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Comparative Evaluation of the Impact of Parental Counselling on Child's Behavior in Dental Operatory

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Abstract: ***Introduction*: Parent's dental fear has been shown to have a significant impact on children's dental fear and behaviour and parental counselling can help them understand and manage their own dental anxieties, which can influence child behavior. *Aim*: Comparative evaluation of the impact of parental counselling on child's behaviour in dental operatory. *Materials and methods*: A randomised clinical trial study was conducted on 40 children aged between 4 - 9 years to assess the impact of parental anxiety in child's behaviour. Pre and post counselling evaluation was done by using Modified Frankel behaviour rating scale for dentist assessment of behaviour of child, Facial image scale for assessment of child's anxiety in his own terms, Parental cooperation scale for assessment of parent's behaviour. *Results*: The values were statistically analyzed using Wilcoxon Signed Ranked test and Mann - Whitney U test. Level of significance *P ≤ 0.05 was considered as statistically significant association. *Discussion*: Our results indicated that the children of counselled parents showed less anxiety because providing parents with information about what was expected and what they should tell their child before dental treatment was found to be an effective intervention in reducing the preoperative anxiety of the parents, which in turn reduced the anxiety in children. *Conclusion*: This study concludes that parental anxiety does have an influence on children anxiety and this linkage could be used for positive knowledge dissemination hence promoting positive dental attitude among both parents and children.***

Keywords: Anxiety, Parental Counselling, Child dental behaviour

1. Introduction

Pediatric dentistry not only look upon maintaining oral health status among children but also focuses on to provide a positive experience among children in each dental visit. In a dental setup, fear and anxiety are the most common deterrents which is exhibited by an individual, therefore, it should be given special attention by parents and dentist both.[1] Different behaviour management techniques are used to alleviate child's fear and anxiety such as communication, Tell Show Do, Tell Show Play Doh, modelling, parental involvement and counselling for better interaction.[2]

If these factors are not addressed properly, a fear can led to phobia, causing a child to completely restrain himself from any dental procedure resulting into either subjective or objective fear. Anxiety and fear are the two major reasons for which a child can avoid entire dental procedure.3 Subjective fear can develop due to various reasons such as television, friends and family, however it can be especially influential & deeply rooted in children if it is transferred from mother. According to literature, maternal anxiety plays a significant role in stimulating anxiety in a child.[1]

Both dental anxiety and fear evoke physical, cognitive, emotional, and behavioral responses in an individual which is a frequently encountered problem in dental offices. Parent's dental fear, especially the mother's, has been shown to have a significant impact on children's dental fear and behaviour.[4] The most significant component in child's behaviour is behaviour guidance and it should be started even before the first appointment via pre - mailing, pre - telephonic conversation etc. Through this approach pessimistic outlook of parents can be changed into optimistic attitude towards the treatment and they can mould the behaviour of child in a positive way.[5, 6]

Parental counselling is a relationship in which a professional or trained individual offers to support another in recognizing, identifying, and managing dental fear and anxiety - related psychological issues. Counselling helps parents understand and manage their own dental anxieties, which in turn can reduce the child's anxiety. Counselling can equip parents with strategies to prepare their child for the dental visit, fostering positive expectations and reducing apprehension. Counselling allows parents to learn effective communication techniques to use with their child during the dental visit, promoting cooperation and understanding. Parents can learn about different behaviour management techniques that can be used to help their child cope with dental procedures, leading to a smoother and more positive experience.

Parental experience and behaviour plays a very crucial role in managing a child in a dental clinic as every child have different opinion about the clinic due to various circumstances which includes past dental experiences of

parents, parent - child relationship, parent dental anxiety and fear, parental perspective. To understand the effect of parental behaviour on children, will definitely help the dentist in managing the child during dental procedures in much better way.[7]

Parental counselling based on anticipatory guidance (health promotion model) plays a vital role in spreading awareness among parents on how they can guide their child in a better way so that the child turns out to be a happy patient.[8] Therefore, the aim of this study is comparative evaluation of the impact of parental counselling on child's behaviour in dental operatory.

