ORIGINAL ARTICLE

NEEDS ASSESSMENT FOR ESTABLISHING FACULTY DEVELOPMENT PROGRAM IN A PRIVATE MEDICAL COLLEGE AT LAHORE

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Background: Needs assessment helps in situation analysis and setting priorities for establishing a faculty development program to ensure quality improvement in education. The objective of this study was to identify areas for faculty development in order to incorporate them in continuing–medical education program. **Methods:** It was a cross sectional survey conducted from 2014 to 2015 in Fatima Memorial Hospital College of Medicine and Dentistry, Lahore, Pakistan. A non-probability consecutive sampling technique was used to include 195 faculty members from Medical & Dental College of all cadres. Data was collected through a self-administered questionnaire & analysed using SPSS 20. Chi square was applied and *p*-value of ≤0.05 was considered to be significant. **Results:** Out of 194 participants, 133 belonged to clinical departments and 61 to basic Sciences, with a higher proportion of female faculty members. (*p*=0.025). Importance of DME was recognized by 97% clinical and 95.1% basic science faculty. Faculty development program was considered essential by 69.1% of the clinical faculty & 30.9% of the basic faculty. (*p*=0.185). The priority areas identified were educational psychology (*p*=0.030), teaching skills (*p*=0.341), assessment techniques (*p*=0.296), educational research (*p*=0.849), management skills (*p*=0.797), work-based ethics & conduction of meeting. (*p*=0.01 & *p*=0.003). About 71.25% of the clinical teachers and 28.8% of the basic subject teachers have never attended any medical education program (*p*=0.001). The area of highest motivation was teaching (*p*=0.002), research (*p*=0.052), patient care (*p*=0.001) and administration (*p*=0.870). **Conclusion:** This survey reinforces the need of an effective faculty development program targeting training in teaching methodologies and assessment tools.

Keywords: Need assessment; Faculty development; Educational research; Pakistan

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INTRODUCTION

Effective training begins with needs assessment as it measures the skills that individuals have, what they need, and how to deliver the right training at the right time, as described by the American Society of Training and Development.[1] Needs assessment is used to define the rationale and background for a program and identifies the areas of interest and gaps within the needs and requirements of learners.[2] Learners tend to adopt new behaviours if interventions are planned according to needs assessment surveys. It is an accepted belief that it is the responsibility of the learners to self-assess, identify, and participate in programs to enhance their learning and competency.[3] Active learning is the key to success throughout academic career of any academician especially in the field of medicine. Continual learning is required to remain competent and aware of the changes that occur in the medical field after graduation. Educational programs, particularly problem-based, are essential for the development of self-assessment skills and self-directed learning skills in order to prepare medical professionals to face the challenges of the rapidly evolving world of medicine.[4]

Faculty development programs, wherever and whenever initiated, have proven to be beneficial leaving a significant positive effect on medical teachers' competencies and enhances the effectiveness of their performance as professionals.[5] Many universities in our region advocate development of faculty programs and successful examples have been shown in Saudi Arabia and India.[6,7] Educationalists in Pakistani universities, have been emphasizing on the pressing need to initiate faculty development programs for instructional, professional and organizational development.[8]

A variety of tools and techniques, including questionnaires, Likert scales, focus groups, interviews, and Delphi techniques, can be employed to conduct needs assessment for continuing medical education (CME) in various settings. Clinicians may also utilize patient feedback, diaries, clinical incident surveys, peer reviews and clinico-pathological conferences as self-assessment tools.[9]

This study was carried out to assess the educational needs of the faculty of both basic medical and clinical sciences before initiating a faculty development program. It was also meant to highlight priorities and identify urgent needs of the faculty.[10] Objective of this study was to identify areas for faculty development in order to incorporate them in a continuing medical education program.

