



The Effect of Socio-Economic Status on Dental Behavior Management During the Syrian Crisis

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Received: April 01, 2019; Published: May 15, 2019

DOI: 10.31080/ASDS.2019.03.0542

Abstract

Background: It has been always a challenge to provide dental treatment for children especially children who need behavior management, and dental behavior management can be affected by the general condition of the child and also by the environment of the child or the level of socioeconomic status (SES) he comes from.

Objectives: To study the prevalence of the dental behavior type of children on Frankel's scale during the Syrian crisis, and the effect of the Syrian crisis and the SES in determining the dental treatment behavior management.

Materials and methods: A cross-sectional study was carried out at the department of pediatric dentistry, the data was collected after receiving the approval of children parents or guardian. Frankel scale was used to assess children behavior in dental clinic. The determination of the persistence of psychological shock among children is made based on the exposure of the children to one of the 6 standard factors related to Syria crisis, Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS) v.22.

Results: The number of uncooperative patients was 34 (30.7%) and the rest is cooperative 77 (69.3%). The Frankel scale was used to determine the type of behavior of the children, definitely negative patients were 20 (18%), negative patients were 14 (12.6%), positive patients were 31 (27.9%), and definitely positive patients were 46 (41.4%). Data analysis showed significance relation using T-test between the children behavior type and the presence of the psychological shock ($p= 0.000$), and being an IDP (0.000), but no significant relation with the gender was found (0.924).

Conclusion: This study focused on the effect of the SES during the Syrian crisis on the children general behavior management, especially for children who had a previous traumatic event, and the result of this study support the importance of providing special care for children from low SES level or children from areas affected with disasters in order to establish connection with the child and to do the dental treatment.

Keywords: Syrian Crisis; Patients; Socioeconomic Status;

Introduction

Dental treatment can cause fear and anxiety for children, and that can turn into dental phobia [1], and controlling children behavior in the dental clinic remain till now a global problem and a significant challenge, with more than 5- 40% of the children have dental anxiety [2]. mastering behavior management techniques require time and practice [3]. Moreover, High or low socioeconomic status (SES) reflect on individuals especially children, and the role of the SES on the behavior type of the children should be understood and studied [4,5]. Because effective behavior management

can vary through the complex context of the social, emotional and cognitive development of the children [6]. In certain cases, for example children with special needs or children with previous traumatic experiment, the normal behavior management protocols will not be appropriate and effective [7]. Also, children with mental or psychological needs require access to specialized resources that are not yet standardized or generalized in dental pediatrics department [8]. And it is important to document the relation between SES and the children behavior in dental practice in order to understand the nature of social interaction with dental behavior management [9].

On the other hand, the socioeconomic status has deeply been affected by the ongoing war in Syria. The war in Syria constitutes the worst humanitarian disaster that mankind has witnessed since the end of the Second World War, with a catastrophic human, social and material consequences. Moreover, the Syrian crisis affected directly the health system on all levels. People lost their access to the health materials, and multiple research and scientific facilities had been directly targeted [10,11]. And it is important to study the effect of the traumatic events or the changing in socioeconomic status on the dental behavior management of the Syrian children during the time of Syrian crisis.

Aims of the study

- To study the prevalence of the dental behavior type of children on Frankel's scale.
- To study the effect of the SES on the dental behavior management among children.
- To study the effect of the Syrian crisis on the behavior type of the children.

Methods and Materials

Study design

A cross-sectional study was carried out at the department of pediatric dentistry, Damascus university, Syria. The data was collected from September to December 2018 after an ethical approval obtained from the dean of faculty of dentistry and the scientific research committee at Damascus university. The data was collected after receiving the approval of children parents or guardian.

Data collection

Frankel scale was used to assess children behavior in dental clinic, which classify the behavior of the children into four categories (absolutely positive – positive – negative – absolutely negative).

The evaluation of the socioeconomic status was assessed by 5 questions, which assessed: 1- the educations of both the father and the mother of the children, 2- the monthly family income, 3- profession of father and mother. Basing on the previous questions, the SES was divided into 3 categories (high, moderate and low). In addition to that, the SES assessment was enhanced with additional questions which clarify if the family is internally displaced (lives in temporary accommodation Center for refugees) or not, and another question was added to know if the children has had exposed to any of the factors related to the Syrian crisis.

The determination of the persistence of psychological shock among children is made based on the exposure of the children to one of the 6 standard factors related to Syria crisis, and those factors are reliable and valid and was previously studied by Morad W [12]. The 6 factors are: 1- internally displaced child, 2- losing the original house during war, 3- losing family member or a friend during war, 4- being in danger of physical injury, or family member in danger because of war, 5- sexual assault or sexual harassment 6- Hear the sounds of explosions or missiles.

Data analysis

Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS) version 22 (SPSS Inc, Chicago, IL, USA). Both descriptive and inferential statistics was used to assess if there is any significant relation between the variables. Chi square test and Kruskal-Wallis test were used to assess the significance relation between the persistence of psychological shock and the behavior type of the children. Statistical significance was set at $p < 0.05$ and confidence levels at 95%.

Inclusion criteria

- All children under 12 years old.
- The child must come with one of his/her parents.

Exclusion criteria

- The child shouldn't have a previous traumatic dental treatment.
- The child shouldn't have any problem that affects the speech or appearance of the child (Cleft lip,...).
- Children with special needs.

Sample

The data collected from the children who attended the department of pediatric dentistry according to the previous inclusion criteria. 136 patients were examined, 25 patients were excluded according to the exclusion criteria. The final sample size consisted of 111 patients, 74 (66.7%) of them were males, and 37 (33.3%) were females. The average age of the patients is 8 years and the age ranged between 6-12 years.

