

KNOWLEDGE ATTITUDE PRACTICE ON CARIES STATUS AMONG BLACKSMITHS

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ABSTRACT

INTRODUCTION: Dental caries is considered a major public health problem globally due to its high prevalence and significant social impact. Dental caries, otherwise known as tooth decay, is one of the most prevalent chronic diseases of people worldwide; individuals are susceptible to this disease throughout their lifetime. Oral diseases have been a persistent public health problem globally, with almost every individual experiencing poor oral health at least once in their lifetime. A blacksmith is a metalsmith who creates objects from iron or steel by the metal, using tools to hammer, bend, and cut.

MATERIALS AND METHODS: Survey instrument used in this study was a pretested questionnaire comprising 11 questions evaluating the and awareness levels of the respondents on caries status. A Convenient survey of 50 Blacksmiths in Shakhthivel steel industry near Poonamalle were included in this study. The responses obtained were tabulated.

RESULTS: Among the population 60% smoked or tobacco chewing, 75% drinking as a habit. About 80% had toothaches. Most of the population know that they had caries and felt that dental treatments are expensive and thus were not interested in going for caries management.

CONCLUSION: The knowledge and awareness on oral hygiene status among blacksmiths is not satisfactory. It can be concluded that there should be knowledge provided to this strata of society since they are not fully aware of oral hygiene.

KEYWORDS: Awareness, Blacksmiths, Knowledge, Oral hygiene, innovation

INTRODUCTION:

Health is a beneficial resource not only for an individual, but also for the social system. A nation may increase more promptly when the population are healthier and lead a dynamic life(1). Oral health is now perceived in relation to general health. Numerous factors like hygiene, stress, tobacco chewing nutritional status, alcohol, etc. are linked to a ample range of oral diseases constructing the crucial basis of the common risk factor approach (WHO, 2000) to prohibit the oral diseases(2). The extensive section of factors that may influence individual and community health behavior include: knowledge, beliefs, attitudes, finance, values, materials, time, and the impact of family members, friends, co-workers, skills, opinion leaders, and even health workers themselves.

Among common oral diseases, caries and periodontal diseases are the two head most oral pathologies that remain extensively frequent and influence all populations throughout the life span. The hazard behaviors for dental caries include frequent intake of drinks, irregular tooth brushing, sugary foods, smoking, alcohol consumption and irregular dental attendance(3).

Dental caries is one of the considerable causes of tooth loss in the world. It is also one of the most common disorders of mankind, starting at an early age, affecting children and young adults but can occur any age. A number of factors have been put forward to demonstrate the alteration in prevalence, extent and acerbity of dental caries, not only between developing and developed countries but also between rural and Working population usually is majority of population who need to have good health for good quality of life(4). Subsequently, the use of questionnaires and interviews (self-perceived assessments) became a familiar method for aggregating diagnostic data and operating oral health surveys(5). Our team has extensive knowledge and research experience that has translated into high quality publications.(6–20),(21–28)

The experiences made us work more on research.

A blacksmith is a metalsmith who creates objects from wrought iron or steel by forging the metal, using tools to hammer, bend, and cut. Blacksmiths produce objects such as gates, grilles, railings, light fixtures, furniture, sculpture, tools, agricultural implements, decorative and religious items, cooking utensils and weapons.

MATERIALS AND METHODS:

The survey pro forma was prepared to assess the caries status, oral health knowledge, attitude and behavior of the blacksmiths. Survey instrument used in this study was a pretested questionnaire comprising 11 questions evaluating the and awareness levels of the respondents on caries status. A Convenient survey of 50 Blacksmiths in Shakhivel steel industry near Poonamalle were included in this study. The responses obtained were tabulated.

The questionnaire which was distributed to the Blacksmiths is seen below :

NAME: _____ SEX: Male \ Female

AGE: _____

PHONE NUMBER: _____

1) Have you visited a dentist?

A. Yes

B. No

2) How many times do you brush your teeth?

A. Once in a day

B. Twice a day

3) How do you clean your teeth?

- A. Toothbrush and toothpaste
- B. Toothbrush and tooth powder
- C. Charcoal
- D. Others

4) Do you bleed when you are brushing your teeth?

- A. Yes
- B. No

5) Do you have toothaches?

- A. Yes
- B. No

6) Have you ever used mouthwash?

- A. Often
- B. Rarely
- C. Never

7) Does food particles stuck often?

- A. Yes
- B. No

8) Do you have habit of smoking or tobacco chewing?

- A. Yes
- B. No

9) How often you consume alcohol?

- A. Often
- B. Rarely
- C. Never

10) Do you have bad smell from your mouth?

- A. Yes
- B. No

11) Are there cavities in your tooth?

- A. No cavities at all
- B. Three cavities or more
- C. Don't know

12) Have you experienced any trauma during work?

