ORIGINAL ARTICLE

PERCEPTIONS OF BASIC MEDICAL SCIENCES FACULTY TOWARDS VARIOUS EDUCATIONAL ROLES IN MEDICAL SCHOOLS

Fozia Gul[1], Naheed Masood[2], Farooq Ahmed[3]

Department of IHPER, KMU, Peshawar & Department of Gynecology KIMS, Kohat - Pakistan

Department of Medical Education, Khyber Girls Medical College, Peshawar - Pakistan

Department of Medical Education, Khyber Medical College, Peshawar - Pakistan

ABSTRACT

Objective: To assess the perception of faculty members towards various educational roles and importance given to these roles by their respective institutions in three medical colleges of Khyber Pakhtunkhwa.

Material and methods: The study was conducted in Khyber Medical College Peshawar, Khyber Girls Medical College Peshawar and Khyber Medical University Institute of Medical Sciences Kohat. A questionnaire comprising of twelve roles classified into six-categories (information provider, role model, facilitator, examiner, planner, resource developer) was distributed amongst 145 teachers of basic medical sciences through purposive sampling. Faculty members were asked to score the importance of each role using a 1–10 scale containing proforma.

Results: Out of 145, 117 (80.7%) responded where 59 (50.4%) were females. Majority were lecturers with 1-5 years of teaching experience. Maximum score was given to "lecturer in classroom" (Mean 8.87+1.390 SD), Teacher in clinical/ practical setting (mean=8.74+1.604 SD) and examiner (mean=8.75+1.479 SD). Minimum score was given to study guide producer (mean=6.86+2.665 SD) and curriculum evaluator (mean=7.37+2.533 SD). The Importance of roles in faculty point of view vs importance in college programs were comparable ($p<0.05$).

Conclusion: Faculty members of these public sector medical colleges are generally aware regarding different educational roles but they need to be informed about some of the roles like study guide producer and curriculum evaluator.

Keywords: Roles of medical teacher, role modelling.

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INTRODUCTION

Globally many modifications and transformations have been observed in Medical education over the past few decades. There has been shift from teacher centered to student centered learning[1,2]. Inclusion of options like integrated teaching, problem-based learning, community-based learning, core curricula with electives and more systematic curriculum planning have been advocated[2]. There has been more emphasis on performance assessment with the use of techniques such as the objective structured clinical examination, the use of standardized patients, log books, portfolio assessment and self-assessment. All these reforms in medical education have resulted in putting new demands on teacher's academic roles and work tasks[3, 4, 5].

Harden and Crosby have listed 12 roles for teachers in medical education and teaching classified in six categories[1]. Lecturing in the classroom, role modelling, mentoring, and assessment and curriculum planning are among the various educational roles enumerated for medical teachers. Since there is no formal preparation

Dr. Farooq Ahmed (Corresponding Author)
Director of Medical Education, Khyber Medical College, Peshawar - Pakistan
E-mail: drfarooqahmed43@gmail.com
Contact: +92 - 313-3799901
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for teaching, most faculty members involve themselves in only some of these roles and omit others[6,7]. A teacher may take several roles concurrently but not necessarily to be competent in all roles. The medical faculties having variety of these roles are the backbone for institutional development. We conducted this study to assess the importance of different educational roles in view of faculty members of three public sector medical colleges. The aim was to identify the roles and competencies which are scored less in the survey (given less importance to these by the faculty) and to address those issues in faculty development programs in future.

MATERIAL AND METHODS

The study was conducted in 3 public sector medical colleges of the Khyber Pakhtunkhwa province (KP); Khyber Medical College (KMC), Khyber Girls Medical College (KGMC) and Kohat Institute of Medical Sciences (KIMS) having 250, 100 and 50 students per class respectively. The proforma mentioning (annexure-1) 12 roles of a medical teachers was distributed amongst 145 teachers of basic medical sciences in these institutions through purposive sampling.

Out of these, 117 returned the responses. The responses were obtained through the help of a self-designed proforma (that was pilot tested on 25 participants) mentioning the college, teacher`s position, experience, discipline, and 12 roles as medical teacher in 2 columns.

