

The effects of geriatric oral dental health training to dental students on their elderly attitudes

Fatma Hastaoglu

Abstract

Objective: To measure the effect of geriatric oral health education on the attitude of dentistry students towards the elderly.

Methods: The interventional study was conducted in December 2022 at Sivas, and comprised students of the Faculty of Dentistry, Sivas Cumhuriyet University, Türkiye in their 4th and 5th academic year. A 20-hour training course was delivered over 3 days by faculty members. Baseline and post-intervention difference was assessed using the Kogan's Attitudes Towards Old People Scale. Data was analysed using SPSS 22.

Results: Of the 30 students, 18(60%) were females and 12(40%) were males. The overall mean age was 22.93 ± 1.63 years. Besides, 18(60%) students belonged to 5th year and 12(40%) to the 4th year. The mean Kogan Elderly Attitude Scale score at baseline was 184.13 ± 25.55 , while post-intervention it was 195.36 ± 22.36 . ($p < 0.05$).

Conclusion: Relevant training was found to have a significant impact on the attitude of dentistry students towards the elderly.

Keywords: Oral health, Dentistry, Aged, Attitude, Health education. (JPMA 74: 1613; 2024)

DOI: <https://doi.org/10.47391/JPMA.10368>

Introduction

A rise in life expectancy at birth and a demographic shift are the results of health and technical advancements. According to recent data from the Turkish Statistical Institute (TUIK), the country's elderly now make up 9.7% of the overall population.¹

All human organs and tissues exhibit the impact of aging on metabolism. Oral mucosa, jaw bones, teeth, gingiva-supporting teeth, periodontium, masticatory muscles, salivary glands and jaw joints all undergo significant modifications.²

Although it is not a normal part of aging, the decline in oral health might occur as a result of systemic disorders, medication usage, poor nutrition, or a general disregard for oral cleanliness. As a result, maintaining oral health in the elderly is a primary responsibility of dentists and other health professionals. In general, oral changes associated with aging include tooth-loss, a decrease in salivary flow and secretion, atrophy of the muscles and mucous membranes in the mouth, and a weakening of the sense of taste.³ Changes in the oral cavity and the tissues around it might be considered the main consequences of aging on the organism.^{4,5}

Sivas Cumhuriyet University Gerontology Studies Application and Research Centre, Sivas, Türkiye.

Correspondence: Fatma Hastaoglu. e-mail: fhastaoglu@cumhuriyet.edu.tr
ORCID ID: 0000-0001-8929-2860

Submission complete: 08-08-2023

Review began: 09-09-2023

Acceptance: 29-06-2024

Review end: 20-04-2024

Due to their chronic medical conditions, it can be argued that elderly people contact doctors considerably more frequently.^{6,7} As a result, dentists play a significant role in the diagnosis and treatment of oral and dental illnesses in the elderly, and preserving dental health in the elderly population is crucial for averting numerous issues that could arise later.⁸

As a result, since the dental needs of the elderly increase with age, it is not enough to approach elderly patients only with the medical perspective. Instead, factors such as the emotional state of the person, the need for socialisation, and aesthetic concerns should also be taken into consideration. In dental treatments to be applied to elderly patients, problems, such as atrophies in the structures supporting the teeth, systemic diseases, communication difficulties due to decreased senses and motor losses, complicate the treatment process.⁹

There are many other factors, including the inability to provide adequate oral care and hygiene due to insufficient skills and limited financial ability.

The main goal of geriatric dentistry is to recognise the needs of old age and to act in accordance with the needs. A moderate attitude of the dentist for successful treatment comprises the ability to work atraumatically, communicate well with the patient, understand the feelings of the elderly, try to understand their psychology better, and have a better command of the oral problems of old age. Most importantly, geriatric patients need to be seen as different from other groups.¹⁰ Geriatrics is a multidisciplinary field that concerns many areas. It is essential to ensure that the

health needs of the geriatric group are well-defined and that the health of the geriatric group is maintained.

In dental treatments for elderly patients, tooth-supporting atrophies in structures, systemic diseases, communication difficulties due to decreased sensation, and inadequate oral care and hygiene are important factors (9). Dentists need to have sufficient training and knowledge related to technology and equipment, and must understand the importance of multidisciplinary work.¹¹

The current study was planned to measure the effect of geriatric oral health education on the attitude of dentistry students towards the elderly.

