

Assessment of Oral Hygiene Knowledge, Practices & Attitude towards the Professional Dental Care Among Narikuravar Children in Tirunelveli District, Tamilnadu-A Cross Sectional Study with a Psychology Approach

**Dr. Esai Amutha Prabha^{1*}, Dr. Packialakshmi A²,
Dr. Arun Elangovan³, Dr. Madhan Chenchugopal⁴,
Dr. Lubna Fathima⁵, Dr. V Dharini⁶**

Received: 20- June -2023
Revised: 02- July -2023
Accepted: 15- August -2023

¹ Master of Dental Surgery, Associate Professor, Department of Pediatric and Preventive Dentistry, Rajas Dental College and Hospital, Kavalkinaru, Tamil Nadu, India

² Master of Dental Surgery, Senior Lecturer, Department of Pediatric and Preventive Dentistry, Madha Dental College and Hospital, Kundrathur, Tamil Nadu, India

³ Master of Dental Surgery, Professor and Head, Department of Pediatric and Preventive Dentistry, Madha Dental College and Hospital, Kundrathur, Tamil Nadu, India

⁴ Master of Dental Surgery, Associate Professor, Department of Pediatric and Preventive Dentistry, Madha Dental College and Hospital, Kundrathur, Tamil Nadu, India

⁵ Master of Dental Surgery, Senior Lecturer, Department of Public Health Dentistry, Madha Dental College and Hospital, Kundrathur, Tamil Nadu, India

⁶ Master of Dental Surgery, Senior Lecturer, Department of Pediatric and Preventive Dentistry, Madha Dental College and Hospital, Kundrathur, Tamil Nadu, India
Email: ¹ dresaijaiganesh@gmail.com

Abstract

Background: Evaluation of oral fitness repute in several tribal communities is continually a tough mission attributed to the conduct, customs, and beliefs prevailing throughout the indigenous population. Compromised oral health reputation amongst those businesses in large part impacts general individual health, health service usage, and high-quality lifestyles. The present study was aimed at understanding the present-day nation of oral health and assessing the understanding and attitude towards oral hygiene practices of many of the kids of the Narikuravar tribal inhabitants

Materials and Method: A cross-sectional questionnaire- primarily grounded check was done to assess the knowledge and attitude towards oral health status and professional dental care practices amongst kiddies of the Narikuravar population in the abecedarian areas of the main study population at Tirunelveli, Tamil Nadu. The rankings have been calculated and grounded completely on the responses of the bystander actors.

Results: In the present study only 22.5% children brush their teeth twice a day while about 70% preferred to brush only once in the morning using tooth paste and brush (62.5%) to clean their teeth. Majority of the children (92.5%) were not familiar with brushing techniques, role of dental plaque in bleeding gums and complications associated with dental caries despite 80% were reported without any caries. On Assessment of their attitude towards Professional Dental Care, it was observed that 75% had never visited the dentist with the major reason being that they lack experience of tooth pain while 15% of them reported fear associated with their dental visit and 15% of them experienced little dental pain during their first visit.

Conclusion: The present study clearly shows lack of awareness and insufficient understanding towards oral health concerns and oral hygiene practices despite one-third had utilized the services of professional dental care in the past. This emphasizes the need for dental health educators and dental professionals to conduct dental camps, organize more aggressive propaganda and health programs to educate and raise awareness among the children of Narikuravar tribal inhabitants about their oral health to improve the overall quality of life.

Keywords: Attitude, Dental Caries, Dental Plaque, Health Promotion, Narikuravar, Tribal Oral Health

1. Introduction

Philosophies and customs about health, wellness and disease are integral part of every society that remains unique and constant over a period of time. It is evident that oral health reflects the physiological, functional, aesthetic, and psychological state of well-being and also illustrates the overall health status of an individual at the community level. Factors like availability of oral health care services, cultural views, beliefs, attitudes, race, ethnicity and oral hygiene practices have a major impact on oral health-seeking behavioral pattern. Compromised oral hygiene practices results in poor oral health which is considered as one of the major health concerns in developing countries like India that demands appropriate treatment plan and execution of the same at all the levels¹. One of the key determinants for the accessibility and utilization of various treatment modalities is the sociocultural structure of the community. In addition to these factors, inferior knowledge towards complications associated with poor oral hygiene habits and a lack of understanding about oral health also significantly affect oral health status and disease prevalence across the community².

