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Original Article

An Investigation on the Oral Hygiene Tools Knowledge of the Personnel of Nyala Sudan Turkey Training and Research Hospital

Nyala Sudan Türkiye Eğitim ve Araştırma Hastanesinde Çalışan Personelin Oral Hijyen Araçları Konusundaki Bilgilerinin Araştırılması

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Abstract

Background: Dental studies have shown that caries or periodontal disorders in the mouth are the result of dental plaque. An adequate oral hygiene is possible with sufficient removal of the dental plaque. Different tools are used in order to achieve a healthy oral hygiene.

Materials and Methods: The study was conducted on adults working in Nyala Sudan Training and Research Hospital. The present study included 104 individuals including 43 (41.35%) males and 61 (58.65%) females with age ranging between 20 and 57 years. Individuals were asked to fill out a questionnaire aiming to measure their oral hygiene habits and dental plaque knowledge.

Result: In the present study where oral hygiene habits were examined, a significant difference was detected between the genders in terms of tooth brushing habits and women fulfill these habits more regularly ($p<0.05$). Furthermore, it was concluded that women use mouthwash more regularly ($p<0.05$). On the other hand, it was observed that their knowledge level about dental plaque was lower than men ($p<0.05$). The review of the age variable revealed that individuals over 40 years of age had brushing habits once a day when compared to other age groups ($p<0.05$). Different levels of knowledge about age could not be reached in individuals.

Conclusion: It was reached out that the knowledge and attitudes of the participants on oral hygiene and the frequency of visits to the dentist were insufficient. It was observed that knowledge and habits on oral hygiene vary between individuals

Key words: Dental plaque, Toothbrush, Oral hygiene

ÖZ

Amaç: Diş hekimliği ile ilgili olarak yapılan araştırmalar göstermiştir ki ağız içerinde meydana gelen çürük ya da periodontal rahatsızlıklar dental plağın sonucudur. Dental plağın yeterince uzaklaştırılabilmesi ise iyi bir ağız hijyeni ile mümkün olur. Sağlıklı bir ağız hijyeni sağlayabilmek için farklı araçlar kullanılmaktadır. Bu çalışmada Nyala Sudan Türkiye Eğitim ve Araştırma hastanesinde çalışan personelin oral hijyen alışkanlıklarını, oral hijyen araçlarını ve bilgilerini değerlendirmek amaçlanmıştır.

Gereç ve Yöntem: Çalışma Nyala Sudan Türkiye Eğitim ve Araştırma Hastanesinde çalışan yetişkinler üzerinde gerçekleştirildi. Çalışmaya yaşları 20-57 arasında olan 43 (%41,35) erkek ve 61 (%58,65) kadın olmak üzere toplam 104 kişi katılmıştır. Bireylerin oral hijyen alışkanlıklarını ve dental plak bilgilerini ölçmeyi amaçlayan anket formunu doldurmaları istendi.

Bulgular: Oral hijyen alışkanlıklarının incelendiği bu çalışmada cinsiyetler arasında diş fırçalama alışkanlığı açısından kadınların bu alışkanlıklarını daha düzenli yerine getirdikleri yönünde anlamlı bir farklılık görüldü ($p<0.05$). Ayrıca gargara kullanım alışkanlıkları konusunda da kadınların daha düzenli kullandıkları sonucuna ulaşıldı ($p<0.05$). Öte yandan dental plak konusunda erkeklere göre bilgi düzeylerinin daha düşük olduğu görülmüştür ($p<0.05$). Yaş değişkenine bakıldığında ise 40 yaş üstü bireylerin günde 1 kez fırçalama alışkanlıklarının olması diğer yaş gruplarına göre anlamlı olarak görülmüştür($p<0.05$). Bireyler arası yaşla ilgili farklı bilgi düzeylerine ulaşılamamıştır.

Sonuç: Çalışma sonuçları ele alındığında bireylerin oral hijyen alışkanlıklarının neler olduğu ve hangi sıklıkla kullandıkları hususunda bazı sonuçlara ulaşılmıştır. Oral hijyen bilgi ve alışkanlıklarının bireyler arası değişiklik gösterdiği görülmüştür.

