliative services".¹ A greater systemic emphasis on primary healthcare can be expected to improve health outcomes.²

In Pakistan, the health condition of general population is not up to the mark. A relative lack of primary health care centers and primary care physicians is well recognized in our country.³ For improvement of general health status of Pakistan, primary health care looks more and more like a smart way to get health development back on track.⁴ In this matter, medical students are the most important asset. It is evident that role of medical students is very important in any

health system. Furthermore their knowledge about PHC and its implementation in career choices also impact health policy regarding human resource management.⁵

There is dearth of literature on this topic especially in our part of world. Primary Health care is the part of curriculum for medical students in Pakistan but their knowledge about this important health initiative was not assessed. Hence, the purpose of this study was to explore medical students' knowledge of PHC which can be a positive influence on students' decisions to pursue careers in family medicine. In Pakistan medical universities are broadly distributed into private and public sector, with difference in their management, standardization and conduct of medical education.⁶ So here in this study knowledge of students from both universities about PHC was assessed.

Methods and Results

It is a cross sectional study, conducted in 2014 among medical students, after obtaining permission from the Institutional Ethics Committee. Non probability convenience sampling was used to select two medical universities of Karachi, one from public and one from private sector. Undergraduate Students of Bachelor of Surgery, Bachelor of Medicine (MBBS) programme, from 1st through 4th year were targeted from both universities by quota sampling technique.

The sample size was calculated by WHO sample size estimation calculator taking 50% anticipated proportion of students' opinion, at 95% Confidence Interval with 0.05 precision. Calculated sample size was 384 that rose to 400 to avoid data wastage. From 400, 200 forms each were equally distributed among both universities. Pretested, structured self-administered questionnaire was used, constructed after thorough literature search. It had 21 items, each specified with one statement about PHC (Table-1) with nominal response options i.e. true, not true and don't know. Correct answer of each question was given score of 1 so the maximum and minimum scores that may be

^{1,2}4th Year MBBS Students, ^{3,4}Ziauddin University, Karachi.

Correspondence: Rubab Ehsan. Email: rubabehsan1@gmail.com

Table-1: Correct Responses of Medical Students from Public and Private Universities Regarding Primary Health Care.

	Items for assessing knowledge regarding Primary Health Care	Correct Response n= 400 (100%)	Public University n = 200 (50%)	Private University n= 200 (50%)	P- Value
ITEM 1	Accessibility to health care is a basic concept of primary health care	387 (96.8)	192 (48)	195 (48.8)	0.022
ITEM 2	The World Health Organization considers primary health care to be the best way to achieve "Health for All."	364 (91)	184 (46)	180 (45)	0.735
ITEM 3	The key approach to achieving primary health care is technology	298 (74.5)	142 (35.5)	156 (39)	0.275
ITEM 4	One major emphasis of primary health care is disease prevention	367 (91.8)	184 (46)	183 (45.8)	0.982
ITEM 5	Within a primary health-care system, safe adequate drinking water is considered as important as professional health services	346 (86.5)	167 (41.8)	179 (44.8)	0.014
ITEM 6	A statement of commitment to primary health care is ratified at the international conference held at Alma Ata in 1978	237 (59.2)	116 (29)	121 (30.2)	0.668
ITEM 7	An increase in physicians is needed in Pakistan to fully implement primary health care	304 (76)	157 (39.2)	147 (36.8)	0.273
ITEM 8	Many governmental departments, such as Agriculture and Municipal Planning, are important for the implementation of the goals of primary health care	300 (75)	169 (42.2)	131 (32.8)	0.001
ITEM 9	Within a primary health-care framework, the health-care system is considered to be the key determinant of the populations health	340 (85)	172 (43)	168 (42)	0.573
ITEM 10	Primary health care should be provided according to the need of the community	337 (84.2)	165 (41.2)	172 (43)	0.200
ITEM 11	Primary health care involves, among other activities, working on underlying problems that affect social and emotional health	299 (74.8)	150 (37.5)	149 (37.2)	0.654
ITEM 12	An example of a primary health-care strategy to improve the health of the community is to increase the number of cardiac specialists	97 (24.2)	59 (14.8)	38 (9.5)	0.036
ITEM 13	Rehabilitative services are part of primary health care	221 (55.2)	125 (31.2)	96 (24)	0.014
ITEM 14	Improved health educations is a key concept in primary health care	352 (88)	177 (44.2)	175 (43.8)	0.076
ITEM 15	Cooperation between governments and voluntary organizations is a key concept in primary health care	316 (79)	157 (39.2)	159 (39.8)	0.128
ITEM 16	Primary health-care approaches take into consideration ways to provide culturally appropriate care	280 (70)	130 (32.5)	150 (37.5)	0.035
ITEM 17	Community participation is central to an effective primary health-care system	353 (88.2)	181 (45.2)	172 (43.0)	0.119
ITEM 18	Acute care services are not considered part of primary health-care system	143 (35.8)	65 (16.2)	78 (19.5)	0.137
ITEM 19	In a primary health-care system, efforts are made to use the least expensive technology and personnel to achieve positive health outcomes	304 (76)	149 (37.2)	155 (38.8)	0.560
ITEM 20	One of the five key principles of primary health care is the provision of high-quality, episodic medical care	226 (56.5)	129 (32.2)	97 (24.2)	0.005
ITEM 21	Primary health-care services do not include curative or palliative care	199 (41.2)	112 (28.0)	87 (21.8)	0.057

