

PERCEIVED ORAL HYGIENE HABITS AMONGST 16-YEAR-OLD SCHOOLCHILDREN

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Abstract

This study was aimed at assessing dental habits among 16-year-old schoolchildren. A total of 116 16-year-old schoolchildren took part in this survey, which was part of a larger study to assess dental fluorosis occurrence among the respondents. A questionnaire was given to each respondent prior to getting written consent from the parents. They were asked three categories of questions pertaining to habits of oral hygiene, firstly the number of tooth-brushings per day, then the quantity of toothpaste used per brushing, and lastly the number of visits to the dentist per year. From 116 respondents, 32 (27.6%) were males and 84 (72.4%) were females. On the first question, 100 respondents (86.2%) used fluoridated toothpastes while the remaining 16 (13.8%) used non-fluoridated toothpastes. For the second question, 8 respondents (6.8%) brushed their teeth once per day, 59 (51.0%) twice per day, 35 (30.1%) three times per day and 14 (12.1%) 4 times per day. About the question on quantity of toothpaste used for brushing (question 3), 25 respondents (21.5%) used ½ pea size, 66 (56.8%) used 1 pea-size, 24 (20.9%) used 2 pea-size and 1 (0.8%) used 3 pea-size. For the final question (question 4), 43 (37.1%) had never had any dental visits all their life, 33 (28.4%) had one dental visit per year, 30 (25.9%) had twice-a-year visit, 4 (3.4%) had 3 visits, 3 (2.6%) had 4 times-a-year visit and 3 (2.6%) had more than 4 times-a-year visit. This study concluded that more oral health education programs should be organized to improve the understanding of oral hygiene and the importance of dental visits in order to sustain a healthy oral life for a lifetime especially for the respondents.

Keywords: Oral hygiene, schoolchildren, Klang Valley, Malaysia, dentist, toothpaste.

Introduction

Dental caries and periodontal disease are common and costly chronic diseases affecting modern societies. To a great extent, their prevention and control depend on a person's lifestyle and behavior. However, for a long time oral health care, including oral health education has not attracted much attention in Mainland China (Lin et. al, 2001). It has been observed that oral health knowledge and tooth brushing behavior had improved during the period 1987 – 1995 in residents in Wuhan city, located in central China (Peng et. al, 1997, as cited in Lin et. al, 2001)

In Malaysia, the National Oral Health Plan (NOHP) was formulated in 2002 to provide direction for oral health initiatives and the expected outcome up to the year 2010 (OHD, MOH, 2002). It is a strategic plan for oral health developed by members of the dental

fraternity from both the public and private sectors, taking into cognisance Vision 2020, the Vision for Health and the health service goals outlined for the country.

Petersen et. al (2001) mentioned that the information on oral health attitudes and behavior was collected by means of interviews and due to the school-based approach a high response rate was obtained. However, the data collection method may have certain limitations, for example with regard to oral hygiene habits and frequency of dental visits where over reporting has to be assumed. In addition, recall bias should be considered with respect to services received at the last dental visit, for example.

The aim of this study was to quantify and examine the types of habits pertaining to oral hygiene on these 16-year-old respondents, since fewer studies are done on this context.

Methodology

This study is part of a larger study to assess fluoride in drinking water and the presence of dental fluorosis amongst respondents, who were schoolchildren aged 11 to 16 years old.

A questionnaire session was performed with the attendance of students who agreed to become respondents. The questionnaire was improvised from a similar questionnaire used by the Oral Health Division (OHD) of the Ministry of Health, Malaysia. The session was done classroom-style with the researcher reading each question before asking the respondents to answer to those questions. Those who did not understand were asked to put up their hands and were verified immediately by the researcher. Wong et. al (2001) used a similar method of structured questionnaire on 12-year-old children in order to gather information on demographics background, oral health knowledge, attitudes and practices, dietary habits and dental services utilization history.

The questions were categorized into four types: (1) type of toothpaste used, (2) frequency of brushing per day, (3) quantity of toothpaste used, and (4) number of dental visits per year.

Results

Out of the 116 respondents, 32 (27.6%) were males and 84 (72.4%) were females (Table 1 and Figure 1).

