

Perception of Dental Faculty on Face-to-Face and Virtual Programs of Faculty Development; A Cross-Sectional Study

Shaur Sarfaraz, Muhammad Kashif Nisar, Samira Adnan, Sabeen Masood, Zohaib Khurshid

ABSTRACT

Objective: To compare the perception of dental faculty regarding face-to-face and virtual faculty development programs (FDPs) in dental institutes of Karachi.

Study design and Setting: A descriptive cross-sectional study was conducted at multiple dental colleges of Karachi. (January to April 2020).

Methodology: The study was carried out among 161 faculty members teaching in private dental institutes, using a modified, validated questionnaire with convenient sampling. Data was analyzed on SPSS version 21.

Results: The mean age of study participants was 32.31 ± 8.09 years, and teaching experience was 5.01 ± 6.34 years. Majority of the participants had not received any faculty development training (p-value of 0.001). Most of the faculty reported no established faculty development program available either face-to-face or virtually in their respective institute. Majority (28.8 %) of participants perceived that the main barrier for FDPs was the lack of administrative support. However, the faculty desired to enhance their teaching skills, recommending that faculty development programs be made compulsory for all faculty members. The majority of participants (35.43 +ve mean rank) were in favour of face-to-face sessions (p=0.001) but were reluctant towards virtual sessions. Most (49.2 %) of the faculty perceived the foremost benefit of attending FDPs to be improvement in teaching skills and MCQs /EMQs writing.

Conclusion: Dental faculty were more inclined towards face-to-face sessions than virtually conducted sessions however, their perception of the utility of FDPs were found to be limited. Moreover, it was that some of the barriers to attend FDPs was faculty determinants like deficient time and dearth of commitment.

Keywords: Dental faculty, Faculty development programs, Self-perception.

How to cite this Article:

Sarfaraz S, Nisar MK, Adnan S, Masood S, Khurshid Z. Perception of Dental Faculty on Face-to-Face and Virtual Programs of Faculty Development; A Cross-Sectional Study. *J Bahria Uni Med Dental Coll.* 2022; 12(1):35-40 DOI: <https://doi.org/10.51985/JBUMDC2021087>

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Received: 18-Oct-2021
Accepted: 15-Dec-2021

INTRODUCTION:

Faculty development (FD) refers to activities that are organized for effective professionalization of teachers.^{1,2} These sessions vary in length, context and complexity depending upon faculty and institutional needs.²⁻⁴ The most common formats of faculty development programs (FDPs) include workshops, seminars, courses and degree programs. Till date, FD activities have shown convincing evidence in enhancing the professional skillset of the faculty and in helping them perform their academic roles as teachers, assessors, leaders, managers, researchers and mentors.^{5,6} Besides these essential facets, FD can also serve as a useful medium for curricular and institutional reforms that are insinuated to improve the overall educational environment.⁷ Many institutes recognize the value of FD and they invest variable amount of human and logistic resources to assist their teachers in improving their teaching competencies.^{7,8} Although FD is a well known teaching capacity building process, its recognition in the context of dental education in a developing country like Pakistan is still evolving. This could be attributed to the unavailability of expert

educationists, insufficient resources and/or mere lack of institutional priorities.⁸ The commencement of FD activities is less frequent in dental field, and with the additional strain caused by the COVID 19 pandemic lockdown, it becomes even more challenging for health professions educationists to effectively design and conduct workshops for the dental faculty. An additional hurdle is the inflexible attitude of some faculty that hinders the effective translation of training to their teaching practices.⁹ Such faculty members fail to practice evidence-based teaching and eventually revert back to their didactic methods. The factors can include the “Dunning-Kruger effect”, insufficient motivation, lack of institutional support and/or not internalizing the significance of FD.¹⁰ Henceforth, continuous professional development of faculty is essential to ensure evidence-based teaching practices that can positively influence students’ learning and keep faculty’s spirit motivated since they are the key stakeholders steering the professional education of their students.⁵

There is scant evidence in literature related to faculty development programs in dentistry. Hence, this study aimed to compare the perceptions of faculty towards faculty development programs and determine their interest in face-to-face sessions compared with virtual sessions in various dental institutions of Pakistan. The results of this study will facilitate universities, accrediting bodies and policymakers to recognize the needs of faculty development initiatives in dental education. The observations will also aid dental educationists in promoting faculty development programs in various formats, especially in dental institutions.

