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Original Research Article

Assessment of oral health knowledge attitude and practice among multipurpose workers in a private educational institute- a cross sectional survey

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ABSTRACT

Background: Oral diseases are a major public health concern owing to their high prevalence and their effects on the individual's quality of life. One of the most important factors that decide the dental health of a population is the outlook of its people toward their dentition. The aim of the survey is to assess the knowledge, attitude and practice of the oral health among multipurpose workers in a private educational institute located in Chengalpattu district, Tamil Nadu.
Methods: A descriptive study was conducted among the multipurpose working in a private educational institute to assess the knowledge, attitude and practice regarding oral health. A self-administered 15 items of questionnaires distributed among them and was collected back. A total of 150 participants were included in the study. After that questionnaire was collected and oral hygiene awareness were provided to them.
Results: The study results showed that total of 150 participants were enrolled with mean age group of 41.7%. Among the study participants, 40% has the satisfactory knowledge towards the oral hygiene. 24.7% of the participants had the habit of using tobacco products. On overall, the multipurpose workers showed a good oral health maintenance towards the 54%. 8.7% of the population showed unsatisfactory results for oral hygiene maintenance.
Conclusions: The study concluded the oral hygiene knowledge, attitude, practice among the multipurpose workers was fair with few unsatisfactory responses. Hence it is necessary to focus on the vulnerable population on preventing oral hygiene disease by providing affordable, accessible oral health care.

INTRODUCTION

Poor oral health in early childhood is one of the most serious and costly health conditions in young children. Oral health is an essential and leading component of children's overall health, functional capacity, and social welfare. Due to their developmental dependency, young children constitute a special population requiring the attention and consideration of society and its governmental policymakers.[1]

Oral diseases are a major public health concern owing to their high prevalence and their effects on the individual's quality of life. Oral health attitude and beliefs are significant for oral health behavior. One of the most important factors that decide the dental health of a population is the outlook of its people toward their dentition. Oral health knowledge is considered to be an essential prerequisite for health-related behavior.[2]

Oral health is considered as the quality of health that enables an individual to socialize easily without any active disease, discomfort, or embarrassment, which impact general well-being. One of the major public health problems is oral disease, which has higher prevalence and significant social impact. To improve an oral health in a community, it is essential to have oral health–related knowledge. Oral hygiene is the practice of keeping the mouth healthy and clean by brushing and flossing to prevent tooth decay and gum disease. Good oral hygiene has been shown to contribute greatly to the prevention of oral diseases.[3] Oral diseases may lead to impairment of functions due to pain, disruption of daily performance, leading to loss of working hours, income, education, and other social activities. Thus, they affect the quality of life and overall productivity of an individual and therefore present an economic burden to the society.

Community based oral health and hygiene can be improved and various oral/dental diseases can be prevented by creating awareness among the public which can be carried out by multipurpose workers. Such workers who are the connecting link between the public and health care delivery system should possess minimum knowledge regarding oral health and hygiene.[4]

A study conducted by Baseer et al in Riyadh, to assess oral hygiene status and practice among health-care professionals working in King Khalid Hospital, Al-Kharj revealed that the health-care professionals' knowledge was less compared with the expectation among these groups. Their attitude toward oral diseases was positive indicating they can play a major role in educating the hospital patients and the community about oral health care.[5]

Although good oral health practices and knowledge regarding oral health are associated with better oral health status among a varied group of population and vice versa, there exists no literature on the knowledge and practices of oral health among auxiliary health workers working in the PHCs, namely, auxiliary nursing midwife, general nursing midwifery, and accredited social health activist.[6]

Globally, in the children aged 3-6 years dental caries is categorized as a major public health issue. The lack of availability and affordability of oral health services especially in developing countries like India not only results in aggravation of the disease but also enhances the cost of treatment and care.[2] It has been observed across various countries that the basic health care workers and parents have limited knowledge about causes and prevention of the most common oral diseases.[4-7] Control of oral diseases is only possible if services are oriented towards primary health care and prevention. Oral health is a state of being free from chronic oral disease, tooth decay, and other diseases and disorders that affect the oral cavity. Oral diseases are among the most common diseases of human society, which take up a lot of family time and expenditure. They are unambiguously related to oral health practices followed, knowledge of oral health, and health-seeking behavior. A decline in dental diseases with improvements in oral hygiene practices has also been noted earlier.[7] Despite all the evidence on efficiency of dental practices, there still exists a great burden of oral diseases in India, which can logically be explained by the lack of dental facilities, inequalities access to care, asymmetrical distribution of workforce, and deficiency of services provided in the rural areas where majority of the population resides.