Assessment of oral health status among the particular community is always a challenging task attributed to behavior, customs and believes prevailing across the population. One such group of tribal people of interest are the "Narikurava", an indigenous, semi-nomadic tribal inhabitant of Tamilnadu, a state in Southern part of India³. The primary activity of the inhabitants of these native semi-nomadic tribes is hunting. Following the deployment of the Wild Life Protection Act (WLPA), they were prohibited from entering the forests, which presented them with options to carrying on their specific way of life⁴. Due to the revolution of Indian settlement plans and migration of vast number of people across the country after independence, these inhabitants^{7,8} were allocated small huts, shelters and houses in newly built townships known as colonies and consequently resulted in substituting their routine hunting to carry tasks such as making and selling of attractive hand-made products made up of beads for their livelihood^{5,6}.

Over the past two decades, there has been no progress in the research or very few literature studies were carried out to assess the knowledge, familiarity and attitude towards health care practices including oral health status among these Narikuravars population group. Keeping this research gap in our observance, the present study was aimed to understand the current level of oral health status, their knowledge and attitude towards oral hygiene and professional dental care practices among the Children of the Narikuravar tribal inhabitants^{7,8}.

2. Materials And Methods

A cross-sectional questionnaire survey was carried out to evaluate the Oral fitness fame amongst youngsters of the Narikuravar population in Pettai and Valliyoor, major areas in Tirunelveli, Tamil Nadu, India, with a higher population of the Narikuravar populace organization. The character and cause of the review were explained to the Institutional Review Board (IRB) of Rajas Dental College and Hospital, and ethical clearance was received. Informal consent had been obtained from the observer members after a short period, and approximately the goal, techniques, and cause of the study were supplied to ensure voluntary participation. The Narikuravar youngsters' population in each colony comprised a total of ninety-five youngsters. For the existing study, a standard sampling choice method was hired to lessen any bias because of selection error. Out of ninety-five kids, approximately 55 have no longer been protected inside the examination due to their absence on the day of the examination or unwillingness to participate in the examination, leaving a total of 40 subjects for the entire assessment. The inclusion criteria encompass members aged 6–12 who have been willing to participate in the study. Participants who had issues with the nearby language or individuals who did not understand the questions were also excluded. With the useful resource of a non-governmental organization (NGO) in the locality, residents of the Narikuravar colony inside the Tirunelveli district were delivered to Valliyoor together with the Pettai area youngsters. A pattern of 20 contributors served as the pre-take-a-look model for a closed-ended survey on questions on oral fitness notions and oral hygiene practices. The internal consistency of the questionnaire evaluated was found to be good enough (Cronbach's alpha = 0.86). In the very last information analysis, those samples were excluded. The questionnaire consists of socio-demographic data and a total of 33 questions, which have been divided into three units. The first set of questions was about oral hygiene practices and included the tool used to clean teeth and how

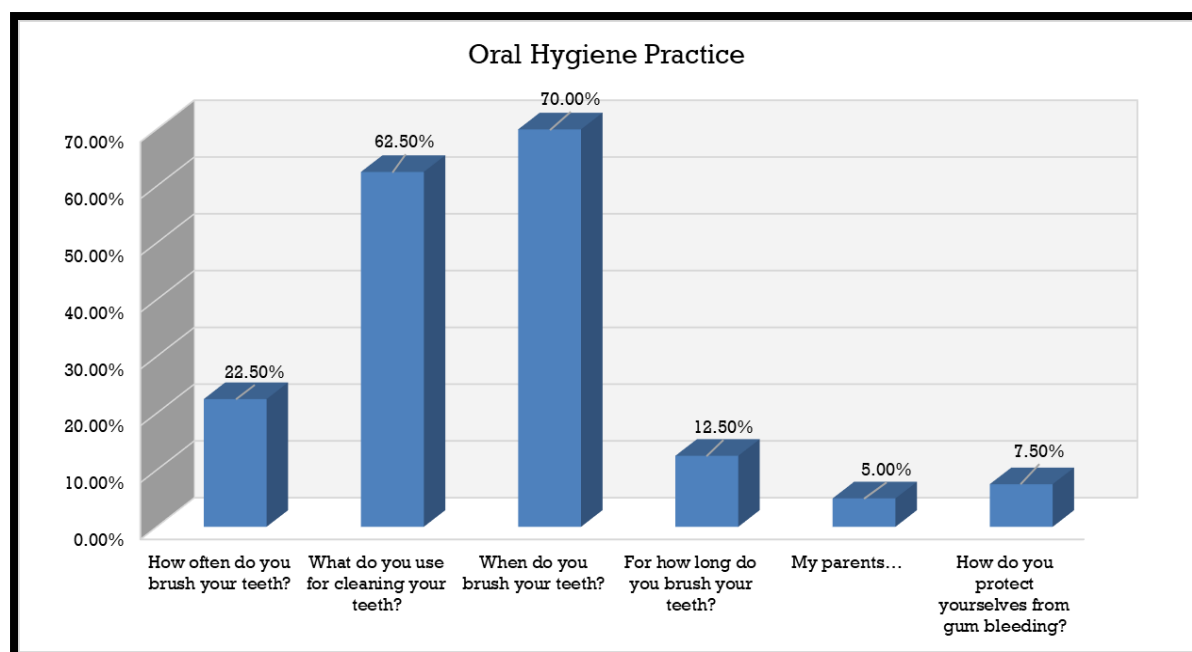
well it was assumed to perform oral hygiene care. The kids were asked a second set of questions about their knowledge of oral hygiene and a third set of questions targeted at how they perceived and felt about oral fitness and the way they sought out their dental treatment desires. Due to the subjects' incapacity to study or write, the data was collected through face-to-face interviews. The statistics concerning their oral health fame turned into the use of the WHO Proforma 2013. The statistical evaluation was carried out with the SPSS model 15.0. Descriptive records, which protected chances and frequencies, were used to evaluate the variables.

