

ASSESSMENT OF *MISWAK* PRACTICE AMONG *TABLIGH* FOLLOWERS.

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ABSTRACT

The Islamic scholars proposed various techniques in using *miswak* according to the *sunnah* of Prophet Muhammad P.B.U.H. In Malaysia, the use of *miswak* as an oral hygiene aid is popular among *tabligh* followers which is a group of Islamic preachers. They are known to routinely practice the *sunnah* of the Prophet P.B.U.H. including the use of *miswak*. The aim of this study is to assess the *miswak* practice among *tabligh* followers. This is a cross-sectional descriptive study. Forty *tabligh* followers who visited Masjid Jamek Sri Petaling were selected and they were required to answer the questionnaire. The usage method of *miswak* was also observed. Descriptive analysis was done on the usage method of *miswak*. Various techniques of holding the *miswak* were then compared with area covered during brushing with Chi-square test. Thirty-seven participants were included in the study as 3 incomplete questionnaires were excluded. 73% of the participants used both toothbrush and *miswak* while the remaining 27% use *miswak* only. Less than half of the participants omitted on brushing the palatal sites (41.9%) and lingual sites (40.5%) of the posterior teeth. 78.4% of the participants hold the *miswak* with three fingers on the upper part of the *miswak*. For brushing technique, they angulate the *miswak* perpendicularly (81.1%) and then move it vertically (56.8%). However, the technique of holding the *miswak* was not related to the area covered during brushing ($p=0.455$). In conclusion, similar technique of *miswak* use was applied by most of the participants although there were variations in holding the *miswak* and brushing technique. Nonetheless the technique used in holding the *miswak* did not have significant impact on the area of the teeth covered while brushing.

Keyword: *miswak*, *tabligh* followers, brushing

Introduction

Miswak or chewing stick is used for centuries as an oral hygiene aid. In spite of the invention of the modern toothbrush, *miswak* is still being used nowadays because it is easily available, low cost, for religious reasons or traditional culture (Halawany, 2012). Studies have shown that *miswak* (*Salvadora persica*) has a lot of therapeutic and prophylactic effects attributed to its mechanical properties and active chemical potential release. The example of chemical compounds released by *miswak* including fluoride, chloride, saponins, salvadorine, silica and sulfur (Niazi et al., 2016). In addition, *Benzyl-isothiocyanate* was described as one of the main constituents of the *miswak* and it was discovered to exhibit a broad-spectrum bactericidal activity (Almas & Almas, 2013). It has been scientifically demonstrated as an antimicrobial and antiplaque agent in the prevention of two main oral diseases namely dental caries and periodontal disease (Gazi et al., 1990; Almas & Almas, 2013; Niazi et al., 2016).

In terms of clinical effects of the *miswak*, various studies revealed that *miswak* was just as effective as modern toothbrush when used in proper manner (Gazi et al., 1990; Darout et al., 2000; Batwa et al., 2006). On top of that, low periodontal treatment needs have been reported among Saudi adults who used *miswak* (Al-Khateeb, 1991; Guile, 1992).

In the perspective of Islam, *miswak* use is one of the *sunnah* of the Prophet Muhammad P.B.U.H. There are about 36 authentic *ahadith* that can be found related to *miswak* in Sahih Bukhari and Sahih Muslim (Nordin et al., 2012). In all the related *ahadith*, the Prophet P.B.U.H. encourages Muslims to clean their teeth with *miswak*. One of the Islamic scholars, Abu Umamah has narrated the saying of the Prophet P.B.U.H. "*Miswak* is a means of the purification of your mouths and the pleasure of your *Rabb*" (Sunan Ibn Majah). Therefore it is well known that *miswak* use is highly recommended for Muslims in view of the benefits from the religious point of view as well as its clinical effects.