METHODOLOGY:

This was a descriptive cross-sectional study to compare the perception of dental faculty regarding faculty development programs (FDPs) being conducted in different dental colleges of Karachi, Pakistan. The study spanned over a period of four months, from January 2020 to April 2020.

A self-administered semi-structured questionnaire in the English language was designed to collect data. The study questionnaire consists of three sections. The first section recorded demographics like age, gender, and information about qualification (specialization), teaching program, academic rank and teaching experience of the faculty. The second section comprised of twelve items based on responses on a 3-point Likert scale (Agree, Neutral and Disagree) and assessed the opportunities, support and formal training offered by the institution as well as the attitude of the participants towards faculty development programs in both face-to-face and virtual mode of delivery. The third section contained three open-ended questions. Faculty were asked about the barriers and hindrances in implementing faculty development programs, suggestions regarding areas for training and development of faculty and the rationale they believed for faculty development programs. The questionnaire

was adapted from a similar study conducted by N. Karl Haden and O’Sullivan^{1,3} and modified by authors according to context. The questionnaire was piloted among twenty participants giving Cronbach’s alpha value of 0.81, showing acceptable reliability.

The research was approved by an independent local review body, ethics committee of Altamash Institute of Dental Medicine (Ethical Review #: AIDM/EC/10/2018/05). The final questionnaire was distributed among 200 faculty members. Visiting and adjunct dental faculty and faculty who did not give consent to become part of the study were excluded. Each participant was informed about the purpose and benefits of this research, and a guarantee of confidentiality was provided prior to the data collection. Only after acquiring verbal and signed consent from the candidates, the responses were recorded. A total of 161 responses with no missing data were included in the study. The data was then gathered and transferred into SPSS sciences (version 21). Descriptive statistics like frequency (f), percentage (%), Arithmetical mean (X), standard deviation (s) and Wilcoxon Signed Ranks Test was used to compare the perception of faculty for face to face and virtual programs for faculty development. p-value <0.05 was considered as statistically significant.

RESULTS:

The data related to the demographics of the participants is shown in Table 1. The mean age of study participants was 32.31 ± 8.09 years, and the mean teaching experience was 5.01 ± 6.34 years. A female predominance characterized the respondents, with most participants having only BDS degree. Majority (83.6%) of the faculty taught undergraduate students and more than half (60.2%) of the participants had appointment as senior lecturer.

The majority of the participants had not received any type of faculty development training as data presents disagreement for both formats of FDPs with a significant p-value of 0.001.

Significant mean ranks was found for the format of faculty development programs with opportunities for developing the skills of educational administration ($p=0.000$), improving teaching skills ($p=0.026$), formal training for improving teaching skills attended in other institutions ($p=0.009$) and for the parent institution offering faculty development programs ($p=0.000$). In addition, other significant results are presented in Table-2. In Table 3, the correlation between the faculty’s interest in participating in FDPs conducted through both face-to-face and virtual mode with institutional support is shown. The faculty’s motivation in attending FDPs was significantly more than the support and resources provided by their institutions. This interest was inclined towards the face-to-face sessions as compared to online sessions. Figure 1 shows the perceived barriers to participation in FDPs by the responders. The most significant hurdle in this regard was the lack of moral and financial support from the administration of the institute of employment, followed

by a lack of time and commitment as well as financial constraints.

Responses related to the perceived benefits of the attending FDPs demonstrated that the majority of the participants believed FDPs helped improve teaching skills and provided guidance in the development of assessment tools like Multiple Choice Questions (MCQs) and Extended Matching Questions (EMQs) (44%). Other perceived advantages reported by the faculty are shown in Figure 2. Participants were also asked to suggest topics for which FDPs should be conducted. The responses were categorized into themes, as shown in Table 4.