A brief insight into the global burden of chronic diseases clearly states that the epidemic of chronic diseases affecting the bulk of the rural population has been neglected and it can be said more for the oral diseases. Oral diseases are categorized as chronic non-communicable diseases.[8] Analysis of current data suggests a majority of the population is affected by dental caries and severe periodontitis is found in 5-20% of the adult population in most countries.

The World Health Organization (WHO) too has urged its member states to consider mechanisms to incorporate the essential oral health services into the existing primary health care system, with emphasis placed upon disease prevention and health promotion for the poor and the disadvantaged populations.[9]

Although there exists a reliable source of availability of oral health services, a few groups of people lack in utilizing these services. There may be lot of factors which may influence the groups to neglect oral health care. The multipurpose workers are those who may or may not literate for whom necessary advocacy is needed for enhancing their oral hygiene. Hence the present study focusses to assess the knowledge, attitude and practice towards oral hygiene among the multipurpose workers in Karpaga Vinayaga Educational group in Chengalpattu district. The aim of this survey is to assess the need of training among the multipurpose workers in Karpaga Vinayaga Educational Group campus in Chengalpattu district of Tamil Nadu regarding the oral hygiene knowledge awareness and practice.

METHODS

The study was a descriptive and cross-sectional questionnaire survey. The study population includes 150 multipurpose workers in Karpaga Vinayaga Educational group, Chengalpattu district.

The ethical approval of the study obtained from institution of Karpaga Vinayaga Institute of Dental Sciences and informed consent was obtained from all the study participants.

The necessary permission for data collection was obtained after explaining clearly to the participants by the Principals of Medical, Engineering and Nursing institutions.

Questionnaire

The specially designed comprehensive pre tested, self-admitted questionnaires consisting of 15 questions was constructed in local language Tamil. It was designed for regarding all the relevant data pertaining to details to demographic details as well as questionnaires related to knowledge, attitude and practice regarding oral health. The questionnaires were first prepared in English and was later translated to local language for easy comprehension for the multipurpose workers.

In order to assess the internal validity and reliability of the questions regarding oral health knowledge, attitude and practice among the multipurpose workers, the questions were grouped and was Cronbach calculated as (0.80) with good reliability.

Inclusion criteria

All the multipurpose workers of Karpaga Vinayaga Educational group who were ready to participate till its completion were included in the study.

Exclusion criteria

Participants who were not available on the day of questionnaires distribution and those who are not willing to participate in the study were excluded from the study.

Sample estimation

The sample size and sampling method employed in the survey was convenience sampling method by which the samples were drawn from the population who were present in the private educational institute on the day of data collection. The subjects were working in the institute at different areas and data were collected at the site of their presence according to the inclusion and exclusion criteria respectively. From this method a total of 150 people had participated in the study conducted in the educational institute.

Data collection

The study was conducted in the month of May 2022. Proper permission was obtained from the medical, dental, engineering and nursing heads of the institution of Karpaga Vinayaga Educational group, Chengalpattu district for conducting knowledge, attitude and practice study among multipurpose workers. The multipurpose workers were elaborated about the study and who gave the consent for the study were included. Questionnaires were distributed to the multipurpose workers personally. After each participants answered the questionnaire, it was collected back and subsequently oral health awareness was taught to them.

The data were entered into excel worksheet and analysis done using statistical software statistical package for the social sciences (SPSS) version 17 for windows, Chicago SPSS Inc. released 2018. Descriptive statistics was used to summarize the data.

RESULTS

A total of 150 multipurpose workers responded to the questionnaire. It can be seen from graph 1. 75 of them were 50 years of age. 50 of them were 40 years of age. 25 of them were 33 years of age showing mean age group of 41.73 from the overall responses (Figure 1). Figure 2 represents the distribution of study participants with respective gender in which out of 150, 90 were female and 60 were male. Figure 3 represents the distribution of multipurpose workers who participated in study from Karpaga Vinayaga Educational group in which 33 of them were from Institute of Medical Sciences, 29 of them were from Institute of Dental Sciences, 20 of them were from Institute of Nursing and 56 of them were from Institute of Engineering and Technology. On the whole, 150 multipurpose workers actively responded to the questionnaire.

