DonnishJournals

Donnish Journal of Dentistry and Oral Hygiene
Vol. 7(4) pp. 025-029 June 2021.
http://www.donnishjournals.org/djdoh
ISSN: 2984-8806

Original Research Paper

Relations between Dental and Somatic Pain in Children

Farah Alfrayh[1], Reem Alnosair[1], Atheer Alfaris[1], Shaimaa Buhamad[1], and Haneen Alshukairy[2]*

[1]Dental Interns, Riyadh Elm University, Riyadh, KSA
[2]BDS, MSc in Pediatric Dentistry - Lecturer Course Director, Clinical Instructor – Pediatric Department, Riyadh Elm University, Riyadh, KSA

Accepted 5th June, 2021.

Introduction: Most of the children around the world have anxiety from dental clinic visits. The extreme anxiety is assumed to be associated with somatic pain, which is characterized by an intense focus on physical symptoms such as abdominal pain or shortness of breath. Aim: To assess the factors affecting the mental stability of children undergoing dental treatment. Material and Methods: An online questionnaire was designed using Google form conducted for parents. Questionnaires consisting of 16 questions regarding parents' age, parent-child Relations, Region, Education, income, and Number of Children were administered. Results: The results indicate that dental treatment anxiety among children was associated with the child never having a dental appointment and other socioeconomic factors such as the gender of the parents, household income, and the area of residence. Conclusion: A significant number of children presented with dental anxiety and a history of dental pain, as well as with psychological instability when it comes to dental treatment.

Keywords: Children, Somatic pain, Anxiety.

INTRODUCTION

Somatic pain is characterized by an extreme focus on physical symptoms such as abdominal pain, weakness, or shortness of breath. Somatic pains especially in children are significantly associated with factors such as anxiety issues like depression and other mental disorders (Masi et al., 2000). According to Masi et al. (2000), somatic pains identified in youth and children included severe headaches, stomach aches, and musculoskeletal pains and were all associated with specific gender and psychological attributes. This study by Masi et al. (2000) elucidates the need to incorporate intensive studies on the factors that may significantly cause somatic pain in children with a focus on the psychological and economic issues affecting them.

Many cases of abdominal pains among school-aged children are associated with parental issues as well as psychological factors (Saps et al., 2009). The somatic pains are included in the temporomandibular disorders which had proven a relationship with the emotional characteristics of children and adolescents, and specifically, the aggravated levels of depression and anxiety (Al-Khotani et al., 2016). The psychosocial factors, somatic and personal attitude and characters are therefore greatly associated with the temporomandibular disorders among children (Al-Khotani et al., 2016). The psychological issues especially depression and anxiety are also associated with parents' and guardians' socio-economic levels which cause the existence of somatic pains in children (Leirbakk, Clench-Aas, & Raanaas, 2015). A study conducted among 120 Swedish children showcased the existence of numerous somatic pain issues especially in the dental care department as well as other health departments (Kling, Vinnerljung, & Hjern, 2016). A specific interest is in the dental association with somatic pain as conducted by a study among students that indicated the existence of symptoms positively associated with somatic pain occurrences (Lövgren et al., 2018).

The research we studied was on children aged 6 to 13 years, suffering from somatic and dental pains, which had possible negative implications on their social and academic life. The study is very fundamental to improve the comprehension of the perception of dental anxiety in comparison with pain in other organs in children (Lövgren et al., 2018). The data corresponding to the parents and the

*Corresponding author: Haneen Alshukairy, Email: drhaneensh@riyadh.edu.sa

children will be collected using the questionnaire to assist in determining the main factors associated with reduced psychological distress among children. Different statistical tests estimating the measure of association such as chi-square tests, as well as the descriptive statistics, are used to give the overall insights of the research data collected from the participants.

MATERIALS AND METHODS

The study conducted was a survey research design that entailed the distribution of questionnaires with specific questions addressed to parents of the children who had dental issues (Lövgren et al., 2018). The demographic details taken from the parents included questions, parents' relationship to the child, parental age, parental education level, parents' income, and the number of children in the family (Muller et al., 2017). Further information on bodily symptoms of children while visiting a dental clinic, if there was a bad experience for the child in the first visit to the dental clinic, the psychological management of the dentist to the child before starting the treatment, at any age of the first child visit to the dentist, how much time does the dentist spend during visiting, where they prefer to treat their child's teeth (Kling, Vinnerljung, & Hjern, 2016). The statistical analysis of the variables suspected to have a significant impact on dental treatment anxiety among children was performed using the SPSS software. The information corresponding to the patients and their guardians is very instrumental in assessing the mental health of children because it may affect the response and the overall effectiveness of treatment.