Column 1 shows the importance of role in faculty`s point of view, and column 2 shows importance of roles in college teaching programs (annexure-2). Every role was given importance in order of 1-10 (with 1 as least important and 10 as most important). Clinical sciences teachers were excluded from the study. Data was analyzed using SPSS-23, where quantitative data is presented as means and SD and qualitative data as frequencies and percentages. The 2 groups were compared by paired t-test.

RESULTS

A total of 117 faculty members returned the responses, out of these 59 were females. Details of responses from 3 colleges, disciplines which the faculty belonged, teaching positions and years of experience are presented in table-1. More than half of responders were lecturers with 1-5 years of teaching experience. Regarding individual responses to different roles of medical teachers, most marks were given to role-1 (lecturer in class room), and least to role-12 (study guide producer). See table-2 for details of individual responses. Comparison of 2 groups (importance of roles in personal point of view vs importance in college programs) is shown in table-3, where the responses between the 2 groups are comparable with a p-value of less than 0.05.

Table 1: Baseline information.

Domains	Titles	Numbers	Percentages
Participants responses	KMC	37	31.6
	KGMC	51	43.6
	KIMS	29	24.8
	Total	117	100
Disciplines	Anatomy	25	21.4
	Physiology	21	17.9
	Biochemistry	19	16.2
	Pathology	22	18.8
	Community medicine	10	8.9
	Pharmacology	14	12
	Forensic medicine	06	5.1
Gender	Males	55	47
	Females	59	50.4
	Missing	3	2.6
	Total	114	100
Teaching positions	Lecturers	68	58.1
	Assistant professors	28	23.9
	Associate professors	03	2.6
	Professors	18	15.4
Experience of teaching	Less than 1 year	12	10.3
	1-5 years	52	44.4
	6-10 years	23	19.7
	More than 10 years	30	25.6

Table 2: Responses of teachers regarding different domains of teaching roles.

Name of the institute	Means Number Standard deviation	Lecturer in class room	Teacher in clinical / practical settings	On the job role model	Teaching role model	Mentor / tutor	Learning facilitator	Assessor	curriculum evaluator	Curriculum planner	Course organizer	Study guide producer	Learning resource producer
KMC	Mean	8.9	8.84	8.51	8.02	8.14	8.19	8.07	7.48	6.68	6.71	6.2	7.65
	N	37	37	36	36	37	37	37	36	37	37	37	37
	Std. Deviation	1.34	1.54	1.82	1.94	2.05	1.73	2.06	2.48	2.71	2.67	2.85	2.27
KGMC	Mean	8.65	8.82	8.22	7.37	7.67	7.39	8.24	7.31	7.04	6.82	6.61	7.94
	N	51	51	51	51	51	51	51	51	51	51	51	51
	Std. Deviation	1.214	.817	1.724	1.624	2.017	1.650	1.582	1.985	2.191	2.104	2.426	1.462
KIMS	Mean	9.00	8.55	8.28	8.03	7.97	9.03	9.34	6.41	7.59	8.03	6.62	8.66
	N	29	29	29	29	29	29	29	29	29	29	29	29
	Std. Deviation	1.732	2.399	2.297	1.861	2.598	1.451	1.261	3.490	2.958	2.679	3.396	2.365
Total	Mean	8.87	8.74	8.38	7.93	7.98	8.00	8.75	7.37	7.59	7.66	6.86	8.31
	N	117	117	116	116	117	117	117	116	117	117	117	117
	Std. Deviation	1.390	1.604	1.906	1.725	2.117	1.749	1.479	2.533	2.388	2.303	2.665	1.776

DISCUSSION

In this study, the importance of educational roles of medical teacher was assessed from the faculties' and institution's point of view. The twelve educational roles were categorized into six groups as it was done in a study by Abolbashari S[8, 9]. Our study was multicenter and there were similarities between the overall views of faculty members of three medical colleges. Most marks were given to information provider role of a medical teacher and least marks were given toplanner and resource developer role of a medical teacher in all three medical colleges.