For brushing techniques, Islamic scholars namely Imam Nawawi, Ibn Qayyim and Ibn Hajar Asqalani have proposed several brushing techniques (Nordin et al., 2012). Five-finger grip and three-finger grip are the techniques documented in holding the *miswak* stick. These techniques are thought to have a well-controlled movement and to ensure that every part of the oral cavity is reached (Niazi et al., 2016; Almas & Almas, 2013). Five-finger grip technique or also known as palm grasp was described when the *miswak* is held in the palm and the thumb rests firmly on the opposite side of the stick with the index finger close to the bristles. Whereas three-finger grip technique or pen grip technique is to hold the *miswak* with the index and third finger while the thumb rests on the opposite side of the *miswak*. The later technique is claimed to commonly use by children (Almas & Almas, 2013).

Apart from the documented advantages of miswak, there were also some negative impacts that have been related to its use such as gingival recession and tooth surface loss (Muhammad Saleh et al., 2017; Eid et al., 1991). Therefore, further studies need to be conducted to evaluate the brushing technique using *miswak*.

Currently in Malaysia, research on *miswak* use was not extensively done compared with the Middle East countries. Although Malaysia is a country dominated by Muslims, generally the use of miswak as oral hygiene aid is not a culture among the Malaysian Muslims. It was found that 32.6% of Malaysians had experience in using *miswak*, but majority of them were not sure of the detail practices of *miswak* by the Prophet Muhammad P.B.U.H. (Nordin et al., 2013). However, it is noted that in Malaysia, miswak use is popular among certain groups of people. Therefore, the current study tried to focus on the specific group that use *miswak* in their daily oral hygiene routine.

Tablighi Jamaat group in Malaysia, also known as *tabligh* followers is a group of Islamic preachers that focus on emphasizing Muslims to implement the basic practices of Islam. The *tabligh* followers were reminded on the necessity of constantly increasing one's faith through certain rituals instituted by *Tablighi Jamaat*. Using *miswak* to brush their teeth instead of the toothbrush is one of it (Muhammed Haron, 2005). Thus, it is necessary for the *tabligh* followers to carry *miswak* along with them. Therefore, the aim of this study is to assess *miswak* practice among *tabligh* followers in Malaysia.

MATERIALS AND METHODS

This is a descriptive cross-sectional study done at Masjid Jamek, Sri Petaling Selangor. The location was selected as it is known as one of the gathering centre for most of the *tabligh* followers. After the ethical approval was obtained, the subjects were recruited based on purposive sampling. The inclusion criteria were *miswak* users among *tabligh* followers who aged 18 to 60 years old. Each participant was individually approached and written consent was obtained from all participants. Any volunteer that meet the inclusion criteria was invited to participate in this study. The study was conducted for three months. Only one researcher was involved in data collection.

The study was divided into two parts, questionnaire and observation. For the questionnaire, they were required to respond on demographic background, their primary oral hygiene aids and other additional oral hygiene aids used.

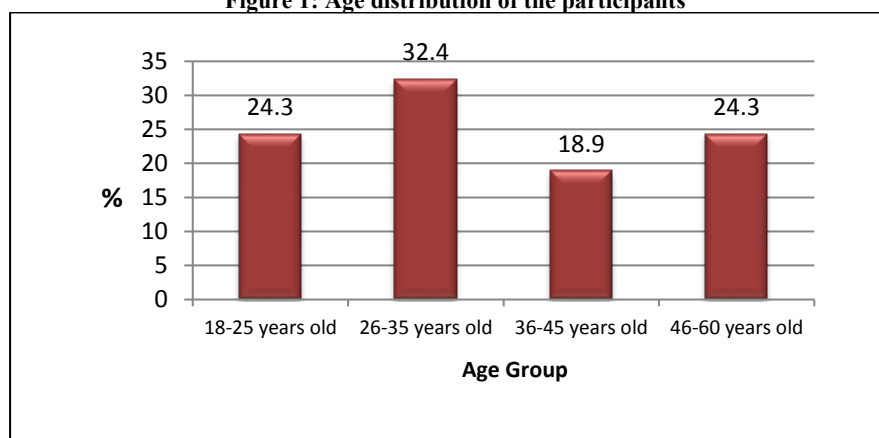
While for the second part, immediately after answering the questionnaire they were required to clean their teeth using *miswak*. The researcher involved observed the technique of brushing and recorded the findings in the prepared observational checklist. They were observed in terms of technique of holding the *miswak*, the angulation and movements of the *miswak* as well as the area covered during brushing. Any variations in the technique that was not listed in the checklist were also recorded.

