

Evaluation of Quizzing as a Method for Orthodontic Teaching of Cephalometrics of BDS Students

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ABSTRACT

Aim: To evaluate quizzing as a method for orthodontic teaching of cephalometric to BDS final year students.

Methods: Present study was conducted on 20 BDS final year students of de'Montmorency College of Dentistry, Pakistan. Didactic lectures were taken on the topic of cephalometrics. MCQ tests were taken before and after the quiz at each session of cephalometrics. The cumulative scores of all the sessions were calculated. Student paired t test was used to compare the average pre-test scores with post-test scores..

Results: Student paired t test showed a significant correlation between pre-test and post-test which indicate a significant improvement.

Conclusion: The incorporation of quizzing in orthodontic teaching of cephalometrics does lead to a significant increase in knowledge of BDS students.

Keywords: Orthodontic; Medical teaching; Quizzing.

INTRODUCTION

Orthodontic teaching has evolved through the years.¹ Teachers are adopting latest innovative tools to deliver their lectures and engaging students in learning process. There has been a paradigm shift from teacher centric teaching to student centric teaching^{2,3,4}.

It has been found that quizzing assists in student centric teaching and can be an effective teaching tool for small group teaching sessions⁵. It has also been found that quizzing assists in deep learning and can be a effective teaching tool for small group teaching sessions on clinical topics⁶.

Cephalometrics is an important investigating method in orthodontics. There are various cephalometric analyses. Cephalometrics is taught to BDS students of final year orthodontics by lectures and clinical sessions. Cephalometrics is important for diagnosis of skeletal, vertical, dental and soft tissue abnormalities⁷. Cephalometrics is a dry topic, and is not easy for students to grasp its concept. Quizzing being innovative tool can provide orthodontic teachers innovative teaching method to teach cephalometrics to final year BDS students.⁸ It may enhance their knowledge and skills to master basic cephalometry. It can also be used as a tool to involve students actively while teaching cephalometry. This may also allow orthodontic teachers to get immediate feedback of how to improve their teaching⁹.

Following this rationale, the objective of present study was to evaluate quizzing as a method for orthodontic teaching of cephalometric to BDS final year students.

MATERIAL AND METHODS

This cross sectional, comparative and interventional study was conducted at de'Montmorency College of Dentistry,

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Pakistan. Present study was conducted on 20 BDS final year students of de'Montmorency College of Dentistry, Pakistan during that academic year 2016-17. Didactic lectures of 2 hours were taken on the topic of cephalometrics. MCQ tests were taken before and after the quiz at each session of cephalometrics. The cumulative scores of all the sessions were calculated before and after the conduction of quiz. (Table 1). The quiz was taken on the following aspects of Cephalometry:

1. Knowledge about standardization of cephalometrics
2. Locating landmark
3. Finding of angles and planes
4. Clinical interpretation to composite cephalometric analysis

Data analysis: Student paired t test was used to compare the average pre-test scores with post-test scores. Feedback of students was also taken on the conduction of quiz at the end. The level of significance was determined at $p \leq 0.05$.

RESULTS

Student paired t test showed a significant correlation between pre-test and post-test which indicate a significant improvement. Average pre-test scores of $36 \pm 19/100$ were improved to post-test scores of $87 \pm 9/100$. (Table 2)

BDS Students' feedback results showed that knowledge of students and their interest increased. Most of the students preferred this method of teaching.

Table 1: Details of quiz on cephalometrics

No.	Topics
1	Knowledge about standardization of cephalometrics
2	Locating landmark
3	Finding of angles and planes
4	Clinical interpretation to composite cephalometric analysis

Table 2: Student's paired t-test (n=20 BDS students)

Pre-Test(Mean ± SD)	Post-Test (Mean±SD)	P-value
36±19/100	87±9/100	0.023

DISCUSSION

The objective of present study was to evaluate quizzing as a method for orthodontic teaching of cephalometric to BDS final year students. Quizzing being innovative tool can provide orthodontic teachers innovative teaching method to teach cephalometrics to final year BDS students.⁸ This may also allow orthodontic teachers to get immediate feedback of how to improve their teaching⁹.

Present study was conducted on 20 BDS final year students. The sample size was based on the total number of BDS students that was on rotation in orthodontic department for clinical session. Didactic lectures of 2 hours were taken on the topic of cephalometrics. MCQ tests were taken before and after the quiz at each session of cephalometrics. The cumulative scores of all the sessions were calculated before and after the conduction of quiz. Cephalometrics is an important investigating method in orthodontics¹⁰⁻¹³. Cephalometrics is taught to BDS students of final year orthodontics by lectures and clinical sessions. Results of the present study showed a significant correlation between pre-test and post-test which indicate a significant improvement. Average pre-test scores of $36 \pm 19/100$ were improved to post-test scores of $87 \pm 9/100$. BDS Students' feedback results showed that knowledge of students and their interest increased. Most of the students preferred this method of teaching.

Thus it was found that the incorporation of quizzing in orthodontic teaching of cephalometrics does lead to a significant increase in knowledge of BDS students. Results are in agreement with findings of Khan et al who showed that students found that the quiz helped them learn the basic concepts about cephalometrics in a more friendly and interactive way⁷. Results are also in agreement with the study findings that the incorporation of MCQ in orthodontic lectures does lead to a significant increase in short term knowledge retention of BDS students¹⁴. Study by Azeem et al. showed that traditional lecture and video were equally effective for orthodontic training of dental interns¹⁵.

Limitations of present study are its cross-sectional design and small sample size. Further large scale studies are suggested.

CONCLUSION

The incorporation of quizzing in orthodontic teaching of cephalometrics does lead to a significant increase in knowledge of BDS students.

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