

ORIGINAL ARTICLE

Oral Health Knowledge, Attitude and Practice of the Caregiver at the Special Needs Boarding School in Kuantan, Pahang

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ABSTRACT

Introduction: Caregivers and parents are important to the healthy development of children. Therefore, this study was undertaken to assess the knowledge, attitude and oral health practice among caregivers of children with disabilities.

Method: A cross-sectional study was conducted among caregivers in three special boarding schools in Kuantan, Pahang, who cared for 7 to 17 years old disabled children using self-administered questionnaires. Kruskal-Wallis and Chi-square test were used to analyse the data. **Results:** Most caregivers were female (73.2%). The overall mean knowledge score was 87.75%. All of caregivers have agreed that sugary or sticky food and drinks can cause caries and toothbrushing for children is important for oral health. All of the caregivers possess secondary educational level where 75% of the caregivers with tertiary educational level assist the children while brushing teeth. However, 71.9% of caregivers with tertiary educational level and 45% of caregivers with secondary educational level had shown poor oral health practice since they were frequently giving sweet food to the children. Surprisingly, most of the caregivers with secondary educational level (95.2%) and caregivers with tertiary educational level (85%) thought children with disabilities can brush their teeth independently. **Conclusion:** Despite having adequate oral health knowledge among the caregivers in the special needs boarding schools, their attitude and oral health practice however were not up to the necessary standards. The implementation of oral health promotion related programmes in the special needs boarding schools must be taken into consideration in order to tackle the oral health problems of children with disabilities.

Keywords: Children with disability, Caregiver, Attitude, Oral health practice, Knowledge

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INTRODUCTION

Children are reflections of their parents' characters. Commonly, children tend to mimic their parents' habits, actions and behaviours, which have a profound impact on them. Hence, for improving children's oral health, the first step that needs to be considered is to improve the parents or guardian oral health behaviour. However, the situation is different for the disabled children who stay at the special needs boarding school. Parents have to transfer their caretaking role to caregivers and this may compromise disabled children's oral health status, since the caregivers need to supervise hundreds of students at the same time.

The impacts of oral diseases in children with disabilities are much more severe due to their disabilities and the

complexity of the diseases. Disabled children have a significantly high prevalence of dental caries and poor oral hygiene as revealed by a study conducted in Sana'a, Yemen (1). Similarly, a study conducted in Malaysia has also revealed a high dental caries prevalence among children with disabilities (1,3). The children might be partial or totally dependent on caregivers to carry out their routine activities especially in oral hygiene care and food intake choices (16). It is crucial for the caregiver to have an adequate knowledge on oral health, a positive attitude and good oral health practice since he or she is the one that disabled children depend on for their entire stay in the boarding school (18). A study conducted among caregivers in children day-care centres had reported that although the caregivers had good understanding on oral health, yet their attitude and oral health practices were not influenced by that (12). The active participation of parents and caregivers are therefore a significant principle of oral health education (14).

By considering this crucial and sensitive role of the

caregivers, therefore, this study was undertaken in order to assess the knowledge, attitude and oral health practice of the caregivers at the boarding schools for special needs.

MATERIALS AND METHODS

A study among caregivers at boarding schools for special needs in Kuantan, Pahang was carried out in 2017 cross-sectionally by a voluntary non-probability sampling protocol. Ethical clearance was obtained from the IIUM Research Ethic Committee [ID No. 697] and the Ministry of Education [Reference No: KPM.600-3/2/3 Jld], and written consents were acquired from the participants. Three special needs boarding schools were selected, they were Sekolah Kebangsaan Pendidikan Khas Kuantan, Sekolah Kebangsaan Indera Mahkota, and Sekolah Menengah Pendidikan Khas Vokasional, Kuantan. The total participants involved in this study were forty-one. The questionnaire was constructed in Malay using the Likert scale answer choice. The questionnaire consisted of fifteen questions which relate the caregiver's general information with their knowledge, attitudes and practices on oral health. A pilot test was carried out on fifteen parents to check its clarity, feasibility, comprehensiveness and acceptability; a Cronbach's alpha of 0.64 was obtained indicating an acceptable reliability.