Table 1: Gender of respondents

Gender	Number of respondents	Percentage (%)
Male	32	27.6
Female	84	72.4
Total (N)	116	100.0

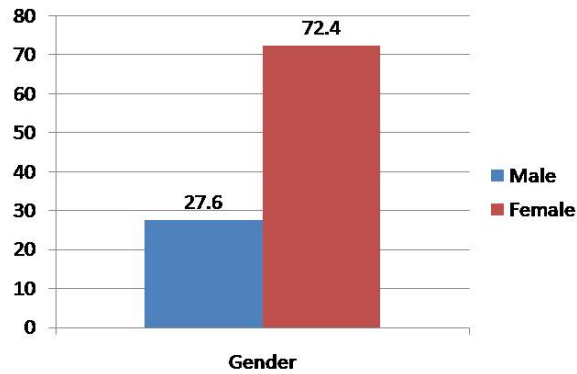


Figure 1: Gender of respondents (in percentage)

On the first question, 100 respondents (86.2%) used fluoridated toothpastes while the remaining 16 (13.8%) used non-fluoridated toothpastes (Table 2 and Figure 2).

Table 2: Type of toothpaste used

Type of toothpaste	Number of respondents	Percentage (%)
Fluoridated	100	86.2
Non-fluoridated	16	13.8
Total (N)	116	100.0

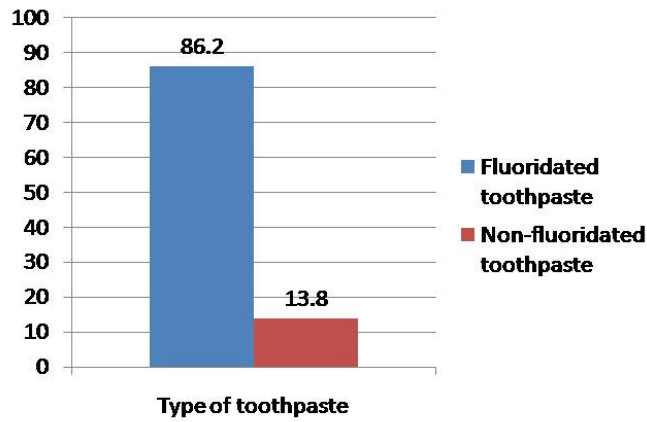


Figure 2: type of toothpaste used

For the second question, 8 respondents (6.8%) brushed their teeth once per day, 59 (51.0%) twice per day, 35 (30.1%) three times per day and 14 (12.1%) 4 times per day (Table 3 and Figure 3).

Table 3: Frequency of brushings per day

Frequency /per day	Number of respondents	Percentage (%)
Once	8	6.8
Twice	59	51.0
Three times	35	30.1
Four times	14	12.1
Total (N)	116	100.0

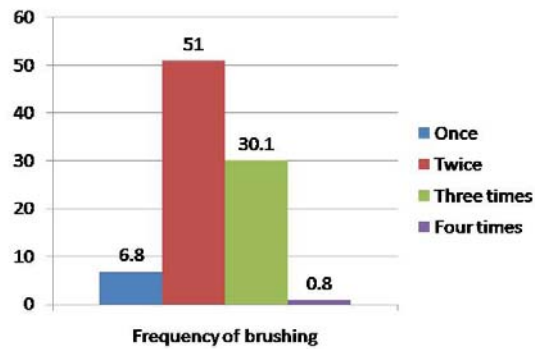


Figure 3: Frequency of brushing per day (in percentage)

About the question on quantity of toothpaste used for brushing (question 3), 25 respondents (21.5%) used $\frac{1}{2}$ pea size, 66 (56.8%) used 1 pea-size, 24 (20.9%) used 2 pea-size and 1 (0.8%) used 3 pea-size (Table 4 and Figure 4).