Aim

Comparative evaluation of the impact of parental counselling on child's behaviour in dental operatory.

2. Materials and Methods

A randomised clinical trial study was conducted on 40 subjects aged between 4 - 9 years who reported in the outpatient Department of Pediatric and Preventive Dentistry for their first dental visit. The parents were explained about the study and only those who agreed and signed informed consent were included in the study as per the inclusion criteria.

Inclusion criteria

- The child who falls under 4 - 9 years of age group
- First dental visit of a child
- Parents who gave informed consent
- Children needing restorative procedures

Exclusion criteria

- Parent not willing to give consent
- Children with special health care needs
- Children who received a previous dental treatment

After the final enrolment, children were randomly divided using lottery method into two different groups equally.
Group I – Counselling group (Parents of these children were counselled)
Group II – Non - Counselling group. (Parents of these children were not counselled)

Pre and post counselling evaluation was done by using these three scales viz Modified Frankel behaviour rating scale for dentist assessment of behaviour of child (Fig No.1); Facial image scale for assessment of child's anxiety in his own terms (Fig No.2); Parental cooperation scale for assessment of parent's behaviour by Kupietzky et al (Fig No.3). During the first visit, the baseline data for both the groups were noted via the aforementioned scales. The parents in Group I were counselled about dental treatment, factors influencing behaviours in dental operatory and methods to reduce anxiety in children by the trained councillor and this knowledge was reinforced by handing out education pamphlets. The children and parents in Group II were made to follow regular patient protocols and initiated for treatment as per procedure. The first dental visit was an introductory visit in both groups and no dental treatment was carried out. During the second visit, restorative treatment was carried out in both groups as per protocol and post treatment values were noted on all evaluatory scales.

Rating	Wright's modification	Attitude	Definition
1.	(–)	Definitely negative	Refusal of treatment, crying forcefully, fearful, or any other overt evidence of extreme negativism
2.	(–)	Negative	Reluctant to accept treatment, uncooperative, some evidence of negative attitude but not pronounced, i.e., sullen, withdrawn
3.	(+)	Positive	Acceptance of treatment; at times caution. Willingness to comply with dentist, at time with reservation but patient follows the dentist's direction cooperatively
4.	(++)	Definitely positive	Good rapport with the dentist, interested in the dental procedure, and

Figure 1: Modified Frankel behaviour rating scale (Wright's modification)

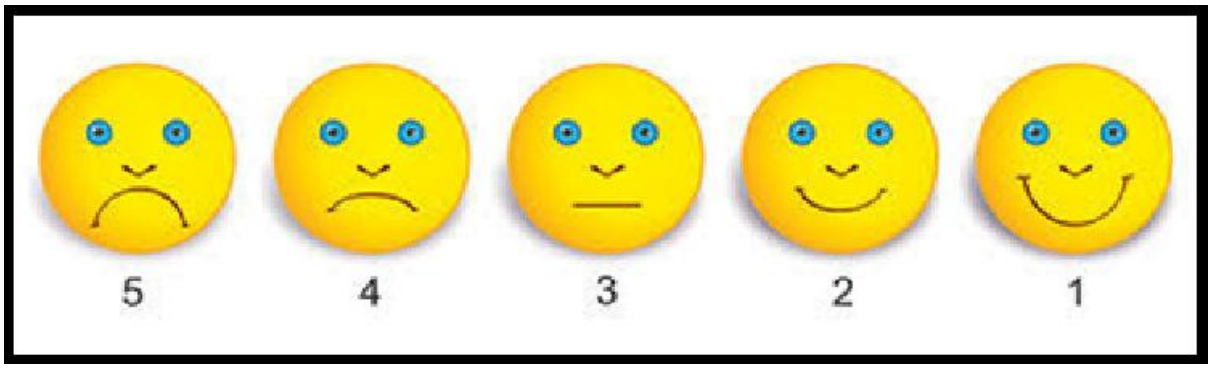


Figure 2: Facial image scale

1. **Definitely Negative** – Refusal of treatment plan, suspicious of dentist, overprotective of child
2. **Negative** - Reluctant to accept the complete treatment plan, some evidence of negative attitude, act as liaison between patient and dentist
3. **Positive** – Acceptance of treatment plan, cautious behaviour at times, reluctantly allows child to be with dentist
4. **Definitely Positive** – Trustful, express confidence in dentist, allows patient to be alone with dental staff

