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Perceptions of the preparedness of medical graduates for their responsibilities as "physicians of first contact": a pilot study

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ABSTRACT

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Received: June 23, 2016 Accepted: October 07, 2016 Published: October 16, 2016 Background: The objectives of the medical graduate training program are laid down by the Medical Council of India (MCI) since 1997 that was subjected to amendment till 2012. The graduate medical students are envisaged to provide first contact care inclusive of preventive, promotive, curative and rehabilitative aspect of medicine. However, significant gap in the clinical skills of graduate doctors in India are echoed by the team of medical education experts. Objectives: Keeping these issues in mind, this study aims to explore the perceptions of medical graduates in their preparedness towards their role as first contact clinicians, in management of common problems, in providing holistic care based on bio-psycho-social approach. Methodology: Qualitative methodology was used to explore the perceptions, experiences and ideas of MBBS graduates during medical training, internship and tenure in a Family medicine unit. Results: The initial theme emerged from the data was the disappointment with the lack of opportunity for experiential learning and clinical reasoning. Subsequently, the second theme of passiveness and perceived incompetence in clinical work was evident. This in turn influenced the graduates' perception of the appreciation of learning opportunities in Family Medicine unit towards preparation for their role of physicians of 1st contact care. Conclusion: The participants' perception of lack of confidence in their role of first contact physician reflects the opportunities in the training schedule that needs further research and intervention to improve medical graduates' preparedness for their role as primary care providers in India.

KEY WORDS: Family Medicine; Medical Graduates; Medical Education

INTRODUCTION

The objectives of the medical graduate training program are laid down by the Medical Council of India (MCI) since 1997 that was subjected to amendment till 2012. The graduate medical students are envisaged to provide first contact care inclusive of preventive, promotive, curative and rehabilitative aspect of medicine. The goals of the medical curriculum include competency in practice of holistic medicine, in the diagnosis and management of common health problems of the individual and the community, in socio-psychological, cultural, economic and environmental factors affecting health and in assuming professional responsibilities [1].

The duration of MBBS (Bachelor of Medicine and Bachelor of Surgery) course is four and a half years with one year of internship. The goals to be achieved by the intern during rotation in the district hospital and primary health center are to deal effectively with an individual and the community in the context of primary health care. This is further reinforced by the "Vision – 2015" document of MCI for early clinical exposure with emphasis on compulsory training in family medicine to focus on common problems seen in ambulatory services [2]. Currently on successful completion of internship, the medical graduate is eligible for registration to be licensed to practice in India.

Several studies illustrate the gap between medical education and preparation for practice as the majority of clinical training in medical schools is in tertiary care centers [3,4]. The gap in the clinical skills of graduate doctors in India is echoed by the team of medical education experts [5]. A qualitative study done on health worker attitude towards rural service in India report on the inadequacy of MBBS training as perceived by the MBBS graduates [6].

To the researchers' knowledge the level of training possible or achieved during medical graduate training and the proposed level of competency expected at the time of graduation for the role of a "first contact physician" is poorly defined and explored in India. Keeping these issues in mind, we wanted to explore the perceptions of MBBS graduates in their preparedness towards their role as first contact clinicians, in management of common problems, in providing holistic care based on bio-psycho-social approach. Such data could guide curriculum planners in medical education as well as better prepare the medical graduates for the above roles. Using a qualitative, phenomenological approach, we conducted a focus group discussion with five medical graduates about their experiences as a student and an intern.

OBJECTIVE

The objective of the study is to explore the perceptions of the preparedness of the MBBS graduates for their role as "physicians of first contact", their perceived gap in the under-graduate curriculum towards training for the above role and their experience of working in a Family Medicine unit towards gaining competence for the above role

METHODOLOGY

Qualitative methodology was used to explore the perceptions, experiences and ideas of MBBS graduates during medical training, internship and tenure in a Family medicine unit. Phenomenology was used because it offers a descriptive, reflective, interpretive, and engaging mode of inquiry from which the essence of an experience may be elicited. Further-more this approach presents the evidence of the world as it is lived – the lived experience [7].

Participant recruitment

Researchers' recruited five MBBS graduates as participants who worked in the urban health center managed by a team of Family physicians and Community medicine physicians. Participants had worked over a period of six months to two years in the health center. Researchers' informed the participants about the objectives and details of the study and recruited them after obtaining informed consent. Researchers assured the participants of anonymity and confidentiality. The study was approved by the Institutional Review Board.

