ORIGINAL ARTICLE

Oral health comprehension in parents of Saudi cerebral palsy children

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Abstract Objective: To determine oral health comprehension among parents of cerebral palsy (CP) children.
Methods: A self-administered questionnaire was utilized to obtain the required information. The study was conducted in two main centers for disabled children in Riyadh, Saudi Arabia.
Results: Parents of all 157 CP children registered in the two centers completed the questionnaire. Mothers mostly (86.6%) completed the questionnaire. Majority (98.7%) of the parents knew the importance of dental health for general health. More than two-third (70%) of the parents thought that teeth should be brushed thrice daily or after each meal. About three in every ten (29.9%) parents were not aware of the beneficial effect of fluoride in preventing dental caries; and very few (9.6%) were aware of water as a source of fluoride. Almost all (98.7%) the parents knew that sugary foods caused dental caries. Three-fourth (75.8%) of the parents were not aware of the possible harmful effects of bottled juices on teeth. There were no significant (p > 0.05) associations between the parental age/gender with any of the dependent variables.
Conclusion: Parents of CP children generally showed satisfactory oral health comprehension. However, they need further oral health education in several areas.

Keywords Oral health comprehension; Parents; Cerebral palsy; Children

1. Introduction

Knowledge forms the basis for most human actions and behaviors; and those with better level of knowledge are expected to have more appropriate decision making and practices (Heskett, 2017). Parents play an important role in providing knowledge to their children and formation of their habits and behaviors related to health (deCastilho et al., 2013). This is specifically important in case of intellectually and physically challenged children, where parents make most of the decisions for them including oral hygiene and dietary routines (He et al., 2014).
Cerebral palsy (CP) is one of the most highly prevalent conditions in the world; population-based studies from around the world report prevalence estimates of CP ranging from 1.5 to more than 4 per 1000 live births (CDC&P, 2017). CP describes a group of permanent disorders of the development of movement and posture, causing activity limitation; attributed to non-progressive disturbances which occurred in the developing fetal or infant brain. The motor disorders are often accompanied by disturbances of sensation, perception, cognition, communication & behavior, epilepsy, and secondary musculoskeletal problems (AACP&D&M, 2005). Due to these handicapping characteristics, these children are dependent on their parents/care givers for their daily care including oral hygiene care and dietary intake (Grammatikopoulou et al., 2009). The parents with better and appropriate comprehension in these areas are expected to take good care of their children (Al-Omiri et al., 2006). However, CP parents/care givers have been reported to have low comprehension in these areas (Verrall et al., 2000). Therefore, it is important to collect information about oral health comprehension of these parents; and monitor their knowledge level as well as provide them with oral health education in weak areas.

There is a scarcity of information internationally about oral health comprehension in parents of CP children. A study was conducted on this topic in Riyadh, Saudi Arabia about a decade ago, which though reported satisfactory level of oral health knowledge among the CP parents; still pointed out towards several areas where the parents needed further oral health education (Wyne, 2007). No further studies have been published after that. In the wake of rapidly changing socio-economic environment; continuous monitoring and gauging the CP parents oral health comprehension is necessary. The purpose of the present study was to collect latest information on oral health comprehension of CP children’s parents.

2. Methods

The study, cross-sectional in design, was conducted in two main centers for disabled children in Riyadh, Saudi Arabia from December 2014 to May 2015. A self-administered questionnaire in Arabic was utilized for the present study; which was a modified version of a questionnaire utilized in a previous study by Wyne (2007). The questionnaire was pre-tested for validity and reliability in 30 parents of CP children not participating in the main study. There was a time interval of two weeks for the test-re-test reliability. Pertinent modifications were made to enhance its clarity for the participating parents.

The information collected through the questionnaire is listed below.

- Demographics: parent’s age/gender, and the CP child’s age/gender
- Significance of dental health
- Significance of optimal dental health for better health in general
- Reason and frequency for dental visits
- Oral hygiene routine
- Various sources and importance of fluoride
- Possible foods & drinks that cause tooth decay
- Action to be taken on finding a cavity in their mouth
- Possible reason(s) for bleeding of gums and action needed if there is bleeding from gums after tooth-brushing.

The study was registered with Research Center (CDRC) of King Saud University College of Dentistry. The ethical approval was also obtained for the study from CDRC including the questionnaire utilized in the study. The two centers selected for the study are the main centers for special children in Riyadh, where education and health care are provided to the children with various conditions/disabilities. One (NH) of the researchers visited the selected centers. All the parents of the CP children registered in the two centers were included in the study. The questionnaires were distributed among the parents for completion. The questionnaires had a consent form with a covering letter that explained the research objectives and also ensured the parents about confidentiality of the collected information.

The data collected were stored in the computer utilizing Statistical Package for Social Sciences (SPSS – Version #19). Various frequencies were derived. Chi-Square test was utilized to establish any significant ($p \leq 0.05$) association between various responses and independent variables (such as parental age/gender).

3. Results

The parents of all the 157 CP children registered in the two centers completed the questionnaire. Mothers mostly (86.6%) completed the questionnaire. The mean parental age was 34.0 years (SD 7.3, ranging from 20 to 58 years). The CP children’s mean age was 6.7 years (SD 2.7, ranging from 2 to 12 years) [males 57.7%, females 42.3%].

Responses to questions on importance of dental and oral hygiene are listed in Table 1. Although most (94.3%) of the parents were aware of good dental health for mastication, more than one third (35.7%) did not consider it important for speech. Almost all (98.7%) of the parents knew that good dental health is important for general health. About two-third (65.6%) of the parents thought that one must visit a dentist every six months. However, one-fifth (20.4%) of them were of the opinion that dental visit is needed only for pain or dental problem. More than two-third (70%) of the parents thought that teeth should be brushed thrice daily or after each meal. A great majority (98.1%) of the parents was using toothbrush or both toothbrush and miswak for tooth cleaning.

Table 2 presents results on various questions regarding fluoride. About three in every ten (29.9%) parents were not aware of the beneficial effect of fluoride in preventing dental caries; and very few (9.6%) were aware of water as a source of fluoride. Table 3 lists the parent’s responses about tooth decay. Almost all (98.7%) the parents were aware that sugary foods cause dental caries. Similarly, 91.7% of the parents knew about the harmful effects of soft/carbonated drinks on teeth. However, fewer parents had similar comprehension about flavored fizzy drinks (35.7%), sweetened/flavored milks (32.5%) and bottled/canned juices (24.2%). A large majority (84.1%) of the parents would visit a dentist immediately if they find a cavity staring in their tooth/teeth. Most (84.7%) of the parents knew that regular bleeding on tooth brushing could be a sign of gum disease, however, only 52.2% would see a dentist for the problem (Table 4).
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