



CONGRESS PROCEEDING

Knowledge Skills and Attitudes of Dentistry and Dental Clinic Assistant Students Related to Online Pedodontics Lecture During the Covid-19 Pandemic

Hazal Özer^{ib}*, Yasemin Derya Fidancıoğlu^{ib} and Merve Abaklı İnci^{ib}

Pediatric Dentistry, Faculty of Dentistry, University of Necmettin Erbakan, Konya, Turkey

*Corresponding Author; hazal0713ozzer@gmail.com

Abstract

Purpose: In Turkey, with Covid-19 pandemic, online education system has been introduced, as is the case all over the world. Since March 2020, dentistry(D) and dental clinic assistant(DCA) students have taken pedodontics lessons online. This research; Necmettin Erbakan University Faculty of Dentistry and dental clinic assistant students aim to evaluate efficiency of education given in online pedodontics course, the satisfaction of students and online course system.

Methods: In questionnaire, there are multiple-choice questions about methods of accessing online education system and access knowledge and skills of students. In addition, various propositions about pedodontics classes were presented to students to be answered with Likert scale consisting of 1-5, strongly disagree, disagree, undecided, agree and strongly agree options. This questionnaire was conducted over internet, with anonymity for identity of students. IBM SPSS Statistics25 program was used for statistical evaluations.

Results: Survey participated by 88D and 59DCA students; 40.1% of students reported that they connected to lessons via their mobile phones and tablets. Statistically significant difference was not found between two groups in terms of difficulty and effort levels in their connection to classes($p=0.622, p=0.348$). In contribution of pedodontics to students' knowledge levels was found that knowledge levels of students with easy access to internet at the beginning and end of lessons were significantly different from those with difficult access($p=0.002$). Lecturers' skill level and their competence do not differ significantly according to groups. Statement that watching webinars is more beneficial than online education has been the proposition with lowest mean score.

Conclusions: Dentistry and dental clinic assistant students faced various difficulties adapting to online education system. Internet and technology-based system caused inequalities in education levels of students, tried to be balanced lecturers. While pandemic process continues in an unpredictable way, lecturers have great responsibility to make pedodontics lesson reach their goals fairly.

Key words: Covid-19 Pandemic; Online Lectures; Pedodontics

Introduction

In our country; within the scope of oral and dental health services, there is an associate degree program that provides training to train "oral and dental health technicians" or "dental clinical assistants" in order to meet the dentist's need for assistant personnel before and after treatment. With the Covid-19 pandemic, all courses of dentistry and dental clinical assistant students started to be given online in the process.¹⁻³ Online courses are a new system for lecturers as well as students. Basic factors such as system requirements, the necessity of using internet-based programs, the quality of the material to be used as a program tool, internet connection speed, economic requirements, home-office working style affected the

quality of the courses. Lecturers are aware of the adaptation process with these factors and are responsible for providing the necessary understanding, as well as maintaining the quality of the course.⁴ Our study aims to evaluate the effectiveness of the education given in the online pedodontics course of Necmettin Erbakan University Faculty of Dentistry and dental clinic assistant students, student satisfaction and the online course system through a questionnaire.

Methods

The first part of the prepared questionnaire consists of 10 questions aiming to measure the students' age, gender and the level of their



education, and the theoretical knowledge level. This questionnaire was administered on the internet in a way that the identity of the students was confidential. In the second part where the clinical attitudes of the students are evaluated; 11 questions were asked in which multiple-choice answers were sought (always, often, sometimes, never). Chi-square test was used for statistical analysis between groups and Man-Whitney-U tests were used for analysis within groups. IBM SPSS Statistics 25 (IBM Corporation, Armonk, NY, USA) program was used for statistical evaluations.

