# Parent's Perception on the Importance of their Children's First Dental Visit (A cross-sectional Pilot Study in Malaysia)

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**Abstract:**

**Introduction:** Understanding parental perceptions about early childhood oral health is important in order to develop effective preventive measures since parents' health behaviours and practices usually have a direct influence on their children's dental health. The aim of this pilot study was to evaluate parental views about the primary teeth, first dental visit, and use of behaviour modification at the time of a first clinical visit. **Materials and Methods:** This was a cross-sectional study conducted among parents who brought their children to the Paediatric Dental Clinic at Universiti Teknologi MARA, Malaysia. Parents completed a close-ended interviewer-administrated questionnaire (n=110). The questionnaire had eleven items addressing knowledge and attitudes towards the importance of primary teeth, effects of early extractions, and the main reason to visit the dentist for the first time. It also assessed views on appropriate treatment for decayed primary teeth, methods used to prepare children for their dental visit, and the timing of first dental visit. Data were analyzed using descriptive, frequency and Chi-Square analysis. **Results:** Overall, 82.3% of parents recognized the importance of primary teeth. However, only (12.5%) were aware that the first dental examination should be by age 12 months. Regarding treating primary teeth with decay, 47.9% thought that these teeth should be restored, whereas 37.5% believed extractions were appropriate. Two-third of parents (67.7%) had agreed to promote behaviour modification during the first visit if their children had no pain. **Conclusion:** Many parents realised the importance of primary teeth, however, lacked the sufficient knowledge on how to appropriately deal with these teeth with caries and the recommended time for first dental visit. Hence the parents must receive appropriate anticipatory guidance and also need to appreciate the benefits of early dental visit to the oral health and well-being of children.

Key words: Early childhood caries; primary teeth; first dental visit; behaviour modification; perception.

**Introduction:**

Early Childhood Caries (ECC) is a severe disease affecting the teeth of infants and toddlers. Generally, it often first affects the primary maxillary incisors and then can later progress to involve primary molars (Tinanoff and O'Sullivan, 1997). ECC remains a serious public health problem and has been deemed the single most prevalent chronic infectious childhood disease in several developed and developing countries (Hallet, 2000). In the developed world, 1–12% of children younger than six years of age are believed to have ECC (AAPHD, 2004), whereas the prevalence of ECC is as high as 70% in some developing countries (Milnes, 1996) and Indigenous populations (Schroth et al., 2005; Thomson et al., 2002).

Malaysia shares a similar concern about ECC among its preschool population. Nationwide, the epidemiological dental survey of 5 year old children showed high caries prevalence ranging from 87.1% in 1995 to 76.2% in 2005. Likewise, the caries score for the primary teeth, ranged from 5.8 in 1995 to 5.5 in 2005(Oral Health Division, 2007). Although caries prevalence and rates have shown a modest decline over this ten year period, the decline has not been significant.

Understanding parental perceptions about early childhood oral health is important in order to develop effective preventive measures since parent's health beliefs, behaviours, and practices usually have a direct influence on their children's dental health. Several studies have correlated parents' oral status or attitudes towards dentistry with their children's oral status (Saied Moallemiz et al., 2008; Akpabio et al., 2008; Schroth et al., 2007; Okada et al., 2002). It has been reported that parents with more positive attitudes towards dentistry and oral health were more likely to have children with better dental health (Eijkman et al., 1978). For instance, parents who believe that primary teeth are important are more likely to have children who do not have caries (Schroth et al., 2007). Skeie et al. (2008) reported that parents' positive dental attitudes resulted in children with fewer carious teeth, better oral hygiene, and having received more dental care. Parents' oral health knowledge and good dental care practices are also important in preventing premature loss of primary teeth and can effectively reduce the risk of future decay in permanent teeth (Al-Shalan et al., 1997).

Early dental visits are another essential preventive practice for young children. It allows dental professionals to detect early caries lesions, evaluate dental development, provide anticipatory guidance and dietary counselling, and motivate parents towards adopting preventive behaviours (Ramos-Gomez et al., 2002). Moreover, exposing children to the dental office at an early age helps them to adapt and become familiar with dental environment possibly improving the likelihood of better behaviour and tolerance with future dental treatment (Casamassimo and Warren, 2005).

Therefore, this pilot study was undertaken to evaluate parental views about the importance of primary teeth, timing of the child's first dental visit, appropriate treatment for decayed primary teeth, and the need for behaviour modification during the first visit.