3. Results

TABLE 1: DISTRIBUTION OF ORAL HYGIENE PRACTICE AMONG THE STUDY PARTICIPANTS

S.No	Questions	Correct Answers	Incorrect Answers
1.	How often do you brush your teeth?	22.50	77.50
2.	What do you use for cleaning your teeth?	62.50	37.50
3.	When do you brush your teeth?	70.00	30.00
4.	For how long do you brush your teeth?	12.50	87.50
5.	My parents watch me while brushing.	05.00	95.00
6.	How do you protect yourselves from gum bleeding?	07.50	92.50

GRAPH 1: GRAPHICAL DISTRIBUTION OF ORAL HYGIENE PRACTICE AMONG THE STUDY PARTICIPANTS



A total of 40 Narikuravar tribal kids have been tested, which includes both males and females. Table 1, Graph 1, shows the oral hygiene conduct among the contributors. On the evaluation of oral hygiene conduct, our sample indicated that 22.5% of the children would brush their teeth twice a day. It was seen that 62.5% of the kids used a toothbrush and toothpaste to brush their teeth, even though approximately 70% desired to brush in the morning, among which 12.5% brushed their teeth for 2 minutes. When questioned about the approximate role of dad and mom in their day-to-day oral care, it was found that 5% of youngsters reported that they had been counseled and watched while brushing. On the contrary, 95% of the kids mentioned that their mother and father neither cautioned them nor watched them while brushing.

TABLE 2: DISTRIBUTION OF KNOWLEDGE TOWARDS ORAL HYGIENE PRACTICE

S.No	Questions	Correct Answers	Incorrect Answers
1.	Regular visits to the dentist are necessary	17.5	82.5
2.	Using fluoride strengthens the teeth	10	90
3.	Brushing teeth prevents dental decay	17.5	82.5
4.	Frizzy drinks affect the teeth adversely	7.5	92.5
5.	Sweets affect the teeth adversely	22.5	77.5
6.	Cariou teeth can affect the teeth' appearance	10	90
7.	Do you think you can decide the treatment you need	17.5	82.5
8.	What does dental plaque lead to	7.5	92.5
9.	What does plaque mean	15	85
10.	What does gum bleeding mean	7.5	92.5