Participants' demographic profile: (Table 1)

All the five participants were between the ages of 24 – 30 years with three female and two male doctors. The five participants were trained in three different states of India. Four of them completed their training and internship in private medical colleges. One of the five graduates completed training in a government medical college and did internship in a private academic institution. All the five graduates had completed less than two years of work at other institutions or departments within the same institution prior to joining the Family Medicine unit. One graduate has been in the Family medicine unit for six months while the rest have been in the unit over a period of one – two years.

Data collection

Semi-structured questionnaire for the focus group discussion and for the participant to self-evaluate their level of competency in various skills and procedures was prepared. This was primarily derived after review of Medical Council of India's regulations on Graduate Medical Education [1]. The questionnaire was reviewed by the research team and finalized. The primary questions addressed to the participants are listed in Table 2.

A focus group discussion was conducted by the researchers with the five participants at the health center over a period of 80 – 90 minutes. The entire discussion was audio-taped and transcribed verbatim. Field notes were taken by two of the researchers.

Table 1. Demographic Profile of Participants

No	CHARACTERISTICS	N (%)
1	Gender Male Female	2 (40) 3 (60)
2	Type of medical college attended	1 (20) 4 (80)
3	Type of hospital where internship completed Government Private	1 (20) 4 (80)
4	No. of years since graduation at the time of joining Family Medicine unit Less than 1 year 1 – 2 years	2 (40) 3 (60)
5	Work experience prior to joining Family Medicine unit Nil 1 year 1 – 2 years	2 (40) 0 3 (60)
6	No. of years in Family Medicine unit • < 1 year • 1 – 2 years	1 (20) 4 (80)

Table 2. Questionnaire for Focus Group Discussion

Questionnaire for Focus Group Discussion

Describe your understanding of "physicians of first contact care"

Describe your experience during internship about being competent in diagnosis and management of common health problems of the individual and the community

Describe your feelings about the successes, concerns and challenges that you faced during and after internship

Narrate your experiences about the clinical training opportunities during under-graduation period with the work expectations in internship and after graduation

Describe your experience of working in a Family Medicine unit in terms of severity of clinical conditions, approach to common symptoms and management of chronic conditions.

Share any barriers that might have prevented your learning to get equipped towards a "first contact physician"

Data analysis

Researchers read through the transcript and noted the emerging themes. Field notes were used to add to the descriptions of the participants recorded in transcript. Subsequently these emerging themes were expanded using the immersion and crystallization technique and data synthesized [8]. This technique widely used in qualitative methodology allows the researcher to move from the research question, the generated text and the raw data to the interpretations derived. It requires the researchers' to be immersed in the text with continued reflection, cognitive and emotional engagement with the data. This later evolves into intuitive crystallization and final interpretation.

RESULTS

Participants' self-evaluation of competency in skills and procedures (Table 3)

Participants' self-rating of their clinical and procedural skills varied across the spectrum of medical conditions. Two of them agreed on the ability to manage common illnesses and perform simple procedures. Three of them felt unsure about their ability to manage common childhood illnesses. Similarly three of the participants disagreed on the ability to perform surgical procedures.

Results of focus group discussion

The initial theme emerged from the data was the disappointment with the lack of opportunity for experiential learning and clinical reasoning. Subsequently, the second theme of passiveness and perceived incompetence in clinical work was evident. This in turn influenced the graduates' perception of the appreciation of learning opportunities in Family Medicine unit towards preparation for their role as physicians of first contact care.

Disappointment with the lack of opportunity

The four graduates who completed training and internship in private medical schools were disappointed with their training opportunities. The primary factors in their health system were the limited number of patients who were primarily managed by post-graduate trainees in various specialties. This influenced their experiential learning in performing minor procedures during internship as well.

Participants' quote

"What I felt was we didn't have many patients.. It was a private set up"

"Basically we had post graduate training was also there. Whatever cases were there post graduate students use to take them and even the intra-venous lines also, we usually didn't get any chance during the internship."

"even in cases like circumcision, when it comes to surgery during our internship time, we are also post graduate college, the post graduate students use to work more than us, even basic things like starting a line, circumcision, or any biopsy or anything, the post-graduate student will come. They will do the procedures."

Other factors in the health system that determined the learning opportunities included limited availability of patients in particular specialties and opportunities for clinical reasoning.

