AN ASSESSMENT OF CORRELATION OF MOTHERS EMOTIONAL INTELLIGENCE WITH THEIR CHILD'S ANXIETY LEVELS IN PEDIATRIC DENTISTRY- AN OBSERVATIONAL CROSS SECTIONAL STUDY

ABSTRACT

AIM – To assess the correlation between emotional intelligence of mother and the anxiety level of their children in a dental clinic.

METHOD –The study was done on a sample size of 80 mothers and their children aged 3-7years.A self reported validated questionnaire -Schutte Emotional Intelligence scale was given to mothers to evaluate their emotional intelligence and the children were assessed during the dental treatment procedure using Frankl behavior and Venhams anxiety rating scale.

RESULT - A statistically significant moderate positive correlation found between mother's EQ and Frankl scale r = 0.468, (p=0.000). A statistically significant moderate negative correlation was found between mother's EQ and Venham scale r = -0.450(p=0.000) .

CONCLUSION – The findings of this study imply that mothers with higher emotional intelligence have children with lower dental anxiety levels during dental treatment.

KEYWORDS – Dental Anxiety and Behavior, Emotional Intelligence ,Emotional Quotient, Frankls behavior rating scale , Venhams anxiety rating scale.

INTRODUCTION

Dental anxiety, the fifth most common fear, [1] is a prevalent psychological disorder triggered by threatening stimuli and is a major reason for avoiding dental care. It affects a large number of children and adults worldwide and poses a significant challenge in patient management in dental clinics.

Children are often accompanied by their parents to the dental clinic, where parents play a crucial role in shaping their children's dental attitudes. Research indicates that mothers typically have a stronger influence on their children due to their closer relationship. [2,3]

The behavior of infant tends to develop patterns based on their relationship with their mother.[4,5] Consequently, mother's dental anxiety affects not only their own oral health but also contributes significantly to the development of dental anxiety in their children.

Salovey and Mayer introduced the term Emotional Intelligence in 1990, defining it as a set of skills for accurately appraising and expressing emotions, effectively regulating emotions, and using emotions to motivate, plan, and achieve goals.[6] Assessing the emotional intelligence of mothers and the anxiety and behavior of children is crucial, as a mother's emotional intelligence significantly influences the development of her child's behavior and anxiety levels.[7] Parents with high emotional intelligence are better at managing their emotions in stressful situations, serving as role models from whom their children can learn emotional intelligence as stated by Aminabadi NA, Adhami ZE et al. [8]

Therefore, this present study was designed to explore the possible correlations between maternal emotional intelligence and child's behaviour and anxiety levels during the first dental visit .

MATERIALS AND METHODS

The study was conducted on 80 mothers and their children aged 3-7 years who reported to the Department of Pediatric and Preventive Dentistry . The need for the study and the method was explained to the mothers and written informed consent was obtained.The sample size was estimated using nMaster software. The participants were selected on basis of certain eligibility criterias as follows:

INCLUSION CRITERIA

- Mothers with minimum high school education.
- Mothers having single child only
- Mother and Child with complete physical and mental health with no confounding medical history.
- Children aged 3-7year .
- First dental visit of the child.

EXCLUSION CRITERIA

- Mothers who were not willing to participate in the study.

ASSESSMENT METHOD -

The Schutte Emotional Intelligence scale[11] questionnaire was used for assessment of emotional intelligence of mothers. The questionnaire consisted of 33 questions both in Hindi and English language and was given to the mothers to complete it in the waiting room according to their language preference. The scoring was noted for each question answered. This scale was used for assessing emotional intelligence of mother.

The scale used 4 sub-scales: Emotion Perception, Utilizing Emotions, Managing Self Relevant Emotions and Managing Other's Emotion. The scoring was done on 5 point scale ranging from 1(strongly disagree) to 5(strongly agree) with higher scores indicating higher emotional intelligence of mother.

Dental behaviour and anxiety of the child was assessed using Frankl behaviour rating scale and Venhams anxiety rating scale.[13] during intraoral examination at the first dental visit.

STATISTICAL ANALYSIS

The data was collected ,compiled, organized and analysed using Microsoft Office Excel version 10 and IBM SPSS STATISTICS, windows version 23.0 Armonk,NY :IBM Corp software. The data was analysed using Spearmans rho analysis for the correlation between Mother's emotional intelligence, Frankl behavior rating and Venhams anxiety rating scale.

RESULTS

Participants included 80 mothers with 39 girls and 41 boys aged between 3-7years .

The analysis (table 1.a) revealed that that out of 80 mothers about 35 mothers were highly emotionally intelligent, 27 had average emotional intelligence and remaining 18 mothers had low emotional intelligence .Table 1.b shows the correlation between mothers emotional intelligence and venhams anxiety scale.