Collected data were analysed using the Statistical Package for the Social Sciences (SPSS) version 22. The data was analysed descriptively in the form of percentages, frequency distribution and bar graphs. Furthermore, a statistical significance about the relationship between holding technique and coverage area during brushing was determined by Chi-square test. The level of significance was set at $p < 0.05$.

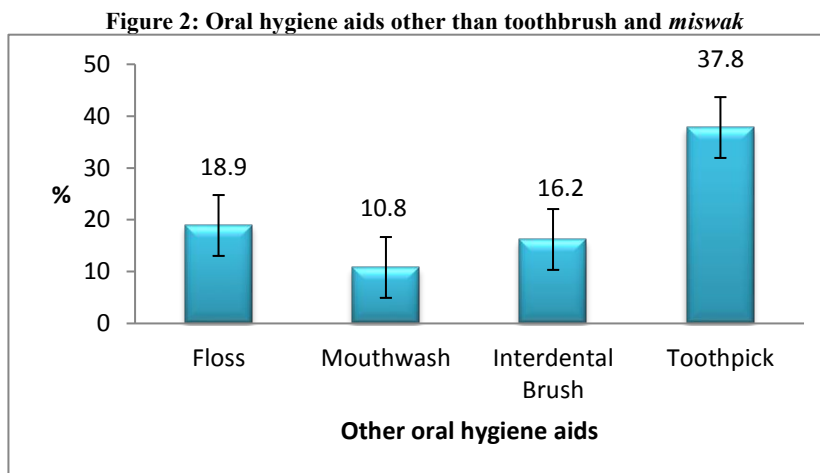
RESULTS

Forty respondents have volunteered to participate in this study. However three of them were excluded due to incomplete questionnaires. From 37 participants, all of them were Malay except one of them who was Bidayuh. There were two types of *miswak* users found in this study. Age distribution of the respondents was described in Figure 1. Majority of them (32.4%) aged between 26 to 35 years old. For education level, 12 of them attended high school, 17 respondents had tertiary education while the rest attended either primary school or other informal education.

Figure 1: Age distribution of the participants



Seventy-three percent of them use *miswak* combined with toothbrush while the remaining participants (27%) use *miswak* alone for their oral hygiene practice. Besides *miswak* and toothbrush, it was found that the participants also use other oral hygiene aids such as toothpick, floss, interdental brush and mouthwash (Figure 2).



From the observation, the techniques of holding the *miswak* can be divided into two major styles. The first technique was the five-finger grip where the *miswak* stick was held in the palm (Figure 3). The second technique was by holding the *miswak* stick with 2 fingers on the lower side and the three other fingers on the upper side of the *miswak* stick (Figure 4). However for the second technique, there were variations in the position of the fingers as shown in Figure 5 (A-C).

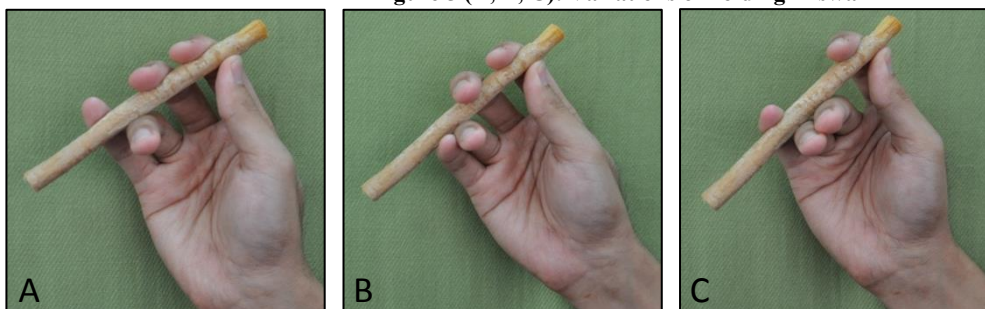
Figure 3: Five-finger grip technique



Figure 4: Two fingers on the lower side and 3 fingers on the upper side



Figure 5 (A, B, C): Variations of holding miswak



From all of the holding techniques observed, it was found that most of the participants (78.4%) held the *miswak* with two of the fingers on the lower side and three other fingers on the upper side of the *miswak* stick (Figure 4). Five-finger grip technique was practiced by 13.5% of the participants while the rest showed variation of the first technique.

