

Parents' Predictions and Assessment of their Children's Behaviour during their First Dental Treatment Visit

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Abstract: ***Introduction:** Due to the influence of parents on their children's emotional development, it is possible for parents to predict their children's behaviour during their first treatment visit to the paediatric dental clinic. Hence, it is essential to compare parents' predictions and self-assessment of their children's behaviour during the first restorative dental appointment with the treating physician's perception of the behaviour of these children. **Objective:** This study aims to determine parents' prediction and assessment of their children's behaviour during their first dental treatment visit. **Methods:** The research took the form of a cross-sectional study; a questionnaire was distributed among the parents of 74 patients visiting the paediatric dental clinic in Queen Rania Al Abdallah Hospital, and the treating dentists were also involved in the study. **Results:** Of the treatment outcomes, 51.3% revealed that there is an agreement between parents' predictions and dental treatment outcomes at all cooperation levels. Whether patients are cooperative, partially cooperative or uncooperative may be divisible as follows: in cooperative cases, agreement was recorded at 88%, in partially cooperative and in uncooperative cases, agreement was recorded at 25.7% and 50%, respectively. Of the children involved in this study, 85.1% did not have any health problems/chronic diseases. Based on the parents' viewpoints, 86.5% of children sit on the dental treatment chair and 75.7% allow the dentists to finish the treatment. The results also showed that age has a significant impact on parents' predictions. **Conclusion:** Dentists must listen to parents' concerns in order to save time, to be able to treat other patients and to avoid wasting time treating uncooperative patients. Additionally, these results are crucial in assisting dentists to focus on the latter and to attempt to develop appropriate handling methods based on parents' predictions.*

Keywords: Children's Behaviours, Parents' Predictions, Wright Classifications, First Dental Treatment Visit

1. Introduction

Preparing children for a visit to the dentist is deemed to be necessary, in order to encourage them and shape their positive behaviour in the dental clinic, so that the dentist can provide them with the necessary treatment [1,2]. In some cases, dentists spend a considerable amount of time adapting the child and convincing them about the treatment, whereas the actual treatment often requires just a few minutes. The behaviour of children in a dental clinic differs from one child to another, according to the care provided to him/her at home. There are fearful children, anxious children, shy children and resistant children, and the paediatric dentist must be sufficiently qualified to determine the child's psyche and deal with it appropriately. Therefore, parents are advised to follow certain strategies that are capable of predicting their children's behaviours and to provide suitable emotional support [3, 4].

Indeed, these children have various emotional feelings towards dental clinics. Fear is a manifestation of normal emotional development, a real or imagined threat or danger [5, 6]. Children's fears constitute a complex pattern that changes during the stages of development, and many of these fears are general, common or necessary as a means of preserving life or ensuring survival, allowing the individual to avoid dangerous or threatening situations. However, topics relating to threats or danger have undergone modification and change in contemporary societies; new topics that give rise to fear have emerged, such as smartphones and the fear of losing one's mobile phone (Nomophobia) [6, 7].

Fear of dentists is a common fear among children, as well as among certain adults [8, 9]. Some are reluctant to see the dentist for fear of the pain of treatment or as a result of a previous unpleasant visit or because they have heard about the suffering of a patient during treatment, such as tooth extraction or oral and maxillofacial surgery [10]. Dental phobia is a unique and distinct fear by comparison with other specific fears, as it includes harm or physical injury [11]. Unlike other treatment concerns, many patients consider the mouth as an organ which is one of the most sensitive receptors in the human body [12]. It is also of particular importance for early childhood development, as stressed by Freud, Erickson and Piaget [9].

Most children consider a visit to the dentist to be unpleasant and stressful (strange sounds, flavours, the application of a substance with a strange taste, meeting strangers, discomfort, pain). Therefore, uncooperative behaviour and a reaction of fear and anxiety are common emotional responses in daily dental practice [11]. Moreover, it is not surprising that the relationship between the mouth and emotion in the human body represents a source of emotional experiences, such as fear, even when an individual's reactions and fear responses are normal. Regarding dental treatment, the growth of pathological fears is related to many factors, including direct conditioning through the experiences that the individual has during dental treatment, in addition to a number of environmental and social factors; these interrelated factors complicate our understanding and study of the fears of clinic and dental treatment [13]. It is also recommended that families take their children to dentists periodically, starting from the emergence of the first primary tooth. This early childhood visit is very important,

enabling children to develop trust towards the dentist and allaying their fears.