obtained through this questionnaire were 21 and 0 respectively. Data was collected before the scheduled sessions in classrooms. Those students who were either absent or did not give consent and incomplete questionnaires were not included.

SPSS version 20 and MS Excel were used for data entry and analysis. The categorical variables were presented as frequency and percentages and numeric variables as mean and standard deviation. Chi Square was applied to find association between categorical variables and independent t-test for finding difference between numeric variables, with P value less than 0.05 taken as significant.

Total 400 students, 200 (50%) each from public and private medical universities responded in this study. Among them 105 (26.3%) were males and 295 (73.7%) were females with ages ranging from 18 to 23 years and

mean age of 20.5±1.4 years. Table-1 shows the items that were included in the questionnaire. It specifies the correct answers as responded by students from both universities. Almost all items showed correct response by majority of the students from both universities except item 12. Significant difference (p value= 0.036) was found about response of this statement between students from both universities.

Mean scores obtained by students of public and private university were 15.21±2.43 and 14.9±2.89 respectively with no significant difference (P=0.370). On this basis, the data is dichotomized into two groups i.e. above average and average (score > 15) and below average (score <15). Figure-1 illustrates the two groups based on knowledge related score from public and private universities, the difference in their knowledge was not significant (P= 0.689).

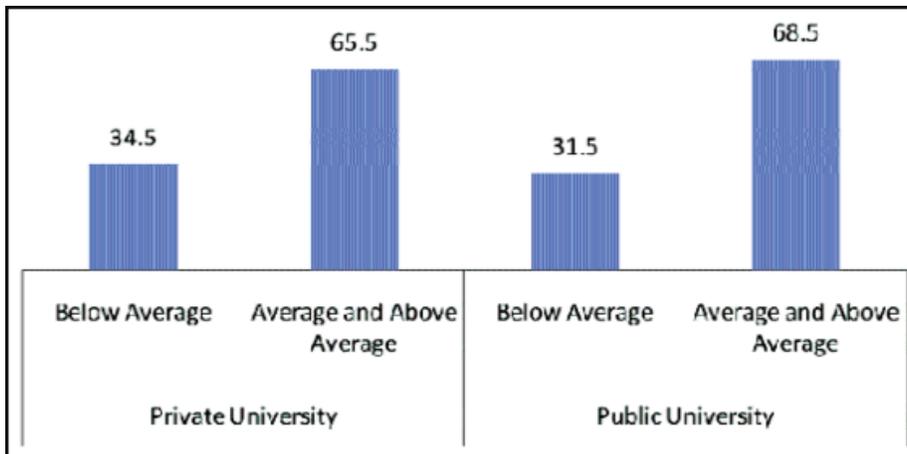


Figure: Comparison of PHC related knowledge among students from private and public universities (%).

