

# Knowledge, attitude, and practice: Oral hygiene status of sanitary workers in Chennai

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## ABSTRACT

**Aim:** The aim of this study was to assess the level of knowledge, attitude, and practice (KAP) on oral hygiene status among sanitary workers in Chennai. **Background:** A KAP survey is a quantitative method that provides access to quantitative and qualitative information. Oral hygiene can be defined as a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, tooth decay, tooth loss, and other diseases and disorders that affect the oral cavity. The disparity in the lifestyle of sanitary workers from the normal population and their limited education may show variations in their level of knowledge, attitude, and oral hygiene practices. **Materials and Methods:** A questionnaire that assessed the KAP of sanitary workers on oral hygiene was made and distributed among 72 sanitary workers from Saveetha Dental College and Sri Ramachandra Medical College, Chennai. Their responses were recorded and analyzed, and their KAP level was evaluated. **Results:** Only 13% of the sanitary workers surveyed have had formal education. 55% of the uneducated sanitary workers believe that using neem sticks is the ideal method to clean teeth. 50% of the sanitary workers are slaves to tobacco addiction. 50% of them who do not visit the dentist blame their jobs to be the reason for it. The overall KAP level of the sanitary workers surveyed was found to be 52.83%. **Conclusion:** The KAP level of oral hygiene of these sanitary workers is a reflection of their educational status and inability to afford dental consultations due to their job scenarios. Free dental camps and distribution of oral hygiene products can, therefore, considerably better the oral hygiene status of sanitary workers.

**KEY WORDS:** Knowledge, attitude, and practice, Oral hygiene, Sanitary workers

## INTRODUCTION

Oral health refers to a state of being free of chronic orofacial pain conditions, oral and pharyngeal cancers, oral soft tissue lesions, birth defects such as cleft lip and palate, and countless other diseases and disorders that affect the oral, dental, and craniofacial tissues, collectively known as the craniofacial complex, which is the very crux of humanity.<sup>[1]</sup> The salivary glands are a model of other exocrine glands, and an analysis of saliva can paint a picture of the overall systemic health or disease. Skeletal parts of our body are emulated by the jawbones. Orofacial pain sensed by the underlying nervous system has its counterpart in nerves elsewhere in the body. Indications of nutritional deficiencies as well as a number of systemic diseases, including microbial infections, immune disorders, injuries, and some cancers, can be detected by a thorough oral

examination. Thus, the mouth is indeed a mirror that reflects the general well-being of a person.<sup>[2]</sup>

Oral health is vital for appearance, sense of well-being, and also for overall health, having a direct effect on the quality of life.<sup>[3]</sup> Oral health is the benchmark of health which allows an individual to eat, speak, and actively socialize without any disease, uneasiness, or discomfort. A good oral hygiene status contributes to the general well-being of the individual.<sup>[4]</sup> Oral diseases are a major public health concern due to their higher incidence and substantial societal influence. Therefore, enhancement in oral health-related knowledge is believed to be an indispensable precondition for bettering oral health in a community.<sup>[5]</sup>

Recently, the Federation Dentaire Internationale, World Health Organization, and International Association for Dental Research have set the promotion of self-care as one of the goals for the year 2020 in an attempt to improve the oral health of the population.<sup>[6]</sup> The

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suggested oral self-care protocol includes tooth brushing more than once a day, lesser consumption of sugar-containing snacks once daily or rarely, and regular use of fluoride-containing toothpaste. Literature reveals that there is an association between increased knowledge regarding oral hygiene and better oral health.<sup>[7]</sup>

According to the Government of India, the educational prerequisite for sanitary workers does not require a high school graduation itself.<sup>[8]</sup> Sanitary workers in India, being mostly uneducated, have little or no knowledge about oral self-care. Health literacy is recognized as an important element of health as well as a fundamental factor in health disparities among different population groups. Oral health literacy is associated with differences in oral health behaviors and clinical oral health status.<sup>[7]</sup> Evaluation of available literature revealed no study from this part of the country on sanitary workers and their knowledge, attitudes, and practices (KAP) toward oral health-related issues. An understanding of the oral health literacy levels plays a key role in designing effective health educational materials and creating intervention programs to promote oral health. Hence, the rationale of this study is to assess the KAP of sanitary workers in Chennai on oral hygiene status.