Subjects and Methods

The interventional study was conducted in December 2022 at Sivas, and comprised students of the Faculty of Dentistry, Sivas Cumhuriyet University, Turkiye in their 4th and 5th academic year. After approval from the ethics review committee of Sivas Cumhuriyet University. The sample was raised. Since the quota limit of the training provided with the support of the Scientific and Technological Research Council of Turkiye was 30 students, those who volunteered to participate in the training were enrolled. After taking informed consent from each of them. Dental students in the 5th year were included first, while the remaining seats were filled by 4th year students. Those who did not meet the inclusion criteria were excluded. The sample size was not calculated and no specific sampling technique was used.

The sociodemographic data was obtained using a predesigned proforma developed in line with the literature, and consisted of five questions.^{12,13} Besides, the Kogan's Attitudes Toward Old People Scale was used to measure individuals' attitudes towards the elderly. It is a 6-point Likert-type scale with social content that does not include medical terms.¹⁴ The scale, which consists of 34 items, has

17 positive and 17 negative statements. Odd-numbered questions contain negative statements and even-numbered questions contain positive statements. Due to the structure of the scale, negative statements are scored from right to left 6, 5, 4, 3, 2, 1, and positive statements are scored from left to right 1, 2, 3, 4, 4, 5, 6. The scores obtained from all items are summed to reach a total score, ranging 34-238 points, with a high score indicating a positive attitude. The validity and reliability of the scale's Turkish version have been established.¹⁵

The forms were distributed to the students before the start of the 20-hour training course delivered over 3 days by faculty members, and were filled in face-to-face before and after the training. The training started with the opening speech, and covered all aspects likely to affect oral health in the geriatric population (Table 1). The training content was evaluated by 5 experts who found it to be sufficient. The training was within the scope of Scientific and Technological Research Council of Turkey Educational Activities support.

Data was analysed using SPSS 22. Data was expressed as mean±standard deviation or as frequencies and percentages, as appropriate. Data normality was examined using the Shapiro-Wilk test, and it was found to be normal. $P<0.05$ was considered significant.

Results

Of the 30 students, 18(60%) were females and 12(40%) were males. Besides, 18(60%) students belonged to the 5th year and 12(40%) to the 4th year (Table 1). The overall mean age was 22.93 ± 1.63 years. The mean Kogan Scale score at baseline was 184.13 ± 25.55 and post-training it was 195.36 ± 22.96 (Table 3).

The difference between baseline and post-intervention scores was significant ($p<0.05$). The scores were also checked for association with various variables (Table 4).

Table-1: The training programme.

	Thursday, December 22, 2022	Friday, December 23, 2022	Saturday, 24 December, 2022
09:00-09:45	Opening, definitions of age and old age	Conservative treatment methods	Geriatric effects of dental chemicals
10:00-10:45	Changes in the Oral Region and Dental Treatments in Geriatric Patients	Rational drug use in geriatric patients-	Communication and empathy in approaching geriatric patients
11:00-11:45	Oral lesions and oral health in geriatric patients	Caries in Geriatric Patients	Geriatric Ethics
12:00-12:45	Prosthesis and its care in geriatric patients	Oral care in Geriatric Patients (including Alzheimer, and dementia patient groups)	Difficulties in dentist-patient relationships
		Midday Break	
14:00-14:45	Endodontic Approaches in Elderly Patients	Nutritional requirements in geriatric patients	Geriatric Emergencies
15:00-15:45	Oral health in comprehensive geriatric assessment	swallowing in geriatric patients	Closing and Certificate Ceremony
16:00-16:45	Implant planning and treatment in geriatric patients	Hearing loss in geriatric patients	-

Table-2: Socio-demographic data.

Socio-demographic Characteristics	n (%)
Gender	
Female	18 (60)
Male	12 (40)
Grade	
4th grade	12 (40)
5th grade	18 (60)
Whether he/she had any previous training	
Yes	17 (56.7)
No	13 (43.3)
Whether the training will be useful or not	
Yes	21 (70)
No	9 (30)

Table-3: Age and baseline scores compared to post-intervention scores.