From the study responses, the knowledge on using any other oral aids was aware only for 40% of population. And towards visiting a dentist, only 43.3% have responded for 6 months once and 16.7% for yearly once. Apart from the oral hygiene practices, knowledge towards using tobacco products is harmful to health was known by 84.7% of the multipurpose work. The attitude of the participants towards changing the toothpaste and toothbrush was with 71.3% of the response. Attitude towards controlling tobacco usage was only noted in 11.3% of multipurpose workers. Finally, the attitude towards visiting a dentist only when there is a dental problem was responded by 70% of the population. The multipurpose workers attribute towards the practicing habits to maintain oral hygiene was good with positive response of 82% of them brush with toothbrush and toothpaste. And 65.3% of them clean their tooth once daily. But only 8.7% of them have the habit of visiting a dentist was satisfactory because 19.3% of them only visit 6 months once and yearly once.

Among the multipurpose workers, 24.7% of the population have a habit of consuming tobacco products and among them 14% of them take it less than 5 per day and 8% of them consume it less than 10 per day. The overall results of this study denote there was a moderate level of understanding about oral hygiene practices and maintenance. But still there were lacunae like economy, fear and other reasons which were the main contributing factors for not cooperating with the dental treatments with positive attitudes. And about 54% of the multipurpose workers have self-assessed their oral health to be good. This considering the reliable response rates from self-administered questionnaire, we need to focus more on the added advantages to maintain the oral hygiene practices in an affordable, accessible way to the multipurpose workers.

Table 1: Questions related to knowledge attitude and practice towards oral health assessment and the responses received from the multipurpose workers.

S. no.	Questions related to attitude	N (%)
1	How do you brush your teeth?	
	Tooth paste and brush	123 (82.0)
	Neem stick	20 (13.3)
	Brick powder	1 (0.7)
	Salt	6 (4.0)
2	How often do you clean your teeth?	
	Once	98 (65.3)
	Twice	52 (34.7)
	Never	
3	When will you brush your teeth?	
	Morning	99 (66)
	Evening	
	Both morning and evening	51 (34)
	Never	
4	How often do you change your brush?	
	6 months once	107 (71.3)
	Yearly once	14 (9.3)
	Once in a while	12 (8)
	Never	17 (11.3)
5	Are you aware of any other dental aids?	
	Yes	60 (40)
	No	74 (49.3)
	Don't know	15 (10)
6	If yes, do you use them?	
	Yes	13 (8.7)
	No	110 (73.3)
	Don't know	27 (18)
	Questions related to practice	
7	How often do you visit a dentist?	
	6 months once	29 (19.3)
	Yearly once	29 (19.3)
	Once in a while	63 (42)
	Never	29 (19.3)
8	How often one should visit a dentist?	
	6 months once	65 (43.3)
	Yearly once	25 (16.7)
	Once in a while	39 (26)
	Don't need	20 (13.3)
	Questions related to knowledge	
9	Do you know that tobacco or betel nut chewing is harmful to health?	
	Yes	127 (84.7)
	No	16 (10.7)
	Don't know	6 (4.0)
10	Do you have the habit of tobacco or betelnut chewing?	
	Yes	37 (24.7)
	No	107 (71.3)
	Don't know	4 (2.7)
11	If yes, how often do you take tobacco or betel nut?	
	Less than 5	21 (14)
	Less than 10	12 (8)
	Once in a while	9 (6)

Continued.

S. no.	Questions related to attitude	N (%)
	Don't know	107 (71.3)
12	Have you taken any steps to give up the habit of tobacco or betel nut chewing?	
	Yes	17 (11.3)
	No	27 (18)
	Don't know	101 (67.3)
13	Do you visit a dentist when there is a dental problem?	
	Yes	117 (78)
	No	23 (15.3)
	Don't know	7 (4.7)
14	If no, what was the reason that you couldn't go for dental treatment that was needed?	
	Economics	13 (18.7)
	Fear	21 (14.0)
	Don't need	8 (53)
	Other reasons	108 (72.0)
15	How will you grade your oral health?	
	Very good	6 (4)
	Good	81 (54)
	Satisfying	50 (33.3)
	Not satisfying	13 (18.7)