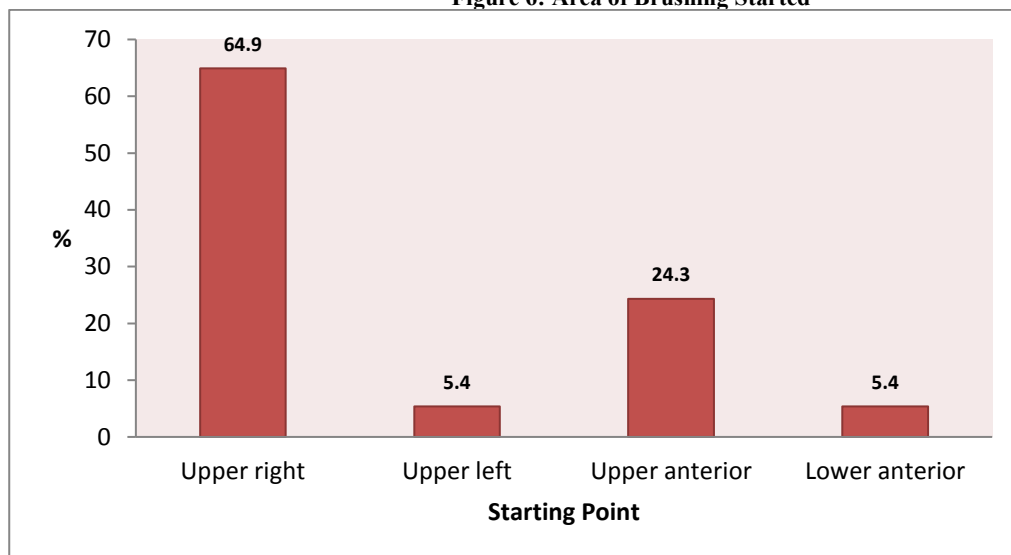
Table 1: *Miswak* stick angulation and movement

Angulations and movements		<i>n</i> (%)	Total <i>n</i>
Angulation of the <i>miswak</i>	Perpendicular	30 (81.1)	37
	45 degree	7 (18.9)	
Movement of the	Vertical	21 (56.8)	37

<i>miswak</i>	Horizontal	10 (27)
	Circular	1 (2.7)
	Figure of 8	4 (10.8)
	Few teeth in one stroke	1 (2.7)

Table 1 showed the angulation and the movement of the *miswak* during brushing where most of the participants angulate the *miswak* stick perpendicularly to the teeth and then move it vertically during brushing. For the area in which the participants start their brushing, most of the participants (64.9%) were observed to start brushing on the upper right side. It was then followed with the upper anteriors (24.3%) (Figure 6).

Figure 6: Area of Brushing Started



Upon the observation of the *miswak* use, it was found that certain areas were omitted during brushing remarkably on the palatal and lingual areas as shown in Table 2. This result was further analysed to find the association of the holding techniques and the area of coverage during brushing. It was discovered that, there is no association between holding technique and the area covered during brushing ($p=0.445$).

Table 2: Missed Area During Brushing

	Right		Anterior		Left		Occlusal
	Buccal	Palatal/Lingual	Labial	Palatal/Lingual	Buccal	Palatal	
Upper arch	5.4%	40.5%	2.7%	35.1%	2.7%	43.2%	32.4%
Lower arch	-	40.5%	-	29.7%	-	40.5%	27%

DISCUSSION

A study on *miswak* use that was done in King Saud University found that 29% out of 236 participants used *miswak* alone as their oral hygiene tool (Eid et al., 1990). Another study done in Sudan found that there were 16% Sudanese school children used only *miswak* to clean their teeth from the total of 600 participants (Ghandour et al., 1988). Both findings were close to the finding from this study where 27% of participants use *miswak* as the only method for brushing teeth. However, the total number of participants in this study was very small compared to the previous studies.