Results

The number of uncooperative patients was 34 (30.7%) and the rest is cooperative 77 (69.3%). The Frankel scale was used to determine the type of behavior of the children, definitely negative pa-

tients were 20 (18%), negative patients were 14 (12.6%), positive patients were 31 (27.9%), and definitely positive patients were 46 (41.4%). About half of the patients in the study had a psychological shock earlier due to the war situation in Syria. 23.5% of the children in the study are internally displaced people (IDPs) and came to the faculty of dentistry from temporary accommodation center. According to the level of SES the children divided into three levels: 1- children with low SES (49) 44.1%, 2- children with moderate SES 44 (39.6%), 3- children with high SES 18 (16.3%).

Data analysis showed significance relation using T-test between the children behavior type and the presence of the psychological shock (p= 0.000), and being an IDP (0.000), but no significant relation with the gender was found (0.924).

ANOVA test showed significant relation between the behavior type of the children and the SES (socioeconomic status). Pearson's correlation was positive and significant between the children behavior and the SES (0.002).

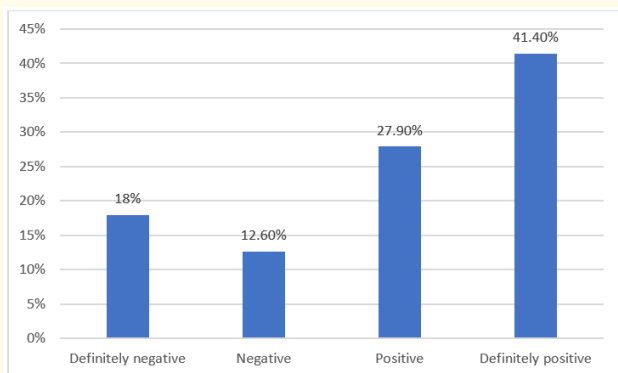


Figure 1: Frankel scale.

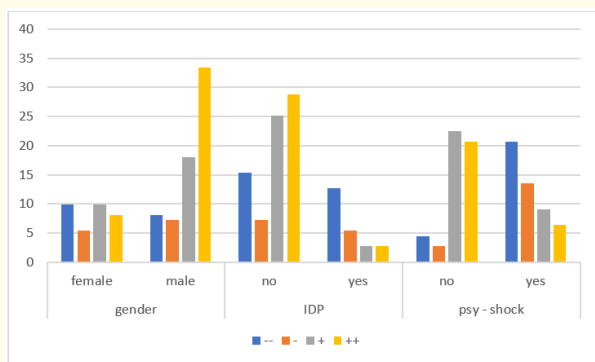


Figure 2: Frankel scale percentage.

Patients examined		136	100%
Patients included		111	81.6%
Patients excluded		25	18.4%
The included sample			
Males		74	66.7%
Females		37	33.3%
Age	Range 6-12	Average 8	
Behavior type	Cooperative	77	69.3%
	Uncooperative	34	30.7%
Frankel scale	Definitely negative --	20	18%
	Negative -	14	12.6%
	Positive +	31	27.9%
	Definitely positive ++	46	41.4%
Psychological shock	Yes	56	50.5%
	no	55	49.5%
IDP *	Yes	26	23.5%
	No	85	76.5%
SES	low	49	44.1%
	Moderate	44	39.6%
	high	18	16.3%

* Internally Displaced Persons

Table 1: Sample size analysis.

Factor		N (%)	Analysis method	P-value
Gender	Males	66.7%	T-test	0.924 ns
	Females	33.3%		
IDP*	yes	23.5%	T-test	0.000 s
	no	76.5%		
Psychological shock	yes	50.5%	T-test	0.000 S
	no	49.5%		
SES	Low	44.1%	ANOVA test	0.006 S
	Fair	39.6%	Pearson's correlation	0.002 S
	Good	16.3%		

S = significant - NS = not significant

* Internally Displaced Persons

Table 2: Correlation between behavior type on Frankel scale and various factors.

Discussion

Dental fear is very common especially among children, which appears as a reflection of the dental environment or previous dental experience [10,11]. Other research compared between two different type of behavior management, tell-play-do, and live modeling for behavior management of children, and the results significantly lower among children who received TPD intervention which indicate the effectiveness of TPD methods for managing the children behavior [10]. Other study found that a simple questionnaire can product the behavior problems in children and this method can be use to help the appropriate planning for each child [7].

Another researcher studied the effectiveness of hypnosis combined with conventional behavior management techniques, and no significant difference were found comparing to the traditional methods [11]. Also, children with special needs or with mental or psychological health problem requires access to higher level of specialized services and resources, and mostly this service is not available [12].

It is important to reduce the pain and to make the dental experience painless as possible, one study found that the Wand system of computerized delivery for injection has a less painful experience comparing to the conventional local anesthesia [13-16].

Moreover, socioeconomic status plays an important role in determining the type of behavior the child will have in the dental clinic or during the dental treatment. However, very few research articles have focused on this point and none has studied the effect of SES during war or crisis on the general dental behavior among children. Usually children from high SES level will cooperate better during the dental treatment, and the lower the SES will become the harder it will be for the dental team to establish connection with the child and do the treatment [9].

Conclusion

This study focused on the effect of the SES during the Syrian crisis on the children general behavior management, especially for children who had a previous traumatic event, and the result of this study support the importance of providing special care for children from low SES level or children from areas affected with disasters in order to establish connection with the child and to do the dental treatment.

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Volume 3 Issue 6 June 2019

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