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REVIEW- EMOTIONAL INTELLIGENCE BETWEEN PEDIATRIC PATIENTS AND THEIR PARENTS DURING DENTAL TREATMENTS

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Abstract:
Dental fear and anxiety are still the most commonly stated reasons for a child's bad behavior in the dental operatory. Children's intelligence influences their communication, feelings, and reactivity to dental problems. The advantages of parental attendance in reinforcing the child's behavior during dental treatment are currently being debated. This study was conducted using numerous databases to cover any research on our topic that were published up to the middle of 2022. Child patient behavioral control is a major concern in pediatric dentistry. The emotional conditions of patients' mothers may influence their children's attitudes. The purpose of this study was to analyze and discuss the emotional bonds between children and their mothers based on physiological responses of child patients and subjective worries of their moms during dental procedures.

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INTRODUCTION:

The term "emotional intelligence," or EI, is defined as "the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" [1]

Children's emotions are distinct and difficult to comprehend because one of their characteristics is that the same conduct displays multiple sorts of emotions [2]. A youngster can express his emotions, but it may take time and assistance to recognize which emotions he is experiencing. Parents must assist their children locate acceptable emotions so that they can recognize and understand the four basic emotions, which are fear, anger, sadness, and joy [2,3].

In adult dentistry, the patient-practitioner interaction is changed into the more complicated patient-parent-dentist interaction in pediatric dental [4,5]. A child's reaction to the demands of dental care is complex, and it is influenced by background variables such as personality traits and parental circumstances [5]. The infant's conduct will begin to follow a pattern established by its interaction with the mother. Parents' views and feelings have a significant impact on their children's emotional development [6]. Previous research indicates that non-responsive parents have children that do not cope adaptively with stress and have less contact in social situations [5,6]. Similarly, parents who feel more good effects and share more of those positive effects with their children have children with higher emotional abilities [7].

Parental emotional intelligence is another aspect that may play an influence in children's emotional-expressive behaviors [7]. Emotional intelligence is the ability to recognize the significance of emotions and their interactions, as well as to reason and solve problems based on them. Emotional intelligence has been proposed as a coping technique that promotes successful and efficient self-regulation toward desired outcomes [8]. According to studies, parents have a significant role in the development of their children's emotional skills, which provide youngsters with the flexibility to respond to stressful life situations in a resilient manner [9]. As a result, numerous aspects of parent-child interactions have been implicated in the development of child anxiety disorders and behavioral problems [9,10]. It appears that a mother's emotional intelligence is one of the most important aspects in the development of a preschool child's fear and conduct in stressful situations such as the dentist setting.

DISCUSSION:

Dentistry as an interactive field has put more and more emphasis on the human dimension of the relationship between dental practitioners and patients. Although technology has made great improvements in dentistry nowadays, our task as a pediatric dentist is still the same: to carry out dental procedures on children with variant ranges of cooperation [9]. According to Wright et al., as a dental health team, we are supposed to follow two main goals: to perform an effective and efficient dental treatment and to initiate positive attitude in the patients [9]. Not only the patients' overall physical condition but also their psychological and mental state should be of great concern to the caregiver [10].

Understanding children’s development and behavior are crucial issues in pediatric dentistry [11]. Physical, social, emotional, and cognitive/intellectual developments are integrated and influence one another [12]. Different predictors were demonstrated for children’s negative behavior in the dental setting. A strong correlation was proposed between dental fear and children’s behavior so that it could be used as a behavior indicator in the dental setting [13]. Moreover, it was noted that the child’s age was significantly related to his behavior; in which more negative behavior should be expected from younger children. Hence, age would be considered an influential factor in the overall behavior of children during dental treatment. Furthermore, female children were proposed to show higher levels of dental fear and thus negative behavior than that of male children [14]. Additionally, previous unpleasant dental experiences have been shown to influence the display of children’s negative behavior in the dental clinic [11]. However, the exact reason why some children well behave in the dental operatory while others do not despite being under the same conditions is still not obvious. Therefore, it seems that another hidden factor, probably the cognitive factor, needs to be counted [15]. The Cognitive factor plays a major role in dental fear and anxiety (DFA) [6]. The correlation between children's intelligence and DFA, as well as their behavior in the dental clinic is a sensitive issue [7,11]. Children’s behavior represents a great challenge in dental practice, as safe and effective treatment requires the shaping of the child and his parents’ behaviors towards dental care. Hence, the term ‘behavior guidance’ has been developed. It entails that the dentist/dental team interact with the patient and the parents to allay DFA in order to establish a good rapport. This is needed for providing quality treatment and for encouraging a positive attitude towards oral health care [15].

Parental presence might be active or passive during dental treatment [16]. Involving the parent as a passive yet silent helper can provide a relaxing atmosphere without unnecessary interference. However, if the parent is properly educated, he/she could actively act as a valuable adjunct in establishing rapport between the child and the dentist during treatment [17].

Intelligence has a significant impact on children's communication, feelings, and responsiveness to dental situations. Limited studies have dealt with the association between children's intelligence and their overall behavior in the dental clinic. The influence of parental presence/absence on the children's behavior and fear during dental treatment has been abundantly evaluated in the literature [17].