GRAPH 2: GRAPHICAL DISTRIBUTION OF KNOWLEDGE TOWARD ORAL HYGIENE PRACTICE

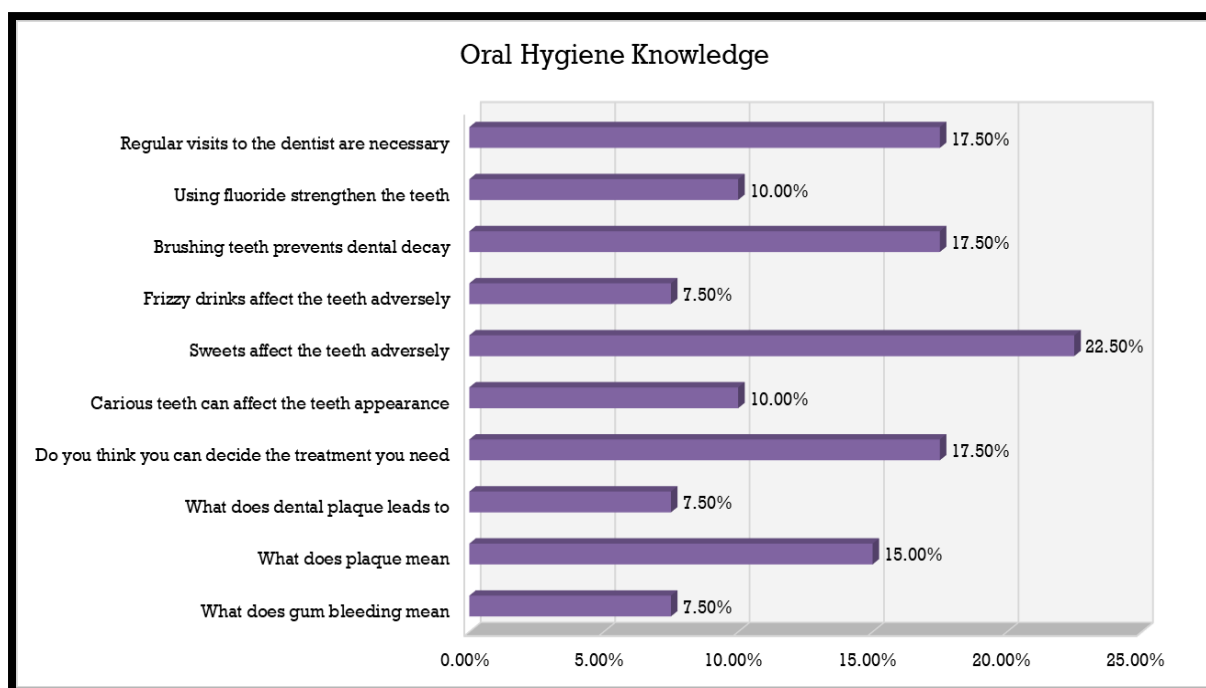


Table 2 and Graph 2 suggest the evaluation of expertise towards oral health. The majority (92.5%) of the subjects were not aware of bleeding gums; only 7.5% knew the ideal solution that it meant infected gums. 7.5% of the youngsters knew that tooth brushing and flossing might assist them in the prevention of gingivitis. About 15% of the children were aware of dental plaque, and 7.5% knew what gum bleeding was. It was discovered that 15% of them knew that dental plaque was linked to the development of dental caries. Even though there were 80% stated they had no dental caries, the handiest 10% were conscious that caries teeth can affect the appearance of the teeth, even though 15% reported having restored teeth. There had been the simplest 20% of subjects who knew the correct number of deciduous enamel, at the same time as there had been 22.5% who knew the correct number of permanent teeth.

TABLE 3: DISTRIBUTION OF KNOWLEDGE RELATED ORAL HYGIENE PRACTICE

S.No	Questions	Correct Answers	Incorrect Answers
1.	How many filled teeth do you have	15.00	85.00
2.	How many carious teeth do you have	20.00	80.00
3.	How many teeth are the permanent teeth	22.50	77.50
4.	How many teeth are the deciduous teeth	20.00	80.00
5.	Is it necessary for patients to decide about their dental treatment needs	7.50	92.50
6.	You care about your teeth as much as any part of your body	5.00	95.00
7.	General body health has a relationship with the oral & dental diseases	7.50	92.50
8.	What the dentist care about is treatment, not prevention	12.50	87.50
9.	The dentist examines and takes care of his or her parents	10.00	90.00
10.	Dentists always explain the dental problem and solve it	2.50	97.50