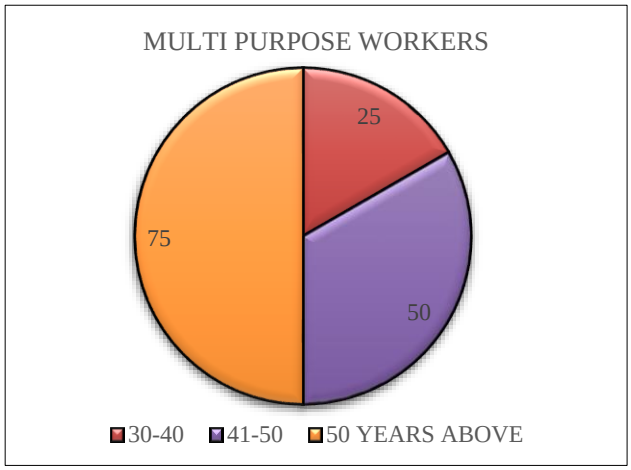

Figure 1: The distribution of study participants with respect to age groups.

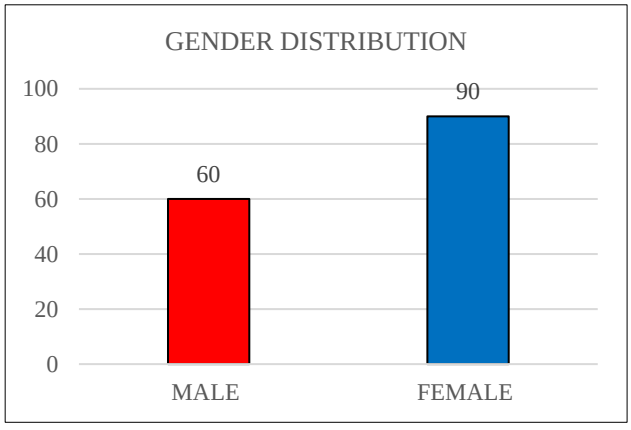

Figure 2: The distribution of study participants with respect to gender.

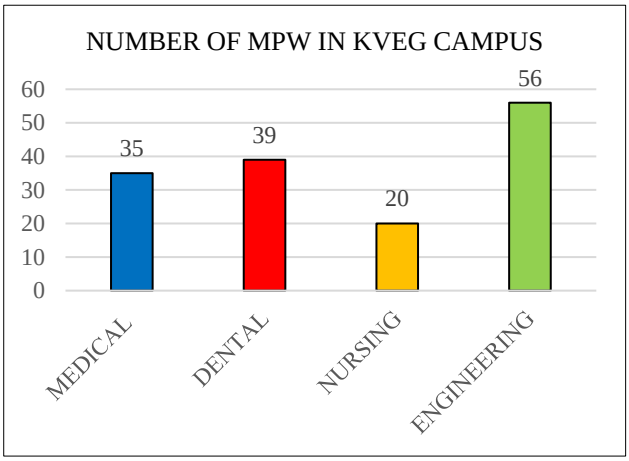

Figure 3: The distribution of multipurpose workers who participated in the study from Kapaga Vinayaga Educational Group.

DISCUSSION

Owing to paucity in the literature regarding OHK, practices and oral health status among auxiliary health workers in India, the present study stands to be a prototype to these studies, indicating possibilities of further research. However, comparison has been facilitated with the studies conducted on population groups with similar training and expertise as the present study population.[6]

Majority of the respondents in the present study had a good knowledge of oral health similar to the ones reported by Walid et al and Abolghasem et al. Findings, refusing the present study, were also observed in the literature as reported by Preston et al, where the

knowledge of majority of the care home staff and auxiliaries was found to be poor.[10]

For optimal oral health, oral hygiene habits should be instilled at a very young age itself. Practice promoting awareness about health and valuing it should be developed early during the pre-school years, that is, when the children are able to absorb the information enough to incorporate oral health care into their daily life habits.

In the present study, 69.8% of the AWW knew the appropriate eruption time for the first milk tooth and only 17.9% of them knew the age of complete eruption of the milk teeth. In a study conducted by Mani et al. on caretakers of children attending day-care centres, 91.2% of the study subjects knew the eruption timing of the first baby tooth and 70.6% of the subjects were aware of the age of complete eruption of milk teeth. Only 50.5% AWW were aware that baby's mouth must be cleaned even before the eruption of first milk tooth.[11]

A majority, about 19.21% AWW agreed that they have an important role to play when it comes to the oral health of children. This finding is similar to the study by Dawani et al, 22 where almost all preschool teachers (98%) realized their responsibility towards assessing student's oral hygiene.[12]

In the present study, the primary health care workers were questioned about the etiology of oral cancer and, surprisingly, only an overwhelming majority of the doctors (95%) and pharmacists (92%) knew that tobacco usage was the most important etiological factor for oral cancer.

