

# Investigating Willingness to Have Dental Treatment during Fasting Month among Muslims in Malaysia

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**Abstract— Background and objective:** Some authors reported that there was reduce in dental attendance among Muslim patients during fasting month. The objective of this study is to assess the willingness among Muslims in Malaysia to have dental treatment during fasting month. **Method:** A cross sectional study was carried out on 246 Muslim adults attended primary care clinic in Kuantan, Malaysia. Face-to-face interviews with a structured questionnaire were used to collect sociodemographic profile and to assess the willingness to come for dental treatment during fasting month. We examined association between sociodemographic profile and their willingness to come for dental treatment. **Result:** Majority participants (70.7%) were unwilling to have dental treatment during fasting month. However, 89% of them were willing to have dental treatment during emergency. Only 11.4% will advise others not to have dental treatment during fasting months. There was no significant association between their willingness to have dental treatment during fasting and the sociodemographic profile. **Conclusion:** Majority of the Muslims were unwilling to have common dental treatment during fasting but still willing to have it during emergency situation.

**Keywords—** Dental treatment, fasting, Muslims.

## I. INTRODUCTION

Fasting is one of the five pillars in Muslims teachings. In most countries, Muslims will be fasting in the Holy month of Ramadhan. During this period, Muslims will restrain themselves from taking any food and drink starting from dawn until dusk<sup>(1)</sup>. This may affect the dental attendance among Muslims in some countries. Several authors have postulated that reduced dental attendance among Muslims during fasting month was due to they were afraid of inadvertently breaking their fast while having dental treatments<sup>(2-5)</sup>. Although, most Muslim scholars clearly stated that having dental treatments while fasting does not invalidate the fast<sup>(6)</sup>. A study done Al Barakati 2009, found that the main reason of failed dental attendance among Saudi women was fasting, followed by difficulty to get transportation and inconvenient appointment time<sup>(4)</sup>. It is even suggested for dental practitioner to postpone any non-emergency dental treatment to a later time after the fasting month is over.<sup>(2,7)</sup> Some authors even postulated that Muslims will not seek dental treatment even during emergency due to their fear of incidentally breaking their fast while undergoing dental treatment.<sup>(5)</sup>

However, to date, there is no study really assessing the views of Muslims regarding attending dental treatment during fasting

Therefore, the purpose of this study is to assess the willingness of Muslims in Malaysia to attend dental treatment during fasting and to find out whether it is similar with what have been postulated. In addition, the result of this study shall help the dentists as well as dental students in providing a better dental treatment plan during the fasting month for their patients<sup>(8)</sup>.

## II. METHODS

This was a cross-sectional study carried out among patients attending 3 health centers in International Islamic University Malaysia namely the dental clinic, family health clinic and International Islamic Medical Center from January to July 2017. Convenience sampling was used in which all Muslim patients attending the clinic aged 18 years and above were invited to participate in the study. The exclusion criteria were adults who cannot understand Malay or English and clinical dental staff and dental students.

Based on a study which found that 20% of patients failed to attend dental treatment during fasting months, we used 20% to calculate the sample size using Kish formula, giving a total of 246 participants<sup>(4,9)</sup>.

Questionnaire was then constructed and consist of 2 sections which are section A and B. Questions in section A was about their sociodemographic profile. There were 4 questions in section B that were asking about the respondents' dental visit during fasting month. The questionnaire was bilingual which were in Malay and English. Content validation was performed to improve the adequacy, accuracy and appropriateness of the questionnaire. The questionnaire was firstly reviewed by four experts comprising two dentists, one medical specialist and a local Islamic scholar. Based on the discussions, minor amendments were made. Overall, the questionnaire was found to be appropriate for the target population in achieving the objectives of the study. Pilot study was done on 10 Muslim adults who fulfilled the inclusion criteria. The participants for this pilot study were excluded from the data of the actual study. The respondents were asked face-to-face via structured interview

questionnaires. A discussion was done to assess whether the respondents can understand the questionnaires easily and their responses on the questionnaires that they felt in need of improvement or clarification from our side. Based on the pilot testing, the questionnaire was found to be easily understood by the participants.

Data were entered and analysed using Statistical Package for Social Sciences (SPSS, version 24). Frequencies were reported using percentages and proportions. Test of normality was performed for continuous data. Association between sociodemographic profile and willingness to have dental treatment during fasting were analysed. Association between categorical data were tested using chi square test while continuous data were tested using independent t-test. Association is considered significant if p value is < 0.05.

### III. RESULTS

The sociodemographic profile of the participants are shown in Table I. The mean age was 34.9 years. More than half of the participants (53.2%) have at least certificate or diploma as their highest education level. Almost half (46.1%) have their highest Islamic education during secondary school. More than half of the participants (55.2%) only came for dental visit during emergency.

TABLE I. Sociodemographic profile of the participants.

Participants profile (n= 246 )	n (%)
<b>Mean age ± SD (years)</b>	34.99±14.58
<b>Gender</b>	
Male	104(42.3)
Female	142(57.7)
<b>Occupation</b>	
Professionals	42(17.1)
Non-professionals	70(28.5)
Student	67(27.2)
Not working	67(17.2)
<b>Race</b>	
Malay	237(96.3)
Others	9(3.7)
<b>Highest education level</b>	
Primary school	12(4.9)
Secondary school	103(41.9)
Certificate or diploma	70(28.4)
Degree, Master or PhD	61(24.8)
<b>Highest Islamic education level</b>	
Primary school	91(37.0)
Secondary school	113(45.9)
Certificate or diploma	27(11.0)
Degree, Master or PhD	15(6.1)
<b>Frequency of dental visit</b>	
At least once every six months	54 (22.0)
At least once every 2 years	56 (22.8)
Only during emergency	136 (55.2)

Table II shows 4 questions assessing their willingness to attend dental clinic during fasting month. Majority of the participants (70.7%) were unwilling to attend dental clinic during fasting month. However, 89.0% of the participants were willing to attend dental clinic during fasting month for emergency cases such as severe toothache or dental abscess.