GRAPH 3: GRAPHICAL DISTRIBUTION OF KNOWLEDGE RELATED ORAL HYGIENE PRACTICE

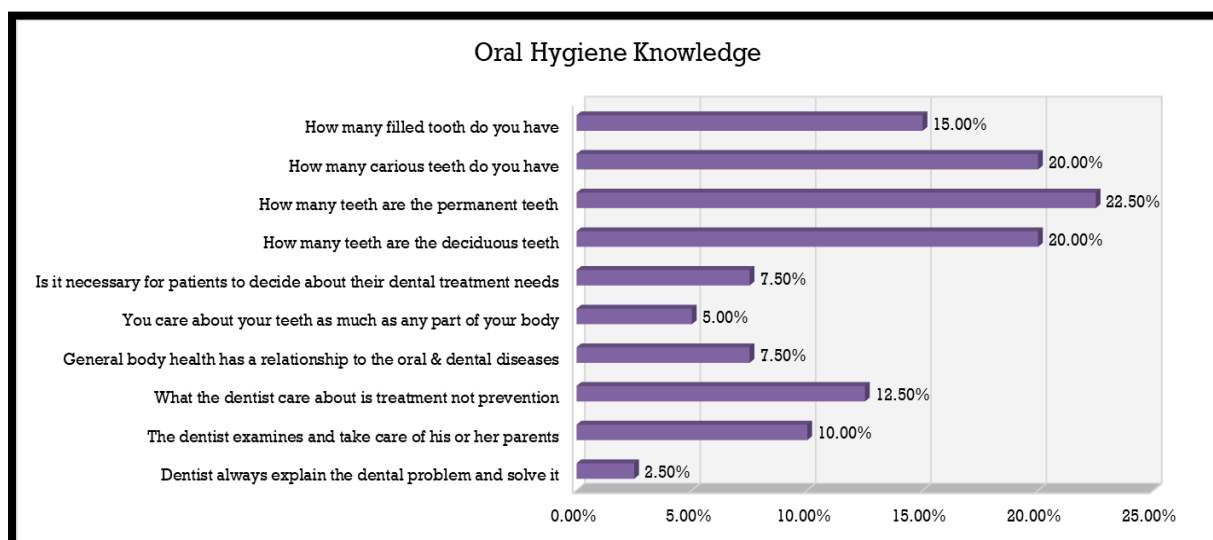


Table 3 and Graph 3 indicate the expertise on the predominant factors affecting the oral cavity. The respondents believe that the most important factors that motivate dental issues are goodies (22.5%) and fizzy liquids (7.5%). Nevertheless, these kids knew brushing their teeth (17.50%) and using fluoride (10%) could save them from dental decay. It turned out that 7.5% of the subjects related dental illnesses to their popular body fitness, and 5% of them cared about their teeth as much as another organ of their body. A much smaller range of topics (2%) stated that the dentist explains the problem and solves it, and 10% said they were happy as the dentist examines and looks after his patients. But 12.5% of them felt that the dentist cares about treatment, not prevention.

TABLE 4: DISTRIBUTION OF ATTITUDE TOWARD PROFESSIONAL DENTAL CARE

S.No	Questions	Correct Answers	Incorrect Answers
1.	How often do you visit your dentist?	0	100
2.	The last time I visited a dentist was	0	100
3.	The reason for my last visit to the dentist was	0	100
4.	When I first visited the dentist	15	85