Providing a comfortable and safe clinical environment is essential for pediatric dentistry in order to prevent children from developing dental anxiety and/or phobias and to cultivate desirable oral health habits. Since a pediatric dental practice is generally conducted in the presence of the caregiver in Japan, the triple relationship between dental professionals, child patients, and their caregivers is important. Several studies on anxiety or fear subjectively experienced by child patients during dental treatment were performed [18]. Additional studies investigated the relationship between mother and child in pediatric dentistry, as well as other fields, and reported the deep and strong mental correlation between mother and child [18]. However, most of these studies examined the subjective anxiety assessed by children themselves or by accompanying parents using psychometric scales to evaluate the internal anxiety or stress of children [19].

According to Salovey et al. [20], parents who are emotionally sensitive to their children's emotional needs usually have emotionally intelligent children. Research confirms the association between parents' level of emotional control or regulation and that of their children [20]. Parents who are able to explain and reflect on their own and their children's emotions help them to develop strong 'mentalizing' capacities in which emotions are understood and skillfully regulated [21]. Other studies have shown that parents' positive expressiveness (mainly in mothers) mediates the relationship between parental warmth and empathy in children, and that, in turn, children's empathy mediates the relationship between parental positive expressiveness and children's social functioning [21]. Thus, a bidirectional model of effects between the emotional conduct of parents and children is evidenced [22].

Anxiety leads to increased environmental and somatic scanning that facilitates sensory receptivity. Patients with generalized anxiety are hypervigilant about their internal bodily states which should increase attention to pain . Alwin et al. [23] found no difference in general anxiety between the groups of cooperative and uncooperative patients. However, Klorman et al. found that the patients trait anxiety was correlated with uncooperativeness in two studies of their three studies, but did not predict behavior profile scores in any sample.

Children with low IQ need significantly longer time to accept the dental treatment situation. Children with above-average IQ had positive levels of cooperation, and those with superior IQ had definitely positive cooperation during the dental procedure. On the other hand, children with borderline IQ seemed to have negative cooperation, and those with below-average IQ had definitely negative cooperation. That is to say, as the children's intelligence quotient increases, so does their level of cooperation, and they tend to exhibit better and more constructive communication and cooperation. This helps the child to have an efficient predominance over his stress and anxiety [24].

Intelligence and sensory processing seem to be closely related; hence, intelligent children show higher speed of sensory processing. Both visual and auditory processing have a critical role in intelligence. However, considering pediatric patients, auditory stimuli tend to be less restrictive. An et al. found a positive correlation between the intelligence quotient and percent change of gamma increase relative to baseline in the auditory cortex [23]. The results of this study are in line with the current study's findings. Verbal distraction as a behavior management technique is the main method during dental treatment of pediatric patients, and as the present study suggests, in children with higher levels of IQ, a higher pace of auditory information processing and better cooperation are expected.

In a study to determine predictive factors for children behavior in the dental environment, the majority of children demonstrated cooperative attitude. The child's age, the technique employed, and the expertise of the dental practitioner may be the potential reasons for this result. Many children have adequate cognitive capacity after four years of age to control their fear and comply with dental treatment. In this study, 13.7% of children assumed to be extremely anxious presented promising behavior. Since it is especially designed for preschool children and also has moderate to high reliability in distinguishing anxious and nonanxious

children, the Venham picture test (VPT) was used in the study. Three predictive variables were correlated with child behavior in the aforementioned study: the mother's estimation of the child's behavior, the level of anxiety of the child (VPT), and whether the child had suffered from a toothache before [24].

In accordance with this study, Shetty et al. found a significant positive correlation between IQ and Frankl's behavior scale in healthy children while no correlation in the group with hearing and speech impairment was recorded [25]. Considering that in this study, the Culture Fair Intelligence Test Scale 3 (CFIT) and performance scale (nonverbal) were used to measure IQ, and also due to the limitations caused by the existence of speech and hearing impairments for the correct implementation of behavior management, especially Tell-Show-Do (TSD), this difference in results is justifiable [25].

CONCLUSION:

The review's main finding revealed that a high EQ may be more helpful than a low EQ in modulating children's compliance during dental treatment. Many studies show that children with greater total EQ as well as higher scores on intrapersonal, interpersonal, adaptability, and stress management measures can be more adaptable and effective in the dentistry context. They looked into the emotional bond between schoolchildren and their moms in an empirical setting where the level of stimulus could be carefully controlled. However, our patients were much younger than schoolchildren, and the data was collected in a real-world clinical setting where environmental control is more difficult, because assessing and controlling stress and anxiety in younger children is an important issue in pediatric dentistry. Some factors may also regulate or mitigate the relationship between mother-child and children's behavior and emotional development. For example, family atmosphere factors such as belonging to a nuclear or extended family, the number of siblings, father authority, the parent's own developmental history with her or his own parents, and child personal characteristics such as evolving temperament can all have an impact on parenting quality as the child grows.

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