

# Determination of the awareness regarding usage of various interdental aids among dental patients - a pilot study

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## Abstract

### OBJECTIVES:

To assess the knowledge, attitude, and awareness regarding the usage of various interdental aids among dental patients visiting a dental college and hospital at Kerala. MATERIALS AND METHODS: A 13-item questionnaire was self administered by the author to the dental patients who visited the department of Oral medicine & Radiology and the department of Periodontology during January to March 2017. A total of 300 samples were selected for the study by convenience sampling.

### STATISTICAL ANALYSIS:

Data entries and analyses of results were done using SPSS version 18.0. The responses given by the participants were summarized as frequencies. The inferential analysis for responses in relation to gender was done using chi square test.

### RESULTS:

There are no statistically significant differences among gender. 62% of patients had heard about interdental aids through various means. Among this 62%, only 40% of them were informed by their dentists. In spite of 62% of awareness level, the regular usage of interdental aids is limited to only 21%.

### CONCLUSION:

This data shows that the low usage of dental aids can be attributed to lack of proper patient education and awareness programs. Health education programs are necessary to create an awareness about the significance of maintaining a meticulous oral hygiene.

### KEYWORDS:

Interdental aids, dental floss, oral hygiene, knowledge, tooth brush.

## Introduction

Periodontal diseases constitute a major fraction of chronic infections affecting the oral cavity. Although they are preventable, their prevalence is increasing globally, especially in the developing world.<sup>1,2</sup> Periodontal disease has become a major public health problem in India and its prevalence ranges from 50 to 100% in various parts of the Indian subcontinent. This is a matter of great concern and hence needs to be tackled appropriately.<sup>3</sup>

Biofilm or dental plaque is one of the main factors in the causation of periodontal disease. Therefore its effective removal will not only prevent its formation but also reduce the increasing burden of diseases affecting the periodontium. Mechanical method is one of the easiest and most efficacious ways of plaque control.<sup>4,5</sup> According to many studies conducted worldwide, it has been found that toothbrush alone is inadequate for effective plaque removal. Hence, the use of other oral hygiene aids such as dental floss has been emphasized.<sup>6</sup> Although dental floss is an effective method of plaque removal,<sup>7</sup> its usage as an adjunctive oral hygiene aid is not widely accepted.

It has been found that daily practice of dental flossing not only prevents periodontal disease but also reduces the risk of cardiovascular disease,<sup>8</sup> and hence, its importance has to be highlighted. So, modification of patient's behaviour regarding oral hygiene maintenance is one of the significant challenges faced by the modern dental practitioner.<sup>9,10</sup> Merely explaining the role of good oral hygiene in prevention of oral diseases may not result in compliance of oral hygiene instruction. Instead, the patient education should proceed in such a way that, it should emphasize the link of periodontal diseases with various systemic diseases, which may motivate an individual to take proper oral care.<sup>8,11</sup> Therefore this study was conducted to find-out the knowledge, attitude, and awareness regarding the usage of various interdental aids among the dental patients visited the department of Oral medicine and Radiology and department of

Periodontology in Annoor Dental College and Hospital, Kerala.

## Materials And Methods

Ethical clearance for the study was obtained from the ethics review and research board of the Annoor Dental College and Hospital, Kerala, India. A 13-item questionnaire was self administered by the author to the dental patients who visited the department of Oral medicine & Radiology and the department of Periodontology, Annoor dental college and hospital, Muvattupuzha during January to March 2017. A total of 300 samples were selected for the study by convenience sampling. Informed consent was also obtained from all the participants. During the 3 month period, many patients who visited the department were reluctant to participate due to some personal reasons.

## Study Setting

The present study was carried out amongst the general population of patients who visited the two departments of our dental college in Kerala.

## Questionnaire

A self-made questionnaire written in English/Malayalam language was given to each one of them [Table 1]. The questionnaire included information related to the patient's name, age, sex, occupation and residence. The questionnaire was further categorized to evaluate the knowledge, attitude and awareness related to their oral hygiene.