Anahtar Kelimeler: Dental plak, Diş fırçası, Oral hijyen

Highlits

In this study, it was aimed to measure the knowledge level of the participants about oral hygiene. Questionnaires were filled in by the participants. Evaluations were made with statistical analyzes and it was concluded that the level of knowledge is important in the light of the literature. While conducting the surveys, help was received from an interpreter who knew the local people's language and Turkish.

Introduction

Studies conducted for many years indicated that dental plaque is the main cause of dental caries and periodontal diseases (1-3). It is important for the patient to have a well oral hygiene knowledge in order to remove the plaque (3,4). The goal of all recommended tools for maintaining oral hygiene is to remove the plaque effectively. If the plaque cannot be removed, the discomfort in the gums and hard tissues may lead to tooth loss (5). According to the World Health Organization (WHO), "Oral health means not only having good teeth, but being free from diseases and ailments that affect the mouth and oral cavity (6).

Healthcare services in Sudan is very below the average. For instance, the infant death rate was detected 62% in Sudan. Despite infectious diseases such as tuberculosis, malaria and hepatitis A, the budget allocated by the government for health expenditures is less than 10% of the total expenditure. Furthermore, the ratio of dentists per population in rural areas is very low, and the studies showed that approximately three dentists serve for 100,000 people. There is limited number of dentists in Sudan. This restricts the access to dental therapies. The population of Sudan is around 45.5 million (7). Majority of the population is located in rural areas. Approximately 40% of the population lives below the poverty line (8). A previous study conducted in Sudan in 2013 showed that the share of expenditure on health services by individuals is 78.9% (9). Individuals spend 1% of these health expenditures for dental treatments only (10).

There have been many studies showing that cultural beliefs and practices have a higher impact on access to health services (8,11,12). However, there is a widely accepted view that majority of the researches on healthcare at global scale are performed in developed countries. Relatively limited number of researches is available in developing countries (8). Africa including rural part of Nyala is a region where health research is limited. The aim of this study was to evaluate the oral hygiene knowledge and habits of individuals in this region.

Materials and Methods

Following approval from the ethics committee of Sudan Nyala Training and Research Hospital, 104 personnel were informed about the study and their written consents were obtained from the Dental Clinic of Nyala Training and Research Hospital between June 2019 and January 2020. Adult volunteer patients without any psychological disorder were enrolled into the study. Patients with anxiety disorder, minors and patients over 65 years of age were excluded. Assistance was obtained from a translator who was fluent in the language of the region as well as Turkish language while preparing the questionnaire, and care was taken to ensure that the questions were in their own language. Demographic data were included in the questions related to gender, age and reason for referral in the first part of the questionnaire. In the second part, oral hygiene habits and knowledge about dental plaque were questioned. The literature was benefited in order to decide the scale measuring the Periodontal Awareness information (15). Alwaeli et al. used a scale of which the reliability was confirmed. In this section, 5 questions were asked to the individuals and they were asked to give the correct answer or answers by putting 4 options for each question (13,15). An explanatory scale derived from the short version of the SOC scale proposed by Antonovsky was used (16,17) Four questions were asked and appropriate answers were requested in order to measure Oral Hygiene Motivation. Dental procedures planned were performed to the patients after filling in the questionnaires.

Statistical Analysis

After filling out the questionnaire forms, statistical analyzes were carried out with the help of SPSS version 17.0 program. Consistency with normal distribution was evaluated with histogram graphics and Kolmogorov-Smirnov test. Mean, standard deviation, and median values were used in descriptive analyses. Pearson's Chi-Square test was used when evaluating categorical variables. In the statistical analysis part, since the groups showed normal weight, Student's t test was applied. Any p value below 0.05 was accepted as statistically significant.