MATERIAL AND METHODS

A cross sectional survey was conducted at Fatima Memorial Hospital College of Medicine and Dentistry, Lahore. A total of 195 participants, 60 from basic sciences and 135 from clinical departments were enrolled through non-probability consecutive sampling technique. The total duration of survey was one year starting December 2014 to December 2015. A self-administered questionnaire was developed and used for data collection from all faculty members of both medical & dental college. The participants included faculty members from both basic and clinical sciences and included all cadres of teaching staff. Institutional Review Board (IRB) clearance was taken before data collection. Data was collected anonymously and confidentiality was maintained by the principal investigator in all steps of data collection, entry, coding and analysis. Data was analysed using SPSS 20. Chi square test was used as test of significance. A *p*-value of ≤0.05 was considered to be significant.

RESULTS

A total of 194 faculty members involved in teaching participated in this survey. Approximately 68.5% (n=133) participants were from the clinical side while 31.4% (n=61) belonged to basic sciences. Female predominance was observed, among clinical faculty 53.4% (n=71) were females and 46.6% (n=62) were males while in the basic sciences 70.5% (n=43) were females and 29.5% (n=18) were males. Majority of the participants were demonstrators 55.1% (n=107). Other members included 7.2% professors, 6.1% associate professors, 10.82% assistant professors &14.4% senior demonstrators. The study also included 6.1% of the house officers who wanted to pursue teaching career. The results of duration of stay in these particular teaching institutes showed that 35.6% (n=69) of the staff had less than one year of duration of stay with affiliated medical college. About 27.3% (n=53) of the participants had 1–3 years, 11.3% (n=22) had 4-5 years and 25.8% (n=50) had more than five years of stay with affiliated institute. There was significant difference observed in the comparison of duration of stay between basic sciences and clinical faculty members (*p*=0.05) (Table-1).

Ninety six percent of the faculty members agreed that medical education department is an essential component for the institution. Majority 97% (n=129) of the clinical and 95.1% (n=58) of the basic sciences faculty endorsed the idea (*p*=0.508). Faculty development program as the requirement of modern teaching was agreed to with no significant difference where 69.1% (n=132) of the clinical faculty and 30.9% (n=59) of the basic sciences faculty agreed to it (*p*=0.185).

Table 1: Socio demographic profile of faculty members

variables	n	(%)
Gender		
Female	114	58.8
Male	80	41.2
Department		
Clinical Sciences	133	68.6
Basic Sciences	61	31.4
Academic Rank		
Professor	14	7.2
Associate Professor	12	6.2
Assistant Professor	21	10.8
Sr.Demonstrator	28	14.4
Demonstrator	107	55.2
House officer	12	6.2
Duration of Stay at FMH		
1 Year	69	35.6
1–3 Year	53	27.3
3–5 Year	22	11.3
More than 5 year	50	25.8

In response to areas that needed focus of medical education department, 26.3% (n=51) answered in favour of curriculum and educational strategies improvement, 20.1% (n=39) were in favour of CME credit hours enhancement and 11.9% (n=23) favoured improvement in research skills (*p*=0.098) (Figure-1)