## Data Collection

The questionnaires were handed to the patients while they were seated in the waiting area of the Departments. At all times, one of the investigators was present with the respondent while the questionnaires were being filled to ensure that the concerned respon-

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NAME:	AGE:	OP NO:
OCCUPATION:		
ADDRESS:	SEX:	
<ol style="list-style-type: none"> <li>1. Have you heard about any type of interdental aids like dental floss, tooth pick, interdental brush, irrigation devices, etc..previously? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>2. Have to been informed about the benefits of regular usage of the interdental aids during any of your previous dental visits? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>3. Are you aware that the regular usage of this would enhance removal of plaque and debris from the interdental regions? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>4. Do you think that the regular usage of interdental aids substitute the practice of regular tooth brushing? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>5. Do you practice using any other methods to remove debris from the interdental regions? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>6. Do you think that the interdental aids should be used on a regular basis? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>7. Do you practice using this on a regular basis? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>8. Do you think that usage of interdental aids induces bleeding from gums? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>9. Do you think that the usage of interdental aids would massage the gum tissue? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>10. Do you think that the usage of this would injure/harm the interdental gums? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>11. Do you think that its regular usage would prevent gum inflammation? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>12. Do you think that whether its usage would wear-off enamel from interdental tooth surfaces? <input type="checkbox"/> y <input type="checkbox"/> n</li> <li>13. Do you think that the usage of tooth pick is found to be better and easier than other methods of interdental cleaning? <input type="checkbox"/> y <input type="checkbox"/> n</li> </ol>		
SIGNATURE:		
(Please tick based on your opinion)		

Table 1: Questionnaire for the study.

dent did not discuss the questions or the answers with any other patients sitting in the waiting area and also to make sure that the concerned respondent fully understood the questions as well as the probable answers completely. After distribution of questionnaire, 10 minutes were allotted for completing the questionnaire. Results were subjected for statistical analysis.

### Statistical Analysis

Data entries and analyses of results were done using SPSS for Windows (version 18.0, SPSS, Chicago, IL, USA) statistical software package. The responses given by the participants

were summarized as frequencies. The inferential analysis for responses in relation to gender was done using chi square test. (Table 2)

### Results

There are no statistically significant differences among gender. 62% of patients had heard about interdental aids through various means. Among this 62%, only 40% of them were informed by their dentists. In spite of 62% of awareness level, the regular usage of interdental aids is limited to only 21%.

### Discussion

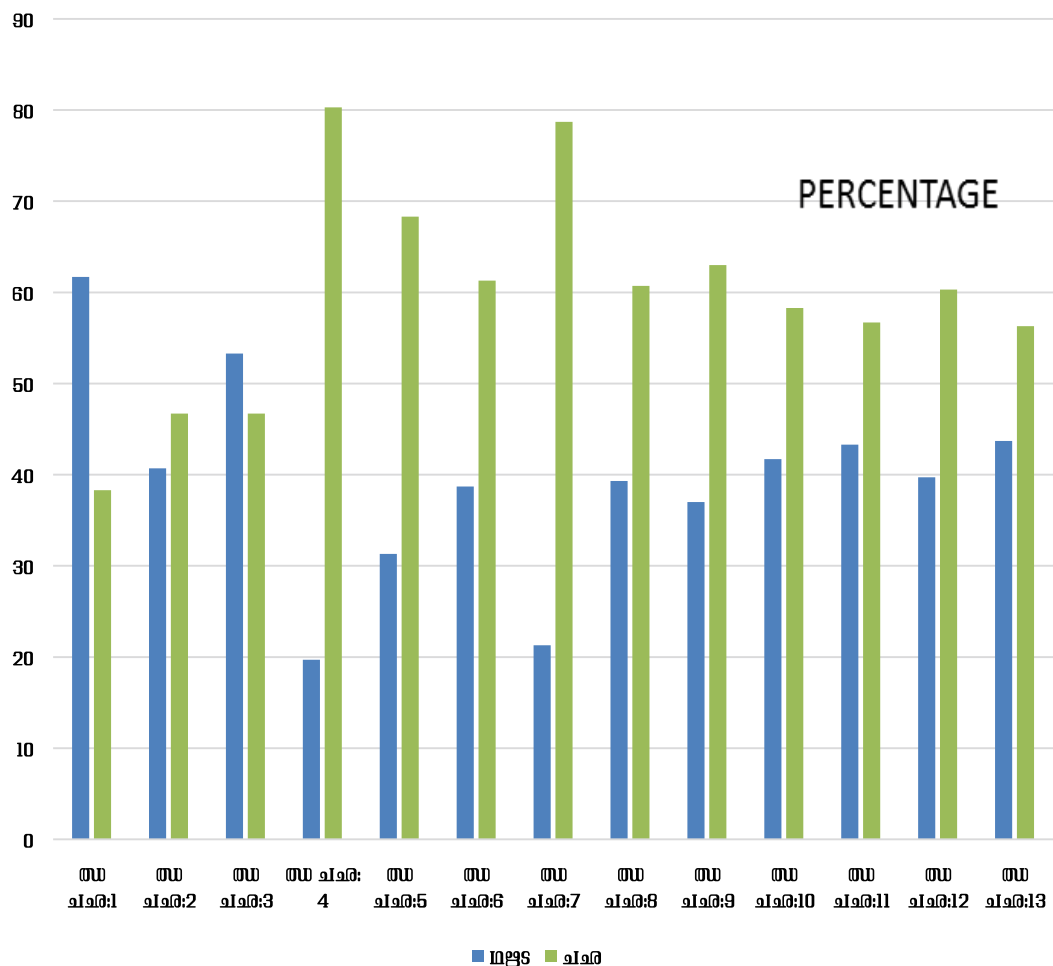
The present study has confirmed the general opinion that oral hygiene has still remained as