Figure 3: Parental cooperation scale by Kupietzky et al

3. Results

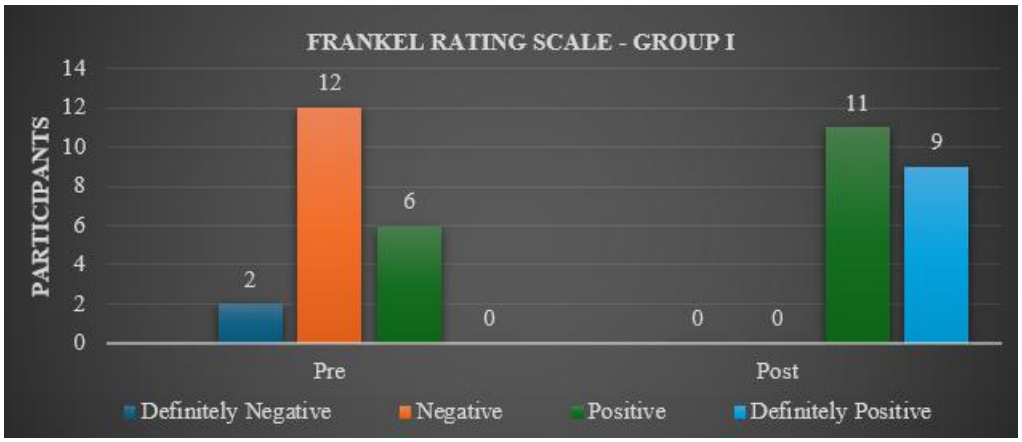
The values were statistically analyzed using Wilcoxon Signed Ranked test and Mann - Whitney U test. Level of significance *P ≤ 0.05 was considered as statistically significant association.

Table 1: Table showing association between pre and post intervention

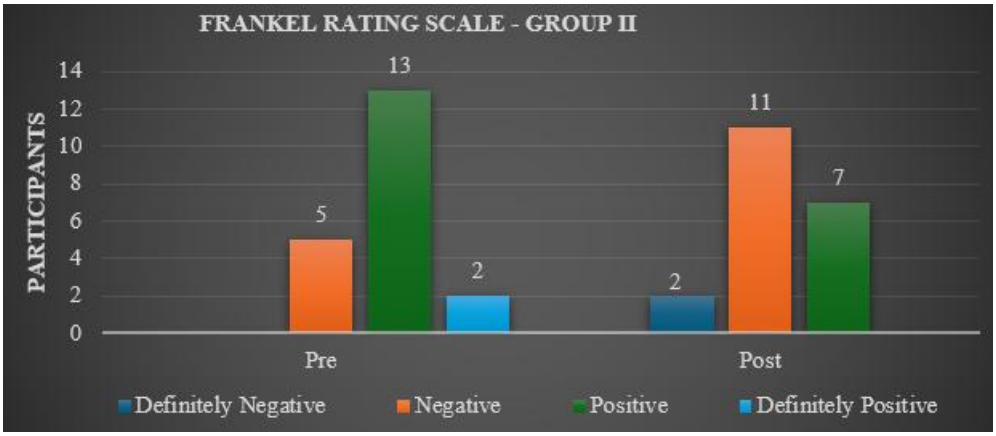
	N	Minimum	Maximum	Mean	Std. Deviation	Z	P - value
Conventional FRS pre	20	1	3	2.20	0.616	- 4.134	*0.000
Conventional FRS post	20	3	4	3.45	0.510		
Conventional Facial image scale pre	20	2	4	2.60	0.598	- 4.179	*0.000
Conventional Facial image scale post	20	1	2	1.40	0.503		
Conventional PCS pre	20	1	3	2.25	0.550	- 4.053	*0.000
Conventional PCS post	20	3	4	3.65	0.489		
Ctrl FRS pre	20	2	4	2.85	0.587	- 3.464	*0.001
Ctrl FRS post	20	1	3	2.25	0.639		
Ctrl Facial image scale pre	20	1	4	2.50	0.946	- 2.646	*0.008
Ctrl Facial image scale post	20	1	5	2.95	1.099		
Ctrl PCS pre	20	2	4	2.85	0.587	- 2.828	*0.005
Ctrl PCS post	20	1	4	2.45	0.686		