DISCUSSION:

This study is an initiative to aid dental educationists to determine the current views of dental faculty regarding FD training, the consistency of the FD programs and issues related to these programs in private dental colleges. In the study, it was observed that majority of the faculty members had negligible or no support from their institutions in improving and developing their teaching skills, and that there was lack of trainers or educationists who could develop and facilitate the faculty in improving and enriching their teaching and assessing skills. The lack of availability of appropriate professional personnel for faculty training could be due to the lack of interest of leadership as well as scarcity of relevant resources provided by the administration and other figures of authority towards developing their faculty. Similar findings have been reported in other studies¹⁵⁻¹⁶ where emphasis has been placed on the need of administrative support to implement professional development programs to improve faculty teaching skills and organizational outcomes.³⁻¹¹ Such support to the faculty results in a positive change in their teaching behaviours and they contribute in their institutions by escalating the quality of teaching programs.¹²⁻¹⁷

This study showed that majority of participants had not received any type of faculty development training as represented by the data for both modes of delivery. In addition, the participants who received the training offered by the institution or elsewhere, increased the prospect of developing and improving the skills of educational administration and teaching. The faculty also affirmed that FDPs should be compulsory for all faculty and relevant opportunities should be provided by the institutions. In many studies, similar results regarding faculty development initiatives were found, where there was an outstanding change in faculty confidence after gaining knowledge and skills of teaching when they had undergone proper training.^{5,9,11,16}

Our study also identified the most significant barrier towards FD programs that the faculty perceived was the lack of support from the administration and institutions towards such activities. Many studies reported similarly, where

faculty receive no support or time to improve their teaching and capabilities skills.¹⁸ Teaching and managing students are not spontaneous skills. The faculty requires training and development while being cognizant of evidence-based practices followed globally.¹⁹ Considering the results of this study, if institutes are not willing to promote FDPs in their settings and fail to encourage the faculty to improve their teaching and assessing skills then subsequently, the students would suffer, leaving them less equipped to effectively apply their knowledge in clinical practice.¹⁸⁻¹⁹ Hence, it is imperative that dental colleges and institutes invest in resources required to continually conduct and propagate FD programs, including acquiring the service of health professions educationists and faculty trainers. Moreover, the administration should ensure that all faculty members participate actively in such programs since, besides institution-related barriers, lack of time and

Table 1: Descriptive Statistics of Dental faculty (n=161)

	Mean ±SD
Age(years)	32.31±8.09
Teaching Experience (years)	5.01±6.34
	n(%)
Gender	
Female	99(61.5)
Male	62(38.5)
Qualification	
B.D.S	63(39.1)
M.Sc.	35(21.7)
F.C.P.S	28(17.4)
M.C.P.S	19(11.8)
MPH	6(3.7)
FDSRCS	8(5.0)
PhD.	2(1.2)
Field of Specialization	
Not specialized (BDS only)	38(36.9)
Dental Material	3(2.9)
Oral Biology	2(1.9)
Community Dentistry	3(2.9)
Oral Pathology	10(9.7)
Periodontology	11(10.7)
Oral Surgery	12(11.7)
Prosthodontics	9(8.7)
Operative Dentistry	8(7.8)
Orthodontics	7(6.8)
Teaching Program	
Undergraduate	139(86.3)
Postgraduate	22(13.7)
Academic Rank	
Senior/Lecturer	97(60.2)
Assistant Professor	34(21.1)
Associate Professor	18(11.2)
Professor	12(7.5)

Table 2: Comparison of items means pertaining to perception of face-to-face and virtual mode of faculty development programs (FDPs)