As suggested by Imam Nawawi, the best method to use *miswak* is from the right side of the mouth and finding from this study also in agreement with the opinion. Most of the participants (64.9%) start brushing with *miswak* from the upper right side. In fact, starting from right side in daily routine was also part of the Prophet’s P.B.U.H *sunnah*. As narrated by ‘Aishah “The Prophet P.B.U.H used to like to start from the right side on wearing shoes, combing his hair and cleaning or washing himself and on doing anything else” (Sahih Bukhari).

Regarding the movement of *miswak*, in the current study the technique that was most commonly practiced was similar to the previous study done by Eid et al. (1990). They revealed that 66.7% of the participants moved the *miswak* stick up and down or vertically during brushing which is almost similar with the current study (54%). These findings were also in agreement with Ibnu Hajar Asqalani who suggested that *miswak* should be used from upper side to the down side (vertical) of the teeth to prevent gum bleeding (Nordin et al., 2012). Similarly, it was suggested that the effective method of brushing using *miswak* is to hold it perpendicular to tooth surface, moved it up and down and should be directed away from the gingival margin on both buccal and lingual surfaces (Niazi et al., 2016).

The lingual and palatal surfaces were commonly omitted by about 40% of participants in this study. These surfaces are the area facing the tongue and palate. This is supported by the previous study done where more than half of the participants used *miswak* on facial (buccal and labial) surface only (Almas & al-Lafi, 1995). Moreover, these findings are also in line with another evidence that *miswak* is more effective as an oral hygiene tool in buccal surfaces or the surfaces facing the cheek and lips than lingual surfaces (Gazi et al., 1990). It was suggested that the lingual and palatal surfaces were commonly missed due to the position of the *miswak* bristle which is on the long axis of the *miswak* (Eid et al., 1990; Almas & al-Lafi, 1995).

Two fingers on the lower side and three fingers on upper side of the *miswak* stick is the most common holding technique used among the participants in this study. This technique was actually not mentioned in any literature review or other previous study. In fact, a previous study done in Saudi found that the most commonly used holding techniques were pen grasp and five-finger grip (Eid et al., 1990). However, according to Abdullah Ibn Mas'ud, "*Miswak* should be held in the right hand so that the small finger is below the *miswak* and the thumb is below the tip and the other fingers are on top of the *miswak*" ("*Miswaaik: Sunnah of the Tooth Stick*", 2010). This might suggest that the holding technique was actually practiced by certain groups of people.

Other holding techniques such as five-finger grip, three-finger grip and pen grip was said to ensure controlled movement and coverage of every area with ease and convenience (Almas & al-Lafi, 1995). However, the analysis of this study found that there is no association between holding techniques and the area covered during brushing. This could be due to small sample size and large difference in the number of participants in each group of those holding techniques.

Small sample size is one of the limitations of this study as it was challenging in getting volunteers to get involved and actively participated. Therefore the results may not fully represent the whole population of *miswak* users in Malaysia. However this could be recognised as a positive effort and becoming a reference for further studies in the future. On top of that, further study on the oral findings should be carried out particularly in relation to the missed area during brushing.

CONCLUSION

Generally, almost similar technique of *miswak* use was applied by most of the participants although there were variations in holding the *miswak* and brushing technique. The technique applied by the participants in this study may differ from *miswak* users from other countries. Certain areas were noted to be left out during brushing mainly on the palatal and lingual sites. However the technique in holding the *miswak* did not influence the area of the teeth covered during brushing. The use of *miswak* as oral hygiene aid should be encouraged as it is one of the *sunnah* of Prophet Muhammad P.B.U.H. However a correct method of *miswak* use should be emphasized to all *miswak* users so that the *miswak* can be used effectively and fully benefit the users.

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