- A. Yes
- B. No

After distributing the questionnaire, simple oral hygiene education was given highlighting certain practices like mouth rinsing with water after each meal(29).In addition, brushing technique was also taught and demonstrating the correct strokes (Bass method). All the collected data were then analysed and bar graphs and pie charts were then plotted.

RESULTS AND DISCUSSION:

The data was extracted and presented in a pie chart.

Figure1 showed that 65% had never visited dentists, Figure 2 showed that 80%of the population had felt bad smell from their mouth, Figure 3 showed that 32%of the population had experienced trauma during work ,Figure4 showed that 85%of the population had toothaches, shows that 56% of the population reported using toothbrush and toothpaste,Figure 5 showed that 54% of the population consumes alcohol,Figure 8 showed that 30% of the population reported using toothbrush and tooth powder, Figure 9 showed that 75% of the population had the habit of smoking or tobacco chewing, Figure 10 showed that 14%of the population reported using charcoal.

Blacksmiths in India usually belong to the lower income strata category and find it difficult to make time to visit the dentist and due to poor socioeconomic status find it difficult to afford dental treatments.Among the population 65% had never visited dentists,85%of the population had toothaches, different question about pattern of washing their mouth shows that 56% of the population reported using toothbrush and toothpaste, 30% of the population reported using toothbrush and tooth powder, 14%of the population reported using charcoal.32%of the population had experienced trauma during work.80%of the population had felt bad smell from their mouth. 75% of the population had the habit of smoking or tobacco chewing. This further proves that their oral hygiene is not well maintained and the reason for this is that some of them didn't know and few of them said they didn't find it that important to do so.(30)Most of the population know that they had caries and felt that dental treatments are expensive and thus were not interested in going for caries management.Blacksmiths were told to act as a dentist in the earlier days but now many are not even aware of the term Dentistry. They are not that well educated to understand and even go for regular check up. As they are not educated we the dentist are responsible to make them aware of the caries. Due to that this survey is conducted and knowledge is spread effectively.

Majority of the blacksmiths thought that dental treatment is costlier and painful, which might be due to fear. It has been suggested that the modification of attitude allows a change in the behaviour, which further causes attitude modification in most of the blacksmiths who complained that dental treatment was painful and costly.

Amir et al¹⁷ conducted a study on KAP on oral hygiene status among patients with heart disease. Their study found that Remaining participants do not brush regularly. Moreover, 71.0% of cases spent 1-2 minutes or more to brush their teeth.Different questions about patterns of washing their mouths showed that 80.0% of the participants reported using of toothbrush and toothpaste, 55.8% used fluorinated toothpaste, and 74.1% reported using mouthwash. 9.0% of participants reported regular dental visits, whereas 61.5% visited their dentists only when they had a toothache. The high cost of dental visit singly or along with other causes was expressed by 53.0% of respondents as one of the common causes of not visiting the dentist.(31)

Pine CM, Adair PM, Nicoll AD, et al conducted a study onInternational comparisons of health inequalities in childhood dental caries.822 children and families were recruited. In multivariate analyses,

reported toothbrushing behaviours that doubled the odds of being caries-free were a combination of brushing before age 1, brushing twice a day and adult involvement in brushing. Analyses combining beliefs, attitudes and behaviours found that parents' perceived ability to implement regular toothbrushing into their child's daily routine was the most important predictor of whether children had caries and this factor persisted in children from disadvantaged communities. 90% of children with lactobacillus had caries. (1)(32)

Chen X, Liu Y, Yu Q, Zheng L, Hong X, Yan F, Yu H conducted a study on Dental caries status and Oral hygiene status among civilian pilots.(33) All of the pilots were men ages 21-58 yr (mean, 31.48 ± 7.20). In the caries group (CG), the frequency of tooth brushing and flossing was a little higher; more subjects had already given up smoking; more subjects had higher alcohol consumption; the sugar intake index (SII) was a little bit higher; and the last dental attendance time (LDAT) was shorter than that in the noncaries group (NCG). A total of 211 pilots (37.95%) had caries and 85 (15.29%) had missing teeth. The average DMFT was 2.19, while the mean ICDAS was 0.72. The frequency of sugary beverage consumption was negatively correlated with caries ($r = -0.088$), while a positive relationship was found between LDAT and caries ($r = 0.094$)

Self-Assessed Dental Status, Oral Behavior, DMF, and Dental Anxiety total of 393 young adults were examined (98.3 percent response rate). Approximately one-third brushed their teeth once a day or not at all. Of the participants, 10.7 percent assessed their dental status as "Poor" and 46.3 percent as "Fair." Furthermore, 25.5 percent assessed their dental treatment needs as high. The average DAS score was 7.14. The average DMF score was 6.2. There was a correlation between self-reported tooth status, participants' assessment of their dental treatment needs, and DMF score ($p < 0.0001$). Anxious participants assessed their dental treatment needs as higher ($p = 0.05$). (34)