**Materials and Methods:**

Approval for the study was obtained by the Human Ethics Committee at the Universiti Teknologi MARA (UiTM), Malaysia**.** The population being studied was parents who brought their children for oral examination and dental treatment at the Paediatric Dental Clinic of the university. The clinic is generally open to public and

also serves children of university staff. However, most participants represented in this study were non-academic staff of the university whose children attended the dental clinic. Dental treatment is free for children in Malaysia. Informed consent was obtained from each parent who participated in this study.

All parents were interviewed by one dental nurse to answer a close-ended interviewer-administered questionnaire (modified questionnaire of Al-Shalan, 2003). The questionnaire was tested to ensure that it was valid and comprehensive. The demographic details were taken from the parents included questions such as parents' relationship to the child, parental age, marital status, and the number of children in the family below 12 years of age. The questionnaire had eleven items addressed parental perception included information about knowledge and attitudes of parents towards: the importance of primary teeth the effects of untreated caries involving them, the effects of early extraction of primary teeth, and the main reason to visit the dentist for the first time. It also assessed parental views on the best treatment option for decayed primary teeth, the use and timing of behaviour modification (e.g. oral hygiene instructions and acclimatizing a child to the dental environment), methods used by parents to prepare their children for a visit to the dental clinic, and the timing of first dental examination.

A total of 110 questionnaires were completed by participants; 14 were excluded because they were incomplete or completed by someone other than the parent. Hence only 96 questionnaires were analyzed. Collected data was entered into an electronic database and analyzed with SPSS Version 10 (Chicago, Illinois). Descriptive, frequency and Chi-Square analysis were performed.

**Results:**

The demographic information of the participants is presented in Table 1.

| Characteristics | No. (%) of participants |
|---|---|
| Age | |
| 21-30 | 34(35.4) |
| 31-40 | 45(46.9) |
| 41-50 | 5(5.2) |
| > 50 | 12(12.5) |
| Gender | |
| Male | 35(36.5 |
| Female | 61(63.5 |
| Children below 12 years | |
| None | 17(17.7) |
| One | 23(24.0) |
| Two | 29(30.2) |
| Three | 18(18.8) |
| Four | 7(7.3) |
| >Four | 2(2.1) |

Table 1 Demographic characteristic of participants

Almost half of the respondents belonged to the 31-40 years of age group (47%), with the majority being mothers (63.5%). Most of the participants had at least two children below 12 years of age in their family unit.

Regarding the importance of the primary dentition, a majority of parents (82.3%) recognized the importance of primary teeth in the child's life and to overall health and development. In addition, many parents (60.4%) were aware of the effects that untreated caries in primary teeth can have on the permanent teeth and general health and well-being of children. Only 49% of parents indicated that the early loss of primary teeth may affect the eruption of permanent teeth, which may subsequently lead to malocclusion. With regards to the best treatment choice for primary teeth with caries, 37.5% of parents considered extraction to be the best treatment if a child experienced dental pain (Table 2).

In relation to parent's perception of the timing of the first dental visit, very few (12.5%) correctly predicted the first year of child's life as the recommended time for a first dental examination whereas the majority (87.5%) were unaware (Table 3). When asked what should be the reason for a first dental visit; more than half (58.3%)

reported that it should be for a dental check-up. Regarding parental perceptions relating to follow-up dental visits, a high percentage of participants (68.7%) preferred to revisit the dentist for regular follow-up for their children even if the chief complaint had been completely managed (Table 3).

| Variables | No.(%)of participants |
|---|---|
| Primary teeth are important | |
| Yes | 79(82.3) |
| No | 4(4.2) |
| Don't know | 13(13.5) |
| Untreated caries involving primary teeth can affect the permanent teeth | |
| Yes | 58(60.4) |
| No | 29(30.2) |
| Don't know | 9(9.4) |
| Early extraction of primary teeth can affect the eruption of permanent teeth | |
| Yes | 47(49.0) |
| No | 25(26.0) |
| Don't know | 24(25.0) |
| Best treatment option for a primary tooth with caries | |
| Extraction | 36(37.5) |
| Restoration | 46(47.9) |
| Don't know | 14(14.6) |

Table 1 Percentage distribution of parents' awareness about importance of primary teeth and preference for treatment of caries

thirds of parents (67.7%) agreed that it should begin with behaviour modification when the child has no dental concerns. However, nearly one third (32.3%) disagreed.

