Prevalence of Tooth Loss among Road Transport Workers in Owerri Metropolis

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

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ABSTRACT

Background: Tooth loss is recognized as a public health problem and used as an important measure of the oral health. Oral health is commonly taken for granted, and its significance to overall health of the body's general health is underappreciated.
Aim: The purpose of this study is to assess the prevalence of tooth loss among road transport workers in Owerri Metropolis, Nigeria.
Methods: This was a descriptive research study. Data were collected from 292 road transport workers in Owerri metropolis town who were available during the distribution of the questionnaire, the questionnaire was validated by three professors who are experts in the field of dentistry; with the help from the secretary of transporter and they were selected using the purposive sampling technique, using the semi-structure questionnaire, which were designed to elicit accurate and honest responses from the transport workers, including demographic data, causes of tooth loss, position of tooth loss, treatment of tooth loss and condition associate with tooth loss. Data collected were analyzed using descriptive statistics of frequencies, percentages, and mean scores.

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Results: The study found that most of the respondents were males (89.73%), their ages ranged from 40 – 50 years (37.33%). The majority of them were married (40. 41%), with the highest education of primary school certificate (37.33%), belong to the Igbo tribe (53.08%). At the same time, the highest daily income ranges from 2600 -5000 and 7100 – 10000 naira (34.25%), respectively. These results inferred those self-reported causes of the tooth were traumatic (road accident, fighting, and falls) (32.53%), location of tooth loss was upper anterior (33.22%). Meanwhile, respondents' treatment adequate for tooth loss was visiting a chemist shop (40.07%) and tooth loss associated with complex chewing(mastication) (39.38%).
Conclusion: It is imperative for the government, dental health professional and management of motor park to work hand in hand to established dental clinic around motor park, educate and sensitized the transports workers about the efficient of visiting dental clinic twice a year as part of their routine program.

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1. INTRODUCTION

Health is frequently taken for granted, and its importance is rarely completely appreciated until it is gone. Oral health is sometimes taken for granted, and its importance to total bodily health is underappreciated. Tooth loss is recognized as a public health issue and is utilized as an essential indicator of oral health. It is a critical metric for analyzing the quality, availability, and usage of both curative and preventative dental treatment in each population [1].

Tooth loss, which is still ranked among the top hundred health conditions affecting the world's population, is an oral ailment that causes functional, cosmetic, and social harm, affecting people's quality of life, and is responsible for 7.6 million DALY (disability-adjusted life years) [2].

Many studies found that the absolute number of teeth, as well as their relative location in the mouth, are connected to a reduction in oral health-related quality of life (OHRQoL) [2]. One of the major determinants of health is one's working environment. Certain working classes spend the most of their time on vehicles, commuting from one location to another without regular meals, relaxation, leisure, or even sleep. These individuals operate under unusual climate circumstances with frequent changes in their day and night shifts, resulting in a change in their lives and stress that can lead to violence, which is exacerbated by delays and breakdowns [3].

Although sufficient preventative measures for tooth loss have been implemented in various areas of the world, its occurrence has not decreased in recent decades, and it is still regarded as a public health care concern [4].

The prevalence of tooth loss in Europe has decreased over time, with the prevalence in the United Kingdom falling from 79 percent to 57 percent among 65–74-year-old individuals between 1968 and 1988, from 19 percent in 1975 to 3 percent in 1997, and from 24 percent in 1998 to 22 percent in 2006. In Switzerland, the prevalence of tooth loss among persons aged 35 - 44 years fell from 1.1 percent in 1993 to 0.4 percent in 2002.

In the United States, the figure was 10.8 percent in 1999, but it fell to 7.7 percent in 2002. This decrease is mostly due to efforts geared on reducing the most frequent causes of tooth loss [5].

Furthermore, Brazil and India reported the median number of teeth lost in adults (35–44 years), which is about four times that of teenagers (15 – 24 years) and half that of older individuals (65 –74 years) [6].

According to most of the research conducted in Nigeria, caries and periodontal diseases are still the leading causes of tooth loss [7]. Adeyemo et al. [8] revealed that tooth loss owing to caries and periodontal causes had risen when compared to research done in a similar region year. It also highlighted other justifications for extraction and associated tooth loss, such as orthodontic and obstruction excision.

Numerous studies have been conducted to investigate tooth loss, which is typically cross-sectional in nature and assesses factors associated with this condition, primarily socioeconomic status, and use of oral health care services. As a result, it is critical to investigate the distribution of tooth loss in the age groups of adolescents, adults, and older

people. This supported the prior study's selection of an older-age sample of adults [9].

Narvai et al. [10] indicate a polarization of tooth loss in young adults, similar to the polarization of dental erosion, because the problem has the greatest impact on a small fraction of people. Even though the incidence of tooth loss was limited to a small number of young individuals, it was comparable to the average incidence in older people.

According to Batista et al. [11], the distribution of tooth loss in a population-based age group, primarily in an extended age group of adults, would allow for more accurate data for public health planning and may also serve as a foundation for validating the impact of public health measures enacted.