Items	Median(IQR)		Positive Mean Rank	Negative Mean Rank	P-value
	Face to Face	Virtual			
I try my level best to improve the learning of the students	4.00(2)	4.00(2)	0.00	0.00	1.000
I get opportunities for developing the skills of educational administration	3.00(2)	3.00(1)	11.00	0.00	0.000*
I want to improve my teaching skills by faculty development programs	4.00(1)	4.00(1)	0.00	3.50	0.026*
I attend formal training for improving my teaching skills in other institutions	3.00(2)	2.00(2)	4.50	0.00	0.009*
My institution offered us to participate in faculty development programs	3.00(1)	3.00(2)	14.50	0.00	0.000*
I attend formal training in my institution in faculty development programs	3.00(2)	3.00(1)	4.93	1.50	0.019*
I have undergone through faculty evaluation after faculty development program	3.00(2)	2.00(2)	32.71	26.29	0.000*
Teaching abilities are considered while considering faculty promotion in my institution	3.00(2)	3.00(2)	8.78	12.50	0.002*
Teaching abilities are considered necessary while regarding students learning in my institution	3.00(2)	3.00(2)	7.59	3.75	0.007*
I receive institutional support for improving teaching skills	3.00(2)	3.00(2)	7.65	10.25	0.024*
Faculty training programs should be compulsory for all faculty	4.00(1)	2.00(4)	8.14	8.14	0.000*
Opportunities are available in my institution for trying out alternative approaches in teaching	3.00(1)	3.00(2)	13.98	14.07	0.028*

Wilcoxon Signed Ranks Test was applied. *p*-value<0.05 considered as significant. * Significant at 0.05 levels

Table 3: Comparison of attitude of faculty and support from the institute with faculty’s preference interest towards face to face or online FDPs

Questions	Median(IQR)		Positive Mean Rank	Negative Mean Rank	P-value
	Face to Face	Virtual			
Attitude (1,3,4,6,7,11)	2.00(1.50)	2.00(1.50)	35.43	20.50	0.000*
Institute Support (2,5,8,9,10,12)	2.00(1.00)	2.00(1.50)	18.00	14.60	0.000*

Wilcoxon Signed Ranks Test was applied. *p*-value<0.05 considered as significant. * Significant at 0.05 levels

Table 4: Topics suggested by dental faculty to be conducted in FDP (n=161)

Topics for FDPs	n(%)
Don’t know/No idea	62(38.5)
Teaching methods and strategies	50(31.1)
Constructing MCQs/EMQs	30(18.1)
Distance learning/Integration of online education	8(5.0)
Communication skills/Student counseling	7(4.3)
Research/Education Administration	4(2.5)

Figure 2: Perceived benefits of attending FDPs identified by dental faculty.

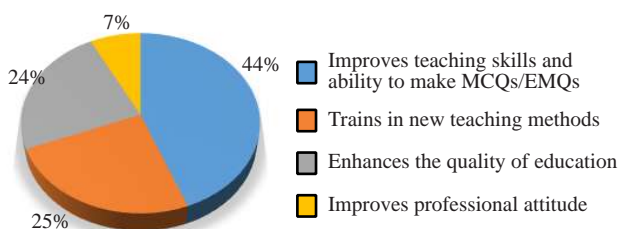
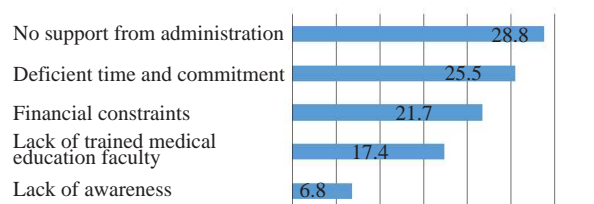


Figure 1: Perceived barriers identified by dental faculty in attending faculty development programs



commitment was reported to be the most significant personal barrier for FD. This is similar to another study where finding time to engage in such activities while balancing multiple work responsibilities was determined to be a significant personal barrier.²⁰ Other barriers reported by the faculty can be mitigated by developing a committee dedicated to oversee the FD activities in order to facilitate the conduction of training in collaboration with the department of medical/dental education. In case of dearth of resources in parent institution, provision should be made to facilitate the faculty to attend

workshops, seminars, hands on training sessions related to FD offered and operated elsewhere physically or remotely by allocating dedicated time, the required resources and offering encouragement and support.²¹ Moreover, interestingly the participants of this study were found to be more inclined towards attending face-to-face FD sessions compared to those conducted virtually. However globally, the trend to conduct FD sessions is shifting online in order to continue facilitating the faculty to participate and engage in FDPs amid their many academic commitments. Unfortunately, there is still reluctance observed in faculty members for online sessions in our settings. The faculty should be cognizant of the benefits of using virtual medium to attend training sessions, which helps to save time and resources.²²