Results

The present study included 104 individuals including 43 (41.35%) males and 61 (58.65%) females with age ranging between 20 and 57 years. The mean age of the individuals participating in our study was 32.22±9.02. One hundred and one (101) individuals brush their teeth; however, 3 individuals stated that they do not brush their teeth. Ten (10) individuals stated that they brushed their teeth once a day, 86 individuals brush their teeth twice or more, and 5 individuals reported that they have an irregular tooth-brushing habit. There are 22 people who use dental floss and/or interdental brushes. Five (5) individuals use dental floss and/or interdental brushes once a day whereas 7 individuals use these twice or more in a day. Twenty fine (25) individuals use mouthwash and/or mouth spray. When the last dentist appointment of the participants was investigated, 23 people were examined in the last 6 months; however, 21 individuals had dental examination 1 year ago, the number of people who have referred to the dentist 3 years ago is 4, and the number of people who have never been to the dentist is 40. Among all participants, 35 individuals stated that dental plaque is a soft attachment, 25 individuals said that it is a hard attachment, 3 individuals said that it was a stone, and 41 individuals stated that they had no idea about this. There are 49 individuals who say that if the dental plaque persists in the mouth for

a long time would cause discoloration, 5 people who say it would cause malformation, 18 people think that it would cause gingival discomfort, and 32 individuals do not have an opinion on this issue.
Eighty-eight individuals interpret a possible bleeding as gingivitis; 5 individuals consider that bleeding is an indicator for healthy gingiva; 4 individuals think that this might cause gingival recession, and 4 individuals have no idea on this issue. There are 7 individuals who believe dieting is the method to prevent gum diseases; 88 individuals who see it as oral care, and 9 people think that vitamin C supplementation is necessary. In addition to these, there were 89 individuals who said "we should brush our teeth in the morning"; 3 people found it important to brush at noon. The number of people who say "we should brush before going to bed" is twelve (Table 1).

Table 1. Demographic Data, Attitudes and Information about Oral Hygiene of the Participants

Age, year		32.22±9.2
Gender, n, (%)	Male	43(41.35)
	Female	61(58.65)
Do you brush your teeth?n, (%)	No	3(2.88)
	Yes	101(97.12)
How frequent do you brush your teeth?n, (%)	Once in a day	10(9.90)
	Twice or more times	86(85.15)
	Irregularly	5(4.95)
Do you use dental floss and/orinterdental brushes?n, (%)	No	82(78.85)
	Yes	22(21.15)
How frequent do you use these? n, (%)	Once in a day	5(22.73)
	Twice or more times	7(31.82)
	Irregularly	10(45.45)
Do you use mouthwash and/ormouth spray?n, (%)	No	79(75.96)
	Yes	25(24.04)
When did you haveyour last dentist examination?n, (%)	6 months ago	23(22.12)
	1 year ago	21(20.19)
	2 years ago	16(15.38)
	3 years or more than 3 years ago	4(3.85)
	Never	40(38.46)
What is a dental plaque?n, (%)	Soft attachment on tooth surface	35(33.65)
	Hard attachment on tooth surface	25(24.04)
	Tartar	3(2.88)
	I don’t know	41(39.42)
What can occur as a result ofnot removing dental plaque from the mouth for a long time?n, (%)	Colorings	49(47.12)
	Malformation on tooth surface	5(4.81)
	Gingival Disease	18(17.31)
	I don’t know	32(30.77)
What does gingival bleeding indicate?n, (%)	Gingivitis	88(84.62)
	Healthy gingival	5(4.81)
	Gingival Recession	4(3.85)
	I don’t know	7(6.73)
How can you beprevented from gingival diseases?n, (%)	Through having Diet	7(6.73)
	Through brushing teeth and using dental floss	88(84.62)
	Through taking Vitamin C supplement	9(8.65)
At what time of the dayis brushing the gumsmore important?n, (%)	In the mornings	89(85.58)
	At noon	3(2.88)
	Before sleeping	12(11.54)

When evaluated in terms of gender variable, the rate of brushing teeth is higher in women than in men ($p<0.05$). The rate of using mouthwash and/or mouth spray is higher in males than females ($p<0.05$). The rate of those who say that dental plaque is a soft attachment on the tooth surface is higher in women than in men ($p<0.05$). There was not any significant difference between genders about frequency of brushing and referring to a dentist ($p>0.05$) (Table 2).