When parents were asked about the best approach to successfully bring children to dentist for the first time,

| Variables | No. (%) of participants |
|---|---|
| Age when child should receive first dental visit | |
| 1 year | 12(12.5) |
| 3 years | 48(50.0) |
| 6 years | 36(37.5) |
| 1st dental visit should be before child first birthday | |
| Yes | 12(12.5) |
| No | 84(87.5) |
| Reason for NO | |
| Teeth are not complete | 36(42.8) |
| No disease at this age | 24(28.6) |
| Child is uncooperative | 24(28.6) |
| Main reason to see dentist for the first time | |
| Emergency | 9(9.4) |
| Treatment | 31(32.3) |
| Check up | 56(58.3) |
| Return to dentist for follow-up | |
| Yes | 63(65.6) |
| No | 30(31.3) |
| Don't know | 3(3.1) |

Table 2 Percentage distribution of parents' knowledge about timing of first visit, main reason for coming to dental clinic and follow up visit

respondents and whether they did or did not agree with a first dental visit by one year of age. The results showed no significant differences between respondents' sex and age in relation to the/ with regards the timing of child's first dental visit (p= 0.69, 0.07 respectively).

Despite this, there were still a noticeable number of respondents (31.3%) who thought that there was no need to visit the dentist again if their child's complaint had been addressed.

Concerning parents' views about the use of behaviour modification (i.e. promoting behaviour change) during a child's first dental visit, two-

8.1% appeared to have previously educated and prepared their children at home, 11.5% of them do not tell the child about the dental visit, whereas 10.4% used force to bring their child to the dental clinic.

Chi-Square analysis comparisons was made between sex and age of

**Discussion:**

Parents and family members are considered the primary source for knowledge about child rearing and health habits for children, which undoubtedly has a long-term influence in determining a child's oral health status (Watt, 2002). They are considered the key persons in

achieving the best oral health outcomes and assuring wellbeing for children. This pilot study assessed parental knowledge and attitudes about the importance of primary teeth and the first dental visit in Selangor, Malaysia. To the best of our knowledge, it is the first local study of its kind in Malaysia and Southeast Asia that examines parental views on early childhood oral health care.

Maintaining healthy primary teeth is essential to a child's overall oral and general development (Casamassimo and Warren, 2005). Plans for a child's early dental examination and establishing proper oral health behaviours and routines at an early age can certainly assist in preventing the initiation of dental diseases throughout life. Previously, Poulsen (2003) showed that prevalence of dental caries at age one year was close to zero, but increased to 8% by age two years. Mattons-Graner et al (1996), on the other hand, reported detecting many lesions within the first 18 months of life. These studies show that caries can be prevented in the very young age if children are brought for care before or shortly after the eruption of first tooth. Presently, the American Academy of Paediatric Dentistry (AAPD) recommends that an infant's first oral health visit should be within six months of the eruption of first primary tooth and no later than age 12 months. Further, during this time parents should receive counselling and anticipatory guidance on appropriate oral hygiene procedures, minimizing harmful infant feeding practices, oral habits, fluorides, as well as general dietary counselling related to oral health (AAPD, 2008).

If dental caries in primary teeth is left untreated, different complications can arise such as pain, oral infection, problems with eating and sleeping, malnutrition, and alterations in growth and development (Clarke et al., 1999, Schroth et al., 2009, Schroth et al., 2012, Schroth et al., 2013) and possible of early loss of teeth (Kagihara et al., 2009). Early extraction of primary teeth might lead to short-term effects like problems in eating and speaking, and long-term effects like mal-alignment of permanent teeth and increased risk of malocclusion in later (Kagihara et al., 2009).While the majority of participants in this study were aware about the importance of primary teeth (82.3%), there were still slightly more than quarter (26%) who did not recognize consequences of early loss of primary teeth on the permanent dentition. This is crucial since such parental awareness can have long-term effects on childhood oral health. Interestingly, a Canadian study indicated that parents who believed baby teeth were important had children with significantly lower caries rates than those who believed otherwise (Schroth et al., 2007). Furthermore, 37.5% of parents in our study considered extraction as the best treatment for primary teeth; this may be attributed to the fact that parents usually believe these teeth eventually exfoliate and are replaced by permanent teeth. We may suggest from our findings that dental providers can play a significant role in educating and increasing the awareness of parents about child's oral health. At the same time, they must address the potential problems such as cost of treatment, time, child's lifestyle and well-being, and the consequences of early loss if the parents are being reluctant to have their child's primary teeth treated for decay.