The data obtained was analysed using the SPSS version 16.0 software system. Kruskal-Wallis test and Chi-squared test were used to determine the significant differences in data.

RESULTS

A total of forty-one (41) caregivers completed the questionnaire where a majority of them were female (73.2%) and in the age groups of 30 to 39 years old (61%). Half of the caregivers had secondary education, while the other half had tertiary educational level. Surprisingly, none of them had any prior special training as caregivers. Table I showed the socio-demographic characteristic of the participants.

Oral health knowledge of caregivers

The response of the participants that is related to oral health knowledge is presented in Fig. 1. The overall mean knowledge score is 87.75%. All of the caregivers agree that sugary/sticky food and drinks can cause caries and tooth brushing for children is important for good oral health. The majority of the caregivers (90%) is also aware that dental caries can develop in children teeth. However, about 33.3% of the caregivers with secondary educational level and 30% of the caregivers with tertiary educational level did not know that at the age of 6 years permanent teeth erupt. On the other hand, 61.9% of secondary educational level caregivers and 50% of the tertiary educational level caregivers agree

Table I: Socio-demographic characteristic of participants

Items	n	%
Gender		
Male	11	26.8
Female	30	73.2
Age of caregivers (years)		
20-29	13	31.7
30-39	25	61
40-49	3	7.3
Caregiver's educational level		
Secondary	21	51
Tertiary	20	49
Special training as caregivers		
Yes	0	0
No	41	100
Total	41	100

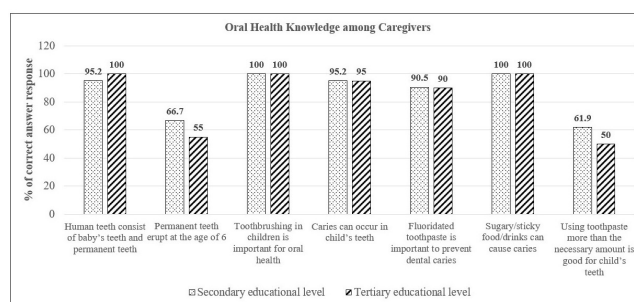


Figure 1: The response of participants in relation to oral health knowledge

that using more than the necessary amount (pea-sized) of toothpaste is good for the child's teeth.

Oral health attitude of the caregivers

The overall mean attitude score was 64.6%. The response of the participants that is related to oral health attitude is shown in Fig. 2. A balance diet is important for healthy teeth development, however 40% of the caregivers with tertiary educational level were not in agreement with this. Surprisingly, most of the caregivers with secondary educational level (95.2%) and caregivers with tertiary educational level (85%) thought children with disabilities can brush their teeth independently. In addition, 71.4% of the secondary educational level caregivers and 65% of the tertiary educational level caregivers responded positively to a child's visit to the dentist after his or her first eruption of teeth.

Oral health practice of the caregivers

The practices were categorised into 'good' practices and 'poor' practices. The overall mean good practice and bad practice was 74.7% and 25.3% respectively. The response of participants that is related to oral health practice is shown in Fig. 3. All of the caregivers with secondary level of education and 75% of the caregivers with tertiary education level reported that they brush the children's teeth. However, 71.9% of the caregivers with tertiary educational level and 45% of caregivers with secondary educational level had shown poor oral health