	1 (%)	2 (%)	CHI SQUARE	
			CHI SQ VALUE	p value
Q 1	61.7	38.3	0.72	0.81 (NS)
Q 2	40.7	59.3	0.63	0.72 (NS)
Q 3	53.3	46.7	1.00	1.00 (NS)
Q 4	19.7	80.3	0.66	0.77 (NS)
Q 5	31.3	68.3	3.90	0.14 (NS)
Q 6	38.7	61.3	0.81	0.90 (NS)
Q 7	21.3	78.7	1.00	1.00 (NS)
Q 8	39.3	60.7	0.63	0.72 (NS)
Q 9	37	63	0.72	0.81 (NS)
Q 10	41.7	58.3	0.19	0.24 (NS)
Q 11	43.3	56.7	0.81	0.90 (NS)
Q 12	39.7	60.3	0.90	1.00 (NS)
Q 13	43.7	56.3	0.73	0.82 (NS)

TABLE 2: SHOWS THE RESPONSE OF THE STUDY SUBJECTS TO VARIOUS QUESTIONS WITH INFERENTIAL ANALYSIS USING CHI SQUARE TEST.

1= YES, 2 = NO. NS = NON SIGNIFICANT

**Graph:1. KNOWLEDGE TRENDS AMONG PATIENTS**



an ignored and unrealized major social problem. Preventive oral health education is in transitional stage in India. Population based oral health promotional programs are yet to be implemented and followed. Hence in this study, attempts were made to describe the preventive oral knowledge, attitude, awareness of the studied population. Our study has shown very limited knowledge on prevention and preventive dental behaviour. Although the use of dental floss along with regular tooth brushing has been recommended routinely for prevention of gingival diseases,<sup>12,13</sup> the statistics throughout the world is not encouraging, and hence, it is essential to identify defi-

ciencies, which would be helpful to plan corrective measures. Hence the present study was undertaken with the same objective among a select population who visited the dental college in Kerala.

The main oral hygiene aids used in India are toothbrushes, toothpastes, and tooth powder, along with indigenous aids like neem stick, babool, charcoal, brick powder, ash, etc.<sup>14,15</sup> Our study shows that there is no statistically significant differences among males and females with 50% of them were previously aware about these cleaning aids. From the study, almost 62% of the population have heard about various interdental cleaning aids



through various means. Among those 62% of the participants, only 40% of them were informed regarding this by their dentists. So that is the major limitation, either because of lack of awareness among the clinicians or reluctance to educate from the dentist's side. The percentage of dental floss users in our study is significantly less, of about 21% when compared to toothbrush and toothpaste users. It has been reported that only 15.8% of the population in India used dental floss, which could be attributed to lack of awareness among people.<sup>16</sup> It is found that about 60% of the study participants were aware that the regular usage of these cleaning aids would not create any problems such as gingival bleeding, pain or even cervical abrasion. But still its regular usage is very much limited. In addition to that, almost 58% of the population from our study group believes that the routine usage would not prevent the onset of gum inflammation. So, in this scenario, prescribing a dental floss is not enough; it is also essential to demonstrate correct flossing technique, as incorrect flossing may result in cervical abrasion of the teeth and angular alveolar bone loss.<sup>17,18</sup>

### Limitation

Our study has got some shortcomings. Since this survey used a self-reported questionnaire, authenticity of the responses could not be ascertained. Another limitation to our survey was the limited sample size. Since we have taken samples only from one academic institution, it does not represent the general population. So we cannot conclude with the findings of this study. Hence, we propose that future studies be aimed with a larger sample size, which can be carried out in other geographic areas in India as well to arrive at broader conclusions.

### Conclusion

This data shows that lack of proper patient education and awareness programs could be the reasons behind this. Health education pro-

grams are necessary to create an awareness about the significance of maintaining a meticulous oral hygiene and also to educate the bidirectional relationship between various systemic diseases and periodontal diseases among the general population. This makes them to overcome the myths regarding interdental aids and helps them maintain their overall general and oral health in a better way.

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## Inter Dental Aids

