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Research Article

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The nature of dental complaints and visits for children with Intellectual disability: parents' perspective

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ABSTRACT

Children with intellectual disability often have poor oral health compared to those without and visit the dentist less often. Aims: this study assessed the nature of dental complaints and visits in children with intellectual disabilities from parents' perspective. Materials and Methods: A total of 147 children were included in the study. These were children of records at The Faculty of Dentistry and King Abdulaziz University Hospital, both of which are located at king Abdulaziz University, Jeddah, Saudi Arabia. Caregivers were asked to assess their children's nature of dental conditions and dental visits. Results: show that most caregivers considered their children to have acceptable oral health. Children with ID complained more of dental pain or swelling compared to controls ($p<0.001$). Caregivers also report that their children had more dental caries compared to controls ($p<0.001$). No association was found between the nature of dental complaint and dental visits. Conclusion: This study concludes that the main dental complaint of children with ID is dental pain or swelling and that there is no association between visiting the dentist and type of dental complaint. Clinical significance: Findings from this research can be used to encourage caregivers of children with ID to have regular preventative dental visits and not await more severe symptoms. It can also encourage dental schools to incorporate more training to its graduates on the handling of children with ID.

Key words: *case-control study, intellectual disability, dental visits, children, pain*

INTRODUCTION

As many as 2.5% of the population are affected by Intellectual disabilities (ID), condition that can limit the intellectual capability of affected individuals and necessitate extraordinary support in order to allow them to be active participant in typical dailyfunctions.[1]

Studies show that children with ID have more health problems and poorer Oral Health Related Quality of Life (OHRQOL).[2,3] They have greater unmet dental care needs4 and require extra help from their parents to maintain good health. These children receive lower quality of dental care and are less likely to have preventive dental care.[5] In addition, children with ID have been reported to have greater prevalence of dental caries and gingivitis.[6]

Some of the reasons why children with ID receive less dental care than children without include lack of access to dental facility, lack of insurance covering their dental care. Most dental schools offer no official courses or training to its students on how to handle such patients hence there is lack of training on behalf of general practitioners in doing so when faced by such children.[4,7] Children with ID may lack verbal ability and hence cannot convey their pain or dental needs to their caregivers. Parents must rely on certain ques to ascertain that their children are in pain or require dental treatment.[8]

A study on children [3-17] years shows that irrespective of ID, better education and socioeconomic status seems to positively impact access to dental care and results in better experience with medical care providers which can enhance the likelihood of having better preventive care.[9] It has been reported that young adults with ID have less dental visits per year compare to those without ID.5 A study by Zifeng et al. showed that only 23.6 percent of children with ID had visited the dentist in the previous year.10 Additionally, the IADR in their 2010 conference on the utilization of dental care in children with ID showed that low proportion of patients visited the dentist in the preceding year and that children with ID received more extractions than restorations.[11] Three population based reports from Israel show that individuals with ID suffered similar diseases compared to the general population. However, these children needed special medical and dental systems in addition to special expertise to face these needs.[12]

Aim:

This study assessed the nature of dental complaints and visits in children with intellectual disabilities from parents' perspective.

The null hypothesis of this research was that children with ID displayed similar dental complaint as those without ID and that there was no association between the nature of dental complaint and having dental visits. The alternate hypothesis was that children with ID had more sever dental complaints and that there was an association between these complaints and having dental visits.

METHODS

This study recruited a total of 147 children of records at The Faculty of Dentistry at King Abdulaziz University (KAUFD) and King Abdulaziz University Hospital (KAUH), both of which are located at Jeddah, Saudi Arabia. The children in the sample were divided into cases and controls based on the presence or absence of ID. Cases included children (birth1-16-year-old) with ID as verified by their medical records (n=62) while controls were age matched children not diagnosed with ID (n=85).

Ethical approval was obtained from KAUFD to conduct the study and recruited caregivers were given full details about the study before obtaining their consent. To collect proper data from parents a questionnaire containing both closed and open ended questions was developed.[8] The questionnaire asked about participants' demographical, medical, and dental data. The medical records of recruited children were reviewed by the investigator to ascertain the nature of children's' medical status, medical diagnoses, prescribed medication if present, and the degree of ID. The readability and understanding of the questionnaire was checked by pretesting it on a group of recruited caregivers. The investigator interviewed caregivers and guided them in filling out the questionnaire.[8]

Caregivers were asked about their children's' general dental status, main dental complaints, how they recognized their children's dental complaints and the action they took regarding these complaints.

Statistical analysis:

This study was analyzed using IBM SPSS version 23. The data was assumed to be normally distributed. Continuous variables were described by means and standard deviations while discreet and categorical variables were assessed using counts and percents. To establish associations of categorical variables, Chi-square tests were used. A conventional $p<0.05$ was used to reject the null hypothesis.