Subjects and Methods

A cross-sectional study was conducted. The study sample comprised 74 participants, including both males and females. This sample was selected employing a convenient, non-probability, sampling technique to collect data from the participants. The study sample was collated by asking parents of children visiting the paediatric dental clinic in Queen Rania Al Abdallah Hospital to complete a survey, including questions relating to parents' predictions of their children's behaviour. Moreover, dentists who offered the dental treatment were requested to answer certain questions. Specifically, the study used a self-administrated questionnaire, which included closed questions for the parents during their children's visit. These questions included demographic patient information, e.g., gender and age, and a section relating to parents, e.g., their relationship to the child; the marital status of the parents, the child's sleeping arrangements and the medical history of the child. Based on the parents' viewpoints, questions were asked regarding the parents' expectations of their children's behaviour during dental treatment. The final part of the questionnaire focused on dentists' viewpoints relating to dental treatment situations with regard to children.

This questionnaire was validated by conducting a pilot study among 20 participants, who were not included in this research to obtain questionnaire reliability. This pilot study allowed researchers to make certain modifications accordingly, to ensure clarity and easy understanding of the study questions. The questions used in the questionnaire were written in the Arabic language, in order to obtain clear answers and to achieve the study's main objectives. Next, the data were coded, entered and analysed using the Statistical Package for the Social Sciences (SPSS), version 26.

2. Results

More females took part in the study than males; 58.1% of the children were female, while 41.9% were male. Moreover, Table 1 shows that most children were aged between five and seven years old (early school age) with 51.4% of females and 37.8% of males being below the age of five. The lowest percentage of participants was within the age range of eight to 11 years old at 10.8%.

Table 2 shows that children mainly attend dental appointments with one of their parents; 51.4% of children's companions were their fathers and 48.6% were their mothers. Of these parents, 95.9% were married and 4.1% were divorced. Furthermore, parents added that 64.9% of their children sleep with their brothers and/or sisters and 25.7% of them sleep with their parents. Only 9.5% sleep alone.

Table 2 also highlights whether or not children suffer from any health problems/chronic diseases. The participating parents confirmed that 85.1% of children did not suffer from any health problems or chronic diseases, while 14.9% did have health issues.

Table 3 indicates that 86.5% of children, as predicted by their parents, would sit on the dental treatment chair and 13.5% would not. Table 3 also highlights that 75.7% of parents ensure that their children allow dentists to complete the dental treatment, while 14.9% will not allow this; 9.5% of parents were unsure. With regard to children's cooperation, 50% of parents confirmed that their children would potentially be cooperative during dental treatment and 31.1% pointed out that their children could be cooperative. On the contrary, 18.9% of parents confirmed that their children would be uncooperative.

This study also attempts to explore dentists' viewpoints in relation to the visits, in order to identify whether the dental treatment was completed and/or how it was completed, as shown in Table 4.

More specifically, as demonstrated in Table 4, dentists use Wright's clinical classification of children's behaviour to determine that 63.5% of children are cooperative and that 21.6% of these are potentially cooperative. However, it has been indicated by dentists that 14.9% of children are uncooperative. In addition, dentists conclude that 86.5% of children allow them to finish the dental treatment, while 13.5% do not.

This study has examined the impact of age, the education level of children and their sleeping arrangements on patient cooperation and treatment completion. Table 5 compares parents' predictions with the dentists' perspectives of patient cooperation.

Table 5 shows that there is little difference between parents' predictions and dentists' evaluations. Therefore, the expectations of both parties are similar to one another. Specifically, children who were predicted to be cooperative, based on their parents' views, behaved as follows: during the treatment, 88% were cooperative and 12% were potentially cooperative; 0% were uncooperative. This shows the importance of parents' predictions in relation to dentists, as the predictions correlated almost exactly with the treatment outcomes; according to the dentists' evaluations of 25 patients, 22 were cooperative and three were potentially cooperative. Moreover, the findings indicate that based on parents' predictions that their children would be potentially cooperative, 62.8% of them were cooperative and 25.7% of them were potentially cooperative; conversely, 11.5% of the children were uncooperative. Table 5 also shows a comparison of parents' predictions of uncooperative responses from their children: 50% of children were uncooperative, while 21.4% were potentially cooperative and only 28.6% were cooperative.

Table 6 confirms that the impact of gender, children's ill health and sleeping arrangements on patient cooperation during dental treatment is insignificant, based on parents' predictions. This is proven as the p-value (Sig.) of each variable is more than 0.05. On the contrary, Table 6 shows that there is a significant effect of age on children's cooperation, as the p-value is 0.011 which is below 0.05.

3. Discussion

The key to being a good paediatric dentist is having the capacity to control challenging behaviours. Paediatric dentists are knowledgeable in a range of behaviour management strategies, including more sophisticated strategies (voice control, protective stabilization: passive or active), communicative strategies (positive reinforcement, reward strategies, tell-show-do) and pharmacological strategies (general anaesthesia, as well as sedation).

