

Original Research

Awareness of Dental treatment among Malaysian Parents – An Epidemiological Study

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ABSTRACT:

Introduction: Health as defined by World Health Organization (WHO), it is a "State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." Maintaining oral health is very important for overall wellbeing of the individual in the community. **Aims:** To create an awareness of dental treatment among Malaysian parents towards children.

Methods and Material: Across-sectional study was conducted in Faculty of Dentistry, Asian Institute of Medicine, Science and Technology (AIMST) Dental Centre, Malaysia. A set of questions with multiple-choice answers formulated was personally given to a total of five hundred parents who brought their children for dental treatment and parents who came for their dental treatment in AIMST Dental Centre. Statistical analysis was appropriately used to analyze the effect of awareness of dental treatment among Malaysians. **Results:** Statistical analysis was performed for all questions individually. Overall, the results made us aware that adequate knowledge and education must be regularly given to parents in order to maintain children oral health. **Conclusions:** Parents should be a role model for their children to maintain a good oral health. Together, parents and children should practice and maintain good oral health. Good habits like tooth brushing should be inculcated to every child in the family.

Key words: Oral health, epidemiology, oral hygiene.

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INTRODUCTION

Health as defined by World Health Organization (WHO), it is a "State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." Maintaining oral health is very important for overall wellbeing of the individual in the community. Most often, parents are not aware of their children's oral health.^[1] Negligence of oral health in children will cause them to develop dental caries, periodontal problems and malocclusions. There is often a misconception about baby teeth, as many believe that since they are not permanent and eventually exfoliate, they are not important and can be electively removed should any problems arise. The truth is, not only is baby teeth important for nutrition, they are also crucial in maintaining space for the permanent teeth to erupt.

Permanent teeth have a tendency to drift toward the midline when baby teeth are extracted and not restored in a timely manner. Primary teeth help as placeholders for the emerging permanent teeth. If a baby tooth is prematurely removed, the teeth behind it are free to drift forward to close the space where the extracted tooth once occupied, leading to space loss. When space loss occurs, there is insufficient room for the permanent tooth to erupt which leads to tooth crowding. The significant message is to leave primary teeth in the mouth until they fall out on their own. If there are cavities on primary teeth, then fillings should be rendered to preserve the vitality of the teeth. If there are large cavities leading to toothache, then a root canal treatment and stainless steel crown should be rendered, even if the tooth will eventually exfoliate. For example,

the tooth cannot be salvaged and repaired, should an extraction be considered. In event of premature extraction due to non-restorability, it is important to maintain that space following tooth loss with a space maintainer. Space maintainers help to clasp the space that the extracted tooth once occupied to prevent the drifting of other teeth until the permanent tooth is ready to erupt. Preventing space loss is crucial for allowing sufficient space for the permanent teeth to erupt. When teeth erupt properly into alignment, orthodontics may not be necessary. Although we have the facilities to provide a good oral health care service to the community including children, the response of the community towards the oral health care service is unsatisfactory.^[2]

Parents play a major role in maintaining their children's dental health. Children usually look up to their parents as their role model. Hence, parents need to have a positive attitude in maintaining their oral health which will be followed by their children.^[3] Previous research have been conducted to study parental attitudes to the care of the carious primary dentition.^[4] It is important to educate the parents that primary teeth need to be carefully monitored and examined since the first tooth appears in the child's oral cavity and routine check-up is important to save a lot of troubles. General health practitioners, pediatricians and nurses should be encouraged to integrate oral health education into health instructions delivered to parents of young children.^[5] Parents' knowledge about promoting children's oral health is limited. Parents and caregivers can play a major role in preventing oral disease in children and should thus be well educated about oral health promotion.

MATERIALS AND METHODS

A cross-sectional study was conducted in Faculty of Dentistry, Asian Institute of Medicine, Science and Technology (AIMST) Dental Centre. A set of questions with multiple-choice answers formulated was personally given to a total of five hundred parents who brought their children for dental treatment and parents who came for their dental treatment in AIMST Dental Centre. Incompletely filled questionnaire forms on these criteria were excluded. Informed consent was obtained prior to the beginning of study. Ethical clearance from Institutional Ethics committee was obtained prior to the study. The questionnaire included a total of twenty questions regarding parental awareness and attitude toward dental treatment. [Annexure 1] All aspects of oral health awareness and dental treatment attitudes were addressed.^{[7][8]} The purpose and nature of the study was explained, and strict confidentiality was assured. Collected data using the self-administered questionnaire addressing various aspects of knowledge and attitude of parents toward oral health and treatment

modalities were assessed with appropriate statistical methods.