The principle of PHC as defined at Alma-Ata is essential health care that is universally accessible to all in the community at affordable cost.⁴ Utilization of health services provided by PHC is highly beneficial for community itself and for whole country at large. This can only be achieved through proper knowledge of the domains and boundaries of PHC among health care providers and policy makers.

In this study students' knowledge about PHC was remarkably more than average both in public and private universities. Also, there was no significant difference between the mean scores of both universities. This signifies a relatively satisfactory contribution of medical curriculum in imparting knowledge about PHC, its components and an understanding of its functioning in the first two years of MBBS, followed by incorporating clinical skills and a well-structured training of PHC in the curriculum 3rd year onwards. Quality Medical curriculum and education system impart a great deal of knowledge to the students.

Accessibility to health care is a basic concept of PHC. The ideal location for PHC is in the community, situated as close to the beneficiaries as possible so the people are encouraged to avail its services. A total of 48% students from public universities and 48.7% from private ones acknowledged this fact by answering correctly. It is also encouraging to know that both groups were aware that availability of safe drinking water is just as important as professional services in maintaining a healthy community. This is important in Pakistan and other underdeveloped countries where safe drinking water, a basic human necessity is unfortunately still not available to all communities and several adult and child lives are lost

due to water-borne infections. Rehabilitation often plays a greater role in maintaining health than only medication. Total 55.1% students identified rehabilitation services as a part of PHC which is also a positive result in this study.

Despite the documented importance of PHC in improving the health of community, many countries are facing a lack of PHC doctors.⁵ It was observed in our study that majority of the students felt increasing the number of doctors will improve community health. This can be

attributed to stresses medical students undergo during their 5 years' study, such as study-related stress and financial difficulties in paying for medical education. These could potentially lead medical students to aim for more rewarding specialties in their future careers. Hence effective interventions are needed to make PHC settings more attractive and to encourage medical graduates to pursue careers in PHC.

Conclusion

This study highlighted that there was no significant difference in the knowledge about the concepts and working of PHC amongst students of public and private medical universities in Karachi. While knowledge about PHC is crucial, it is equally important to encourage current medical students to work in PHC by making it more interesting and rewarding. A well-functioning PHC system greatly reduces the healthcare costs of a country by addressing population health issues in early stages and preventing others from arising.

Acknowledgement

I, Rubab Ehsan would dedicate my work to my beloved parents Syed Ehsan Ashraf and Shahla Ehsan Syed for their complete support and encouragement.

As students of our beloved teacher and also co-author of this research Dr Nosheen Zehra we would like to thank her for helping us out whenever we found hurdle during research.

Declaration of Originality: I, Rubab Ehsan, as an author of this research declare that my research 'Knowledge about primary health care among medical students from public and private medical universities of Karachi,

Pakistan' is a complete new and original research which has neither been presented, published in any conference nor in any journal.

Conflict of Interest: There is none to declare.

Funding Disclosure: None to declare.

References

1. Lamarche P, Beaulieu M, Pineault R, Contandriopoulos A, Dennis D, Haggerty J. Choices for change: The path for restructuring primary health care services in Canada. Ottawa: Canadian Health Services Research Foundation; 2003.
 2. Starfield B. The future of Primary Care: refocusing the System. *N Engl J Med* 2008; 359: 2087-91.
 3. Khawaja RDA, Jahan F. Rekindling the interest of primary care specialties among medical students of a developing country: Perspective from Pakistani medical education system. *J Pak Med Assoc* 2011; 61: 1257-8
 4. WHO director-General Dr Margaret Chan, WHO Almaty, Kazakhstan, 2008.
 5. Giang KB, Minh HV, Hien NV, Ngoc NM, Hinh ND. Knowledge of primary health care and career choice at primary health care settings among final year medical students – Challenges to human resources for health in Vietnam. *Global Public Health* 2015; 10: s120-30
 6. An Overview of Medical Education in Pakistan and the Improvements Required. [Online] [Cited 2015 May 23]. Available from: URL: <http://blogs.jpmonline.com/2012/08/21/an-overview-of-medical-education-in-pakistan-and-the-improvements-required/>.
-