Participants' quote

"one thing I want to share you....very difficult to digest....hardly I've seen only 1 normal delivery during the whole one year"

"Obstetrics and Gynecology cases I was incompetent in normal vaginal delivery....and in pediatric cases managing a upper respiratory infection or something pneumonia ..."

"...we would appreciate our findings..we'd identify what the professors and post graduate trainees would teach us...but then that's it. We didn't join the dots.."

"..there was no exposure to apply what were taught during the clinical postings.."

One graduate who completed internship in the private academic institution had challenges with the work load; however felt that she had adequate opportunities to perform procedures.

Table 3. Participants' self-evaluation of competency in skills and procedures

No	Procedures	Strongly agree No (%)	Agree	Neutral	Disagree	Strongly disagree
			No (%)	No (%)	No (%)	No (%)
1	Diagnosis and management of common illnesses		2 (40)	2 (40)	1 (20)	
2	Preventive, promotive, curative and rehabilitative medicine		2 (40)	2 (40)	1 (20)	
3	Blood (smear and blood group) and urine (routine and microscopic)		1 (20)	2 (40)	2 (40)	
4	Catheterization, proctoscopy, ophthalmoscopy and otoscopy		3 (60)	1 (20)		1 (20)
5	Common childhood illnesses including evaluation of sick child		1 (20)	3 (60)		1 (20)
6	Screening of newborn babies		2 (40)	1 (20)	1 (20)	1 (20)
7	Diagnosis of surgical emergencies	1 (20)		4 (80)		
8	Drainage of superficial abscesses, suturing, circumcision and biopsy of surface tumors		2 (40)		3 (60)	
9	Diagnosis of early pregnancy and antenatal care		4 (80)		1 (20)	
10	Conduct normal vaginal delivery		1 (20)		4 (80)	

Participants' quote

"I was able to learn procedures starting intravenous line, pleural tapping, these kind of basic procedure I was able to learn"

"In internship there were so many nice cases in the wards ...but I use to feel by the end of the day when I finish all the procedures, I feel so tired that I do not feel like going and examining the child and really learn as such."

"In peds everyday I used to wake up at 4.30AM in the morning and start collecting samples..do all investigations and by 7 AM finish all work..."

"at 7AM I'll have some patients to work up..I'll just merely collect history..manually without thinking..I'll have to do it fast. Then the post graduate trainee would come and he will order all the investigations and write the differentials.."

All the graduates expressed that the primary focus was towards "exam cases" and lack of support and supervision for clinical reasoning of various symptom presentations. This was influenced by the above factors and by the belief that this analytical approach to symptoms can be learned later.

Participants' quote

"...even if its iron deficiency anemia or cases like that, they just say see these cases, they don't allow us like OK... they won't teach us what is the case, how do you identify this case"

"how would you classify if it's a pneumonia or anything, OK it's a increased respiratory rate, OK you can see that, what are the antibiotic they mostly use they won't be saying us so elaborately..."

"Patient with fever only..means..I am not taught to.. means like...we have to think of Urinary Tract Infection or Upper Respiratory Infection..in terms of pneumonia.. what are the history we should ask...not taught..so"

"..so when we used to ask them they used to say..how did you do that..they won't make us explain because..they feel like no need to know now, you'll come to know about it later. So it was not good"

"we were taught to handle exam cases..Atrial Septal Defect, Ventral Septal Defect, Mitral Stenosis / Mitral Regurgitation..we were not taught to how to manage diarrhea in a child..dehydrated child.."

The unfavorable learning environment during clinical training and internship rendered the graduates' with a sense of frustration and disappointment with their perceived level of skills in clinical work.

Passiveness in Clinical work

The four graduates from private medical colleges expressed their passive role in clinical care of patients during various rotations in their internship. They felt that they were not part of the clinical team who provided patient care in the role of a physician. They attributed it to the hierarchical system and the interplay of factors in the system.

Participants' quote

"I year internship was like lab technician...I can say that I don't have the feeling oflike a junior doctor... or intern...most of the time I spent in labs...collecting samples or collecting the results..."

" In internship mostly following the orders was there. Discharge summary was there"

"Challenge was I was asked to do certain things rather than being part of clinical care and labor room"

"but in internship running around xrays, running around investigations.."

The graduates' perceived significant lack of responsibilities in clinical work and a clear role in the team. This evolved into a sense of failure towards deeper understanding and involvement in patient care.