RESULTS

Demographic results of this study have been enlisted below.

(a) *Education levels of Parents* - Majority of the parents, 283 out of 500 participants (56.6%) had education level until SPM, followed by degree, 97 out of 500 participants (19.4%), followed by diploma 80 out of 500 participants (16%). 30 out of 500 participants (6%) did not finish their studies and lastly, 10 out of 500 participants (2%) obtained their Masters. This sample size is a reflection of the education level the parents has received who attended center.

(b) *Number of children/parents* - 221 out of 500 participants (44.2%) had 3 children and above, followed by 172 out of 500 participants (34.4%) had 2 children, followed by 107 out of 500 participants (21.4%) had 1 child. Hence, it can be deduced that parents who has the most children tend to bring their children to AIMST Dental Centre for their dental treatment.

(c) *Previous number of visits of their children to AIMST Dental Centre* – 213 out of 500 participants (42.6%) had 3 visits and above prior to this study, while 147 out of 500 participants (29.4%) had no prior visit. 70 out of 500 participants (14%) came twice prior and finally, 69 out of 500 participants (13.8%) came once before. Therefore, we can infer that majority of the parents who were approached in this study came frequently.

(d) *Reasons for their children visiting the dental clinic* - 289 out of 500 participants (57.8%) reason for visiting the dental clinic was for routine dental check-up. 193 out of 500 participants (38.6%) had not answered. 12 out of 500 participants (2.4%) came for aesthetic purposes. 3 out of 500 participants (0.6%) came for discoloration treatment while 2 out of 500 participants (0.4%) visited for other reasons. Majority of the parents bringing their children to AIMST Dental Centre was for routine dental check-up.

(e) *Previous experience of the parents child on their dental problems* – 286 out of 500 participants (57.2%) did not answer the previous experience of their child on dental

problems. 196 out of 500 participants (39.2%) was for tooth pain, 12 out of out of 500 participants (2.4%) was for dental trauma and 6 out of 500 participants (1.2%) was for bleeding gums. Many parents in this study were unaware of the dental problems faced by their children.

(f) *Type of dental injuries seen on the child* - 119 out of 500 participants (23.7%) did not answer the types of dental injuries seen on the child. 32 out of 500 participants (6.4%) was crown fracture, 6 out of 500 participants (1.2%) was for displaced teeth, 5 out of 500 participants (1.0%) was for soft tissue injuries and 4 out of 500 participants (0.8%) was for avulsion. Majority of the parents in this study were unaware of the types of dental injuries seen on their child.

Questionnaire results of this study have been enlisted below.

- Q1 - Awareness of the parents of their child's age of teeth eruption. 297 out of 500 participants (59.4%) are aware of the age of teeth eruption, 199 out of 500 participants (39.8%) were unaware and 3 out of 500 participants (0.6%) did not answer. Majority of the parents in this study are aware of the age of teeth eruption of their children.
- Q2 - Awareness of the importance of their child's dentition. A total of 465 out of 500 participants (93.0%) were aware of the importance of their child's dentition while 35 out of 500 participants (7.0%) were unaware. Parents in this study are aware of the importance of their child's dentition.
- Q3 - 329 out of 500 participants (65.8%) thought that untreated caries involving primary teeth can affect the permanent teeth while 72 out of 500 participants (14.4%) thought that untreated caries involving primary teeth had not affected the permanent teeth. 99 participants out of 500 (19.8%) have answered "don't know". Many parents thought that untreated caries involving primary teeth could affect the permanent teeth.
- Q4 - 299 out of 500 participants (59.8%) thought early extraction of primary teeth can affect eruption of permanent teeth while 119 participants (23.8%) have answered "don't know" and 82 participants (16.4%) have answered they do not think early extraction of primary teeth can affect eruption of permanent teeth. Majority of the parents think early extraction of primary teeth affected the eruption of permanent teeth.
- Q5 - 365 out of 500 participants (73%) answered that the best treatment options of decayed primary teeth is restoration while 84 out of 500 participants (16.8%) have answered that the best treatment options of decayed primary teeth is extraction followed by 50 out of 500 participants (10%) have answered do not know as their unaware. Majority of parents thought that the best treatment options of decayed primary teeth was restoration.
- Q6 - 167 participants (33.4%) thought the age for a child to go for their first dental visit is 6 years old while 123 participants (24.6%) have answered 6 months. 104 participants (20.8%) have answered 1 year old with a close margin compared to 102 participants (20.4%) who have answered 3 year old. Parents thought the right age for their child to go for their first dental visit is 6 years old.
- Q7 - 272 out of 500 participants (54.4%) thought first dental visit should not be before a child's first birthday while 223 out of 500 (44.6%) participants think first dental visit should be before a child's first birthday. This shows that majority parents do not think first dental visit should be before a child's first birthday.
- Q8 - 95 participants (19%) have answered that the reason for not going for dental visit before child's first birthday is because teeth not complete while another 94 participants (18.8%) have no disease at this age and 93 participants (18.6%) have answered child was uncooperative. Although participants have answered to a close margin for this question, majority parents have answered that the reason for not going for dental visit before child's first birthday was because teeth was not complete.
- Q9 - 297 out of 500 participants (59.4%) have answered main reason to see the dentist for the first time is for routine check-up, while 162 out of 500 participants (32.4%) have answered main reason to see the dentist for the first time is for emergency and a minority of 39 out of 500 participants (7.8%) have answered main reason to see the dentist for the first time is for treatment. Participants' main reason to see the