Hypothesis

Alternative hypothesis

There is a relation between somatic and dental pain complaints among children who attend a dental clinic.

RESULTS

The majority of the respondents are females (N=308, 66.8%), while the males represent 33.2% of the whole population (N=153). The most common parent relationships among the participants were the mother represented by 301(65.3%). The age group with the majority of the study participants was 18-30 years, which had a total of 144(31.2%), while the minimum was found in the >50 years age group with a total of 65(14.1%). The central region was the place where the majority of the participants hailed from (N=217, 47.1%), while the least number of participants were from the Southern region (N=5, 1.1%). The majority of the participants were literate, with 64.9% of the total participants having university and postgraduate qualifications, while 35% of the total participants were the least educated with primary school qualification. The salary ranges with the maximum number of participants were 11000-20000 with (N=172, 37.3%), followed by 5001-10000 (N=121, 26.2%), and the least represented group was more than 20000 (N=72, 15.6%).

A total of 190 participants (41.2%) noticed symptoms before deciding to visit the dentist, while the minority of the participants (N=97, 21%) sometimes noticed symptoms when visiting the dentists. Approximately 37.4% of the participants never noticed any symptoms in their children before visiting the doctors. Majority of the children taken to see the dentist were between ages 5 and 7 (N=169, 58.9%), while the least represented group in this aspect was age group 11-13 (N=20, 7.0%). Generally, the majority of the participants represented by 65.9% of the total participants have a bad experience when taking the children to visit the dentists as shown in table 2.

The majority of the pedodontics are rarely available, while 39.9% are frequently available to solve different dental complications among children. Approximately 68.3% of the children respond to dental visits with tension; 16.9 % of the total children do not make any response towards the visits. In comparison, 14.8% of the total children respond quietly to medical appointments. The majority of the participants represented by 43% are not certain whether their children are adequately prepared psychologically by the dentists; 41 % of the participants are sure that their children are prepared psychologically by the doctors. In comparison, 15.4% of the total participants believe that their children are not prepared psychologically by their dentists on the nature of the treatment. Most of the children represented by 58.1% of the total were aged between 5 to 7 years, followed by less than four years represented by 12.6%, while the least represented age group during the dentists' first visit was more than eight years which is represented by 12.6% of the total children. The chi-square tests showcased the association between different pairs of variables.

There exists a significant association between the gender of the participants to the psychological treatment, management, and response by the children as indicated by the P-value, which is 0.000, hence less than the statistical significance level of 0.05. The relationship of the parent to the child (whether a father or a mother) significantly influences the psychological part and responsiveness of the children (p=0.010. <0.05), which may affect the overall outcome of the appointments. However, the patient relationship does not have a significant influence on the ability to notice symptoms in the children (p=0.790, >0.05), and the children's responsiveness to the dental visit (p=0.605).

DISCUSSIONS

The result implies that gender is a significant determinant in the psychological response towards visits to dentists as well as treatment (Al-Khotani et al., 2016). The gender of the participant is not associated with ability to notice different symptoms in children. The age of the child is significantly associated with their first time of attending the first dental visit, which may be attributed to the individual preparedness in handling the appointment without anxiety (Leirbakk, Clench-Aas, & Raanaas, 2015). The region of residence is a vital variable that significantly affects the capability of the participants to visit the hospital as well as choose the most appropriate health facility based on closeness and affordability, among other factors.

Education is not associated with the frequency of visits to the hospital, the first time the child goes for a dental appointment, and the type of health institution the parents choose for the treatment of dental complications among children. Based on the results, the income of the participants only affects the mental management and the capability of the parents to seek psychological services to enhance the child's responsiveness and attitude towards dental treatment from the doctors (Muller et al., 2017), (Al-Khotani et al., 2016). Education is not associated with the frequency of visits to the hospital, the first time the child goes for a dental appointment, and the type of health institution the parents choose for the treatment of dental complications among children.