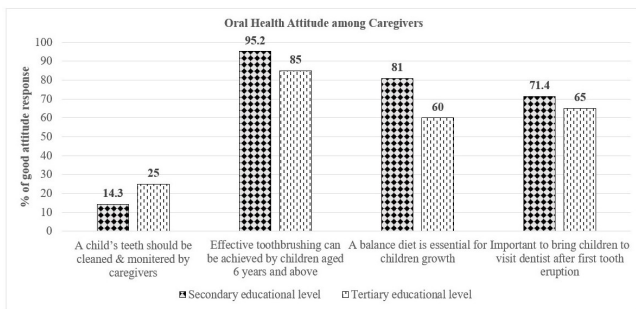


Figure 2: The response of participants in relation to oral health attitude

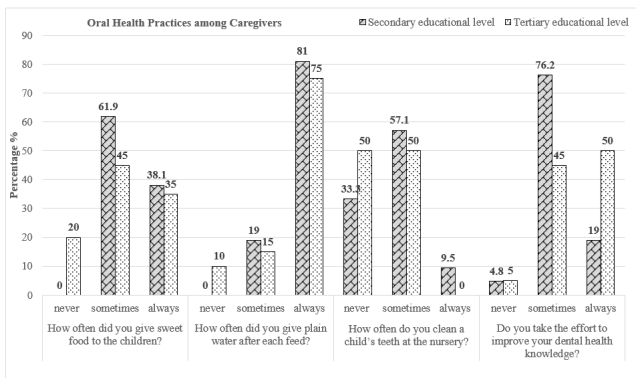


Figure 3: The response of participants in relation to oral health practice

practice since they were frequently giving sweet food to the children.

DISCUSSION

Although the participants were not representative of the whole population, however, this study provides a baseline information on the caregiver's knowledge, attitude and oral health practice. As it was a self-administered questionnaire, the participants may give false-positive responses.

The level of education plays a significant role in shaping the understanding of a caregiver. Higher educated caregivers are supposed to have better oral health knowledge, positive attitudes, and good behaviours. However, the findings from this study reported that the level of oral health knowledge and caregiver attitudes are not significantly associated to their level of education. This is contradicted with the findings from other studies (9).

A high proportion of caretakers in this study had adequate level of oral health knowledge and is concurrent with others studies (12). This could be due to them having earlier information from school or other reading materials. A majority of them had knowledge on causes and prevention of dental caries and they are similar to findings that have been reported by previous studies (2,

3, 6 & 17). However, about 30% of the caregivers in this study did not know that permanent teeth erupt at the age of 6. This is could be because of the fact that children's oral health related information is rarely seen in the mass media or healthcare set-up in Malaysia, unlike Hong Kong healthcare set-up where the information can be found easily (5).

The present study reported that a majority of the caregivers (85.3%) believed that children with disabilities can brush their teeth independently. This contradicted with the study done in Brazil (4), where the caregivers supervised the children during tooth brushing. An outstanding way to establish good oral hygiene practices among these children is to perform periodic tooth brushing practice at the hostel with help from the caregivers. A majority of the caregivers 73.7% knew the importance of a balanced diet for healthy teeth, and this is in line with the study done in Sudan (10).

Despite having a relatively adequate oral health knowledge, that was not in their everyday practices. This result was consistent with the findings of previous studies (8, 12 & 15). A good level of knowledge is likely to be attributed to common exposure on education and promotion of oral health via school dental services, antenatal clinics and other programmes, as conducted by the Ministry of Health, Malaysia (11). An interesting finding in this study was that about 95% of the caregivers seeks to know about oral health. In addition, the education level of the caregivers had a beneficial impact on their practices. Caregivers who had completed their education up to the secondary level had a lower mean practice score than those with tertiary level education.

Caregivers and school staff need regular reinforcement in monitoring the children's tooth brushing technique and the application of comprehensive oral health preventive programmes was shown to be efficient for children with disabilities (7).

The importance of oral health prevention should be explained to the caregivers in order to increase their knowledge, attitude and practice of oral health- as this would be useful for disabled children who are under their supervision. Parents as well as caregivers need training, provided with sufficient oral health knowledge and also to be motivated to perform good oral hygiene care. Moreover, early exposure of special need children to the oral healthcare services should be reinforced in order to improve the children's well-being. The general dental practitioners should update their knowledge and skills through continuous professional education programmes as well as to be willing to treat special needs children. Furthermore, regular dental visit should be carried out by the dental school team to familiarise the children with the dental environment and oral hygiene regimes.

CONCLUSION

In spite of having adequate knowledge, attitude and oral health practice among the caregivers in the boarding schools for special needs, however, it was still not reach the expected standards. Therefore, the implementation of oral health promotion programmes in the special needs boarding schools are highly recommended in order to tackle the oral health problems among disabled children. It is crucial to ensure that caretakers have sufficient oral health knowledge, attitude and as well as good oral health practice.

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