Table 2. Comparison of Participants' Attitudesand Knowledge Levels on Oral Hygiene by Gender

		Male	**Female**	**P**
Do you brush your teeth?n, %	No	3(6.98)	0(.00)	0.036
	Yes	40(93.02)	61(100.00)	
How frequent do you brush your teeth? n, %	Once in a day	4(10.00)	6(9.84)	0.999
	Twice or more times	34(85.00)	52(85.25)	
	Irregularly	2(5.00)	3(4.92)	

Do you use dental floss and/orinterdental brushes? n, %	No	34(79.07)	48(78.69)	0.963
	Yes	9(20.93)	13(21.31)	
How frequent do you use these? n, %	Once in a day	1(11.11)	4(30.77)	0.434
	Twice or more times	4(44.44)	3(23.08)	
	Irregularly	4(44.44)	6(46.15)	
Do you use mouthwash and/ormouth spray? n, %	No	24(55.81)	55(90.16)	<0.001
	Yes	19(44.19)	6(9.84)	
When did you haveyour last dentist examination? n, %	6 monthsago	8(18.60)	15(24.59)	0.162
	1 yearago	9(20.93)	12(19.67)	
	2 yearsago	10(23.26)	6(9.84)	
	3 yearsormorethan 3 yearsago	3(6.98)	1(1.64)	
	Never	13(30.23)	27(44.26)	
What is a dental plaque? n, %	Soft attachment on tooth surface	11(25.58)	24(39.34)	0.021
	Hard attachment on tooth surface	17(39.53)	8(13.11)	
	Tartar	1(2.33)	2(3.28)	
	I don’tknow	14(32.56)	27(44.26)	
What can occur as a result ofnot removing dental plaquefrom the mouth for a long time? n, %	Colorings	24(55.81)	25(40.98)	0.313
	Malformation on tooth surface	2(4.65)	3(4.92)	
	Gingival Disease	8(18.60)	10(16.39)	
	Idon’tknow	9(20.93)	23(37.70)	
What does gingival bleeding indicaten,%	Gingivitis	39(90.70)	49(80.33)	0.411
	Healthy gingival	2(4.65)	3(4.92)	
	Gingival Recession	1(2.33)	3(4.92)	
	Idon’tknow	1(2.33)	6(9.84)	
How can you beprevented from gingival diseases? n, %	Through having Diet	2(4.65)	5(8.20)	0.660
	Through brushing teeth and using dental floss	38(88.37)	50(81.97)	
	Through taking Vitamin C supplement	3(6.98)	6(9.84)	
At what time of the dayis brushing the gumsmore important? n, %	In the mornings	36(83.72)	53(86.89)	0.100
	At noon	3(6.98)	0(.00)	
	Before sleeping	4(9.30)	8(13.11)	

When a comparison is done for the age variable, the age of those who use dental floss and/or interdental brush once a day is higher than those who use it twice or more and those who use it irregularly ($p<0.05$). No significant difference was observed in other habits and knowledge in consideration of the age variable (Table 3).

Table 3. Comparison of Participants' Attitudesand Knowledge Levels on Oral Hygiene by Age

		Mean± S.D.	**P**
Gender	Male	32.47±8.90	0.574
	Female	32.05±9.18	
Do you brush your teeth?	No	44.33±13.58	0.071
	Yes	31.86±8.70	
How frequent do you brush your teeth?	Once in a day	34.50±9.24	0.633
	Twice or more times	31.67±8.83	
	Irregularly	29.80±4.32	
Do you use dental floss and/or interdental brushes?	No	31.60±8.97	0.145
	Yes	34.55±9.06	
How frequent do you use these?	Once in a day	44.40±8.88	0.045
	Twice or more times	30.86±6.59	
	Irregularly	32.20±7.54	
Do you use mouthwash and/or mouth spray?	No	32.18±8.87	0.939
	Yes	32.36±9.67	
When did you have your last dentist examination?	6 monthsago	36.17±10.36	0.327
	1 yearago	31.19±7.63	
	2 yearsago	30.94±8.46	
	3 yearsormorethan 3 yearsago	30.50±13.48	
	Never	31.17±8.44	

