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Identification And Assessment of Factors Predicting Behaviour of The Child in The First Dental Visit.

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ABSTRACT

Introduction

Dental anxiety is one of the commonest problems which inherently develops during childhood and adolescence period of growth. This widely acclaimed challenge is not only faced by the dental professionals but also act as a major hindrance for parents and assisting dental personnels. This inturn leads to difficulty in devising an adequate treatment protocol in managing the child. Therefore timely evaluation of child's dental anxiety and identifying the contributing factors prior to receiving treatment act as a major key in establishing the success of the treatment.

Aim

This study was conducted to identify various factors and their influence on behvaioural management in children.

Materials and Methods

A questionnaire study was conducted to identify various factors and their influence on behvioural management in children. The predetermined questionnaire included two sections respectively Section A, which determined the behavior of the child with respect to social parameters and subsequently the child's behavior was classified according to Frankl

classification. Section B specified the existing parental attitude and perception to the child's varying modalities and anxiety.

Results

The study confirmed that 29.7% of children exhibited incidences of dental anxiety during their first dental treatment. Among the various contributing factors the study determined that maternal anxiety and unwanted threatening of child with regards to conveying the fear of pulling out child's teeth destabilizes child's behaviour in dental office.

Conclusions

Thorough knowledge regarding information on the origin of dental anxiety and uncooperative behavior in a child prior to treatment will help the pediatric dentist in devising an adequate treatment plan and behavior management strategies accordingly. Thus a well-defined pretreatment interview might aid the dentist in planning appropriate treatment modalities adequately.

Keywords: Dental anxiety, Pretreatment questionnaire, Pediatric dentistry

INTRODUCTION:

Dental anxiety is defined as unprecedented fear of visiting the dentist for preventive therapy and unwanted anxiety in receiving dental procedures. This in turn leads to difficulty in behavior management and poorer oral health care outcomes of the child.[1] Hence identifying the various contributing factors to dental anxiety facilitates early diagnosis and prompt dental treatment. Several studies have shown that the existing dental anxiety among children is contributed by several factors.[2,3] Dental anxiety is thus assumed to possess multifactorial etiology. Among the wide variety of factors the influence of maternal anxiety, age, gender, education and socioeconomic status and presence of caries are found to have undeniable effects on their children.

Maternal dental anxiety have exhibited to transmit it directly to child thereby having a considerable impact on child's behaviour. Studies pertains to the fact that younger children tend to be more anxious and uncooperative when compared to older ones.[2,3] Though gender predilection have received less importance few authors tend to the fact that anxiety levels are found to be higher among girls. Children belonging to low socioeconomic status and educational background presents with increased violent episodes of dental anxiety behavior.[4] Dental anxiety is considered to have a positive correlation with high prevalence of dental caries and profoundly act as a risk indicator.

The pertaining team of dental professionals should be aware of both the child's and parents perception of dental anxiety and their resultant attitude in receiving dental treatment according to their treatment needs. Parental awareness regarding the undeniable benefits of receiving dental treatment as well as their active involvement in the treatment scenario will help in creating a good rapport and communication with the dental team as well as the patient.[5] Hence, a questionnaire study was planned with the aim to identify and explore several variables in estimating the influence on behavior management problems (BMP) in children.

MATERIALS & METHODS:

A total of 125 children (63 boys and 62 girls) aged between 2 and 8 years participated in the study. The inclusion criterion was as follows: (1) Children age range- 2 to 8 years; (2) children seeking dental care and treatment needs; (3) Children accompanying parent/guardian/care taker.

(4) Must be child's first dental visit; (5) Dentist with no connection with the accompanying person. Children in emergency need of dental treatment were excluded from the study.

The accompanying person was informed about the study and consent was taken for participation.

An experienced dental researcher and practitioner enquired about each participant's background variables from accompanying persons using a standardized questionnaire.