## MATERIALS AND METHODS

A cross-sectional study was carried out on sanitary workers from Saveetha Dental College and Sri Ramachandra Medical College, Chennai. 72 sanitary workers were randomly enrolled in the study with their consent. A custom-made questionnaire consisting of 23 questions that assessed their basic KAP toward oral health and oral hygiene maintenance was distributed among them.

The questionnaire consisted of three sections, the first of which included questions such as what should ideally be used to clean teeth, how many times a person must visit a dentist, the ideal frequency of brushing teeth, and the relation between systemic and oral health, to assess their knowledge. The next section consisted of questions that evaluated the attitude of the surveyed group such as why should one visit the dentist, what was the reason for not visiting dentists, harms of tobacco addiction, and benefits of giving up addictions. The last section focussed on analyzing the oral hygiene practices of the sample group with questions such as the tools they used for cleaning their oral cavity, their frequency of brushing, the frequency of changing toothbrushes, whether they were addicted to any habits like tobacco chewing, presence of carious tooth, bleeding gums, bad breath, tartar deposits, and the frequency of their previous visits to the dentist [Table 1].

Their responses were recorded and analyzed to draw a conclusion on the level of the KAP on oral hygiene status of the sanitary workers in the locality surveyed.

## RESULTS

Only 13% of the sanitary workers were found to have formal education [Figure 1]. Most of the sanitary workers belonged to the 40–50 years of age category, followed by those who belonged to the 50–60 years group [Figure 2]. Table 2 shows the frequency of the ideal responses and other responses to the KAP questionnaire and the KAP level of the surveyed group. The oral hygiene knowledge level was found to be 51.78%, the attitude level was 40.83%, and practice level was 68.05% [Figure 3]. The average KAP level of the sanitary workers examined was found to be 52.83%.

Of the 40% (29) of the uneducated sanitary workers, 55.2% (16) believe that the ideal way to clean teeth is to use neem sticks and 15% (6) prefer to use their fingers. 58.3% (42) of the sanitary workers have good brushing habits; they brush their teeth twice a day with toothbrush and toothpaste and change their toothbrushes every 1–3 months. Only 16.66% (12) of the sanitary workers pay regular visits to the dentist twice a year for checkups. 77.77% (56) of the sanitary workers have no tobacco or any other habitual addictions. Of the 36.11% (26) who have tartar deposits on their teeth, 50% (13) were addicted

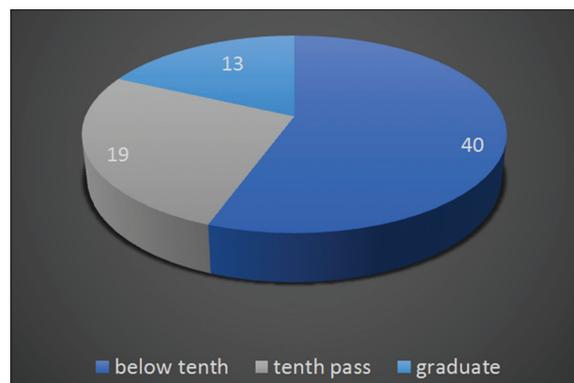


Figure 1: Educational qualification of the sanitary workers

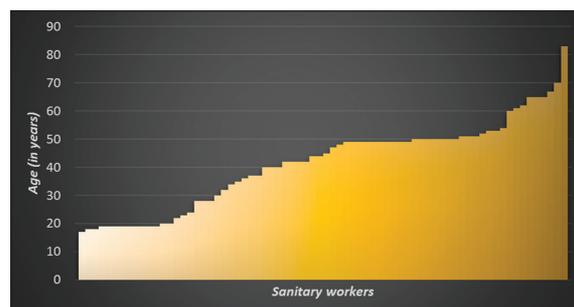
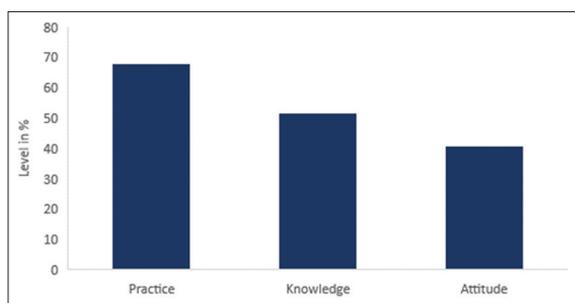