Graduates perceived incompetence

All the graduates shared their experience in diagnosing and managing common clinical conditions as inadequate that made them to feel incompetent. Apart from the system factors listed above the rotations in tertiary care center did not give them the adequate opportunity to get trained in managing common conditions.

Participants' quote

"the common things like diabetes and hypertension management, chronic obstructive pulmonary disease, bronchial asthma, I never had such an experience of follow-up"

"diabetes and hypertension I was not at all confident..
even in Medicine I was made to sit next to a post
graduate, the medicine post graduate will have their own
enough number of charts so she'll be hesitant to teach
also"

"In pediatrics not even a pneumonia case we saw"

"With internship alone competency in diagnosing ...condition...I can't say that I won't say that I was competent only with internship experience"

One graduate shared her experience during the rotation in a secondary care unit as favorable for training in managing common conditions.

Participants' quote

"In internship – in community medicine and urban health center only I was exposed to common illnesses but I think the time here was too short" The graduates' lack of confidence in managing common conditions was evident as the majority of training and internship was primarily and predominantly based in teaching hospitals.

Appreciation of learning opportunities in the Family Medicine Unit

The graduates shared their experiences of various opportunities for managing common medical conditions in a Family Medicine unit based on evidence based medicine and holistic approach. Symptom based approach to common presentations were widely appreciated along with the management towards the tailored needs of patients with psycho-social challenges during out-reach clinics.

Participants' quote

"patients with all the common diseases we can see here and then there is..from my experience..for all diseases there are clear cut protocols that I can see"

"I get to experience an adult with chronic conditions like diabetes, hypertension, rheumatoid arthritis follow-up... here we see all their medications..side effects..everything"

"sometimes the illness may not be the clinical symptoms they see, it may be a home situation, helping that also to identify..giving a solution to that..helping to cope up with that"

Graduates reported on the time spent with the patient towards counseling, shared decision making based on individual patient needs and identifying sick patients among the regular encounters. This evolved into a sense of pride and confidence during their patient interaction.

Participants' quote

"I am able to judge the patients..the common illnesses.. able to identify triage patients..who needs to be admitted, who needs referral"

"I never handled or spoke to the patient for so long.."

"I feel somewhat I am doing good for patients"

"I feel I can treat the common illnesses now"

"..we are accessible to the community over there."

Their perceptions of learning opportunities were not limited to clinical work and were appreciative of the weekly academic sessions, opportunities in out-reach clinics and in group visits for diabetes care.

Participants' quote

"then health education I never attended something like diabetes mellitus group visits classes we have here for follow up"

"weekly presentations helped me a lot..like we can present the case and we can have a discussion...with the consultants..what went wrong and what could have improved in our clinical skills..while managing the patients"

"In the outreach it was like a good experience for me because I see many people couldn't come over here.. they feel that someone is coming there and someone is identifying their problem and giving them medication and making them feel at home."

Their perceived difference in the learning opportunities in an urban health center and in the tertiary care center reflects the difference in the morbidity pattern between the two levels of health system.

Role of physicians of first contact care

Graduates shared their perceptions on the role of first^t contact physicians as physicians accessible to the community, manage common diseases, triage sick patients and arrange appropriate referral for further management and screen for risk factors.

Participants' quote

"..First thing we are accessible to patients...Second thing is we should be able to identify what the problem is and which place to refer to..where to guide..what will be the management of the next step....whether if its within our capability to handle all his/ her problem"

"like at least we should be able to manage community problems like what we commonly see day-to-day"

"is not only treating or curing the disease ..but preventing...like identifying risk factors...like health education"

All the participants shared their understanding of the role of first contact physicians as to provide comprehensive primary and secondary level health services for the community.

DISCUSSION

This study has illuminated the medical graduates' lived experience during medical school and internship towards preparation for the role of physicians of first contact. Their understanding is in accordance to the responsibilities mentioned in the regulations on graduate medical education by the Medical Council of India [1].

Their disappointment with the learning environment, perceived incompetence towards management of common conditions and passiveness in clinical care is a concern. Of the seven semesters that deal with clinical and para-clinical training spread over three and half years of clinical training in medical school, 12 weeks are allotted for training in a primary health center [1]. The rest of clinical training is in tertiary care teaching hospitals which primarily deal with advanced medical conditions and not common diseases from the community. Medical students trained primarily in

tertiary care setting are not equipped for the management of common illnesses in the community.