Table 2: Table showing association between Control and Conventional groups

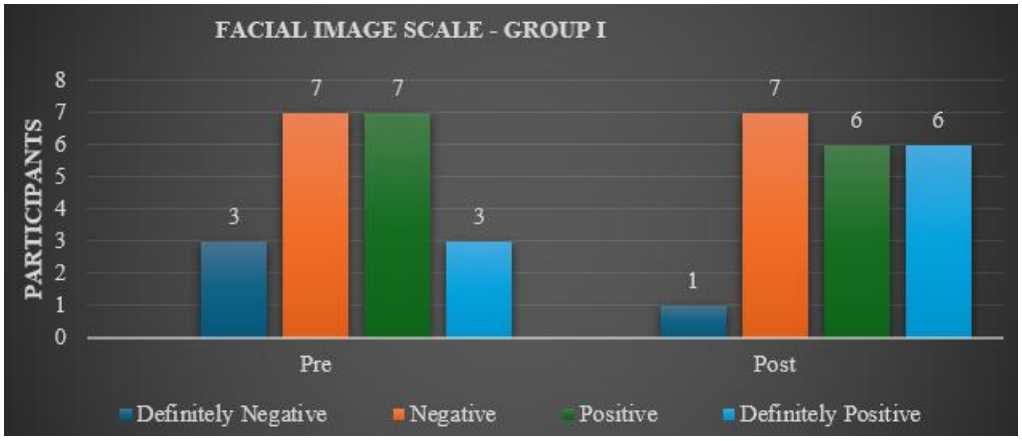
SCALES OF MEASUREMENT	Z	P - value
Frankel Rating Scale Control Pre & post	- 4.726	*0.006
Frankel Rating Scale Conventional Pre & post	- 4.801	*0.000
Facial Image Scale Control Pre & post	- 2.763	*0.269
Facial Image Scale Conventional Pre & post	- 5.111	*0.000
Parental Cooperation Scale Control Pre & post	- 1.932	*0.053
Parental Cooperation Scale Conventional Pre & post	- 1.105	*0.000



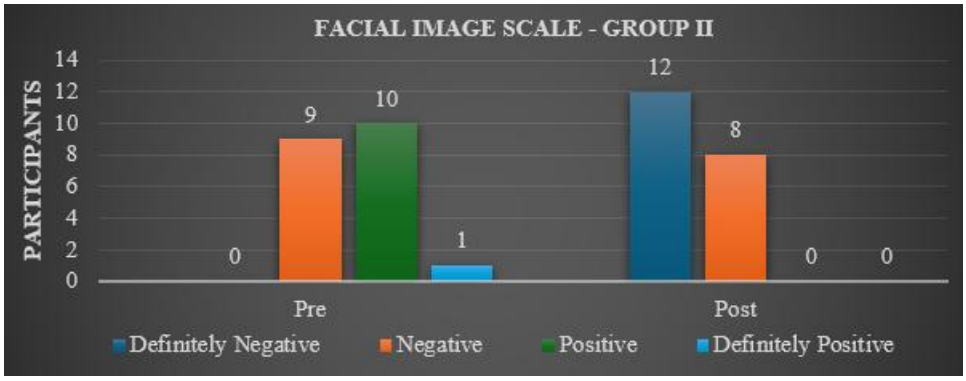
Graph 1: Frequency distribution of Frankel Rating Scale in the Group I (Counselling)