Table 1: Socioeconomic variables of the study participants (n=461)

Socioeconomic variables		n	%
Gender	Male	153	33.2
	Female	308	66.8
Relations	Mother	301	65.3
	Father	160	34.7
Age (Years)	18-30	144	31.2
	31-40	138	29.9
	41-50	114	24.7
	>50	65	14.1
Region	East	189	41.0
	West	14	3.0
	South	5	1.1
	North	36	7.8
	Central	217	47.1
Education	Primary	16	3.5
	Intermediate	24	5.2
	Secondary	122	26.5
	University/Postgraduate	299	64.9
Income (sar)	Less than 5000	96	20.8
	5001-10000	121	26.2
	11000-20000	172	37.3
	More than 20000	72	15.6
Number of Children	None	19	4.1
	1-2	189	41.0
	3-5	171	37.1
	More than 5	82	17.8

Table 2 : Presence of symptoms, age and any bad experience of child when visit to dentist

Questionnaire item		n	
Anybody noticed symptoms while your child visiting a dental clinic (n=461)	Yes	190	41.2
	No	174	37.7
	Sometimes	97	21.0
How Old was your child (Years) (n=287)	5-7	169	58.9
	8-10	98	34.1
	11-13	20	7.0
Bad Experience (n=287)	Yes	189	65.9
	No	98	34.1

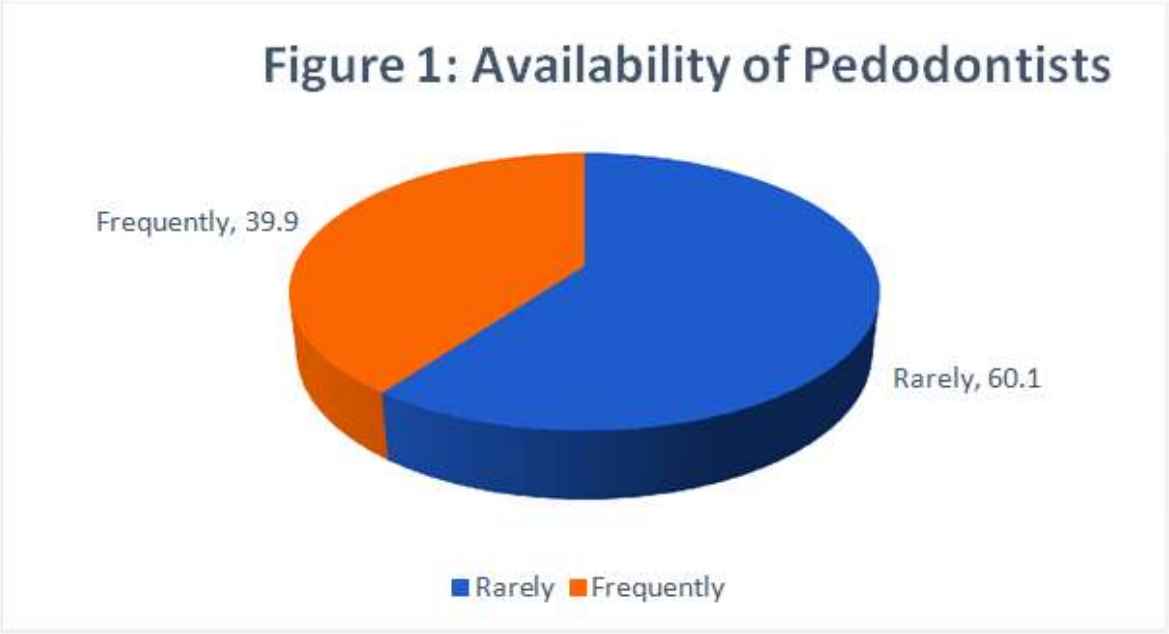
Figure 1: Availability of Pedodontists
Frequently, 39.9
Rarely, 60.1
Rarely
Frequently