- dentist for the first time is for routine check-up.
- Q10 - 278 out of 500 participants (55.6%) have answered that their child goes for follow up treatment, on the other hand 217 out of 500 participants (43.4%) have answered that their child does not go for follow up treatment. Therefore, majority parents have said their child went for follow up treatment.
 - Q11 - 390 out of 500 participants (78%) have answered that their child brushed twice a day, 62 out of 500 participants (12.4%) have answered that their child brushed once daily and 38 out of 500 participants (7.6%) answered more than twice daily. A minority of 10 out of 500 participants (2%) answered their child does not brush teeth. Majority of our children brushed twice a day.
 - Q12 - 360 out of 500 (72%) have answered that their child uses children toothpaste. Only 130 out of 500 participants (26%) have answered that their child uses adult toothpaste. Many parents know that children toothpaste is more suitable for their kids rather than using adult toothpaste on their children's dentition.
 - Q13 - 468 out of 500 (93.6) do not know the appropriate time for replacement of avulsed tooth. Only 32 out of 500 participants (6.4%) have answered that they know when to replace the avulsed tooth. Majority of the parents are unaware of the immediate action to preserve the vital tooth after trauma avulsion.
 - Q14 - 465 out of 500 (93%) were unaware of the medium for transferring an avulsed tooth to dentist. Whereas, only 35 out of 500 (7.0%) of parents knew and have answered the medium for transferring avulsed tooth. Most of the parents were not aware of the importance of saving an avulsed tooth.
 - Q15 - 489 out of 500 (97.8%) thought that it was important to have an educational programme regarding care of primary dentition. Only 11 out of 500 (2.2%) of the participants did not know the importance of having an educational programme regarding care of primary dentition. From this parents felt having an educational programme regarding care of primary dentition was important.
 - Q16 - 191 out of 500 participants (38.2%) were satisfied with their own knowledge on the children's oral hygiene. Most of the participants, 309 out of 500 (61.8%) felt that they were lacking of knowledge in taking care their children's dentition. This showed that majority parents thought that they needed more guidance and information to improve their children's dental health.
 - Q17 - 471 out of 500 (94.2%) taught their children on how to brush and maintain their oral hygiene. Only 29 out of 500 (5.8%) of parents have not taught brushing to their children. Therefore we can infer that, most of the parents actually tried on teaching and training and inculcating their children the right habit, which was to brush teeth. They felt the importance of brushing teeth for their children's oral health.
 - Q18 - 475 out of 500 participants (95%) were willing to attend an educational programme on management of children's oral hygiene. Whereas, 25 out of 500 participants (5.0%) were not willing to attend any programme. Most parents felt committed to improve their knowledge regarding children's oral health. Some parents rejected to attend, may have been due to heavy work and insufficient time after work.
 - Q19 - 494 out of 500 (98.8%) thought that it was important to bring their children to the dentist for dental checkup. Only 6 out of 500 (1.2%) of participants had not think that it was important for children dentition check up. Majority parents understood that regular check up by the professionals is important.
 - Q20 - 496 out of 500 participants (99.2%) were willing to allow their children to undergo dental treatment. Only 4 out of 500 participants (0.8%) were not willing to allow their children for any dental treatment. Therefore, majority parents trust the dentist could help to improve their children's oral health. Only a very minimal number of parents rejected to send their children to the dentists. These can be because parents were very protective to their children, they may not want to see their children suffer on the dental chair.