Table 4: Quantity of toothpaste used

Quantity / pea-size	Number of respondents	Percentage (%)
$\frac{1}{2}$	25	21.5
1	66	56.8
2	24	20.9
3	1	0.8
Total (N)	116	100.0

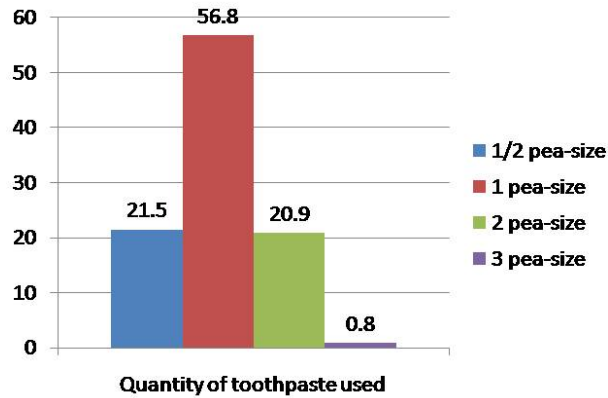


Figure 4: Quantity of toothpaste used (in percentage)

For the final question (question 4), 43 (37.1%) had never had any dental visits all their life, 33 (28.4%) had visits once a year, 30 (25.9%) had twice-a-year visits, 4 (3.4%) had 3 times-a-year visits, 3 (2.6%) had 4 times-a-year visits and 3 (2.6%) had more than 4 times-a-year visits (Table 5 and Figure 5).

Table 5: Number of dental visits per year

Number of visits / per year	Number of respondents	Percentage (%)
Never	43	37.1
Once	33	28.4
Twice	30	25.9
Three times	4	3.4
Four times	3	2.6
More than four times	3	2.6
Total (N)	116	100.0

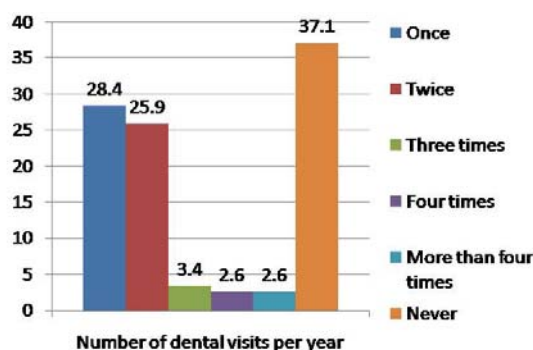


Figure 5: Number of dental visits per year (in percentage)

Discussions

There were more female respondents compared to male respondents, with a ratio of 3:1 females to males. This was due to more female students were interested in participating in the study compared to their male counterparts. Furthermore, there were a slightly higher number of females in each classroom compared to male students.

The usage of fluoridated toothpastes by respondents constitutes the majority of answers from the first question. More than 4/5 of respondents used fluoridated toothpaste while brushing, and only a handful used non-fluoridated toothpaste. Almost all (99%) of children studied by Wong et. al (2001) used toothpaste while brushing, but the authors did not specify which type of toothpaste used. Petersen et. al (2001) found that the majority of respondents claimed to use fluoridated toothpaste.

Frequency of tooth brushing per day was the next question, with the majority of respondents brushing twice per day, at 51.0%. There were also respondents who were brushing their teeth 4 times per day at 12.1%. Wong et. al (2001) reported that 77% of urban children studied claimed that they brushed their teeth twice or more daily, while 22% of the children brushed their teeth once daily. In a study by Petersen et. al (2001) on the oral health status and oral health behavior of urban and rural schoolchildren in southern Thailand, three-quarters of children surveyed brushed their teeth twice a day, compared to just 1.9% and 2.0% respectively who brushed once a day. From the behavioral standpoint, the most important aspect of brushing is its frequency (Kuusela et. al, 1997). Only after the twice-a-day habit was established could efforts be directed to adequate technique and the duration of brushing.

Regarding quantity of toothpaste used per brushing, more than half (66 – 56.8%) of respondents used 1 pea-size toothpaste, compared to the other sizes. The sizes of toothpaste used may reflect the constant exposure to fluoride especially to those using fluoridated toothpaste, and that over-exposure may result in undesirable effects such as dental fluorosis and other fluoride-related diseases.

For the final question, 62.9% of respondents had at least once-a-year dental visit, but a surprising 37.1% had never had dental checks their whole lives. Wong et. al also reported that about half of the urban children had visited a dentist the preceding year, while 13% of them had never visited a dentist before.

Conclusions

More oral health education programs should be organized to improve the understanding of oral hygiene and the importance of dental visits in order to sustain a healthy oral life for a lifetime especially for the respondents.

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