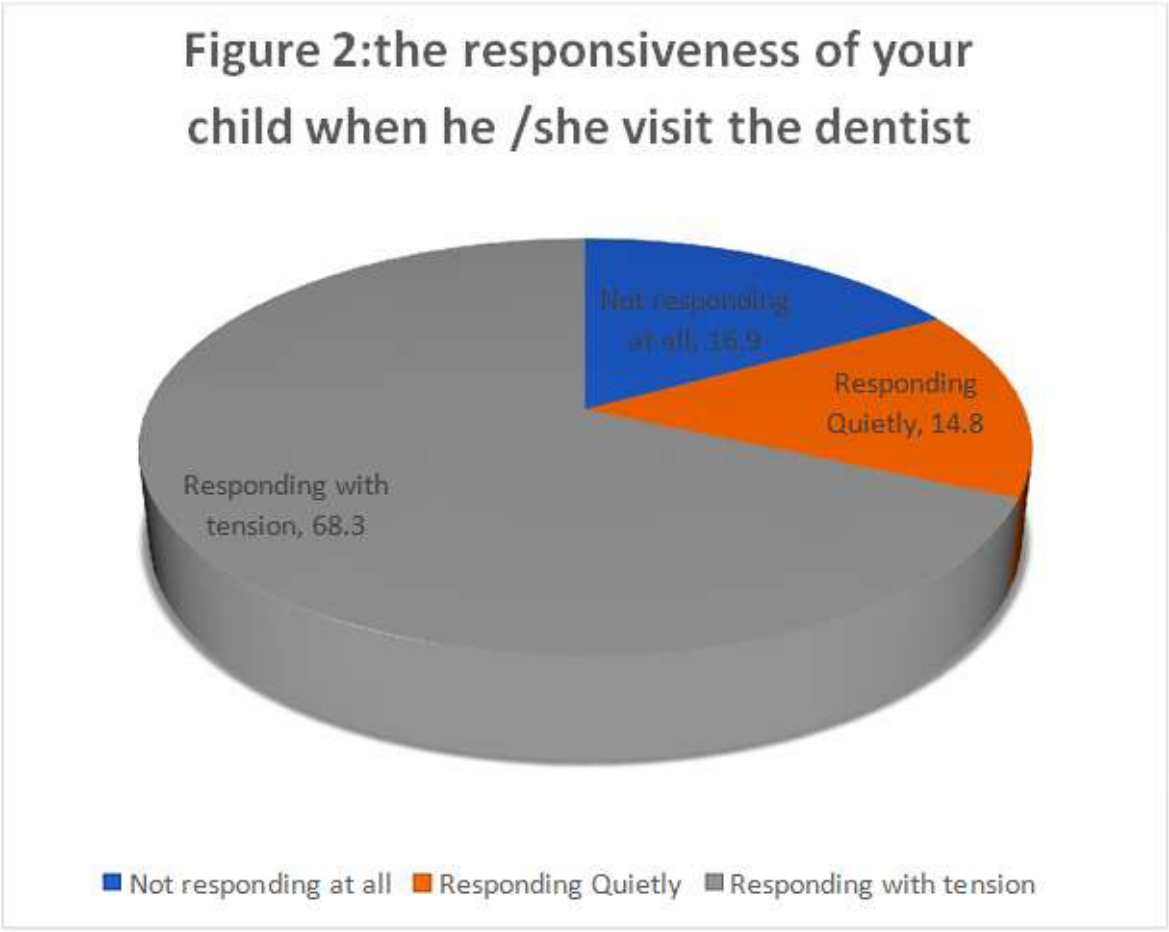
Figure 2:the responsiveness of your child when he /she visit the dentist
Not responding at all, 16.9
Responding Quietly, 14.8
Responding with tension, 68.3
Not responding at all
Responding Quietly
Responding with tension

The income levels of the participants substantially affect the first time the child goes for a dental visit, and the type of health institution the parents choose for the treatment according to the association indicated by the significant p-values which shows the socio-economic effects of the parents on their children's treatment (Liebeck, Clench-Aas, & Raanaas, 2015). The number of children in a household is associated with the first time the child visits the dentist, and the health institution preference, but it does not significantly affect the frequency of the child's visit for dentist appointments.

CONCLUSIONS

The analysis showcases the vast extent of anxiety among children when facing dental treatment in different health institutions. Dental treatment tension is attributed to many factors as per the study, such as the nature of preparedness that is significantly associated with the availability of psychosocial support of the children by the dentists. The aspect of the fear towards dental treatment is clarified by the association between factors such as gender of the parent, parent-child relationship, age, the region of residence, income, and the number of children: because of their association with the psychological management, control, and awareness.