GRAPH 4: GRAPHICAL DISTRIBUTION OF ATTITUDE TOWARD PROFESSIONAL DENTAL CARE

Attitude towards Professional Dental Care

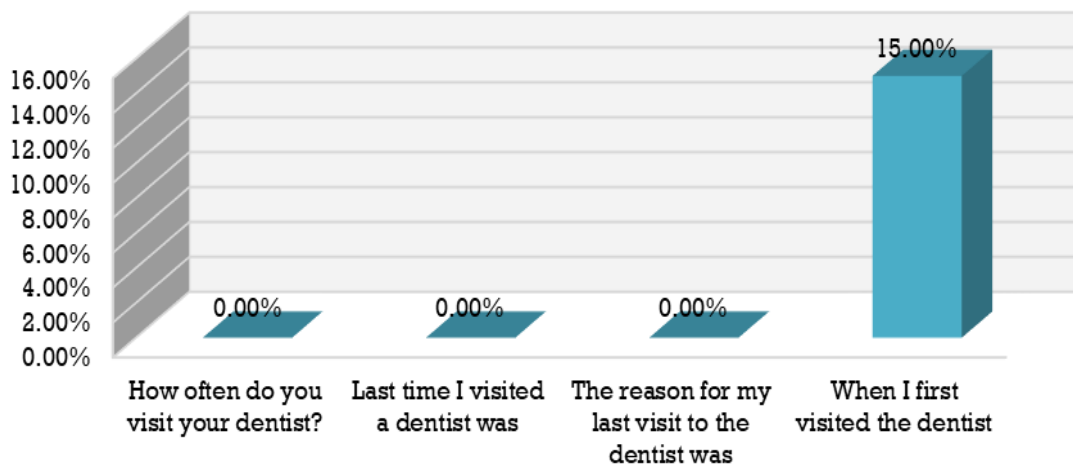


Table 4 and Graph 4 suggest the evaluation of their attitude towards expert Dental care. It was observed that 25% of the subjects might visit a dentist after they experienced pain, while 75% said that they had in no way visited the dentist. Not one of the subjects would visit their dentist often, as often as every 6–12 months; 10% had a dental visit in the last six months. The dental ache was the initiating thing for their last visit; 15% of the topics had undergone remedies, which included fillings and extractions (10%). The most common reason for no longer traveling to their dentist frequently is that they no longer revel in pain. 15% of them said that they had been barely afraid during their first visit, and 15% of them experienced little dental aches all through their visit. Handpieces (5%) and dental needles (27.5%) have been stated to be scary elements in the dental workplace (Graph 4, Table 4).

4. Discussion

Over the years, the anthropologists have generally been the ones to pioneer the field of tribal studies who largely focused on tribal community general behavior, customs and believes prevailing across the population. Yet, the goals of these studies back then largely were non-specific and different from how they are assumed in the present day. The rules of life, from birth to death, as well as the ways in which diseases or sickness are recognized and care is sought after, are governed by culture, beliefs across race and ethnic group. Such myths either make it easier to receive healthcare services or serve as a barrier in and of themselves⁹.

Many studies have shown evidence of the potential relationship between ethnicity, race and oral health status and behavioral pattern, which are impacted by cultural beliefs. The results of these investigations demonstrate the epidemiological basis for the connection between ethnic minorities [5]. Health Locus of Control (HLOC), a paradigm put forth by Rotter appraised individual ideas and values based on prior experiences with health-related concerns. As a bridge between a person's social position and health practices, it plays a significant influence in shaping health beliefs and behaviors. The World Health Organization has set improvements to health and a healthy lifestyle as one of its top priorities¹⁰.

During the last many years, there has been no progress within the research only a few studies in the literature have been done to evaluate the know-how, familiarity, and attitude towards fitness care practices, which include oral health status, among those Narikuravar populace groups. There is large research on cultural beliefs, myths, values,

and behaviors linked to oral fitness among diverse cultural corporations, but there is not any research investigating the beliefs of ethnic minorities who are oblivious to oral health issues. They may not be in deteriorating fitness due to the fact they belong to a Narikuravar tribe; alternatively, it is due to cultural practices and ideals that might be not unusual to these cultures and feature an effect on oral health¹¹.

This examination offered a complete assessment of the oral fitness conduct, know-how, and attitudes of faculty kids aged 6 to 12 and, to the best of our knowledge, represents the first examination of its kind to explore those troubles among narikuravar youngsters in Thirunelveli. There are numerous ethnic minorities and cultural groupings internationally, several of which are migrants, even though others are from the United States. Just like most plural societies, India has a diverse populace made up of many one-of-a-kind ethnic corporations. This specific ethnic group was selected because the situation of the studies revealed that cultural ideals impacted how they behaved concerning oral fitness. Within the modern survey on oral hygiene practices, 22.5% of children observed the recommendation to brush their teeth twice a day. Compared to research carried out with the aid of Blaganna et al. (40%)⁹, Gupta et al. (61%)¹⁰, Harikiran et al. (38.5%)¹¹, Priya et al. (58%)¹², and Kuppuswamy et al. (53%)¹³, the existing look at findings had been less good-sized yet monitored the normal practice prevalent in the various examine populations, necessitating the want to alter habitual practice using implementing aggressive and suitable oral hygiene approach hints and ensuring appropriate follow-up measures were implemented.

Approximately two-thirds (77.5%) of children cleaned their teeth at a minimum once a day, preferably in the morning, even as the individuals' excuses for no longer brushing blanketed lack of time or easy forgetfulness. Around 62.5% of the kids used a toothbrush and toothpaste to clean their teeth, contrary to Blaganna et al. (96.8%)⁹, Priya et al. (98%)¹², and Kuppuswamy et al. (58.4%)¹³. Although much less than half of the kids in this study brushed their teeth two times each day, this effort was not competently coordinated or supported with the aid of parents due to the fact that 5.0% of them observed their youngsters brushing their teeth. Ninety-five percent of parents in no way determined their child's brushing their teeth; they just gave advice, which contrasts with research via Priya et al. (14.7%)¹² and Togoo et al. (32.6%)¹⁴. Those findings may also doubtlessly be explained by a lack of oral health education for parents and children and attributed to insufficient fitness care consciousness applications prepared across the vicinity.

