

<http://dx.doi.org/10.35630/2199-885X/2022/12/1.25>

# IDENTIFICATION OF ORAL HYGIENE LEVEL IN HEARING-IMPAIRED COLLEGE STUDENTS IN PENZA REGION (RUSSIA)

Received 11 October 2021;  
Received in revised form 22 December 2021;  
Accepted 02 January 2022

Marina Suvorova<sup>✉</sup> , Galina Emelina ,  
Julia Telyanova , Anna Teplova 

Penza State University, Penza, Russia

✉ [raikmarina@mail.ru](mailto:raikmarina@mail.ru)

**ABSTRACT** — THE AIM OF THE STUDY is to compare the level of oral hygiene practices among students with hearing disabilities and well-hearing university students.

**MATERIALS AND METHODS.** The level of hygienic knowledge was studied using the sociological research method (questionnaire) among students with hearing disabilities at Penza Medical College, specialty "Orthopedic Dentistry" and their peers — students of Dentistry Department at the Penza State University. 60 students took part in the study. The average age of the subjects was  $19.5 \pm 0.85$  years.

**RESULTS AND DISCUSSION.** The results of the study indicate a weak motivation to preserve dental health, insufficient awareness of the means and methods of oral hygiene among hearing-impaired students compared with their peers. In the university students all the survey indicators were 1.5–2 times higher than in the hearing-impaired college students. This indicates an insufficient specialized education and awareness as a consequence of hearing limitations.

**CONCLUSION.** It is necessary to strengthen dental education in students with hearing impairments, taking into account the specifics of communication and the worldview of this population. This can be achieved through educational videos and options for free preventive dental services.

**KEYWORDS** — dental health, hearing disabilities, oral hygiene.

## INTRODUCTION

The dental health of the Russian population has a steady tendency to deteriorate [1, 4, 5, 8]. The high level of dental morbidity in various social groups is the result not only of the conditions and lifestyle, but also of the system of organization of outpatient dental care for certain categories of the population [2, 3, 7, 13]. One of the problems of modern dentistry is the improvement of dental care for deaf-mute patients.

Diseases of the hearing organs currently occupy far from the last place in the list of socially significant diseases. Hearing loss and deafness not only worsen the formation of intelligence, but can also lead to a change

in the personality of an individual. This may lead to lower social adaptability and disability in a person with hearing impairments. [2, 8, 10].

Dental health in the hearing impaired, as well as for healthy people, is part of general health. Many authors have proved that the state of the oral cavity of each person affects not only his health, but also physical and socio-psychological functioning [1, 5, 10, 11].

The special medical and social status makes this population particularly vulnerable in matters of dental education, which entails a low level of knowledge on dental hygiene, as well as insufficient motivation to preserve and strengthen oral health. The above indicates the need to solve the urgent problem of rational organization of outpatient dental care for the hearing impaired in order to increase its accessibility and quality [1, 6, 8, 12].

## METHODS

60 students took part in our study. The subjects of the study were 30 students with hearing disabilities from Penza Medical College, specialty "Orthopedic Dentistry" and 30 healthy students of the Dentistry Department at Penza State University (Penza, Russia). The average age of the examined was  $19.5 \pm 0.85$  years. The study of the level of hygienic knowledge was carried out using a sociological research method (questionnaire). In the course of the work, 60 questionnaires were filled out and processed, consisting of 21 questions, starting with the general information and reflecting the attitude of the respondents to problems of oral hygiene. Statistical processing of the obtained data was carried out using the Statistica 8.0 for Windows application software packages.

## RESULTS AND DISCUSSION

Analysis of the results of the survey of patients with hearing disabilities showed that 23% of the surveyed contingent visit a dentist once a year, rarely — 20%, and on symptoms — 57%. Thus, it can be concluded that this group of the population is poorly informed about the frequency of visits to the dentist.

Among the examined deaf students, 74% do not use oral hygiene aids, while 82% of the surveyed have a desire to receive professional recommendations on oral hygiene. 69% of respondents do not know how often

they need to change their toothbrush. They select basic oral hygiene products mainly according to their choice (93%). On the question of knowledge about the need to visit a dentist for professional oral hygiene, 79% of respondents answered that they do not know about professional hygiene, and only 21% know about this procedure. Thus, it can be concluded that this group of the contingent has a weak idea of additional hygiene products, the importance of professional hygiene and the rules of oral hygiene.

According to the analysis of the survey data of the university students, 67% of the surveyed contingent go to the dentist 1 time a year, rarely — 10%, and if necessary — 23%.

24% of the university students do not use oral hygiene aids, while 82% of the surveyed have a desire to receive professional recommendations on oral hygiene. 21% of respondents do not know how often they need to change their toothbrush. They select basic oral hygiene products mainly according to their choice (78%). On the question of knowledge about the need to visit a dentist for professional oral hygiene, they answered that they did not know about professional hygiene — 18% of respondents and only 82% knew about this procedure. Thus, it can be concluded that this group of the contingent is not well informed about additional hygiene products, about the importance of professional hygiene and the rules of oral hygiene.