In this study, the faculty's responses regarding their perceptions of the benefits of attending FDPs indicated the lack of realization of the potential advantages that FDPs can offer. Even though faculty's primary role is teaching and assessment of the course content, the scope of FDPs has widened and includes multiple skills and competencies to help faculty develop leadership qualities, mentoring and promoting the scholarship of teaching to bring positive improvement in behaviour and attitude.^{22,23} The responses of the faculty in our study are such because they may not be aware of new educational approaches, through various online modalities and are not exposed to innovative teaching methodologies which have great impact on students learning, engagement and motivation during distance education.²⁴ There is a need to propagate the potential of virtual/ online sessions that can be utilized to engage the faculty in FDP in order to facilitate them with their hectic schedules and other academic commitments. The satisfaction of faculty with online courses as been reported in the literature²² hence it can be incorporated in our context with suitable modifications.

It is interesting to note that even though the majority of the participating faculty was interested in faculty development programs and realized the importance of such activities for enhancing their professional skills, they were unsure on the areas or aspects of dental education for which developing and training activities should be being conducted. The reason could be unfamiliarity with the areas in which the educational skills of the faculty could be enhanced or lack of self-reflection to identify areas of improvement. This is an unfortunate state of affairs and needs to be changed with faculty development workshops and training sessions, familiarizing the faculty with all the avenues in which they have the opportunities to enhance and develop their competencies and expertise. Other notable responses showed an interest in sessions on teaching methods and strategies as well as the development of MCQs and EMQs. Related to these findings, one study covered these aspects as an integral part of the faculty's academic responsibilities, and it is encouraging to observe the faculty deems these important

enough to warrant the conduction of FDPs on them.²³ However, the faculty needs to be made aware of the current trends and requirement of online and distance teaching in the wake of the current COVID-19 pandemic, since it was evident from the responses that the participants did not consider this aspect as an important area for enhancing their expertise. In order to assess the needs of the faculty, faculty development committees may be devised, which could identify focus areas in which the faculty requires and desires training. Additionally, since there is scant literature available on dental faculty development programs, this area along with related aspects like faculty training, curriculum designing, assessment construction and classroom management should be explored, researched and the findings published in order to build awareness and interest in the dental faculty towards improvement in quality of education.^{24,25} Furthermore, to improve the current situation, it is recommended to curtail the perceived barriers related to faculty and institutions in terms of conduction and participation in FDPs, and the provision of administrative support to faculty to improve their didactic skills in the interest of the students, institutions and the dental profession.

There are some limitations to the present study. The study participants were recruited using convenience sampling and the number of study participants was relatively low compared to the total number of dental faculty currently working in different institutes in Karachi. Therefore, the generalizability of our findings is somewhat restricted. A future study conducted using a larger sample will ensure better reliability, generalizability and will further substantiate the results regarding factors causing hindrance in implementing faculty development programs. Further studies could also be conducted to develop solutions to promote the development and implementation of FDPs.

CONCLUSION:

It was concluded that dental faculty were more inclined towards face-to-face sessions than virtually conducted sessions however, their perception of the utility of FDPs was found to be limited. Moreover, it was also found that the some of the barriers to attend FDPs were faculty determinants like deficient time and dearth of commitment.

This study reported minimal administrative support and inadequate opportunities provided towards faculty development programs (FDPs) contrary to faculty participation and interest in training activities to enhance their teaching and assessment skills.

Authors Contribution:

Shaur Sarfaraz: Conception, Methodology, analysis and review

Muhammad Kashif Nisar: Analysis and interpretation of data

Samira Adnan: Writing Introduction and review

Sabeen Masood: Analysis and results

Zohaib Khurshid: Writing Discussion and conclusion, review

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