Most effective 62.5% of the youngsters applied a toothbrush and toothpaste to clean their teeth, largely impacted by a clear lack of knowledge, recognition, or right of entry to toothpaste and brushes. Punitha and Sivaprakasam (62.9%), in a comparable look, observed similar findings amongst rural populations within the states of Uttaranchal and Kanchipuram, respectively¹⁴. This outcome differs from that of the studies of Blaganna et al. (96.8%)⁹, Priya et al. (98%)¹², and Kuppuswamy et al. (58.4%)¹³. However, evaluation of the studies performed by Priya M et al. (31.1%) [12] and Togoo et al. (51.14%)¹⁴. Most effective 7.5% of the children in our study have been conscious that Tooth brushing and flossing may be a beneficial strategy in preventing dental disorders such as gum bleeding, according to Priya M et al. (31.1%)¹² and Togoo et al. (51.14%)¹⁴. Over half of the respondents no longer recognized the importance of gum bleeding or the term "dental plaque," indicating that there was much less awareness of periodontal disorders than dental caries. Few youngsters were conscious that gingival bleeding changed into a signal of periodontal sickness and that cleansing their teeth turned into a powerful defense against it^{15,16}.

In line with observations made by using Blaganna et al. (81.8%) (67.8%)⁹ and Togoo et al. (6.6%) (58.45%)¹⁴ who found that sweets and fizzy drinks had the same response to purposeful enamel decay. According to the kids' reviews, approximately the principal factors that cause dental troubles have been chocolate (22.5%) and fizzy drinks (7.5%). In a comparable observation, Priya et al.¹² tested school children who understood that chocolates and fizzy drinks have varying results on oral health (81.8% and 77.7%, respectively)^{9, 12, 14}. In step with our take look, the most effective 5% of human beings are approximately more about their teeth than some other part of their frame; that's plenty much less than other research by using Sanadhya et al. (53%)¹⁷, Priya et al. (80.2%)¹², and others^{14, 15}. Simply 7.5% of children were aware of the fact that oral and dental infection and overall body fitness are related in comparison to studies by Blaganna A et al. (50.2%)⁹, Priya et al. (71.8%)¹², and Kuppusamy et al. (36%)¹³.

Not one of the observer participants stated ordinary dental attendance, which is inconsistent with findings from related studies^{9,12}. In the simplest form, one-third of the individuals (17.5%) were privy to the significance of routine dental visits, and none of them visited their dentist in the final six months, which is far less in comparison to different studies^{9,10,12}. In keeping with studies, parents or the dentist at a dental appointment impart very little oral fitness understanding to their youngsters. The significance of instructing college students on this topic cannot be overstated because oral infections have a slow pace of development that may be caught early with the aid of the dentist. The mother and father of these kids additionally determine how regularly they visit the dentist, and the dental attitudes that parent's showcase may additionally offer a reason for the irregular attendance. Therefore, it is essential to teach dad and mom about the need to take their kids to ordinary dental checkups⁹.

Despite these dental health observations, the survey clearly reflects that nomads are insensitive when it comes to seeking medical attention. There is undoubtedly a need to overcome obstacles to healthcare, such as financial, administrative, geographic, and cultural barriers^{18,19}, as well as to close the gap between the native population and healthcare workers. The first point of contact for all healthcare services including for patients and healthcare professionals is primary care. A complete cluster of health services must be quickly accessible to the people in order to effectively deliver coordinated primary care. By facilitating referrals from primary care to other levels of care and services, it is possible to strengthen such successful primary care. Therefore, it is necessary to provide primary care for such an indigenous nomadic community in order to foster dialogue, disseminate knowledge, and advance healthcare^{19,20}. The limitations of the current research due to biases including social desirability bias and knowledge bias, where individuals tend to answer in a way that will be seen favorably by others must be solved.

5. Conclusion

The present study clearly shows that the Narikuravar tribes have insufficient understanding and lack of awareness towards oral health concerns and oral hygiene practices despite one-third had utilized the services of professional dental care in the past. To maintain proper oral hygiene, which will reflect the tribes' overall health, it is important to teach tribes about oral health education, train them to perform ideal brushing techniques, and provide necessary supplies. This report sparks a reflective response from our dental health educators and providers to conduct dental camps, organize more aggressive propaganda and health programs to educate and raise awareness among the children of Narikuravar tribal inhabitants about their oral health to improve the overall quality of life.