	Min	Max	Mean±SD
Age (years)	20	29	22.93±1.63
Pre-training Kogan's Attitudes Toward Old People Scale Score	135	222	184.13±25.55
Post-Training Kogan's Attitudes Toward Old People Scale Score	142	228	195.36±22.96

SD: Standard deviation.

Table-4: Baseline and post-intervention scores in relation to study variables.

Kogan's Attitudes Toward Old People Scale mean score	Mean±SD	p-value
Pre-Training	184.13±25.55	0.001
Post-Training	195.36±22.36	
Gender		
Female	Pre-Training 178.77±27.73	0.43
	Post-Training 190.16±25.21	
Male	Pre-Training 192.16±24.09	0.06
	Post-Training 203.16±17.25	
Grade		
4th grade	Pre-Training 170.66±28.07	0.02
	Post-Training 185.00±27.52	
5th grade	Pre-Training 193.11±19.76	0.04
	Post-Training 202.27±16.83	
Have you received training before?		
Yes	Pre-Training 193.64±20.17	0.07
	Post-Training 206.23±13.23	
No	Pre-Training 171.69±27.19	0.003
	Post-Training 181.15±25.60	
Do you think the training will be useful?		
Yes	Pre-Training 179.33±25.47	0.23
	Post-Training 192.19±23.02	
No	Pre-Training 195.33±23.29	0.33
	Post-Training 202.77±22.33	

Discussion

The current study found that students' attitudes towards the elderly could be changed with targeted training. Dental students did not properly use a variety of communication techniques that would improve the quality of interaction with patients.¹⁶

Although attitudes can develop over time, they can also be acquired through learning. In order to change attitudes, it

is crucial to know who is providing the information, and whether or not the information is credible.¹⁷ According to studies involving nursing students, views about the elderly varied dramatically, and as the course year increased, attitude towards the elderly improved.^{18,19} The finding was consistent with the current results. While certain communities tend to view the elderly negatively, countries like Japan appreciate the elderly, and make use of their wisdom and experience, which is seen as raising their social standing.²⁰ In the Turkish culture, respecting the elderly, honouring the word of the elderly, and taking care of the elderly are part of social traditions. However, the status and prestige of the elderly in society are changing today.²¹

Although there are many studies evaluating students' attitudes toward the elderly,^{19,22} there was no study, to our knowledge, that evaluated the effect of training on students' attitudes toward the elderly. As such, the current study was the first in this regard.

The current study had its limitations as it had a small sample, which was because the funder limited the sample to 30. Similar studies with larger samples are recommended.

Conclusion

Relevant training was found to have a significant impact on the attitude of dentistry students towards the elderly.

Disclaimer: None.

Conflict of Interest: None.

Source of Funding: The training was within the scope of Scientific and Technological Research Council of Turkey Educational Activities support.

References

1. Turkish Statistical Institute. News Bulletin: Elders with Statistics. News release. The Turkish Statistical Institute Media Centre. [Online] 2019 [Cited 2022 March 15]. Available from URL: <https://data.tuik.gov.tr/Kategori/GetKategori?p=nufus-ve-demografi-109&dil=1>
2. Bozdemir E, Amasya H. Structural and functional changes in the mouth and surrounding tissues with aging. *Selcuk Dent J* 2019;6:239-46. doi: 10.15311/selcukdentj.439068
3. Slack-Smith L, Arena G, See L. Rapid Oral Health Deterioration in Older People—A Narrative Review from a Socio-Economic Perspective. *J Clin Med* 2023;12:2396. doi: 10.3390/jcm12062396
4. Giretam Croonquist C, Dalum J, Skott P, Sjögren P, Wårdh I, Morén E. Effects of domiciliary professional oral care for care-dependent elderly in nursing homes - oral hygiene, gingival bleeding, root caries and nursing staff's oral health knowledge and attitudes. *Clin Interv Aging* 2020;15:1305-15. doi: 10.2147/CIA.S236460.
5. Lauritano D, Moreo G, Della Vella F, Di Stasio D, Carinci F, Lucchese A, et al. Oral health status and need for oral care in an aging population: a systematic review. *Int J Environ Res Public Health* 2019;22:4558.