Figure 2: Age distribution

**Table 1: Questionnaire consisting of three sections to assess the KAP level**

Questions	Ideal response	Other responses
<b>Knowledge</b>		
What should be ideally used for cleaning teeth?	Toothbrush	Finger Neem stick Charcoal Salt
How many times in a day should you brush your teeth?	Twice a day	Once a day Thrice a day
When should you brush your teeth?	Morning and night	Morning only Night only
How often should you floss/rinse?	Daily	Weekly once Monthly once
How often should one go for dental scaling?	Every 6 months	Every year Only when you have a toothache/ dental problem
How much do you think dental problem can affect your general health?	Can severely aggravate systemic diseases	Does not affect Mildly affects
How often should one visit a dentist?	Twice a year	Once a year Only when you have a dental problem
<b>Attitude</b>		
Why did you last visit a dentist?	Well-being of oral cavity	Dental problem or toothache Follow up treatment
What was the reason you could not go for the dental treatment that was needed?	Was busy	Was too expensive Pain was gone
How often have you had scaling done in the past 1 year?	Twice	Once Nil
Do you think tobacco, betel nut chewing benefits your oral health?	No	Yes
Have you ever given up any of your addictions?	Yes N/A	No
<b>Practice</b>		
How do you brush your teeth?	Toothpaste and toothbrush	Finger Neem stick Salt Charcoal
How often do you brush your teeth daily?	Twice a day	Once a day Never
Do you use fluoridated toothpaste?	Yes	No
How often do you change your brush?	Every 1–3 months	Twice a year Only after the bristles damage severely
How often do you take addictives such as betel nut and tobacco?	N/A	Daily Once a week Once a year
Do you have cavities in your teeth?	No	Yes
Do you have bleeding gums?	No	Yes
Do you have bad breath?	No	Yes
Do you have tartar deposits in your teeth?	No	Yes
How often did you visit a dentist the past year?	Twice	Once Nil
How do you clean your tongue?	Tongue cleaner	Toothbrush Finger Do not clean your tongue

KAP: Knowledge, attitude, and practice



**Figure 3: Knowledge, attitude, and practice levels**

to tobacco and betel nut chewing. 42.30% (11) of those with tartar deposits do not use toothbrushes to clean their teeth and 57.69% (15) have carious teeth. 29.16% (21) of the sanitary workers were found to use fluoridated toothpastes, of which 28.57% (6) have carious teeth. 59.72% (43) of the sanitary workers do not visit the dentist regularly, of which 16.27% (7) do so because dental consultation and treatment are too expensive and 34.88% (15) do so because they are too busy with their work.

**Table 2: KAP survey responses**

Questions	Number of ideal responses	Number of other responses	KAP level (%)
<b>Knowledge</b>			
What should be ideally used for cleaning teeth?	50	22	69.44
How many times in a day should you brush your teeth?	47	25	65.27
When should you brush your teeth?	53	19	73.61
How often should you floss/rinse?	58	14	80.55
How often should one go for dental scaling?	14	58	19.44
How much do you think dental problem can affect your general health?	23	49	31.94
How often should one visit a dentist?	16	56	22.22
<b>Knowledge level</b>			<b>51.78</b>
<b>Attitude</b>			
Why did you last visit a dentist?	14	58	19.44
What was the reason you could not go for the dental treatment that was needed?	15	57	20.88
How often have you had scaling done in the past 1 year?	2	70	2.77
Do you think tobacco, betel nut chewing benefits your oral health?	56	16	77.77
Have you ever given up any of your addictions?	60	12	83.33
<b>Attitude level</b>			<b>40.83</b>
<b>Practice</b>			
How do you brush your teeth?	66	6	91.66
How often do you brush your teeth daily?	30	42	41.66
Do you use fluoridated toothpaste?	21	51	29.16
How often do you change your brush?	33	39	45.83
How often do you take additives such as betel nut and tobacco?	53	19	73.61
Do you have cavities in your teeth?	49	23	68.05
Do you have bleeding gums?	61	11	84.72
Do you have bad breath?	62	10	86.11
Do you have tartar deposits in your teeth?	46	26	63.88
How often did you visit a dentist the last year?	14	58	19.44
How do you clean your tongue?	32	40	44.44
<b>Practice level</b>			<b>68.05</b>
<b>Total</b>	<b>875</b>	<b>781</b>	<b>52.83</b>