The successful restoration session in paediatric dentistry is understanding when to apply each behaviour control strategy. Choosing an incorrect strategy can lead to poor compliance, fear, compromised dental treatment and time-wasting for all concerned.

Therefore, anticipating which patients will present behavioural challenges can have an impact on scheduling appointments, educating parents and preparing advanced behaviour techniques [14].

Parents and other family members are regarded as the most reliable sources in respect of child raising and good behaviour among children, which unquestionably has a long-term impact on the establishment of a child's oral health status [15, 16, 17, 18]. The former are regarded as important players in terms of obtaining the best results for dental health and ensuring the well-being of children [14]. Hence, parents' viewpoints are deemed essential in determining dental care procedures. In this regard, several studies have indicated the importance of parental involvement [19, 20].

As parents have a significant influence on their child's emotional development and behaviour, they can predict how their child will respond and behave during dental treatment sessions (14). If we could understand parents' perceptions of their child's behaviour in a dental setting and were able to compare these with the clinicians' perspectives, we would be able to decide on the best management technique for each child patient, which would, in return, be more acceptable to the parent. This could also help save time in busy clinics, especially in public services, therefore, it might be possible to increase the productivity of such clinics.

4. Conclusion

This study concluded that children's gender, children's ill health and children's sleeping arrangements have an insignificant effect on patients' cooperation, based on parents' views. However, age is found to have a significant effect on patient cooperation. It is important to conclude that parents' predictions are close to actual treatment outcomes; hence, it is essential that dentists pay attention to parents' views, in order to save time and to provide services for other patients, rather than wasting time attempting to treat uncooperative patients. In addition, such findings are important in helping dentists pay more attention to such patients and in finding suitable strategies to deal with uncooperative patients, based on the parents' views of their children's cooperation.

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Appendix

Table 1: Demographic information of the children (n = 74)

Variables	Categories	Frequency	Percent
Gender	Female	43	58.1
	Male	31	41.9
Age	Below 5 years	28	37.8
	5-7 years	38	51.4
	8-11 years	8	10.8

Table 2: Information regarding the children's personal circumstances and their parents' relationship background

	Categories	Frequency	Percent
Relationship to the child	Father	38	51.4
	Mother	36	48.6
Marital status	Married	71	95.9
	Divorced	3	4.1
Sleeping arrangements of the child	With parents	19	25.7
	With brothers/sisters	48	64.9
	Alone	7	9.5
Child suffering from health problems/chronic diseases	Yes	11	14.9
	No	63	85.1

Table 3: Parents' predictions of their children's behaviours

	Categories	Frequency	Percent
Do you think that your child will sit on the dental chair?	Yes	64	86.5
	No	10	13.5
Do you think that your child will allow us to finish his/her treatment?	Yes	56	75.7
	No	11	14.9
	Not sure	7	9.5
To what extent do you think your child will be cooperative during the treatment process?	Cooperative	25	33.8
	Potentially Cooperative	35	47.3
	Uncooperative	14	18.9

Table 4: Dentists' viewpoints of children's behaviours during dental treatment (n = 74)

	Categorization	Frequency	Percent
Patient cooperation	Cooperative	47	63.5
	Potentially cooperative	16	21.6
	Uncooperative	11	14.9
Did the patient allow you to complete the dental treatment?	Yes	64	86.5
	No	10	13.5

Table 5: Comparison of parents' predictions and dentists' points of view regarding patient cooperation

		Dentists' Views * Parents' Predictions						
		Count						
		Parents' predictions						Total
		Cooperative		Potentially cooperative		Uncooperative		
		Frequency	%	Frequency	%	Frequency	%	
Dentists' views	Cooperative	22	88%	22	62.80%	4	28.60%	48=64.9%
	Potentially cooperative	3	12%	9	25.70%	3	21.40%	15=20.2%
	Uncooperative	0	0%	4	11.50%	7	50%	11= 4.9%
Total		25=33.8%		35=47.3%		14=18.9%		74

Table 6: Multiple regression identifying the relationship between parents' predictions and the demographic factors of children

Coefficients ^a						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	2.556	0.538		4.754	0
	Gender	0.085	0.17	0.059	0.499	0.619
	Age	-.326-	0.124	-.295-	-2.619-	0.011
	Children suffering from ill health	-.332-	0.227	-.166-	-1.461-	0.149
	Sleeping arrangements of children	-.106-	0.156	-.085-	-.675-	0.502

a. Dependent variable: parents' predictions