Table 2 displays the correlation between mother's emotional intelligence and Frankl behavior rating scale and Venhams anxiety rating scale. There was a statistically significant moderate positive correlation found between mother's EQ and Frankl scale $r = 0.468$, ($p=0.000$). A

statistically significant moderate negative correlation was found between mother's EQ and Venham anxiety scale r = -0.450(p=0.000)

CORRELATIONS				
Frankl Behavior		Mother's Emotional intelligence		
Rating	Number of children	High	Average	Low
Definetly negative	10	2	7	1
negative	20	3	6	11
positive	30	20	7	3
Definetly positive	20	10	7	3

TABLE 1.a-CORRELATION OF MOTHERS EQ-I and FRANKL BEHAVIOR RATING SCALE.

CORRELATIONS				
Venhams anxiety scale		Mother's Emotional intelligence		
Rating	Number of children	High	Average	Low
0	9	7	2	0
1	46	24	17	5
2	7	1	2	4
3	11	2	2	7
4	7	1	4	2
5	0	0	0	0

Table 1.b – Correlation of Mothers EQ-I and Venhams Anxiety scale

CORRELATIONS					
			Mother_EQ	Venham_scale	Frankl_scale
Spearmans rho	Mothers emotional intelligence	Correlation Coefficient	1.000	-.450 **	.468 **
		Sig. (2-tailed)	.	.000	.000
		N	80	80	80
**Correlation is significant at the 0.01 level (2-tailed).					

TABLE 2 . Correlation between mother's EQ, Frankl and Venham's scale

DISCUSSION

The present study was designed to explore the introspects that there is a correlation between mothers emotional intelligence with child anxiety and behavior in a dental setting .The results showed that there is a positive correlation and it is a positive predictor for child's behavior assessment. This implies that children tend to show more flexible behavior whose mothers are more emotionally intelligent. Parents with high emotional intelligence are adept at managing stressful situations in a better way and thus their children may develop their emotional intelligence by observing and learning from them .[6]

Research conducted by lluna maria et al has stated that Emotional intelligence has four empirical subscales including intrapersonal, interpersonal, stress management and adaptability[1] .Intrapersonal emotional intelligence represents the ability to be in touch with one's own feelings and understand ones feelings and emotional experiences whereas Interpersonal emotional intelligence involves ability to understand and interact well with others. Goleman asserts that there are five key elements to EI: self-awareness, self-regulation, motivation, empathy, and social skills.

Studies[8,9] by Aminabadi NA et al have proposed a substantial role of parents in the development of their children's emotional competences that provide children the ability to respond to stressful life events in a resilient way. Similarly the results of the present study

also proves that children of emotionally intelligent mothers are also emotionally intelligent and can handle their emotions appropriately in stressful conditions such as dental setting.

Studies by Aminabadi NA[7] et al show that mothers with higher levels of EI are more receptive to their child's needs, spend more time with their children, and give more importance and attention to positive parenting . Wood, Jeffrey et al [12] and Negreiros, J. & Miller ,L.D[13] conducted studies on parenting and its relation to child anxiety and have found a positive corelation between them.

Therefore it is evident that children who perceive their parents as warm and less controlling have shown better coping skills. EI is an emotional characteristic that helps regulate emotions and impulses and increases interaction and empathy with others, including the mother/child dyad.[9] Mother's emotional intelligence affects how she nurtures and interacts with their child. resources can help mother develop her emotional intelligence over time which can lead to better support for her child in future medical or dental settings.High emotional intelligence helps maintain a level of clarity that allows parents to respond to their child behavior in a positive and encouraging manner. [8] In the first visit , it will be useful if we get to know mothers emotional intelligence initially so that dental professional can tailor a more better child friendly approach and behavior modification to reduce the child anxiety in the first dental visit.

There is dearth of literature correlating the emotional intelligence of mothers with the anxiety level of children and therefore this study provides an insightful introspect into an important correlation between a child and a mother

CONCLUSION

The findings of this study imply that mothers with higher emotional intelligence have children with lower dental anxiety levels during dental treatment. Mothers with high emotional intelligence have high self-esteem with a positive attitude towards life and are flexible in stressful situations. The findings of the current study enhance our knowledge about a very important predictor which shows the importance of mother's emotional intelligence and its association towards child's dental anxiety and this insights underscores the importance of developing behavior management strategies tailored to the child behavior in dental setting.

CONFLICT OF INTEREST

No conflict of interest

FUNDING

No funding to disclose

REFERENCE

ww.Freidson E, Feldman JJ. The public looks at dental care. The Journal of the American Dental Association. 1958 Sep 1;57(3):325-35

1.Murad MH, Ingle NA, Assery MK. Evaluating factors associated with fear and anxiety to dental treatment-A systematic review. J Family Med Prim Care. 2020 Sep 30;9(9):4530-4535.

2.Goyal J, Menon I, Singh RP, Sharma A, Passi D, Bhagia P. Association between maternal dental anxiety and its effect on the oral health status of their child: An institutional cross sectional study. J Family Med Prim Care. 2019 Feb;8(2):535-538.