The questionnaire consisted of 2 sections: Section A- Behavior of the child in social parameters; Section B- Parental Attitude and perception. The questionnaire comprised of 14 questions in total; Section A- 8 questions and Section B- 6 questions. The questions comprised of sociodemographic data, various emotions that the child display, signs of distress or discomfort, child's behavior with unknown people, nature of relationship of the child with others and parent's nature of threatening the child with dental treatment. Following the questionnaire session, initial examination was done. Children's dental behavior was noted using Frankl's behavior rating scale.The behavior was then analyzed in relation to the answers to the questionnaire , and a logistic regression model was used to determine the power of the variables to determine behavioral management problems. Regression was performed on the data with complete questionnaires. Chi-square test was used to evaluate the level of statistical significance among different variables used in the study.

RESULTS:

A total of 125 children (63 boys and 62 girls) aged between 2 and 8 years completed the study. Eight variables were found to be predictors of BMP and are listed as follows: (Fig-1,2,3)

1. Gender: Female > Male (56% Vs 44%).
2. Age: 4 years (37.3%) > 5 years (33.3%) > 6 years (29.3%).
3. Child's anxiety around strangers: Negative > Positive (73.3% Vs 26.7%).
4. Emotions displayed by the child: Lively or Responsive (57.3%) > Moody (30%) > Emotionally inert (7.3%) > Serious (5.3%).
5. Presence of Toothache: Negative > Positive (54% Vs 46%).
6. Threatening the child with fear of pulling out a tooth so as to restrain from sweet / chocolates: Positive > Negative (74% Vs 26%).
7. Guardian's expectations of the child's behavior during treatment: Positive Dental Behavior > Negative Dental Behavior (60.7% Vs 39.3%).
8. Maternal Anxiety: Low (34.7%) > High (31.3%) > Moderately high (26%) > Moderately Low (8%).

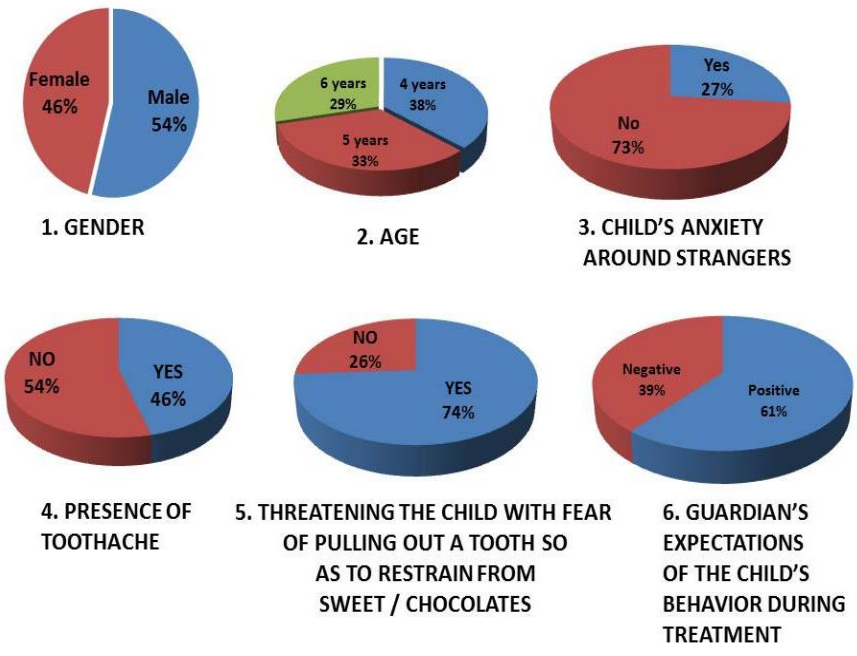

Figure 1. Variables used in the current study to predict BMP.