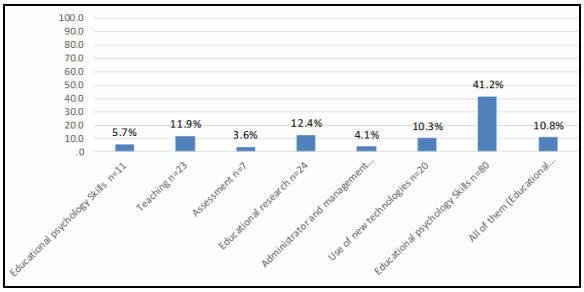

Figure-1: Priority areas of faculty development program

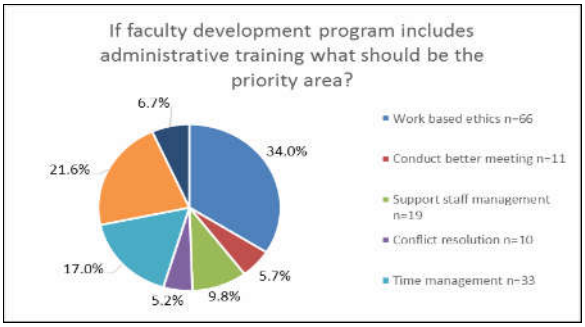

Figure-2: Faculty development program targeting administrative areas

It was observed that 63.25% (n=84) of the clinical teachers and 55.7% (n=34) of the basic subject teachers have never attended any course or workshop in medical education (p=0.326). A very small number of basic sciences faculty members have attended faculty development workshops as compared to those from clinical sciences (p=0.001). These included BLS, ATLS, MCQ development workshops, communication skills, supervisory skills, research skills and use of internet in teaching etc. Best format for faculty development program was believed to be a half day workshop by 38.7% (n=75) participants of the survey. Other favoured formats included clinic-pathological conferences (27.3%), group discussions (25.3%) and full day workshops (8.8%) (Table-2).

Preferred day of the week for faculty development program was agreed to be Thursday by, 30.9% (n=60). The reason was that faculty thought that greater attendance can be achieved targeting middle of the week. There was no statistical difference observed in opinions of faculty members from both basic and clinical sciences. (p=0.208). Morning slot was considered best by majority of the faculty members (89.7%) as the faculty thought that morning sessions bring greater concentration and can be followed by routine clinical work after words.

Table-2: Perspective of faculty members about Faculty development program

Variable	Yes	No	Total	*p* value
Department of medical education is necessary				
clinical	129 (97.0%)	4 (3.0%)	133 (100%)	0.508
basic	58 (95.1%)	3 (4.9%)	61 (100%)	
Faculty development program is the requirement of modern teaching				
clinical	132 (99.2%)	1 (0.8%)	133 (100%)	0.185
basic	59 (96.7%)	2 (3.3%)	61 (100%)	
Attended any course/ workshop/seminar related to medical education				
Clinical	49 (36.8%)	84 (63.2%)	133 (100%)	0.326
Basic	27 (44.3%)	34 (55.7%)	61 (100%)	

Faculty members were comfortable for both internal and external master trainers (p=0.203). (Table-3) A total of 90.7% (n=176) participants believed that there should be a mix of all teaching cadres in these workshops to enhance learning opportunity (p=0.156).

There was significant difference in opinion of faculty members regarding faculty evaluation program (p=0.01) where 94% (n=125) of the clinical sciences faculty favoured it and only 77% (n=47) of the basic sciences favoured it. Self-assessment of faculty at the end of academic year also showed statistical difference in opinion of both groups (p=0.002). Ninety six percent of staff members believed that faculty development program should be started in this institute. Significant difference was observed in satisfaction level with the teaching in current academic year (p=0.009) and the priority areas of faculty development program (p=>0.001) chosen by clinical and basic faculty.

Teaching was identified as the highest area of motivation by 57.3% (n=51) of the clinical side and 42.7% (n=38) of the basic sciences depicting a significant association (p=0.002), research was opted by 61% (n=50) of the clinical and 39% (n=32) of the basic faculty (p=0.052), patient care was considered to be the highest interest area for 92.2% (n=81) of the clinical and 8% (n=7) of the basic faculty members (p-value= > 0.001) while administration was chosen by 66.7% (n=10) of the clinical and 33.3% (n=5) of the basic sciences faculty (p=0.870).

There was significant difference in time spent in teaching by faculty of basic sciences 33.3% (n=28) and clinical faculty 66.7% (n=56) (p >0.001). 55.6% of clinical faculty (n=10) preferred research skills improvement to teaching skills as compared to basic sciences faculty 44.4% (n=8) who had no clear preference (p = 0.212). Majority 93.1% (n=122) of clinical faculty was spending time in patient care (p= >0.001) and administrative work 78.6% (n=98).

