ORTHODONTIC RESIDENTS' PERCEPTIONS OF ONLINE LEARNING

[1]MUHAMMAD AZEEM

[2]ARUSHA AZEEM

[3]MUHAMMAD WASEEM ULLAH KHAN

ABSRACT

Application of online learning system in orthodontic residency may enhance learning capacity of residents. The objective of present study was to evaluate the preferences and perceptions of postgraduate orthodontic Resident's about online learning. Present study was conducted by determining the preferences and perceptions of postgraduate orthodontic resident's about online learning at the Orthodontic department of de'Montmorency College of Dentistry, Lahore, Pakistan, by asking them to complete a questionnaire. Results showed that with respect to residents' learning perceptions, 70% of the residents answered that online lectures and clinical videos were helpful to their learning. With respect to resident's preferences, 48% residents preferred online lectures and 34% residents preferred clinical videos. Most residents (36% agree and 36% strongly agree) preferred a combination of traditional lectures and online learning. It was concluded that orthodontic resident's preferences and perceptions were positive regarding online learning.

Key Words: *Orthodontic; Medical teaching; Online.*

INTRODUCTION

There are various types of learning. Traditional teacher-centric learning is a passive type of learning. Now paradigm has shifted from teacher centric learning towards student-centric learning.[1] Student centric learning is an active type of learning in which students are actively involved in the learning. Online learning is one such type of student centric learning.[2]

There are various advantages of online learning system, such as, time saving, cost effective, active learning type, student centric learning, and overcomes shortage of faculty.[3,4] There are various success factors of online learning system, these include, ease of access, perception of residents, availability of online tools, teaching experience, and political, cultural and economic factors.[5-7]

Postgraduate training of orthodontics in Pakistan usually consists of 2 to 4 year training in which residents are taught through didactic lectures and clinical sessions.[8,9] The didactic lectures cover the theoretical aspect of orthodontics while clinical sessions are aimed at exposure of residents to a wide variety of orthodontic problems.

Application of online learning system in orthodontic residency may enhance knowledge and learning capacity of students.[10] It may enhance their knowledge and skills in orthodontics. It can also be used as a tool to involve students actively while teaching orthodontics.[11] Following this rationale, the objective of present study was to evaluate the preferences and perceptions of postgraduate orthodontic residents' about online learning.

METHODOLOGY

Present study was conducted during 2016-17 academic year at Orthodontic department of de'Montmorency College of Dentistry, Lahore. Duration of study was six months i.e. from 15.3.2016 to 15.9.2016. Orthodontic residents (n=50) were taught about steps of placing temporary anchorage devices (Mini-screws) in an orthodontic patient, through online lectures and clinical videos in addition to the traditional didactic teaching approaches. At the end, the preferences and perceptions of postgraduate orthodontic resident's about online learning were evaluated by asking them to complete a questionnaire anonymously:[10]

1. Online lectures assisted in my learning

[1] Assistant Professor Orthodontics, Dental Section-Faisalabad Medical University/Punjab Medical College, Pakistan. Ex-Assistant Professor Orthodontics, de'Montmorency College of Dentistry, Lahore, Pakistan. **For Correspondence:** Dr Muhammad Azeem, BDS, FCPS, Address: 25-E2, Wapda Town, Lahore, Pakistan. Email:dental.concepts@hotmail.com, Cell: +92-345-8409007

[2] Arusha Azeem, BDS, House officer, de'Montmorency College of Dentistry, Lahore, Pakistan. Tel: 03324729511

[3] Muhammad Waseem Ullah Khan, BDS, FCPS, Assistant Professor, de'Montmorency College of Dentistry, Lahore, Pakistan.

2. Clinical videos assisted in my learning

3. Online lectures were more helpful than didactic lectures

4. Clinical videos were more helpful than demos

5. Online lectures should replace traditional lectures and demos

6. I prefer combination of traditional and online learning

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Descriptive statistics of residents' answer to questionnaire were analyzed using SPSS version 19.0. Results to the answers were shown in form of frequency and percentages. The overall response was presented in the form of mean and standard deviation.

RESULTS

Response rate was 100%. With respect to residents' learning perceptions, 70% of the residents answered that online lectures and clinical videos were helpful to their learning, respectively. (Table 1)

With respect to residents' preferences, 48% residents preferred online lectures and 34% residents preferred clinical videos (Table 1). Most residents (36% agree and 36% strongly agree) preferred a combination of traditional lectures and online learning. (Table 1)

DISCUSSION

The objective of present study was to evaluate the preferences and perceptions of postgraduate orthodontic residents' about online learning. Orthodontic residents were taught through online lectures and clinical videos in addition to the traditional didactic teaching approaches. Results of the present study showed that with respect to residents' learning perceptions, 70% of the residents answered that online lectures and clinical videos were helpful to their learning, respectively. This is in agreement with the findings of recently conducted study on the undergraduate dental students.[10]

Results of the present study showed that with respect to Resident's preferences, 48% Residents preferred online lectures and 34% residents preferred clinical videos. Most residents (36% agree and 36% strongly agree) preferred a combination of traditional lectures and online learning. This is also in agreement with the findings of recently conducted study on the undergraduate dental students.[10]

Thus it was found that orthodontic Resident's preferences and perceptions were positive regarding online learning. Many studies have been conducted that evaluated online learning in orthodontics. Azeem et al. in recently conducted study showed that traditional lecture and video were equally effective for orthodontic training of dental interns.[12] Smith et al. found significant difference between the online learning method and traditional didactic learning methods.[13]

Aly et al.,[14] and Clark et al.,[15] on the other hand,

TABLE 1: PERCEPTION OF ORTHODONTIC RESIDENTS AFTER ONLINE LEARNING SESSIONS (N=50)

Parameter		Strongly disagree	Disagree	Agree	Strongly agree	Mean	SD
Online lectures assisted in my learning	N	9	6	18	17	3.56	0.43
	%	18%	12%	36%	34%		
Clinical videos assisted in my learning	N	8	7	17	18	3.91	0.32
	%	16%	14%	34%	36%		
Online lectures were more helpful than didactic lectures	N	12	14	13	11	2.81	0.69
	%	24%	28%	26%	22%		
Clinical videos were more helpful than demos	N	14	19	9	8	2.81	0.23
	%	28%	38%	18%	16%		
Online lectures should replace traditional lectures and demos	N	16	19	9	6	2.59	0.69
	%	32%	38%	18%	12%		
I prefer combination of traditional and online learning	N	6	8	18	18	3.72	0.74
	%	12%	16%	36%	36%		

found no significant difference between the online learning method and traditional didactic learning methods. According to Hobson et al.,[16] and Rosenberg et al.,[17] online learning system should not be considered as a replacement but supplement for traditional teaching methods. These variations could be explained by the differences in various success factors of online learning system, these includes, ease of access, perception of residents, availability of online tools, teaching experience, and political, cultural and economic factors.[5-17]

Limitation of present study is small sample size. Further large scale studies are suggested.

CONCLUSION

Orthodontic resident's preferences and perceptions were positive regarding online learning.

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CONTRIBUTIONS BY AUTHORS

1	**Muhammad Azeem:**	Concption & designing study, manuscript wrote.
2	**Arusha Azeem:**	Analysis and interpretation of data.
3	**Muhammad Waseem Ullah Khan:**	Title suggestion, abstract, data recording.