The results of the study indicate a weak motivation to preserve dental health, insufficient awareness of the means and methods of oral hygiene of hearing-impaired people compared with healthy students of the Penza State University.

## CONCLUSION

The results obtained indicate insufficient promotion of the prevention of dental diseases and oral hygiene lessons.

It is necessary to develop comprehensive approaches to dental education of the hearing impaired, taking into account the specifics of communication and the worldview of this medical and social group. Integrated approaches include video teaching materials, hygiene lessons. It is also important to work with a psychologist so that hearing impaired people are not afraid to go to the dentist.

To strengthen the motivation of hearing-impaired people to preserve dental health and visit a dentist, Dentists, together with sign language interpreters, need to conduct oral hygiene lessons, conversations about oral hygiene aids and products, about the possibility of free treatment in urban dental clinics and the need for professional oral hygiene.

## REFERENCES

1. **GORBATOVA M.A., ALEKSEEVA A.A., MYSOVA O.S.** Comparative assessment of the level of hygienic knowledge of pupils of secondary schools in Leshukonskoye village before and after oral hygiene lessons / *Bulletin of SSMU*. – 2009. – No. 1. – p. 153.
2. **GORBATOVA M. A., LARIONOV S. N., PLATONOVA N. IN., USHAKOVA T. V., L. , L. N. GORBATOVA.** Maintaining the health and social status of young people "Smile – the flag of life" /, N. V. Platonov, T. V. Ushakov, L. N. Gorbatova Gorbatova M. A. // *Bulletin of the Siberian state medical University*. – 2009. – No. 1. – P. 153.
3. **DEMIDOVA L. I.** Remedial work on the formation of adequate self-esteem of the disabled in the system of social rehabilitation / In proc. Actual problems of theory and practice of social work. Yekaterinburg, 2002. – pp. 45–60.
4. **LUTSKAYA I.K.** Preventive dentistry / I.K. Lutsкая. M.: Medical literature 2017. – 538 p.
5. **ROMANCHUK E. V.** The Need of high school students in the aesthetic treatment of the anterior teeth / proceedings of the 68<sup>th</sup> open scientific and practical conference of young scientists and students "Actual problems of experimental and clinical medicine", Volgograd, 2010. – P. 262.
6. **PRIGODIN S. N., SIRAK S. V., MAXIMOVA, E. M.** Assessment of dental hard tissue in adult residents of the Stavropol region/ Materials in the VIII All-Russian scientific and practical conference "Means and methods of prevention in dentistry". Collection of scientific papers. – M., 2007. – pp. 77–78.
7. **PRIGODIN S.N., SIRAK S.V., SHAPOVALOVA I.A., MAKSIMOVA E.M.** Dental morbidity of the children's population of the Stavropol Territory before and after the introduction of the prevention program/ "Dentistry of childhood and prevention". – 2009. – No. 1. – pp. 20–23.
8. **SUVOROVA M.N., ZYULKINA L. A., EMELINA G.V., KUZNETSOVA N. K., KAPRALOVA G.A.** Comparative analysis of the level of hygienic dental knowledge of hearing-impaired people in Penza and the Penza region / "News of higher educational institutions. Volga region. Medical sciences". Penza, 2015. – No. 3. – pp. 144–152.
9. **FEDOROV YU.A.** Oral hygiene / Yu.A. Fedorov. – M.: IL, 2016. – 60 p.
10. **EMELINA G. V., SUVOROVA M.N., ZYULKINA L. A., KUZNETSOVA N.K., EMELINA E. S.** Evaluation of the prevalence of inflammatory processes in periodontal tissues in the Penza region. 2018. *Journal of Pharmaceutical Sciences and Research*. 10(4), pp. 973–975.
11. **KUZNETSOVA M.YU., NIKONOVA A.V., KUZNETSOV I.I., SEVBITOVA M.A., TIMOSHINA M.D.** Indicators of trypsin-like activity of mixed saliva after the installation of intraosseous implants in the presence of gastric ulcer and duodenal ulcer. *South Brazilian Chemical Journal*. 2019. No 27. No 27. № 13–22.

12. **SADIE J., FUCHS S.**, Middle secretory otitis media in adults: II. The role of pneumatization of the mastoid process as a prognostic factor // *Anna, Otol.* – 1997. – Vol. 106. – No. 1. – pp. 37–40.
13. **SEVBITOV A.V., ENINA YU.I., DOROFEEV A. E., KAMENSKOV P. E., KOZHEMOV S. I., NIKONOVA A.V.** Investigation of the influence of various abrasive factors on the microrelief of the surface of hybrid ceramic orthopedic structures. *Option.* 2019. Vol 35. No. S24. pp. 598–611.
14. **CANNOBBIO VC, CARTES-VELÁSQUEZ R, MCKEE M.** Oral Health and Dental Care in Deaf and Hard of Hearing Population: A Scoping Review. *Oral Health Prev Dent.* 2020;18(1):417–425. doi: 10.3290/j.ohpd.a44687.