3.Golombok S, Shaw K, McConnachie A, Jadva V, Foley S, Macklon N, Ahuja K. Relationships between mothers and children in families formed by shared biological motherhood. Hum Reprod. 2023 May 2;38(5):917-926.

4.S Dhull K, Dutta B, M Devraj I, Samir PV. Knowledge, Attitude, and Practice of Mothers towards Infant Oral Healthcare. Int J Clin Pediatr Dent. 2018 Sep-Oct;11(5):435-439.

5.Morris AS, Silk JS, Steinberg L, Myers SS, Robinson LR. The Role of the Family Context in the Development of Emotion Regulation. Soc Dev. 2007 May 1;16(2):361-388.

6.Mayer JD, Salovey P, Caruso DR, Sitarenios G. Emotional intelligence as a standard intelligence. Emotion. 2001 Sep;1(3):232-42

7.Aminabadi NA, Adhami ZE, Oskouei SG, Najafpour E, Jamali Z. Emotional intelligence subscales: Are they correlated with child anxiety and behavior in the dental setting. Journal of Clinical Pediatric Dentistry. 2013 Sep 1;38(1):61-69

8. Aminabadi NA, Pourkazemi M, Babapour J, Oskouei SG. The impact of maternal emotional intelligence and parenting style on child anxiety and behavior in the dental setting. 2012 Nov;17(6):1089

9. Aminabadi NA, Erfanparast L, Adhami ZE, Maljaii E, Ranjbar F, Jamali Z. The impact of emotional intelligence and intelligence quotient (IQ) on child anxiety and behavior in the dental setting. Acta Odontol Scand. 2011 Sep;69(5):292-8.

10. Wide U, Hakeberg M. Treatment of Dental Anxiety and Phobia-Diagnostic Criteria and Conceptual Model of Behavioural Treatment. Dent J (Basel). 2021 Dec 17;9(12):153

11. Schutte NS, Malouff JM, Hall LE, Haggerty DJ, Cooper JT, Golden CJ, Dornheim L. Development and validation of a measure of emotional intelligence. Personality and individual differences. 1998 Aug 1;25(2):167-77

12.Wood, Jeffrey & McLeod, Bryce & Sigman, Marian & Chin-Wei, Hwang & Chu, Brian. (2003). Parenting and childhood anxiety: Theory, empirical findings, and future directions. Journal of child psychology and psychiatry, and allied discipline

13.Negreiros, J., & Miller, L. D. (2014). The role of parenting in childhood anxiety: Etiological factors and treatment implications.clinical pyschology*: **science and practice** 21*(1), 3–17.

14. Nigam AG, Marwah N, Goenka P, Chaudhry A. Correlation of general anxiety and dental anxiety in children aged 3 to 5 years: A clinical survey. J Int Oral Health. 2013 Dec;5(6):18-24.

15. Kochanska G, Murray KT. Mother-child mutually responsive orientation and conscience development: from toddler to early school age. Child Dev. 2000;71:417-3

16. Por J, Barriball L, Fitzpatrick J, Roberts J. Emotional intelligence: its relationship to stress, coping, well-being and professional performance in nursing students. Nurse Educ Today. 2011;31:855-60

17. Reitman D, Assef J. Parenting practices and their relation to anxiety in young adulthood. J Anxiety Disord. 2010;24:565-72

18. Thirlwall K, Creswell C. The impact of maternal control on children's anxious cognitions, behaviors and affect: An experimental study. Behav Res Ther. 2010;48:1041-6.

19. Rhudy JL, Meagher MW. Fear and anxiety: divergent effects on human pain thresholds. Pain. 2000;84:65-75.

20. Dallaire DH, Weinraub M. Predicting children's separation anxiety at age 6: the contributions of infant-mother attachment security, maternal sensitivity, and maternal separation anxiety. Attach Hum Dev. 2005;7:393-408.

21. Aminabadi NA, Farahani RM. Correlation of parenting style and pediatric behavior guidance strategies in the dental setting: preliminary findings. Acta Odontol Scand. 2008;66:99-104.

22. Krikken JB, Veerkamp JS. Child rearing styles, dental anxiety and disruptive behavior; an exploratory study. Eur Arch Paediatr Dent. 2008;9:23-8.

23. Van Meurs P, Howard KE, Versloot J, Veerkamp JS, Freeman R. Child coping strategies, dental anxiety and dental treatment: the influence of age, gender and childhood caries prevalence. Eur J Paediatr Dent. 2005;6:173-8.

LEGENDS

Table 1a : shows correlation between mothers emotional intelligence and frankls scale

Table 1b : shows correlation between mothers emotional intelligence and Venhams anxiety scale

Table 2: shows correlation between mothers emotional intelligence,frankl behavior rating scale and venhams anxiety scale