The timing of the first dental visit is another essential means of preventing ECC. The present study showed low parental awareness (12.5%) of the recommended time for this visit. Most parents thought that this first visit should occur at 3 or 6 years of age. This may because more parents believed that primary teeth are not fully erupted at 12 months of age and hence no need to see dentist. Others

may have thought that disease cannot affect teeth at this early age, while others may feel a young child is too difficult to manage and will be uncooperative. Our results agree with Al-Shalan (2003) and Meera et al. (2008) who found most of participants were unaware of the recommended time for first preventive dental visit. Increasing the awareness of parents of this is important. Parents may find it difficult to get current information if dentists and physicians are not knowledgeable and do not support and endorse this recommendation. Stijacic et al (2008) reported that many dentists are unaware about this recommendation and this might mean that information regarding the appropriate age of first dental visit is not getting to parents and the public. A survey of dental and medical providers as well as specialists in Malaysia may be required to uncover their views and biases relating to infant and preschool oral health. This can also be used to get more feedback about parents from the providers' point of view in order to develop more realistic approaches to preventing caries. We recently published results of a survey of dentists in Malaysia that also demonstrated that many dentists are also unfamiliar with these professional recommendations for early preventive dental visits (Hussein et al., 2013).

A positive finding in the present study was that a high percentage of parents (58.3%) first brought their child to the dental clinic for a check-up rather than to deal with a dental problem. This may be a sign that parents have good knowledge to take their children for a check-up before any dental problems arise. Moreover, a good number of parents showed a willingness to return to the dentist for follow-up even if their child's chief dental complaint was addressed. Nevertheless, 31.3% reported that there was no need to see dentist again; this could be attributed to the underestimation of the value of follow-up visits or having little spare time to take children for additional visits. In fact, proper timing of early dental check-ups might lessen the stress, cost, and better manage the family's time.

Generally, the discipline of paediatric dentistry does not advise on performing any operative procedures during first visit if there is no immediate chief complaint. Instead, behaviour modification towards dental care and acclimatization to the clinic environment should be carried out to develop good relationships between all parties (Casamassimo and Warren, 2005). Early behaviour orientation is an important practice towards best treatment for children because the first visit is usually associated with fear and anxiety and hence dentist should aim to provide a friendly introduction to dental care, reduce stress for children and parents, and install lifetime positive attitudes towards dental health (Fayl, 2005). Overall, 67.7 % of respondents had positive views on this topic and were willing to schedule an extra appointment dedicated for more behaviour insight to avoid creating possible fear and rejection of dental treatment in their children. Our findings are consistent with Al-Shalan (2003), who reported that a majority of parents preferred to start with behaviour modification during the first visit. Despite this, there were still noticeable participants (33.3%) who were not willing to accept this concept. This might be attributed to their busy work and family schedules, which would prevent them from attending further visits or make such appointments inconvenient. In general, all parents should be introduced to behaviour modification during the first visit or in early sessions, whether a chief complaint is reported or not. This is important to develop good relationship and a positive acceptance of oral health care. It is also recommended that parents should prepare their young

children for dental visits beforehand to make the visit less anxiety provoking.

While this pilot study yields important early evidence on parental views relating to early childhood oral health, our study was not without limitations. First, the sample size was considered to be small because the university's dental clinic is newly established and the patient pool is still growing. Second, it was conducted in one locality. This limits how generalizable our findings are with other parents in Malaysia. Despite this, we still showed that parental awareness relating to oral health was limited. It is most likely that public awareness is even lower. Other limitations include the lack of demographic information of the parent, such as their education level, occupation, ethnicity, and household income that would possibly influence their knowledge and attitudes towards early childhood oral health. At present, local information about parental perceptions of childhood oral health care is insufficient. This work provides needed preliminary evidence of parental knowledge and attitudes towards oral health condition of children, despite the limitations. Regardless of these limitations, our survey was based upon a previously published and validated survey tool developed by Al-Shalan (2003) and collected essential data that can be used to assist in caries prevention activities to our population.

**Conclusion:**

This pilot study revealed that many parents were aware about the importance of primary teeth, but that this was not universal. However, the majority were unaware of the correct timing for a child's first dental examination. A noticeable number of participants were also uncertain about the importance of starting with behaviour modification counselling at the first dental visit. Anticipatory guidance and promoting early dental visits by 12 months of age are important for maintaining healthy primary teeth.

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