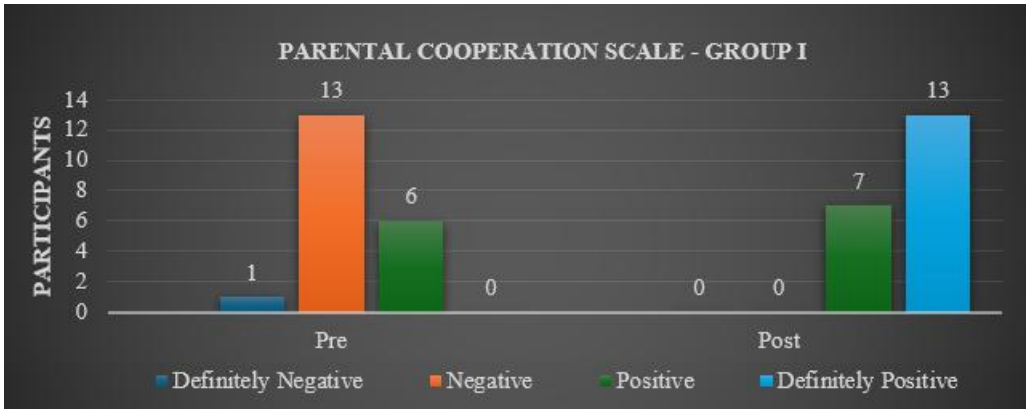
Graph 2: Frequency distribution of Frankel Rating Scale in the Group II (Non - Counselling)



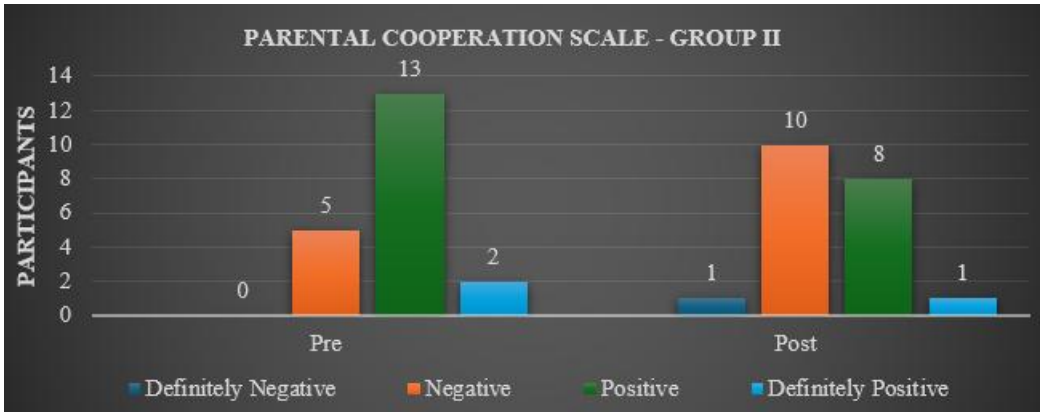
Graph 3: Frequency distribution of Facial Image Scale in the Group I (Counselling)



Graph 4: Frequency distribution of Facial Image Scale in the Group II (Non - Counselling)



Graph 5: Frequency distribution of Parental Cooperation Scale in the Group I (Counselling)



Graph 6: Frequency distribution of Parental Cooperation Scale in the Group II (Non - Counselling)

4. Discussion

For the young child, the dental experience is a novel situation and it appears that the emotional attitudes of family members, especially the parent, toward the dental situation will be communicated to the child, which leads to difficulties in delivering proper care to pediatric patients. However, it is important to remember that, in addition to this the child may also be influenced by peers, family and society. Not every child of an uncooperative parent will exhibit poor dental behaviour and vice versa. However, these factors exhibit mutual interactions.[7]