RESULTS

This study recruited a total of 147 children average age 7.37 years of which 52 percent were males and the rest females (Table 1). Children with ID (cases) represented 57.8 percent and the remaining were controls.

When asked about the general condition of the child, a relatively comparable percentage of caregivers felt that their children's oral health was acceptable or poor. The main dental complaint of children was pain or swelling of which nearly half children were able to communicate to their caregivers. This complaint was significantly more in children in the age range of birth to 6 years ($p<0.001$). Caregivers managed to notice the child's dental problem despite lack of communication on the child's behalf. It can be seen that seeking dental care was the action taken by most caregivers after noticing the child's complaint (Figures 1-4).

Table 2 is a comparison of dental status between children with ID and those without. The table shows that the type of dental complaint for children with ID was pain or swelling ($p<0.001$). There was a difference in the action taken by caregivers towards the child's problem. Higher percentage of cases were taken to the dentist or given painkillers compared to controls. This difference however was not statistically significant ($p<0.059$). No difference was found in dental condition based on child's gender. Table 3 shows that despite having dental pain or swelling as a main complaint, no significant association was found between any of the complaints and taking the child to the dentist.

Table 1: Demographics

Demographics		N	Min	Max	Mean	SD
Age in years		146	2	13	7.37	2.5
				Count		%
Total				147		100.0
Age by categories (Years)	birth to 6			63		43.2
	6 to 12			76		52.1
	12 to 16			7		4.8
	Missing			1		
Control/Case	Control			62		42.2
	Case			85		57.8
Gender	Male			77		52.7
	Female			69		47.3
	Missing			1		