The information provider role has been given highest score by teachers of basic sciences in all three medical colleges. This role had two aspects, lecturer in class room and teacher in clinical setting. In this study, there was no big difference between importance of lecturing in classroom (8.87) than teaching in clinical setting (8.74) in all three medical colleges in contrast to study by Abolbashari S where faculty members were given relatively higher score to teaching in clinical settings. It was also discussed by Harden and Crosby that clinical setting is a very useful mean for transferring knowledge and skills to medical students while complete exclusion of lectures from schedule is also not recommended[1].

Role modeling is one of most effective strategies for the development of medical professionalism[10, 11, 12]. "On the job role model" and "role model in teaching setting" were two extents of role modeling, which we asked faculty members to score. There seemed to be less awareness amongst those teachers about role modelling. There is a need for more awareness regarding their educational role as role model because role modelling is a powerful way for transmitting values and attitudes[13, 14].

The educational role "Facilitator" has two aspects, mentor and learning facilitator, which has been give average score of 7.98 and 8.00 respectively. Faculty need to be more aware of their role as facilitator and should be trained in methods of mentoring. It was mentioned in a study by Seyedmajidi M that most of students and faculties believe that the current educational system is not efficient and the reason stated in the study was that students did not know how and when to get help from their teachers[15].

Assessment is very important as it drives learning and it is one of most important responsibilities of a medical teacher. "Planningor participating in student assessment" was given high score as compared to "curriculum evaluator", which makes it necessary for medical school to organize more training sessions to familiarize faculty with different instruments of as-

Table 3: Comparison in the distribution of responses between 2 groups (importance from your point of view vs importance in college programs).

Educational roles	Paired differences				t	df	Signed 2-tailed
	Mean	Stand. Deviation	95% confidence interval of difference				
			Lower	Upper			
Lecturer in classroom	.554	2.364	.088	1.021	2.357	100	.020
Teacher in clinical / practical settings	.950	2.242	.508	1.393	4.260	100	.000
On the Job role model	1.950	2.735	1.407	2.493	7.129	99	.000
Role model in teaching settings	1.530	2.484	1.037	2.023	6.159	99	.000
Mentor / tutor	1.376	3.458	.694	2.059	4.000	100	.000
Learning facilitator	1.723	2.786	1.173	2.273	6.214	100	.000
Student`s assessor	.812	1.573	.501	1.122	5.187	100	.000
Curriculum evaluator	.710	2.735	.167	1.253	2.596	99	.011
Curriculum planner	1.248	2.794	.696	1.799	4.487	100	.000
Course organizer	1.267	3.114	.653	1.882	4.090	100	.000
Study guide producer	1.079	3.230	.442	1.717	3.358	100	.001
Learning resources producer	.871	2.203	.436	1.306	3.975	100	.000

sessments and importance of evaluating the teaching effectiveness[16].

"Curriculum planner" and "course organizer" were two roles in planner theme which had been given average score of "7.59" and "7.66" in this study. The relatively low score to these roles was also given in study by Abolbashari S which indicates that faculty is unaware of the great impact these roles have on students learning. In another study, lack of training and increased workload has been stated the reason for low scores in these roles[17, 18]

An increased need for learning resource materials creation is implicit in many of the developments in medical education. Study guides are beneficial for students especially in terms of time saving. Production of study guides was given the least score in this study (6.86). It was stated in another study that faculty members were unaware of importance of study guides and medical school have not involved faculty in their preparations[19, 20].

Generally, faculty members scored the importance of all educational roles of a medical teacher higher from their perspective as compared to their medical school program's perspective. Similar findings were observed by Abolbashari S in his study, in which the discordance have been attributed to university policies where research has been given more importance in faculty's member's promotion than their educational roles.

CONCLUSION

Faculty members of all three, public sector medical colleges were generally aware regarding different educational roles but they need to be informed about some of the roles which have gained lower scores in this study and institutional support and faculty development programs should be organized. The discordance between faculty's and institution's views brings up the fact that probably medical schools need to revise their programs and incorporate all educational roles of a medical teacher in their policies and reconsider the duties of a medical teacher which are expected from them at institutional level. In addition, more qualitative and mixed method research should be done to explore in-depth perceptions of faculty regarding their education roles.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Gul F: Conceived the idea, collected data, reviewed the data and took part in all parts of paper writing.

Masood N: Collected the data, wrote discussion.

Ahmed F: Collected the data, compiled the results, finalized the manuscript.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.