Table-3: Suggestions for faculty development program

Preferred Format of the workshop					
	Group discussion	**CPC**	**Full day workshops**	**Half day workshops**	***p*-value**
Clinical	33 (24.8%)	42 (31.6%)	12 (9%)	46 (34.6%)	**0.196**
Basic	16 (26.2%)	11 (18%)	5 (8.2%)	29 (47.5%)	
Preferred day of faculty development program					
	Monday	**Tuesday**	**Wednesday**	**Thursday**	
Clinical	29 (21.8%)	29 (21.8%)	34 (25.6%)	41 (30.8%)	**0.208**
Basic	21 (34.4%)	8 (13.1%)	13 (21.3%)	19 (31.1%)	
Preferred time of day for faculty development program					
	Morning		**Evening**		
Clinical	116 (87.2%)		17 (12.8%)		**0.094**
Basic	58 (95.1%)		3 (4.9%)		
Preferred master trainer for workshops					
	Internal	**External**	**Both**		
Clinical	59 (42.1%)*	42 (31.6%)	35 (26.3%)		**0.230**
Basic	21 (34.4%)	27 (44.3%)*	13 (21.3%)		
Do you think that all cadres of teaching faculty should blend in these workshops					
	Yes		**No**		
Clinical	58 (95.1%)		3 (4.9%)		**0.156**
Basic	118 (88.7%)		15 (11.3%)		

DISCUSSION

Faculty Development Program improves faculty competencies in personal, professional, instructional and course development.[11] Worldwide various faculty development programs in medical colleges have been established in different countries.[12] Recently, Pakistan Medical and Dental council along with Higher Education Commission have approved that each medical college should have a fully functional department of medical education and should be made responsible for faculty development program.[13]

Establishment of department of medical education and strong faculty development program is now the most identified need in medical colleges of Pakistan.[14] In this study 96.4% of the faculty members believed that DME establishment is need of the hour and majority believed that this department should focus on faculty development program. These faculty development programs have shown increase in satisfaction levels of faculty in terms of improvement in content, facilitation, schedules, materials, and academic achievements of both faculty and students.[15]

One of the major objectives of establishing faculty development program is to train trainers who can then facilitate educational reform in their own settings but this domain [16] was largely neglected in Pakistan as our study shows that 60.8% of the faculty members have never attended any seminar/ workshop/ certification in regards to medical education. Multiple tools have been used in training of medical education in Cambodia, Laos, Mangolia, Myanmar & Vietnam to train faculty under the banner of Seoul Intensive Course for Medical Educators which relates to our study where faculty has recommended use of workshops, seminars, plenary sessions and group discussion as tools to enhance faculty competencies.[15,17] Various programs of faculty development in educational leadership and educational psychology have shown that middle of the week is preferred by faculty for such trainings.[18]

A study conducted in Pennsylvania State University College of Medicine which showed that blending of junior faculty members with senior faculty has shown improved results in increasing their motivation and has tremendously enhanced their skills as teachers.[19] The participants of this study also believed that equal participation of senior and junior faculty members in workshops of department of medical education increase learning opportunities.

Faculty development programs provide skills and strategies to faculty of various disciplines and at different stages of their careers, with different responsibilities.[20] Faculty development programs are time and resource intensive so it is required that need assessment surveys should be done before planning so it can improve participant's scholarly productivity.[21]

In the modern era of medical education, multiple tools of teaching and learning are being promoted. Role-modeling, interactive lecturing, web-based learning, case-based discussions, mentoring, role plays are used as multiple instructional tools.[22]

For implementation of these tools, multiple approaches are now being used as part and parcel of faculty development program.[23] Medical education is showing improving trends with increased ownership of medical educationists in Pakistan. Many workshops, seminars & conferences are being arranged at multiple venues.[24]

It is imperative now that stake holders should be taken into account before planning faculty development program at any institute as it will increase their ownership. This in turn will increase their motivation to participate fully and implement new strategies in their routine work.[25,26]

CONCLUSION

Faculty development programs are an integral component of department of medical education. A large number of faculty members currently working in medical schools do not have exposure to faculty development programs. Educational strategies, assessment tools and research are recommended to be the prime focus of faculty development workshops. Motivation of faculty members can be enhanced by performing needs assessment before starting a faculty development program.

AUTHORS' CONTRIBUTION

IM: Conceptualization of study design, literature search, methodology, IRB approval and write-up of results and discussion. SZ: data collection, literature search, write-up of results. AI: Write-up of introduction. FS: Literature search and contribution of references and discussion.

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