What is a dental plaque?	Soft attachment on tooth surface	32.49±9.40	0.895
	Hard attachment on tooth surface	32.12±9.42	
	Tartar	35.00±7.00	
	I don't know	31.85±8.84	
What can occur as a result of not removing dental plaque from the mouth for a long time?	Colorings	32.08±8.84	0.970
	Malformation on tooth surface	30.00±6.82	
	Gingival Disease	33.22±9.48	
	I don't know	32.22±9.64	
What does gingival bleeding indicate?	Gingivitis	32.11±9.33	0.737
	Healthy gingival	35.60±8.29	
	Gingival Recession	29.50±4.43	
	I don't know	32.71±8.08	
How can you be prevented from gingival diseases?	Through having Diet	34.14±8.78	0.652
	Through brushing teeth and using dental floss	31.95±9.16	
	Through taking Vitamin C supplement	33.33±8.54	
At what time of the day is brushing the gums more important?	In the mornings	32.84±9.27	0.115
	At noon	24.00±4.36	
	Before sleeping	29.67±6.60	

Discussion

Having good oral health is very important for the continuation of general health (17). It is extremely important to train the individuals for oral and dental health. There are many studies advocating the correctness of giving these trainings in the very early years so that the person may provide adequate oral hygiene (13).

A study was conducted in Saudi Arabia in which oral hygiene habits and dental plaque knowledge were questioned among primary school teachers. The aforesaid study concluded that female teachers have more knowledge. Furthermore, it was observed that the frequency of tooth brushing of female teachers was more intense than male teachers. There was not any significant difference between teachers about referring to a dentist. It was concluded in the aforesaid study that both men and women do not have sufficient knowledge about dental plaque, and this aspect is not similar to the study conducted in Saudi Arabia. However, the outcome that women brush their teeth more frequently in the present study is consistent with the more frequent tooth brushing habit of female teachers. Moreover, it is similar to this study and some studies in the literature in that there is no significant difference between the frequency of women and men going to the dentist (18,19).

Some studies demonstrated that the increase in the income level of individuals may lead to an increase in oral hygiene habits (18). Since the income of the personnel working in the hospital is higher than the local people, the outcome may not reflect the oral hygiene habits of the local people. It is possible to conclude that the oral hygiene habits of these people who have a better income compared to the local people are more ideal than the general population.

It was concluded in the review of the literature that individuals do not regularly visit the dentist in many studies (3,18). The rate of referring to the dentist in the last year was 42.3% in the study stated above. The rate of the individuals who have not visited a dentist was 57.7%. This may suggest that the importance of oral-dental health is not known and ignored. However, we may consider that they visit a dentist when they had very important complaints. It is consistent from this point of view. On the other hand, Limited number of dentists restricts access to dentists according to the density of the population in Sudan. The reason for the scarcity of visits is understandable when such restriction is considered

It was concluded in a study conducted with patients receiving orthodontic treatment in Sudan that the habit of brushing twice a day was 46% (3). In a study conducted in Turkey, the rate of regular tooth-brushing twice a day was 39% (18). Such rate was detected 82.6% in this study. We believe that this positive result is due to the convenience of reaching the dentist in the institution where they work.

It was observed in another study conducted in Turkey that individuals do not attach the necessary importance to interface cleanliness (18). When the interface cleaning habits of the individuals were examined in this study, it was seen that 21% of them did not use any tool. It was stated that very limited number of people use dental floss and interface brushes. It was detected that the importance of interface care in this regard was not sufficiently understood, and it was seen that it was compatible with similar studies conducted in other countries.

It was found in a study conducted in Turkey about the knowledge of individuals on dental plaque that they did not have enough information (18). The knowledge of the individuals on dental plaque was examined in this study and it was concluded that 66.3% of the participants did not know what dental plaque was. This result seems normal to us in a society where the rate of going to the dentist is lower. It is a fact that psychological factors can affect oral hygiene habits. In a study, it was seen that depression will increase in pregnant women. This affects oral hygiene habits. Since the pregnancy status of the women participating in the study was not questioned, no conclusion could be reached regarding this (20).

Conclusion

As a result of the research, it was seen that approximately 40 of the patients who have referred to the dental clinic had never been to the dentist and the majority of them did not have sufficient knowledge about dental plaque. It is observed in

the light of these results that the lack of knowledge about oral hygiene continues to exist in the whole society; however, this rate increases in geographies where it is difficult to reach the treatment. These studies should be conducted on large patient series in wider geographies.