Fenta A Ayele, Belaynew W Taye, [...], and Kassahun A Gelaye conducted a study on Predictors of Dental caries among children 7–14 years old in Northwest Ethiopia .This is a community based cross-sectional study.[13] Four hundred sixty three (55%) children were females. The prevalence of dental caries was 306(36.3%). The educational status of children's father (AOR=0.3, 95%CI, 0.17, 0.80), monthly household income (AOR=0.59, 95%CI, 0.01, 0.45), regular teeth brushing (AOR=0.08, 95% CI, 0.03, 0.20) and using mouth rinsing (AOR=0.40, 95% CI, 0.2, 0.80) were found statistically significantly associated with dental caries.(35)

Elisabeth Wardenberg Gerdin conducted a study on caries and body mass index by socio-economic status in Swedish children. Caries prevalence decreased with increasing socioeconomic status at all ages, whereas childhood BMI and proportion of overweight/obese children were unrelated to socioeconomic status. Obese, but not overweight, children had more caries affected teeth than non-obese, and BMI had an independent, though weak, effect on caries variation in multiple regression(36)

Adegbembo AOel, Adeyinka International Dental Journal conducted a study on National survey of dental caries status and treatment needs in Nigeria. Results from different states were pooled together according to their Primary Health Care (PHC) classification. Percentages of decayed teeth (DT) were: 30, 43, and 44 per cent respectively for subjects aged 12, 15, and 35-44 years old. Percentage DT showed significant ($P < 0.01$) variation between zones, although the rural/urban differences were not consistent in all ages and significant ($P = 0.01$) differences were reported for 12 and 15 year olds. Mean DMFT in the respective ages were 0.7, 1.3 and 2.5. The level of restorative care (FT/DMFT) was very low, being 1.5,

1.6 and 1.2 percent for the respective ages. Percent MT/DMFT increased with age. Extrapolating from sample estimates, 7.3 and 22.9 million Nigerians were projected to need dental extraction and conservative care respectively.(37)

In the current study, 47% participants consume sweets daily, which is similar to studies by Harikiran et al. in which 56.1% of 11-12 years students of Bangalore city, consumed sugar daily and Kakkad et al. with 49.60% participants consuming sweets daily. In contrast, a lower percentage for the same (33.7%) was described by Prasad et al. among engineering students of Tiruchengode. Most of our participants did not rinse their mouth with water after eating food.(38)

M.P.Santhosh Kumar conducted a study on Knowledge, Attitude and Practices towards Oral Health among Law Students. In this study,64% agreed that oral health is important for overall health of the body. 55% of students were aware that calculus causes bleeding gums. 65% of them agreed that mouth washes contain medications that can prevent or reduce gum problem, but only 12% of students were using mouth wash. 66% of students brush their teeth only once daily. 68% of students were not taking any other measures apart from tooth brushing for oral hygiene maintenance. Majority (49%) change their toothbrush only when it gets spoilt. According to 58% participants, one should visit dentist only when there is a problem.(36)

Hamilton and Coulby (1991) found that a high percentage (44%) studied in North Eastern Ontario used dental floss; in contrast, this present study reported only 10% students used dental floss. This can be attributed to the lack of oral health education or the cost factor of the dental floss.In the current study, 70% of the respondents knew that bleeding gums while brushing indicates unhealthy gingiva and a similar result was obtained in the study conducted by Taani (2002). (39)

Prasad et al. (2010)Conducted a study on Visiting the dentist for routine check-up is “preventive care use.” In this study, 59% participants had visited dentist at least once. Fear of the dentist could be the cause of not visiting dentist in 41% students in the current study. A significantly higher percentage (75.8%) was reported by Peltzer and Pengpid (2014) and lower percentage (44.3%) was reported by Prasad et al. (2010) for visiting dentist at least once.In this study, 89% participants consume sweets daily; in contrast lower percentage for the same (33.7%) .(40)

In this study, only 22% agreed a routine oral check up is necessary once every 6 months, whereas according to Kakkad et al. 34.20% responded for oral check-up. Higher findings were seen for visiting dentist for regular check up according to Prasad et al. and Wierzbicka et al. which was 43.9% and 66% respectively. 58% replied that dentist should be visited only when there is a problem.(41)

Certain oral diseases, such as chronic periodontitis and caries, that are considered as public health problems may be alleviated by effective and regular self-tooth brushing.The study results revealed once-a-day tooth brushing practiced by majority of the participants. Tooth brush and tooth paste were commonly used for brushing among the study population.(42)

LIMITATIONS

- Confined to a smaller number of respondents.
- Cannot be generalized to a large population.