"The Ecology of Medical Care" published in 1960 by White et al provided a significant framework for reorganizing health services, education and research in Western Countries [9]. The framework illustrates that academictertiary care hospital provides care for 1 person in 1000. Similarly the study reports that quality and safety programs along with medical information system and research are limited to these hospital settings. Medical students primarily trained in academic tertiary care institutions miss significant learning opportunities in health services and research in community hospitals.

Medical graduates' perceived lack of preparedness towards the goal of first contact physician is primarily due to lack of training opportunities in secondary care hospitals where they would be eventually expected to provide first contact clinical care. Community hospitals are shown to provide optimum opportunities for training in emergency medicine, in management of common conditions, risk stratification, in prevention and health education [10, 11]. Similar results are reported by the authors' study with the medical students on their perception about rotation in a Family Medicine unit in a secondary hospital. Medical students valued the experiential learning in longitudinal care and symptom based approach to common medical illnesses [12].

In the proposed "Vision 2015" document of MCI, medical graduates are given the option to undergo two years of training after internship in district health services and in Family medicine ambulatory services [2]. This shall provide structured opportunities to work in general practices, family practice clinics, primary health centers(PHC), urban health centers (UHC) or stand-alone clinics. Such health service units are likely to provide opportunities for learning the approach to common symptoms and chronic diseases prevalent in the community. Of late, there is a resurgence of interest by the policy makers and curriculum planners in India towards including Family Medicine in undergraduate training. This was further supported in a recent parliamentary standing committee meeting on health and family welfare [13]. The committee acknowledged Family Medicine as a specialty with a broad set of clinical competencies that equip trainees to manage most of medical problems encountered at primary level.

Newer changes in undergraduate medical education program and curricular design around the world include integration of course content of basic science with clinical exposure and community engagement [14]. Certain universities in Australia have rural clinical schools that serve the twin purpose of serving local communities through engagement with medical students and the university. Medical students learn from local general practitioners and other health professionals. Similar longitudinal rotations in a family practice clinic or PHC or UHC once a week in the afternoon from first year of training in medical school is

6

to be considered in India. The medical student would thus be exposed to interviewing skills, collecting and recording of medical history and physical examination and organizing a problem list in parallel to their basic science teaching. There would be opportunities to develop student patient relationship and continue this throughout the remaining five years of training. The above process if implemented would gradually shift the focus of clinical teaching from complex hospitalized patient to common problems of ambulatory care. The common exit assessment of the medical graduate should also change correspondingly.

The one year of compulsory internship in India is a crucial part of medical education. It is described by MCI as "a phase of training wherein a graduate is expected to conduct actual practice of medical and health care and acquire skills under supervision so that he / she may become capable of functioning independently" [1]. The MCI has defined and listed the guidelines for the internship program. However each training medical college and hospital vary in their capacity and efficiency to provide appropriate teaching and learning environment for their interns. To ensure uniformity, skills training during final year using simulation and further practice during patient encounters in internship can be assessed by work based assessment tools like Mini-Cex [15]. This is likely to improve uniformity among the medical colleges across the country in complying to internship guidelines.

The MCI vision 2015 document suggests a licentiate examination at the end of internship wherein assessment of skills and competencies are to be done [2]. A student can become an Indian medical graduate only on clearing the licentiate exam. Now more than ever is the time to implement such a scheme. As this pilot study describes the frustration of the medical graduate in not being able to acquire skills during internship, the need for the new scheme of licensing medical graduates is emphasized.

This pilot study was done with a group of five medical graduates who graduated from different parts of India and worked in a Family Medicine unit over a period of six months to two years. Medical graduates work in various clinical services to gain understanding of the specific clinical discipline and prepare for their entry level exams to further training in their chosen specialties. Four of them trained in private medical schools may have encountered different training environments from the large majority of graduates trained in government medical schools. The researchers' being the clinical supervisors involved power in the relationship towards the participants.

This study can be further validated over the next few years when new MBBS graduates work in the Family Medicine unit for a minimum of six months. Currently, India has two academic Family Medicine departments that provide opportunities for medical students and medical graduates to conceptualize Family Medicine principles and be trained by Family physicians.

Similar studies involving medical graduates from other parts of the country and their clinical supervisors and patients are likely to be the next step in re-organizing medical education towards meeting the health needs of the country.

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