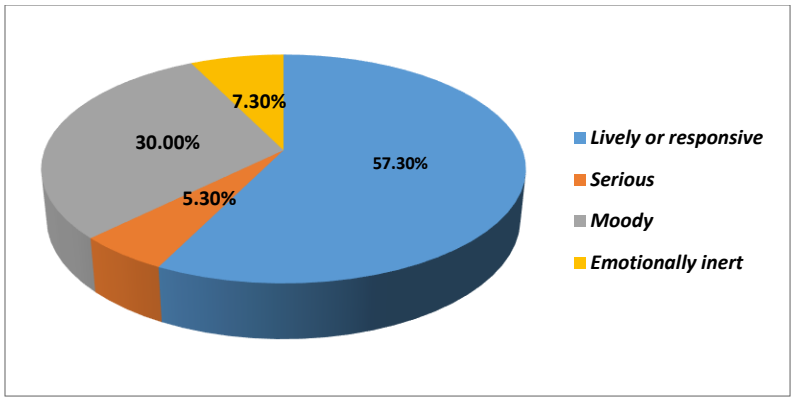

Figure 2. Emotions displayed by the child

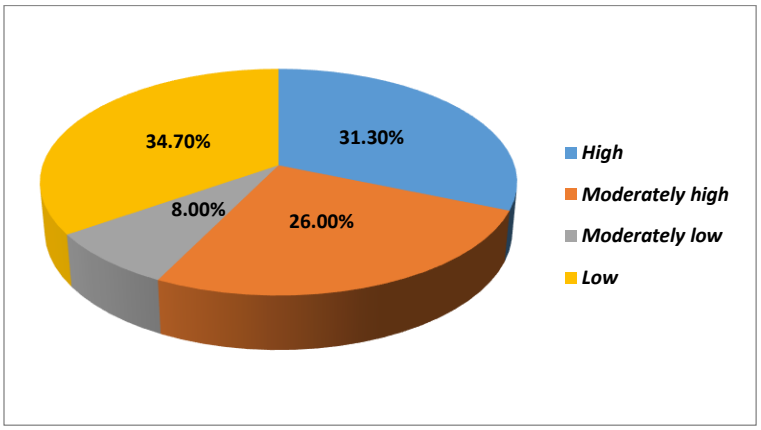

Figure 3. Maternal Anxiety

DISCUSSION:

Multiple factors contribute to dental anxiety and are divided into external and internal origin. External origin could be due to simple fear arising from heard or felt negative dental experience. Internal origin could be pertaining to individuals own character of phobia.[6,7,8] A dentist must be aware of these behaviors of the child in order to successfully treat them with behavior management skills. These skills help a clinician to potentially improve a child's behavior. Complete understanding of child's development and origin of dental phobia helps a clinician to plan and manage kids according to their nature of behavior.[9] The reaction of a child to the demands of dental treatment is quite complex to understand and contributed by lot of factors. Age of the child, cognitive status, personality development, anxiety, fear, response to strangers, previous dental experience, and maternal anxiety influence a child's response to the dental treatment.[10] Since children exhibit a wide range of emotional, intellectual, physical, personality and social development, and different attitudes and temperament, the current study was aimed to evaluate the influence of these factors on the prediction of behavioral responses during an first dental appointment.

Logistic regression analysis of the present study identified eight variables of the questionnaire which were found to be statistically significant predictors: Gender; Age; Child's anxiety around strangers; Emotions displayed by the child; Presence of Toothache; Threatening the child with fear of pulling out a tooth so as to restrain from sweet / chocolates; Guardian's expectations of the child's behavior during treatment; Maternal Anxiety.

Study by Baier et al suggested that children less than 6 years of age were tend to have negative dental behavior, highlighting that age may be an important factor in determining dental anxiety.[11] The result of the present study is in accordance with the conclusion given by Holst and Xia. They

suggested that a child's behavior depends on various factors including maturity level, personal characters, environmental factors, and the parenting nature to cope in the dental clinical setting.[12,13] Venham et al found that children with anxiety had stronger promotion of independence and weak in socialization, resulting in anxiety when experiencing strangers.[14] This is in accordance with the results of the present study.

Based on the current study, predictors of dental anxiety in children were identified. The results were obtained with a simple questionnaire model of study and an interview prior to dental treatment might help the clinician in understanding the child's nature of behavior.

CONCLUSION AND FUTURE DIRECTIONS:

Based on the results obtained in the present study, the predictors of dental anxiety are gender, age; child's anxiety around strangers, emotions displayed by the child, presence of toothache; threatening the child with fear of pulling out a tooth so as to restrain from sweet / chocolates; guardian's expectations of the child's behavior during treatment; maternal anxiety. However, there are many other variables which may play a role in managing a child in a dental office setting.[15] Future research needs a focus on this field.

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