- Web-based surveys are inaccessible to challenging respondents who may lack access to the survey.
- Sampling errors arise due to online surveys.
- Open-ended questions and responses might lead to interviewer bias.

In future, a larger population, particularly for a specific speciality/age/ experience group among dentists should be studied.

CONCLUSION:

Dental caries is a multifactorial disease. The oral hygiene status was found to be relatively fair there was a high rate of dental caries among the blacksmiths. This shows there was a lack of knowledge regarding the oral health maintenance therefore the knowledge on dental caries should be spread through dental camps and health education programs. Furthermore, dental camps can be setup and they can be taught the right way in which the oral hygiene can be maintained and 6 months later a follow up can be done to see if they are practicing well.

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CONFLICTS OF INTEREST:

Nil

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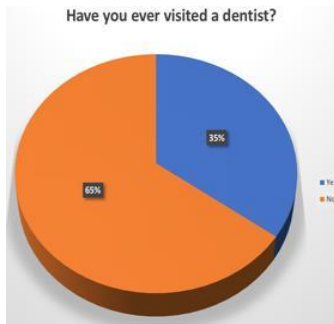


Figure1- Frequency of dental visit.

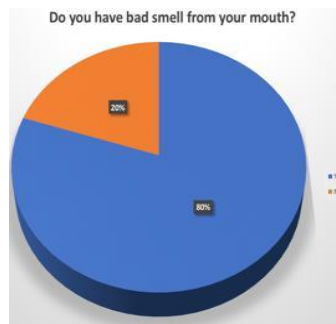


Figure2- odour from mouth.

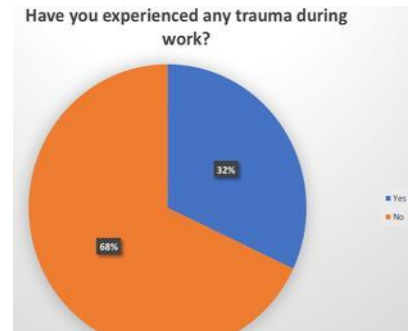


Figure3 – trauma during work

Figure4-Dental pain

Figure5-Alcohol consumption

Figure6- Dietary habits

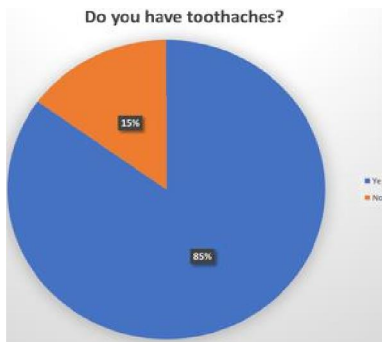


Figure7- Bleeding while brushing

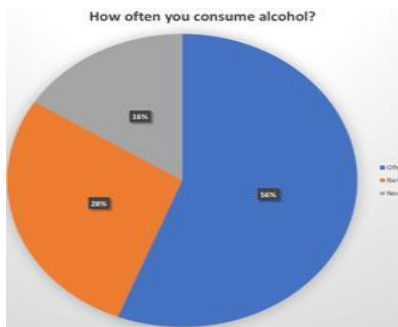


Figure8- Usage of mouthwashes

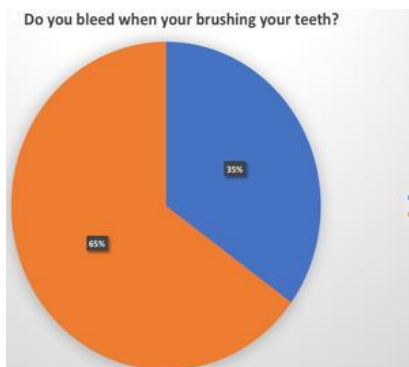
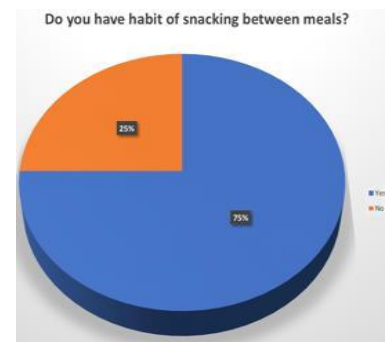


Figure9- smoking habits

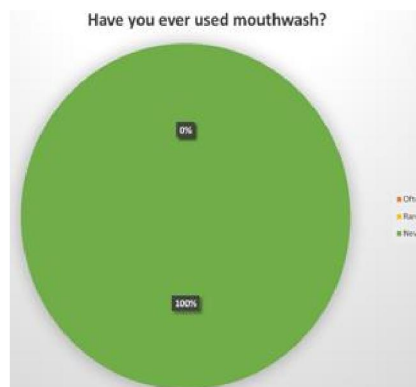


Figure10-Techniques used while brushing