The analysis implies that the mental support of children is essential in reducing the fear of dental problems treatment. The frequency of dental visits to the health facilities is also affected by socioeconomic factors such as age, income, and the total number of children in the household. The increased number of anxiety cases among the children having dental problems means that there is a need to observe the identified significantly associated factors to improve the situation and promote more frequent dental visits by the children despite their region of residence.

ACKNOWLEDGMENT

Authors of this study would like to acknowledge the support and cooperation of the research center of Riyadh Elm University.

CONFLICT OF INTEREST

There is no conflict of interest among the authors regarding the writing and publication of this research.

REFERENCES

Al-Khotani, A., Naimi -Akbar, A., Gjelset, M., Albadawi, E., Bello, L., Hedenberg-Magnusson, B., & Christidis, N. (2016). The associations between psychosocial aspects and TMD-pain related aspects in children and adolescents. The journal of headache and pain, 17(1), 30.

Beidel, D.C., Christ, M.A.G. and Long, P.J., 1991. Somatic complaints in anxious children. Journal of abnormal child psychology, 19(6), pp.659-670

Egger, H.L., Costello, E.J., Erkanli, A. and Angold, A., 1999. Somatic complaints and psychopathology in children and adolescents: stomach aches, musculoskeletal pains, and headaches. Journal of the American Academy of Child & Adolescent Psychiatry, 38(7), pp.852-860.

Firestein, S.K., 1976. Patient anxiety and dental practice. The Journal of the American Dental Association, 93(6), pp.1180-1187

Harvard Colares, V., Franca, C., Ferreira, A., Amorim Filho, H.A. and Oliveira, M.C.A., 2013. Dental anxiety and dental pain in 5-to 12-year-old children in Recife, Brazil. European Archives of Paediatric Dentistry, 14(1), pp.15-19.

Harvard Klingberg, G. and Broberg, A.G., 2007. Dental fear/anxiety and dental behaviour management problems in children and adolescents: a review of prevalence and concomitant psychological factors. International journal of paediatric dentistry, 17(6), pp.391-4066 .

Harvard Taani, D.Q., El-Qaderi, S.S. and Abu Alhaija, E.S.J., 2005. Dental anxiety in children and its relationship to dental caries and gingival condition. International journal of dental hygiene, 3(2), pp.83-87

Kling, S., Vinnerljung, B., & Hjern, A. (2016). Somatic assessments of 120 Swedish children taken into care reveal large unmet health and dental care needs. Acta paediatric, 105(4), 416-420.

Leirbakk, M. J., Clench-Aas, J., &Raanaas, R. K. (2015). ADHD with co-occurring depression/anxiety in children: the relationship with somatic complaints and parental socio-economic position.

Lewis, T., 1938. Study of somatic pain. British medical journal, 1(4023), p.321.

Lövgren, A., Österlund, C., Ilgunas, A., Lampa, E., & Hellström, F. (2018). A high prevalence of TMD is related to somatic awareness and pain intensity among healthy dental students. Acta OdontologicaScandinavica, 76(6), 387-393.

Masi, G., Favilla, L., Millepiedi, S., &Mucci, M. (2000). Somatic symptoms in children and adolescents referred for emotional and behavioral disorders. Psychiatry, 63(2), 140-149.

Muller, C. E., Junior, M. F. S., Dadalto, E. C. V., Gomes, A. P. M., Sarmento, L. C., & Gomes, A. M. M. (2017). Prevalence of odontogenic pain and associated factors in children treated at a paediatric dental emergency service. Revista Odonto Ciência, 32(3).

Peretz, B. and Sarnat, H., 2010. Relations between dental and somatic pain in children. International journal of paediatric dentistry, 20(3), pp.201-206

Saps, M., Seshadri, R., Sztainberg, M., Schaffer, G., Marshall, B. M., & Di Lorenzo, C. (2009). A prospective school-based study of abdominal pain and other common somatic complaints in children. The Journal of pediatrics, 154(3), 322-326.

Soares, F.C., Souto, G., Lofrano, M. and Colares, V., 2015. Anxiety related to dental care in children and adolescents in a low-income Brazilian community. European Archives of Paediatric Dentistry, 16(2), pp.149-152.

Venham, L.L., Gaulin-Kremer, E., Munster, E., Bengston-Audia, D. and Cohan, J., 1980. Interval rating scales for children's dental anxiety and uncooperative behavior. Pediatr Dent, 2(3), pp.195-202.