DISCUSSION

Based on the study done, we have found that majority parents are lacking awareness of dental problems faced

by their children and also parent's lacked knowledge in professional guidance in taking care of their child's oral health. This showed unawareness of dental treatment among parents for their children's oral health and great measure were to be taken to overcome this. Moreover we found that majority children brushed teeth twice daily using children's toothpaste. This showed most of the parents were aware of the adequate number of times their child should brush their teeth which indicated that parents were well aware of basic care of their child's oral health.^[9,10]

Not only that, in this study we found that majority parents thought it was important to have an educational programme regarding care of primary dentition and they were willing to attend to educational programme which showed the concern and interest of parents about their child's oral health. Besides that, most parents thought its important to bring their child for dental check up and they were also willing to allow their children for any dental treatment, this clearly showed that parents had the awareness and understood the importance to bring their children to dental clinic. Thus, parents, children and the society should be more aware on maintaining children's oral hygiene.^[11,12] We as dentist should definitely help in creating and instilling awareness amongst parents.

CONCLUSION

In our study, we found that parents in Malaysia are committed to improve their children's oral health. According to the study, parents were lacking in the knowledge of primary dentition and professional guidance in taking care of children's oral health. Hence, actions should be taken by the professionals to instill proper oral health care techniques and instructions to the parents so that the oral health of each child in the family is not neglected. As children are not able to manage themselves, it is significant that children's oral health behavior is anyhow influenced by their parent's oral health behavior and parent's teaching. In conclusion, parents should be a role model for their children to maintain a good oral health. Together, parents and children should practice and maintain good oral health. Good habits like tooth brushing should be inculcated to every child in the family.

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Annexure I (Questionnaire)

Name: _____

Age: _____

Gender: F / M

Education level: a) SPM/STPM
b) Diploma
c) Degree
d) Masters/PhD

Number of children: _____

Previous number of visits of their children to dental clinic: _____

Reason for visiting dental clinic:

- a) Routine check-up
- b) Aesthetics
- c) Discoloration
- d) Others: _____

Previous experience of their child on dental problems:

- a) Tooth pain
- b) Bleeding of gums
- c) Dental trauma

Types of dental injuries seen on the child:

- a) Crown fracture
- b) Displaced teeth
- c) Avulsion
- d) Soft tissue injury
- e) Unaware of any injuries

General knowledge of the parents about child's dentition and oral health status

- 1) Are you aware of the age of teeth eruption? Yes / No
- 2) Are you aware of the importance of your child's dentition? Yes / No
- 3) Do you think that untreated caries involving primary teeth can affect the permanent teeth? Yes / No / Don't know
- 4) Do you think early extraction of primary teeth can affect eruption of permanent teeth? Yes / No / Don't know
- 5) In your opinion, what is the best treatment options of decayed primary teeth? a) Restoration (Filling); b) Extraction; c) Don't know
- 6) What do you think is the age for a child to go for their first dental visit?
 - a) When the first tooth has been erupted (6 months)
 - b) 1 years old
 - c) 3 years old
 - d) 6 years old
- 7) Do you think first dental visit should be before a child's first birthday? Yes / No
- 8) Reasons for No (According to question no. 7): a) Teeth are not complete; b) No disease at this age; c) Child is un-cooperative
- 9) What is your main reason to see the dentist for the first time? a) Emergency; b) Treatment; c) Routine check-up
- 10) Does your child go to the dentist for follow-up treatment? Yes / No
- 11) How many times does your child brushes his/her teeth?
 - a) Once a day
 - b) Twice a day
 - c) More than twice a day
 - d) Does not brush
- 12) What type of toothpaste does your child uses? a) Children's toothpaste (Kodomo) b) Adult's toothpaste

- | | |
|---|----------|
| 13) Do you know the appropriate time for the replacement of avulsed (fall out) tooth? | Yes / No |
| 14) Do you know the medium for transferring an avulsed tooth to the dentist?
If yes, state the medium: _____ | Yes / No |
| 15) Do you think it is important to have an educational program regarding care of primary dentition? | Yes / No |
| 16) Are you satisfied with knowledge on the children's oral hygiene? | Yes / No |
| 17) Do you teach your child how to brush and maintain his/her oral hygiene? | Yes/No |
| 18) Are you willing to attend an educational program on management of children's oral hygiene? | Yes / No |
| 19) Do you think it is important to bring your children to the dentist for dental check-up? | Yes / No |
| 20) Are you willing to allow your child to undergo dental treatment? | Yes / No |