- doi: 10.3390/ijerph16224558.
6. Avgerinou C, Bhanu C, Walters K, Croker H, Liljas A, Rea J, et al. Exploring the views and dietary practices of older people at risk of malnutrition and their carers: A qualitative study. *Nutrients* 2019;6:1281. doi: 10.3390/nu11061281.
 7. Marshall S, Reidlinger DP, Young A, Isenring E. The nutrition and food-related roles, experiences and support needs of female family carers of malnourished older rehabilitation patients. *J Hum Nutr Diet* 2017;1:16-26. doi: 10.1111/jhn.12397.
 8. Janto M, Iurcov R, Daina CM, Neculoiu DC, Venter AC, Badau D, et al. Oral health among elderly, impact on life quality, access of elderly patients to oral health services and methods to improve oral health: a narrative review. *J Pers Med* 2022;3:372. doi: 10.3390/jpm12030372.
 9. Deeb MA, Abduljabbar T, Vohra F, Zafar MS, Hussain M. Assessment of factors influencing oral health-related quality of life (OHRQoL) of patients with removable dental prosthesis. *Pak J Med Sci* 2020;2:213-8. doi: 10.12669/pjms.36.2.1257.
 10. León S, Giacaman RA. Proposal for a conceptual framework for the development of geriatric dentistry. *J Dent Res* 2022;3:247-52. doi:10.1177/00220345211042268
 11. Marchini L, Ettinger R, Chen X, Kossioni A, Tan H, Tada S, et al. Geriatric dentistry education and context in a selection of countries in 5 continents. *Spec Care Dentist* 2018;38:123-32. doi: 10.1111/scd.12281
 12. Yalçın GM, Chousko Mehmet F. Nursing students' attitudes toward the elderly: a systematic review based on studies conducted in Türkiye. *Psikoloji Çalışmaları - Studies in Psychology* 2023;2:195-213. doi: 10.26650/SP2022-1088109
 13. Carellis C, Kalberer N, Abou-Ayash S, Schimmel M, Wittneben JG, Zitzmann NU, et al. Attitudes of dental students towards treating elderly patients. *Dental students' attitudes on geriatric patients. Swiss Dent J* 2021;2:116-24.
 14. Kogan N. Attitudes toward old people: the development of a scale and an examination of correlates. *J Abnorm Soc Psychol* 1961;62:44-54. doi: 10.1037/h0048053.
 15. Kucukguclu O, Mert H, Akpınar B. Reliability and validity of Turkish version of attitudes toward old people scale. *J Clin Nursing* 2011;20:3196-203.
 16. Guler K, Gorgun EP. A cross-sectional survey study on the use of communication methods in the dentist-geriatric patient relationship. *Repub Dental J* 2022;25:230-8. doi: 10.7126/cumudj.1111262
 17. Tanhan F, Sentürk E. Development of teacher attitude scale towards undesirable intra-class behaviours of students. *Türk Psikolojik Danışma ve Rehberlik Dergisi* 2011;4:44-51. Doi: 10.17066/pdrd.62888
 18. Akbal Y. Determination of nursing students' attitudes towards the elderly. [Online] 2018 [Cited 2022 March 15]. Available from URL: <https://docs.neu.edu.tr/library/6712847715.pdf>
 19. Alkaya SA, Okuyan CB. Attitudes of nursing students towards elderly individuals. *Hacet Üniv Hemşire Fak Derg* 2017;4:43-52.
 20. Harada K, Sugisawa H, Sugihara Y, Yanagisawa S, Shimmei M. Perceived age discrimination and job satisfaction among older employed men in Japan. *Int J Aging Hum Dev* 2019;3:294-310. doi: 10.1177/0091415018811100.
 21. Zehrioglu LG, Yont GH, Bayat E, Gunay B. Determination of nurses' attitudes towards the elderly and influencing factors. *Yıldırım Beyazıt Üniversitesi Sağlık Bilimleri Fakültesi Hemşirelik e-Dergisi*, 2015;3:10-8.
 22. Sahin H, Erdem Y. Determining the attitudes of nursing students toward the elderly. *Turkish J Soc Res* 2017;1:219-32.

Author Contribution:

FH: Agreement to be accountable for all aspects of the work.