Results

The students' means of connecting to the lesson were 40.1% via mobile phones and laptop computers. 125 out of 147 students reported that they used their mobile phones to attend lectures. In the question in which the belonging of the students' tools for connecting to the courses were evaluated, 72.1% reported that the tools belonged to themselves. No statistically significant difference was found according to the Chi-square test performed in the evaluation of the ease of access to the Internet by the students of dentistry and dental clinic assistants ($p=0.622$). In the question in which the level of effort of the students to receive distance education was evaluated, there was no statistically significant difference between the levels of effort ($p=0.348$). According to the Mann-Whitney-U test results, students who reported that accessing the internet were easy compared to those who said it was difficult, the level of skill-knowledge at the beginning of the lessons $p=0.002$; level at the end of the lessons $p=0$; level of knowledge required to complete courses $p=0$; The contribution of the courses to the skill/knowledge level was reported as $p=0$. In the section of the contribution of online courses to your knowledge, the option of "connecting to courses" and the section read did not significantly affect the answers ($p>0.05$). The answers given to the questions of the skill level of the trainers and their proficiency in responding did not differ significantly according to the section read ($p>0.05$). In the answers given to the questions about the skill level of the trainers; A statistically significant difference was found for students who attended classes with facilities such as internet cafe or library compared to other students ($p<0.05$). Students reported that watching webinars is not more beneficial than theoretical training. The answer given by the students to the proposition "I can download and upload a file" in the system requirements section was found to be the proposition with the highest score. Hybrid education was preferred more by dental clinical assistant students.

Discussion

During the COVID 19 pandemic process, a rapid crisis management and online distance education process was implemented in order not to interrupt the education-training process. Identifying some of the difficulties and deficiencies that occurred during the sudden transformation of a planned model for formal education into online distance education and receiving direct feedback from students may enable the crisis to be turned into an opportunity by developing and improving this education method. For this purpose, in this study was aimed to evaluate the effectiveness of the education given in the online pedodontics course for dentistry and dental clinic assistant students, student satisfaction and the online course system through a questionnaire. In a study conducted on Physiotherapy and Rehabilitation Department students, it was suggested that the additional use of online learning in clinical learning could help bridge the theory-practice gap and support advanced clinical skill learning.⁵ In this study, it has been seen that the contribution of online distance education to the theoretical knowledge level of the students is more than its contribution to the application skill. One-to-one practice by students after listening to the

course content can contribute more to the both student's professional practice skills. It has been reported that the integration of online learning with the virtual community can encourage student engagement that can improve learning outcomes.⁶ The study of Cheng and Chau (2016) focused on the important role of social interaction in online education.⁷ On the other hand, it has been reported that the lack of social bonding and low solidarity among students in online education can reduce students' social interactions and they may have low performance and high attrition rate. It is seen that online distance education is advantageous in that it allows students to learn information at their own pace and to receive information at the specified time. However, the fact that students do not receive sufficient feedback, think that they cannot express themselves adequately, and forget the topics they have listened to quickly shows that this education model has disadvantages within the disabilities by connection models. A meta-analysis reported that planning for online learning should not only cover content, but also carefully consider how to support different interactions that are important for the learning process.⁸ Learning processes usually take place in groups and through social interaction, even in online education.⁹ It has been reported that students in an online learning community perform better with higher interaction, learning achievement, and student engagement.¹⁰ Similarly, student-trainer interactions have been recognized as other important interactions that occur in an online education.¹¹ Although a study conducted with medical school students showed that direct and open communication with classmates, teachers and education team increased the level of trust and cooperation, another study on dentistry students, online education, it promotes self-learning independence among students and demonstrates that it improves their ability to use online resources.^{12,13} Both the dentistry and dental clinic assistant students need to be more encouraged by the lecturers to support theoretical knowledge after lessons. Besides lecturers should support students considering their difficulties in accessing the lessons.

Conclusion

Dentistry and dental clinic assistant students faced various difficulties adapting to online education system. Internet and technology-based system caused inequalities in education levels of students, tried to be balanced lecturers. While pandemic process continues in an unpredictable way, lecturers have great responsibility to make pedodontics lesson reach their goals fairly.

None

Author Contributions

Conceived and designed the analysis; H. O., M.A.I Collecting of the data; Y.D.F. Contributing data or analysing tools; H.O. Performed the analysis; M.A.I. Writing of the paper H.O., M.A.I., Y.D.F.