The Nigerian government primarily supports the Ministry of Health and the Nigeria Dental Association (NDA) as the mouthpiece and campaign party, disseminating information about oral health conditions to citizens and the public (via some non-governmental organizations (NGOs) and companies in charge of oral health campaigns, such as Close-up, Colgate, Macleans, and others). The approach intends to lower the significant rate of dental disorders and diseases by advocating for dental treatment on International Oral Health Day (IOHD) every year.

There is compelling evidence that tooth loss is a leading sign of oral health in adults. Previous research has emphasized the key reasons of tooth loss. Tooth loss has been found to have a significant impact on chewing, aesthetics, communication, and quality of life Akpata et al. [12], Mishellany-Dutour et al. [13], Musacchio et al. [14]. Survey on the tooth loss status of transport workers is almost non-existent. Hence, the goal of this research was to assess the prevalence of tooth loss among road transport workers in Owerri Metropolis, Nigeria, and to offer possible recommendations and techniques to help them avoid tooth loss.

2. MATERIALS AND METHODS

A cross-sectional survey research approach was utilized in this study. The descriptive research approach was the best fit for this study, which sought to determine the prevalence of tooth loss among road transport personnel in Owerri,

Nigeria. The study was conducted at the biggest motor park in Egbu road in Owerri metropolis, where there are several transport companies going in and out of Owerri town. The motor park has a total population of more than 500 workers.

Purposive sampling was employed for this study. The transport workers were guided and read all the surveys aloud to ensure that they understood what to do with the questionnaire. On the day the questionnaires were distributed, 292 transportation workers completed the self-administered questionnaires. As a result, they were employed in the study. The questionnaire was constructed based on accepted oral health care described in various relevant books and e-sources. Data gathered were collated, tabulated, and analyzed using simple percentages and frequency counts.

3. RESULTS AND DISCUSSION

Results of this study showed that most of the respondents were males 262 (89.73%), belong to 40 – 50 years age group (37.33%). The majority were married 118 (40. 41%), with the highest education of primary school certificate 109 (37.33%), belong to the Igbo tribe 155 (53.08%). The highest daily income ranges from 2600 -5000 and 7100 – 10000 naira 100 (34.25%), respectively (Table 1).

These results inferred those self-reported causes of the tooth were traumatic (road accident, fighting, and falls) 95 (32.53%) with the highest frequency count, follow by tobacco/drug taking 90 (30.82%), while the tooth extraction is the lowest percentage 23 (7.89%) (Table 2).

The prevalence of tooth loss was higher within the position of upper and lower anterior among the respondents, upper anterior 97 (33.22%) and lower anterior 89 (30.48%), while upper and lower posterior had 56 (19.18%) and 50 (17.12%). (Table 3).

Additionally, concerning the treatment adequate for tooth loss among transport workers was visiting a chemist shop 117 (40.07%), follow by apply local herbs 88 (30.14%) (Table 4).

Concerning the condition associated with tooth loss, the respondents found difficult in chewing (mastication) 115 (39.38%) and difficulty in speech 97 (33.23%) (Table 5).

Table 1. Demographic data of the respondents

Indicators	Frequency (f)	Percentage (%)
Gender		
Male	262	89.73
Female	30	10.27
Age		
18 – 28	30	10.27
29 – 39	85	29.11
40 – 50	109	37.33
51 – 61	68	23.29
Marital Status		
Single	85	29.11
Married	118	40.41
Widow	13	4.45
Widower	27	9.25
Divorce/Separate	49	16.78
Educational Level		
None	13	4.45
Primary	109	37.33
Secondary	78	26.71
Tertiary	29	9.93
Vocational	63	21.58
Ethnicity		
Yoruba	69	23.63
Igbo	155	53.08
Hausa	43	14.73
Others	25	8.56
Income Per Day (Naira)		
500 – 2500	40	13.70
2600 – 5000	100	34.25
5100 – 7100	52	17.80
7100 – 10000	100	34.25

Table 2. Causes of tooth loss

Self-Reported Causes of Tooth Loss	Frequency (f)	Percentage (%)
Traumatic (Road Accident, Fighting, Falls)	95	32.53
Due to Caries	42	14.38
Periodontal diseases	42	14.38
Tooth Extraction	23	7.89
Tobacco/Drug taking	90	30.82

Table 3. Position of tooth loss

What Location of Tooth Loss	Frequency (f)	Percentage (%)
Upper Anterior	97	33.22
Upper Posterior	56	19.18
Lower Anterior	89	30.48
Lower Posterior	5O	17.12

Table 4. Treatment for tooth loss

Treatment Adequate for Tooth Loss	Frequency (f)	Percentage (%)
None (Normal)	42	14.38
Visiting Dentist for Replacement	45	15.41
Visiting Chemist shop	117	40.07
Apply local herbs	88	30.14

Table 5. Condition associated with tooth loss

Tooth Loss Associated	Frequency (f)	Percentage (%)
Difficulty in Speech (Talking)	97	33.23
Difficult in Chewing (Mastication)	115	39.38
Hypertension	46	15.75
None	34	11.64