References

1. Kumar S. To assess the oral health status and awareness about the oral hygiene measures of the jackal people (Narikuravar tribes)-A cross sectional study. *Int J Curr Res*. 2017;9(5):50720-50723.
2. Sindhu, R., Manipal, S., Mohan, R., Bharathwaj, V. V., Lalitha, N. D., & Prabu, D. Perceived oral health beliefs, traditional practices, and oral health status of nomads of Tamilnadu: A cross-sectional study. *Journal of Family Medicine and Primary Care*. 2020; 9(1), 131-135
3. Muthanandam S, Babu BV, Muthu J, Suganya R, Vezhavendhan N, Kishore M. Assessment of knowledge, awareness and attitude towards oral precancer and cancer among Narikuravar population in Pondicherry state. *South Asian Journal of Cancer*. 2021;10(04):225-229.
4. Strauss RP. Culture, health care, and birth defects in the United States: an introduction. *Cleft Palate Journal*. 1990;27(3):275-8.
5. Butani Y, Weintraub JA, Barker JC. Oral health-related cultural beliefs for four racial/ethnic groups: Assessment of the literature. *BMC oral health*. 2008;8(2):1-3.
6. Khazaei T, SharifZadeh G. Nurses' professional burnout and some predisposing factors. *Journal of Birjand university of medical sciences*. 2006;13(1):9-15.
7. Mahajan N, Kaur J. Relation between locus of control of college teachers and their job satisfaction. *International Journal of Applied Psychology*. 2012;2(5):98-103.
8. Priya A. Ethnicity in post-independent India: A sociological perspective on its causes and manifestations. *IOSR Journal of Humanities and Social Science*. 2016;21(1):56-61.
9. Blaggana A, Grover V, Kapoor A, Blaggana V, Tanwar R, Kaur H, Haneet RK. Oral health knowledge, attitudes and practice behaviour among secondary school children in Chandigarh. *Journal of clinical and diagnostic research: JCDR*. 2016;10(10):11-20.
10. Gupta T, Sequeira P, Acharya S. Oral health knowledge, attitude and practices of a 15-year-old adolescent population in Southern India and their social determinants. *Oral Health and Preventive Dentistry*. 2012;10(4):345.

11. Harikiran AG, Pallavi SK, Hariprakash S, Nagesh KS. Oral health-related KAP among 11-to 12-year-old school children in a government-aided missionary school of Bangalore city. *Indian Journal of Dental Research*. 2008;19(3):236.
12. Priya M, Devdas K, Amarlal D, Venkatachalapathy A. Oral health attitudes, knowledge and practice among school children in Chennai, India. *Journal of education and Ethics in Dentistry*. 2013;3(1):26.
13. Kuppuswamy VL, Murthy S, Sharma S, Surapaneni KM, Grover A, Joshi A. Oral hygiene status, knowledge, perceptions and practices among school settings in rural South India. *Oral Health Dent Manag*. 2014;13(1):146-54.
14. Togoo RA, Yaseen SM, Zakirulla M, Nasim VS, Al Zamzami M. Oral hygiene knowledge and practices among school children in a rural area of southern Saudi Arabia. *Int J Contemp Dent*. 2012;3(1):57-62.
15. Punitha VC, Sivaprakasam P. Oral hygiene status, knowledge, attitude and practices of oral health among rural children of Kanchipuram district. *Indian Journal of Multidisciplinary Dentistry*. 2011;1(2).
16. Linn EL. Teenagers' attitudes, knowledge, and behaviors related to oral health. *Journal of the American Dental Association*. 1976;92(5):946-51.
17. Sanadhya YK, Thakkar JP, Divakar DD, Pareek S, Rathore K, Yousuf A, Ganta S, Sobti G, Maniar R, Asawa K, Tak M. Effectiveness of oral health education on knowledge, attitude, practices and oral hygiene status among 12–15-year-old schoolchildren of fishermen of Kutch district, Gujarat, India. *International maritime health*. 2014;65(3):99-105.
18. Jackson Pulver L, Haswell MR, Ring I, Waldon J, Clark W, Whetung V, Kinnon D, Graham C, Chino M, LaValley J, Sadana R. Indigenous health: Australia, Canada, Aotearoa, New Zealand and the United States: laying claim to a future that embraces health for us all. 2021;12(3):62-66.
19. Almazan AN, Benyishay M, Stott B, Vedilago V, Reisner SL, Keuroghlian AS. Gender-Affirming Primary Care Access Among Rural Transgender and Gender Diverse Adults in Five Northeastern US States. *LGBT health*. 2023;10(1):86-92.
20. World Health Organization. A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals. World Health Organization; 2018.