Limitations

One of our limitations is that the study is conducted in a single center. The main limitations of this study are not questioning the use of auxiliary dental hygiene tools such as miswak as an alternative to toothbrush, using it on a limited number of people, and getting help from an interpreter for communication.

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Ethical Approval: All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article

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REFERENCES

1. Carranza FA. NMG. Clinical Periodontology, Sixth ed. W.B. Saunders Co. 1996.
2. Lindhe, J., Karring T, Niklaus P.L. Klinische Parodontologie und Implantologie. Ouintessenz Verlags-GmbH, 1999.
3. Develioglu H, Gedik R. Investigation of Oral Hygiene tools and knowledge of individuals. Cumhur Üniversitesi DişHekim. 2001;4(1).
4. Kandemir Ş, Atilla G. A Comparative Study of the Effectiveness of Motivation Applied by Different Persons inChildren in Youth Detention Centers. EÜ Faculty of Dentistry Bulletin. 1991;12:56–60.
5. Marsh PD, Bradshaw DJ. Dental plaque as a biofilm. Journal of Industrial Microbiology. 1995;15(3):169-175.
6. Petersen PE. The World Oral Health Report 2003: Continuous improvement of oral health in the 21st century - The approach of the WHO Global Oral Health Programme. Community Dent Oral Epidemiol. 2003;31:3–24.
7. Pengpid S, Peltzer K. Prevalence and correlates of dental service utilisation among a national general adult population sample in Sudan. BMC Oral Health. 2021;21(1):1-8.
8. Owens J, Saeed SM. Exploring the oral health experiences of a rural population in Sudan. Int Dent J. 2008;58(5):258–64.
9. World Health Organization (WHO) Regional Ofce for the Eastern Mediterranean. Sudan health profle 2015.URL: https://rho.emro.who.int/sites/defau lt/fles/Profles-briefs-fles/EMROPUB_EN_19610-SUD.pdf. 2021.
10.Sudan Federal Ministry of Health. Health System Financing Review Report May 2014. URL:fle:///C:/Users/user/Downloads/HealthSystemFinancingRe_viewReport.2014.pdf 20 Jan 21. 2014.
11. Nations MK, Nuto S de AS. “Tooth worms”, poverty tattoos and dental care conflicts in Northeast Brazil. Soc Sci Med. 2002;54(2):229–44.
12. Ensor T, Cooper S. Overcoming barriers to health service access: Influencing the demand side.Health Policy and Planning. 2004;19, 69–79.
13. Asa FA, Rahman G, Al Mahmoud N et al. Periodontal disease awareness among pregnant women in the central and eastern regions of Saudi Arabia. Wiley Online Libr. 2015;6(1):8–15.
14. Üstün K, Özdemir E, Sezer U. Hamile Bireylerde Periodontal Farkındalık ve Dental Anksiyetenin Sosyo-Demografik Veriler Işığında Değerlendirilmesi. İnönü University Helath sicences Bulletin. 2013;2(2)1-10.
15. H A Alwaeli, SHA-J. Periodontal disease awareness among pregnant women and its relationship with socio-demographic variables. Int J Dent Hyg. 2005;3(2):74-82.
16. Antonovsky A. Unraveling the mystery of health: How people manage stress and stay well. 1987.
17. Allen PF. Assessment of oral health related quality of life. Health Qual Life Outcomes. 2003;1(1):1-8.
18. Almas K,Al-Malik T, Al-Shehri M, et al. The knowledge and practices of oral hygiene methods and attendance pattern among school teachers in Riyadh, Saudi Arabia. Saudi Med J. 2003;24(10):1087–91.
19 . Loupe MJ. Knowledge and attitude of schoolteachers toward oral health programs and preventive dentistry. J Am Dent Assoc. 1983;107:229–34.
20 .Yaksi N, Tastekin N. Effects of novel coronavirus (covıd-19) pandemic on pregnant psychology. International Journal of Current Medical and Biological Sciences 2022;2(1):1-14