The multipurpose health assistants who form the backbone of the primary health care setup fared miserably in this issue, i.e. only 17.4% of them knew the role of tobacco in cancer initiation and about 65% of them said that improper brushing could lead to oral cancer.

The bulk of the primary health care workers are engaged in the field work at the grassroots level and with the present knowledge levels, they are less likely to counsel the patients about the ill effects of tobacco usage.[13]

In a similar study conducted by Greenwood and Lowry, in the northeast of England, only 50% of the primary care clinicians said that betel nut chewing could predispose to oral cancer. Interestingly, in a study conducted by Ni Riordain and McCreary. Among the Irish general medical professionals, 98% of them said that smoking is a leading risk factor for oral cancer and only a meagre 0.8% of them attributed tobacco chewing as a causative factor to oral cancer.[14] Majority of the participants followed recommended oral hygiene practices such as brushing twice a day, similar to previous studies, while dissimilar findings were reported by Al-Ansari et al. Recommended frequency of changing toothbrush (American Dental Association) was also practiced by more than half the respondents, a finding superior to those in a study by Kaira et al. Other oral hygiene aids were used by a meagre percentage of the participants reflecting their lack of awareness, as compared to an earlier study.[13]

Responding to the question assessing knowledge about the role of milk teeth, 61.9% of the AWW said that unhealthy milk teeth will have an adverse effect on permanent teeth that will erupt later. On the contrary, in the study by Poornima et al, 64.7% of the AWW agreed that there is no need to take care of milk teeth, because they will fall after some time. About 95.5% of the AWW agreed that they needed more information/ training regarding oral health, to create more awareness. This finding is similar to the study by Ramroop et al, where 86% primary school teachers thought that they should have training in dental health education.[14]

An attempt was made to provide a comprehensive overview of the results. A majority of the primary health care workers (64.8%) had medium oral health knowledge levels, 19.8% of them had low levels of oral knowledge, and only about 15.3% of the primary health care workers had high knowledge with respect to oral health as depicted in Figure 1. This is an encouraging sign in spite of the fact that the primary health care workers are already overburdened rendering basic health services.[14]

With respect to the oral health related attitudes, only 13% of the primary health care workers had the most favorable attitude, 13.6% had an unfavorable attitude, and a majority, i.e. 73.8%, of them had a favorable attitude toward oral health as depicted in Figure 2. This is also an encouraging result as they can be suitably educated in the foreseeable future, but what remains to be seen is whether these healthy attitudes can be translated into healthy oral health practices too.[15]

In a developing country like India, people encounter various obstacles associated with access of dental services and majority of the population usually resort to health centre for all health needs, including complaints pertaining to oral health. The auxiliary health workers are in a position to access this population and create awareness of oral health at a grass-root level. Hence, it becomes obligatory that these health workers are provided with adequate information regarding oral health so as to motivate the patients regarding oral health care utilization and maintenance and also refer the patient to dental care professional in need.

Limitations

As for our knowledge is concerned, this study in assessing oral hygiene, knowledge, attitude and practice among multipurpose workers is first of its kind in literature.

The study limits to a restricted population in a private educational institute with no age wise comparison.

The study was also limited only for assessing the knowledge, attitude and practice without any interventions provided.

The study limits by showing very less amount of supporting literature which should be amalgamated to plan out the oral hygiene educational programmes for vulnerable population to promote and enhance oral health services.

CONCLUSION

Oral knowledge of the multipurpose workers about oral health was fair. The multipurpose workers play a vital role in enhancing service to the community. They are also the group of people for whom should be oral health education is the missing part. Hence it is necessary to focus more on vulnerable population on promotion and prevention of oral health disorders. The future prospective is to deliver an affordable, accessible oral health care system for the neglected groups.

Recommendations

Introduction of training program to make the health care workers aware of dental and oral hygiene practice can help improve dissemination of knowledge among multipurpose workers in a better way. These can also be intervention with follow up survey which would help them to improve their quality of life.

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