3.1 Discussion

The intention of this study was to provide adequate solutions and support to road transport workers as they are very important in society. Without their service, in one way or another, most people won't be able to move freely. Their health should be paramount to all the health concerns of the agency to make sure they are free from infections and leave with a good healthy lifestyle. The findings of this study reveal that the majority of the respondents were males (262, 89.73%) and belonged to the 40–50-year age group (37.33%), were married 118 times, 40.41%), had the highest primary school education (109 times, 37.33%), and belonged to the Igbo tribe (155 times, 53.08%). At the same time, the highest daily income ranges from 2600–5000 and 7100–10,000 naira (34.25%), respectively. This implies that the respondents preserved the trait of being predominantly composed of men, as per the study done by Bastista et al. [15], family-oriented people at the middle age of their lifetime, though they didn't have much education background Reddy et al. [16], because it is not necessary for you to be a transport worker, only your driving license. Also, they belong to the Igbo tribe, which likes to engage in business to take care of their family [17]. This finding harmonized with the study of Braimoh and Alade [18], where they found out that the prevalence of tooth loss was higher in males than in females and older than younger age group with a mean of 8.9±2.1, which was not significant.

The most common reasons for road transport workers losing their teeth are traumatic (road accidents, fighting, falls) 95 (32.53%). Most of these workers work morning and night without resting or eating good food that can promote their good health and wellness, which can result in them being violent against their coworkers or whomever comes across their desk when they are not in a good mood. It also reveals that 90 (30.82%) of those surveyed lost their teeth due to tobacco/drug use. When someone is under the influence of drugs or tobacco, they tend to do or act in abnormal ways, which could result in accidents, falls, or fighting. That will lead to losing their teeth. The finding negates the study of Adesanya [19], which revealed two significant causes of tooth loss, i.e., periodontal disease (46.4%) and dental caries (43.9%). Thou trauma had a low percentage of tooth loss among Nigerians (4.5%), tooth impaction (2.4%), and orthodontic problems (1.6%). Moreso, tooth loss because of periodontal diseases is one of the most significant issues facing many nations because of a rise in cigarette usage Abbas et al. [20].

The prevalence of tooth loss was higher within the position of the upper and lower anterior among the respondents; the upper anterior 97 (33.22%) and the lower anterior 89 (30.48%), while the upper and lower posterior had 56 (19.18%) and 50 (17.12%). Most transport workers claimed to have had a great deal of trouble in their lifetime with their teeth, and these problems were related to the work environment and losing their smile teeth. This could be attributed to the fact that the anterior teeth are visible when the mouth is open and can be easily damaged if not protected. That is why most boxers and people engaged in fighting wear mouth gags to secure the safety of their upper and lower anterior teeth [21,22]. The studies of Braimoh and Alade (18**)** also reveal similar finding that tooth loss was higher in the maxillary (upper) anterior segment (14.2%) than the mandibular anterior segment (13.3%).

Instead of going to a dentist or dental clinic, many of the respondents opted to go to a pharmacy shop to cure missing or shaky teeth 117 (40.07%). It might be due to a lack of time or a lack of knowledge and education about where to go in such a situation. Many pharmacy shop owners would prefer not to send them to an acceptable location since they established their chemist store to generate money from these groups of individuals who do not know where to receive sufficient treatment Gordon et al., [23]. These findings were comparable to those of Abbas et al.'s [20] results, where 49.7% of the participants were uneducated and didn't know where to go for their tooth loss treatment. This

demonstrated a lack of irregular dental care behaviors, since none of the participants had received dental treatments or made frequent visits to the dentist.

According to the results of this study, most transport workers had difficult in chewing (mastication) 115 (39.38%) with difficult in speech (talking) 97 (33.23%) which always associated with tooth loss. When some one lost fronter or posterior teeth, chewing and talking will be difficult which will result in altering the spelling or saying certain words preventing people to hear what you are saying or talking about. Sometimes it results to not want to open your mouth or talk among colleagues or friends. Many times, to eat some food will now be option because there is no means of chewing (mastication) [24, 25,26].

4. CONCLUSIONS

Considering the enumerated findings of this study, we conclude that the government, dental health professionals, and management of motor parks work hand in hand to establish dental clinics around the motor park to allow accessibility for transport workers and their immediate families to access oral health care treatment by educating and sensitizing them about the importance of visiting a dental clinic twice a year as part of their routine program. Therefore, we recommend that the management authority of transport workers provide free dental services as part of their benefits while working with the company. Also, periodic health and oral health check-ups of drivers, conductors, and their dependents can be performed along with dental health education using the month of oral health day to educate them. As a result, the authors propose that future studies should address additional oral health care needs to avoid future tooth loss.

5. LIMITATIONS

In comparison to prior research investigations, the current study included several drawbacks, such as a larger proportion of men participating. [15].

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT

Written and verbal consent was obtained from the Transport workers Chairman, Secretary and all individual participants included in the study.

ETHICAL APPROVAL

Ethical approval for this study was obtained from the Federal College of Dental Technology and Therapy, Enugu. Nigeria.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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