Conflict of Interest

Authors declare that they have no conflict of interest.

Authors' ORCID(s)

H.O. [0000-0002-4389-2008](https://orcid.org/0000-0002-4389-2008)

Y.D.F. [0000-0002-0260-6458](https://orcid.org/0000-0002-0260-6458)

M.A.I. [0000-0003-2979-0336](https://orcid.org/0000-0003-2979-0336)

References

- Cucinotta D, Vanelli M. WHO Declares COVID-19 a Pandemic. *Acta Biomed.* 2020;91(1):157–160. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32191675>. doi:10.23750/abm.v91i1.9397.
- Meng L, Hua F, Bian Z. Coronavirus Disease 2019 (COVID-19): Emerging and Future Challenges for Dental and Oral Medicine. *J Dent Res.* 2020;99(5):481–487. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32162995>. doi:10.1177/0022034520914246.
- Soysal F, İşler S Akca G, Ünsal B, Özmeriç N. Covid-19 pandemi döneminde diş sağlığı hizmetlerinde yer alan yardımcı ekibin enfeksiyon kontrolündeki rolü. *Gazi Sağlık Bilimleri Dergisi.* 2020;2020:52–71.
- Fazel M, Hoagwood K, Stephan S, Ford T. Mental health interventions in schools 1: Mental health interventions in schools in high-income countries. *Lancet Psychiatry.* 2014;1(5):377–387. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/26114092>. doi:10.1016/S2215-0366(14)70312-8.
- van Duijn AJ, Swanick K, Donald EK. Student Learning of Cervical Psychomotor Skills Via Online Video Instruction Versus Traditional Face-to-Face Instruction. *Journal of Physical Therapy Education.* 2014;28:94–102.
- Panigrahi R, Srivastava PR, Sharma D. Online learning: Adoption, continuance, and learning outcome—A review of literature. *International Journal of Information Management.* 2018;43:1–14. Available from: <https://www.sciencedirect.com/science/article/pii/S0268401216304662>. doi:https://doi.org/10.1016/j.ijinfomgt.2018.05.005.
- Cheng G, Chau J. Exploring the relationships between learning styles, online participation, learning achievement and course satisfaction: An empirical study of a blended learning course. *British Journal of Educational Technology.* 2016;47(2):257–278. Available from: <https://bera-journals.onlinelibrary.wiley.com/doi/abs/10.1111/bjet.12243>. doi:https://doi.org/10.1111/bjet.12243.
- Bernard RM, Abrami PC, Borokhovski E, Wade CA, Tamim RM, Surkes MA, et al. A Meta-Analysis of Three Types of Interaction Treatments in Distance Education. *Review of Educational Research.* 2009;79(3):1243–1289. Available from: <http://www.jstor.org/stable/40469094>.
- Clark C. Comparing Asynchronous and Synchronous Video versus Text Based Discussions in an Online Teacher Education Course. *Online Learning.* 2015;19. doi:10.24059/olj.v19i3.668.
- Lai CH, Lin HW, Lin R, Tho PD. Effect of Peer Interaction among Online Learning Community on Learning Engagement and Achievement. *Int J Distance Educ Technol.* 2019;17:66–77.
- Kuo YC, Walker AE, Belland BR, Schroder KEE. A Predictive Study of Student Satisfaction in Online Education Programs. *The International Review of Research in Open and Distributed Learning.* 2013;14:16–39.
- Park SW, Jang HW, Choe YH, Lee KS, Ahn YC, Chung MJ, et al. Avoiding student infection during a Middle East respiratory syndrome (MERS) outbreak: a single medical school experience. *Korean J Med Educ.* 2016;28(2):209–17. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27240893>. doi:10.3946/kjme.2016.30.
- Prati C, Pelliccioni GA, Sambri V, Chersoni S, Gandolfi MG. COVID-19: its impact on dental schools in Italy, clinical problems in endodontic therapy and general considerations. *Int Endod J.* 2020;53(5):723–725. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/32277770>. doi:10.1111/iej.13291.