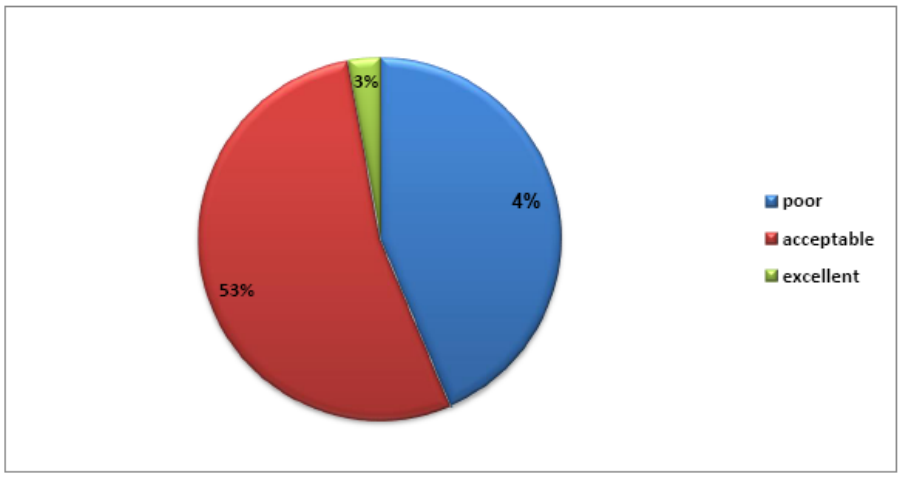

Figure 1: Caregivers' assessment of dental condition

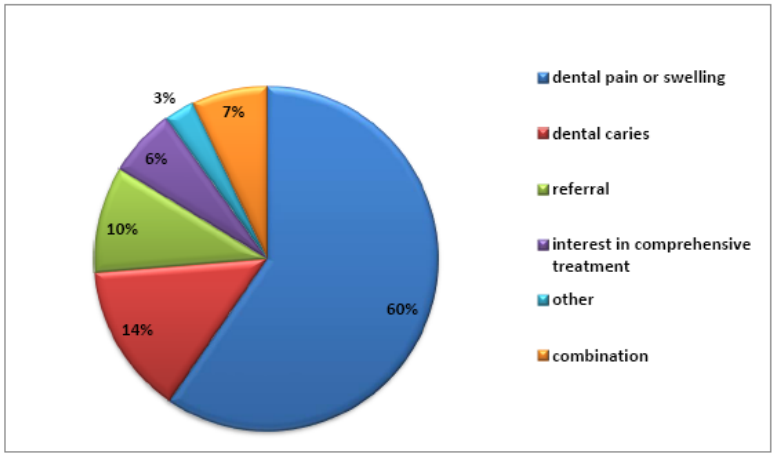

Figure 2: Child's main dental complaint

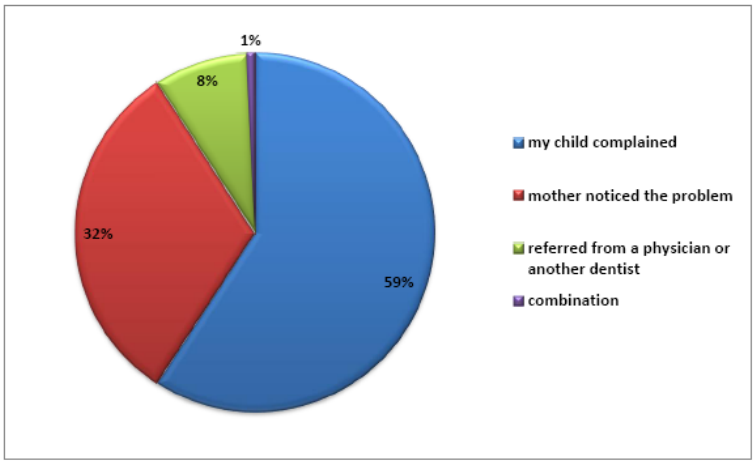

Figure 3: How caregivers found out about their children's complaint

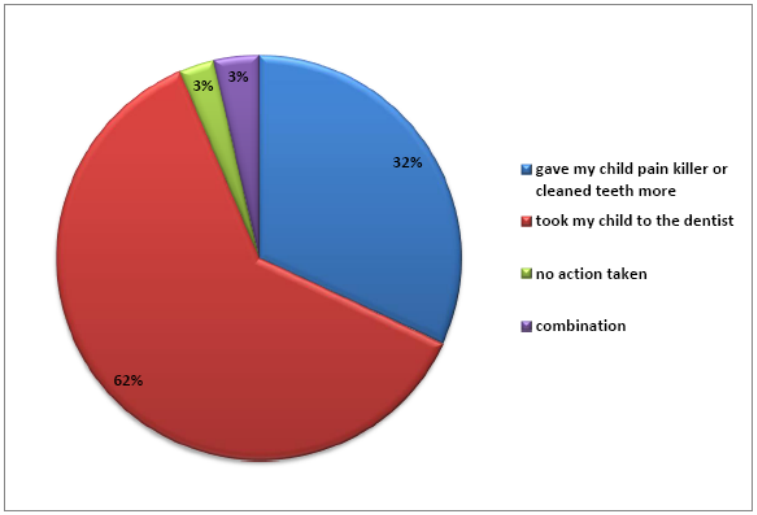

Figure 4: How caregivers handled their children dental complaints

DISCUSSION:

This study's shows that dental pain or swelling is the main condition that children in the sample complained of and that it was significantly more prevalent in children with ID compared to those without.

Children with disabilities and ID often have higher prevalence of dental caries compared to the general population. [5,10] On the contrary, other research reported dental caries to be similar if not less in children with ID compared to those without.13 The difference between children with ID and those without has been shown to be having more unmet dental needs and untreated decay.

[7,14] Children with ID generally receive less preventative dental care and their treatment is of lower quality than children without ID.15 This can explain the findings of this study, which show that children with ID had more pain and swelling than controls. Additionally, Zifeng et al. demonstrated that children with prior records of dental visits within the past 12 months had lesser severity of dentalcaries.[10]

Although not significant, the study shows that relatively a high percentage of children had dental visits and more so in children with ID compared to controls. This is not in accord with other studies, which report that children with diminished mental capacity such as those with Down syndrome or Rhett syndrome had less dental visits[11]. Vijaya et a., 2013 confirmed these findings on young adults with ID where they showed that significantly fewer number of patients visited the dentist in the year previous to their study.5 This is not a surprising finding given that ID can be associated with other medical conditions which can be viewed by caregivers as more pressing issues than dental care.[2,3] These children are less likely to receive preventative medical condition and are frequently rushed to hospitals when their physical condition worsens.[16]

Despite having obvious signs of dental problems such as dental pain, swelling or dental caries just slightly more than half children in this study visited a dentist while other children were put on painkillers or did not receive any treatment. Interestingly, the findings (although not significant) show that more children with ID have dental visits than those without which may be explained by the fact that some of the children with ID in the sample were hospital admitted patients and had better access to dental care.

The issue accessibility to dental care and the provision of preventative dental care for children with ID should also be taken into consideration. The accessibility can be confounded by various factors including the child's physical, psychological and economic status.[17] Because the dental clinics at KAUFD are a referral center, some caregivers may not be able to access these dental clinics for regular or emergency treatment. Additionally, many of these patients do not have medical or dental insurance policies to cover preventative dental treatment. Even in the absence of these obstacles, caregivers may be unconfident in the training of dental health care providers and their ability to handle their children with ID.

This study focused on a convenient sample of children visiting the dental clinics at KAUFD and KAUH and was limited by the sample size, which can affect the generalizability of its results. However, its clinical significance shows the nature of dental complaints in children with ID and can be used to encourage caregivers to have regular preventative dental visits and not await more severe symptoms to occur. The results can also motivate dental schools to improve training and confidence of their graduates in handling children with ID.

CONCLUSION:

This study concludes that the main dental complaint of children with ID is dental pain or swelling and that there is no association between visiting the dentist and type of dental complaint.

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