The most important confounding factor is the parental influence hence the basis of this study was to see the changes in dental behaviour of child by influencing the behaviour of parent by counselling. Parental counselling before a child's dental appointment can significantly improve their behaviour in the operatory by addressing parental anxiety and providing children with positive expectations, leading to better cooperation and reduced fear. Parents often attribute child's dental fear due to past - experiences of child, negative dentist behaviour and child's temperament but very few parents think that their own dental fear or of family members will have an impact on the child's behaviour.[9]

In our study, we counselled the parent by stressing on the following parameters: factors that influence the child behavior; past dental experiences of the parent and child; attitude and knowledge of parent towards oral health; exploring the mother - child dyad. The parents were then explained their role of parent in dental clinic and the do's and don'ts like - be a silent observer, ignore minor disruptive behavior, answer questions about dentistry at home and not to use dental treatment as a threat.[4, 9] Adequate parental education and awareness regarding the beneficial aspects of receiving dental treatment, as well as their recommended active participation will act as an adjunct in establishing good rapport between the child and the dentist.[1]

The age group selected in our study was as per previous mentioned literature as maximum restorative care is required in 4–9 - year - old children. The assessment of anxiety was done by three scales in our study dentist assessment, patient's feelings and parental cooperation. The Facial Image Scale (FIS) comprises a row of five faces ranging from very happy to very unhappy. The children were asked to point a face they felt like themselves at that moment. The scale is scored by giving a value of one to the most positive face and five to the most negative face. This according to most studies is an accurate indicator for the patient's feeling in that very moment.5 The Frankl scale, developed in 1962, is a tool that is widely used in pediatric dentistry to evaluate patient behavior. The original scoring system categorized behavior into four groups: definitely negative, negative, positive, and definitely positive. In 1975, Wright added the following symbols were added to the categories: definitely negative (−−), negative (−), positive (+), and definitely positive (++) and in 2017 Riba H et al added a fifth category: negative positive (−+). The Frankl scale according to literature is the one of the most comprehensive sales for behaviour assessment, as it is more sensitive and subjective as compared to other similar scales.[10] Parental Cooperation Scale recognizes different parent dental behaviors and utilize specific communication techniques for proper communication and parental consent. This was found to be reliable, short in length, easy for application, includes items, which are already familiar to the dental practitioner, and is simple to score and interpret.[7]

The methodology of counselling in our study was both verbal and written. The instructions were explained to the parent alone without the child in the counselling room by the counsellor and then written pamphlet with depictive images was provided to reinforce. Our results indicated that the children of counselled parents showed less anxiety in subsequent appointments. This was in accordance with most studies that imply that written instructions have a positive impact on the effectiveness of patient teaching and maximize patients' knowledge and adherence to treatment. Although some studies like Kiran S et al did indicate that verbal communication by dentist also showed similar effects probably due to the dentist being a trustworthy authority figure for the parent.[11]

Similar parental counseling studies done by Ramesh et al also found that by providing proper parental counselling about dental health, a significant improvement in dental health knowledge could be seen in children especially when done with mothers.[12] This is because providing parents with information by counselling about what was expected and what they should tell their child before dental treatment was found to be an effective intervention in reducing the preoperative anxiety of the parents which in turn reduced the anxiety inn children by positive information dissemination.

There is a paradigm shift from the traditional thinking where in the parent is considered a hindrance to have a good rapport with the child and hence exclude them from dental operatory, to modern thinking where parent is considered a valuable ally and resource in treatment process. Hence, pre - appointment counselling is strongly recommended as it has a positive outcome on the kids' and parents' perspectives of dentistry.

5. Conclusion

The impact of parental counselling on the anxiety of children undergoing dental treatment showed a positive curve wherein such children showed far less anxiety than the comparative control group. This study concludes that parental anxiety does have an influence on children anxiety and this linkage could be used for positive knowledge dissemination hence promoting positive dental attitude among both parents and children.

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