KAP: Knowledge, attitude, and practice

## DISCUSSION

This study assessed the oral health attitudes, knowledge, and practice of sanitary workers working in Chennai city. A customized questionnaire was distributed to assess the KAP of the workers who usually belong to the lower strata of society in terms of the socioeconomic status. This disparity combined with the nature of their profession is the reason for a KAP level that varies from the normal population. In this study, 40% of the workers have not undergone schooling and are uneducated. However, 52.83% of the sanitary workers have good KAP on oral hygiene.

In a study done by Harikiran *et al.*, 2008, on children of lower socioeconomic strata, it was found that 5.4% and 3.9% smoke cigarettes and chew tobacco regularly ranging from every day to once in a week. Of the surveyed participants, 46.1% were afraid of going to dentist due to pain and 67.8% agreed that regular visit to dentist keeps away dental problem. 9.4% were not satisfied with the appearance of their teeth, and 21.9% of study participants avoided smiling and laughing due to their teeth.<sup>[9]</sup> In a study done by Kumaresan and Kumar, 2016, on an urban population,

55.5% brushed twice daily, 66.5% change their brush every month, and 25.5% use a tongue cleaner to clean their tongues.<sup>[10]</sup> However, in the present study, 44.44% of sanitary workers use a tongue cleaner. The attitude of people toward dental health and dental service utilization is determined by certain social and cultural factors.<sup>[11]</sup> Poor attitude to dental service exploitation can be an impact of poor availability, poor accessibility, or prevalence of fear of the dental service, as people of low socioeconomic group are more likely to visit dentist for episodic or emergency dental care.<sup>[12]</sup> In this study, the sanitary workers only visited the dentist in case of emergency due to poor income and long working hours.

Findings from the study by Smyth *et al.*, 2007,<sup>[13]</sup> support the “critical approach” to health education and reflect that social factors (notably family educational level and urban or rural habitat) need to be taken into account in public education programs aimed at improving oral health practices. In this study, the KAP level was found to be more than 50% due to the urban setting the workers inhabit. Tewari *et al.*, 1991,<sup>[14]</sup> Tewari *et al.*, 1992,<sup>[14,15]</sup> showed that a community program about oral hygiene made tooth brushing

more frequent. In this study, sanitary workers were randomly selected from private institutions belonging to the medical sector, who may have been exposed to such dental camps and advice from dental students and dentists. This could be the possible reason for their oral hygiene practice level being 68.05%, which was not expected in sanitary workers of poor socioeconomic and educational background. In other studies based on the KAP model as applied in health education, the educational interference suggestively enhanced oral health practice.<sup>[16]</sup>

Only 31.94% (23) of the sanitary workers in this study were aware that dentofacial problems can severely aggravate systemic diseases. In a study done by Humagain *et al.* 2011,<sup>[17]</sup> the participants displayed positive attitude toward dentists (80%) and high awareness of the association between oral health and systemic well-being (96%) which was found to be similar to other studies done by Al Omiri *et al.*,<sup>[18]</sup> Farsi *et al.*,<sup>[19]</sup> and El-Qaderi and Taani.<sup>[20]</sup> This is important to mention that emphasis on the link between oral health and well-being of the rest of the body might help promote oral health care and oral self-care practice among school children and the public. Hence, there is an urgency for comprehensive educational programs to improve the oral health practice, knowledge, and attitudes of sanitary workers in Chennai.

## CONCLUSION

The current findings of this study indicate the link between the oral hygiene status of sanitary workers and their educational qualification and inability to afford dental consultations due to their highly demanding job scenarios. Oral health education should be offered with the aim of increase public knowledge of the risk factors for dental diseases. Nevertheless, its effectiveness will be restricted if they do not directly invade the attitudes and take into consideration factors related to the environment, education, social status, and economic level of the targeted population. Free dental camps focusing on these ideals and distribution of oral hygiene products can, therefore, considerably better the oral hygiene status of sanitary workers.

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