TABLE II. Willingness to have dental treatment during fasting month

Questions	n(%)
• I will have dental treatments during fasting month. Yes No	72(29.3) 174(70.7)
• I will have dental treatments in fasting month during emergency. Yes No	219(89.0) 27(11.0)
• I will have dental treatments in other months except fasting month. Yes No	149(60.6) 97(39.4)
• I will advise others not to have dental treatment during fasting month Yes No	28(11.4) 218(88.6)

Table III shows there was no significant association between their sociodemographic profile and willingness to have dental treatment during fasting month.

TABLE III. Association between sociodemographic profile and willingness to have dental treatment during fasting month.

Sociodemographic profile (n=246)	Willingness to have dental treatment during fasting month n(%)		P-value
	Yes	No	
<b>Age (years) ±SD</b>	37.5±15.5	33.95±14.1	0.08
<b>Gender</b>			
Male	34(32.7)	70(67.3)	0.31
Female	38(57.8)	104(45.3)	
<b>Occupation</b>			
Professionals	16(38.1)	26(61.9)	0.58
Non-professional	19(27.1)	51(72.9)	
Students	19(28.4)	48(71.6)	
Unemployed	18(26.9)	49(73.1)	
<b>Race</b>			
Malay	70(29.5)	167(70.5)	0.48
Others	2(22.2)	7(77.8)	
<b>Highest education level</b>			
Primary school	2(16.7)	10(83.3)	0.48
Secondary school	31(30.1)	72(69.9)	
Certificate or diploma	24(34.3)	46(65.7)	
Degree, Master and PhD	15(24.6)	46(75.4)	
<b>Highest Islamic education level</b>			
Primary school	22(24.2)	69(75.8)	0.23
Secondary school	33(29.2)	80(70.8)	
Certificate or Diploma	12(44.4)	15(55.6)	
Degree, Master and PhD	5(33.3)	10(66.7)	
<b>Frequency of dental visit</b>			
At least once every six months	16(29.6)	38(70.4)	0.65
At least once every 2 years	19(33.9)	37(66.1)	
Only during emergency	37(27.2)	99(72.8)	

### IV. DISCUSSION

To the best of our knowledge, there is no study assessing views of Muslims on having dental treatment during fasting. There is only one study which found that fasting is the main reason of failure to attend dental treatment<sup>(4)</sup>. Raja et al. (2000) also stated the clinics in high Muslim proportions area, they will experience decrease in dental attendance during Ramadhan. Up until today, several authors have been postulated about the views of Muslim pertaining to dental treatment during fasting month. However, this is the first study that objectively assessed their views regarding this issue.

The results from this study revealed that most of the participants were unwilling to have dental treatment during fasting (seventy percent). This finding was in accordance with what have been postulated by the previous authors<sup>(2,5)</sup>. The reason behind this findings could be because they were unconvinced that they may inadvertently swallow the fluids during the procedures such as drilling and scaling.

Upon questioning their willingness to seek dental treatment in case of emergency in fasting month, majority of them (eighty nine percent) stated that they will attend dental clinic even though they might need to break their fast. This is in opposed to what have been postulated that patients may not approach dentists even at times of emergency due to the fear of breaking the fast<sup>(5)</sup>. This difference could be because they knew that dental pain can be excruciating and need immediate measures regardless if the treatment required may cause them to break their fast.

Despite the findings that majority of participants were unwilling to have dental treatment during fasting month, only eleven percent stated that they will advise others not to have dental treatment during fasting months. This shows that majority of them chose to keep their perception not to have dental treatment while fasting to themselves and will not influence others. This could provide a good information to dental practitioners in dealing and educating their Muslim patients.

In this study, it is also found that willingness to have dental treatment during fasting month was not significantly associated with any of the sociodemographic profile examined in this study. One of the profile included in this study was their Islamic education level, in which authors tried to find any association between this and their attitude towards dental treatment during fasting months. However, this study failed to show any significant association between the two. This result means that regardless of their education level which may change their perception towards dental treatment during fasting, they were still unwilling to have dental treatment during fasting month.

Based on the result of this study, dentists should be cautious in handling their patients during fasting especially at times of emergencies. Few modifications can be done to prevent the need of the patients breaking their fast for procedures like tooth extraction. A proper suctioning during extraction can prevent ingestion of blood into the throat. Uppal and Shikka (2013) suggested dental appointments for

extraction in the afternoon permit oral analgesic dosing after dusk<sup>(10)</sup>. It is also advisable to use long anaesthetic agent injection like bupivacaine which may delay the need for oral analgesics. Non-steroidal anti-inflammatory drugs (NSAIDs) may be substituted by opioids like tramadol since daily fasting may associated be with gastric ulcers. The usage of Chlorhexidine mouth rinses after dusk and before dawn reduces the need for postoperative antibiotics. Antibiotics, if indicated, should have a long duration of action<sup>(10)</sup>.

## V. CONCLUSION

Majority Muslims were unwilling to have dental treatments during fasting month except during emergency situation. However, only a few of them went to the extent of advising others not to have dental treatment during fasting months. There is a need for dental practitioners to update their knowledge as to provide information (eg: giving pamphlets) to patients about dental treatments during fasting.

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