

**Maternal attitude towards use of hand over mouth technique and papoose board in pediatric patients: A questionnaire study**

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**Abstract:**

**Introduction:** Children often do not cooperate in the dental chair. Even a simple visual exam may raise the child's anxiety, and some children cry or fight. The child may cry hysterically and refuse to follow the instructions of the dentist when he is uncooperative. As it is imperative to convey the message to the child, we use the hand over mouth exercise and whisper the instructions in the child's ear explaining the treatment protocol. The uncooperative young child may harm himself while presenting an apprehensive behavior. Hence, it is recommended to use restraint to deliver

effective oral health care while ensuring the highest grades of safety.

**Aim:** To find out the mother's perception about use of hand over mouth exercise and papoose board in children.

**Objective:** The objective of this study is to assess the dental anxiety among the mothers about hand over mouth technique. To assess the dental anxiety among the mothers about use of papoose board. To compare the dental anxiety in mothers about use of Hand over mouth exercise and papoose board.

**Materials and Methods:** The study involved selection of 245 mothers who accompanied their children of age 3–6 years to K V G Dental College and Hospital, Sullia.

**Results:** The overall study showed the acceptance of papoose board technique with  $p < 0.001$  which was statistically significant. Also, the anxiety towards the hand over mouth technique was more with  $p > 0.5$  which was not significant.

**Conclusion:** In the limitations of the questionnaire study, we can conclude that papoose board is most accepted physical restraint technique over hand over mouth technique. Also, it can be said that the anxiety levels for the use of papoose board is less than the hand over mouth technique, by the responses from the participated mothers.

**Key words:** Hand over mouth, papoose boards, maternal attitude, pediatric dentistry

## Introduction

Categorically some children may cry hysterically and refuse to follow the instructions of the dentist when he is un co-operative. Certain children fall under those who are phobic, anxious, hyper motive and hysterical for dental setup; regular behaviour management techniques may not be helpful in treating them and the clinician may opt for aversive conditioning like HOME and physical restraint like papoose board. The paediatric practice with reciprocal triangle between mother, child and dentist display a severe interplay of mother's emotions towards the selection of each treatment. And becomes imperative to give a major concern on mothers perspectives towards the behaviour management strategy. The paediatric dentist selects and unequivocally aversive conditioning like HOME is surely going to evoke an emotional reaction which cannot be ignored.

This paper aims in assessing the mother's perspective on two categories of aversive conditioning. With the visual

sight of aversive condition procedure mothers may not always feel comfortable or accept the procedure leading to adverse reactions and sometimes legal issues. According to Goldstein and Capron at al a lawsuit charging the unconsented use of HOME, would involve rise from the level of malpractice and potentially could justify an award of punitive damages set in an amount designed to punish the dentist.

In fact, the practitioner may develop a sense of false security by the belief that there can be no liability where there is no physical injury. This clearly is not the case. Failure to obtain express consent for any material medical fact constitutes a legal wrong to the patient, even if no physical injury occurs. Parental acceptance and consent are important parameters in selecting the required behaviour management techniques during paediatric dental treatment.

Much literature about mothers perceptive regarding this aversive conditioning techniques are not widely done in India. Hence, this paper evaluated the emotional outlook of mother's perception towards HOME and physical restraints through a questionnaire study conducted in local population in Dakshina Kannada.

When dentistry is imperative, and anxiety-reducing techniques such as tell-show-do, voice control, behavior modification, or positive reinforcement are not effective, physical restraint may be required<sup>1</sup>. The acceptability of a behavior management technique depends, among other factors, on the child's needs at the time of treatment, the type and urgency of treatment influencing both the selection of a particular technique and parental acceptance of that technique<sup>2</sup>. Behavior management is a continuum of interaction targeted to build a relationship between the child, parent, and doctor. It enables the dentist to lower the dental anxiety of both the child and parents and forestall a positive attitude toward oral

health and dental treatment. Thus, helping the dentist to build trust and perform treatment safely. Hence, it is recommended to use restraint to deliver effective oral health care while ensuring the highest grades of safety<sup>3</sup>. Before the use of any active or passive restraint, it is essential to obtain and document an informed consent of the parents in the patient's record file.

Professional standards alone may not be sufficient for the acceptance of a behavioral management technique among parents; this means that parents may decide not to accept any of these techniques; even the clinicians think that these are efficient techniques. The goal of presenting information to the parents is to make them recognize behavior management techniques in children. This may enhance their acceptance and consent and reduce their anxiety in using such techniques<sup>4</sup>.

An integral aspect of child dental care is to provide parents with information of BMTs before the commencement of treatment. This delivery of information provides a mechanism by which parents can participate in treatment decisions with full understanding of factors related to their child's proposed dental care and helps in reducing situational parental anxiety. Thus, insights into the factors which influence parental perceptions are very important<sup>3</sup>. The present study was conducted to assess the maternal attitude towards the use of papoose board and hand over mouth exercise.

#### Materials and methods:

The present online survey was conducted on 245 mothers who accompanied their children to the Outpatient Department of KVG Dental College and Hospital, Sullia. The study individuals were selected on the basis of following criterion: 1. Mothers with children of 3 – 6 years of age. 2. Mother's using WhatsApp and having e-mail address. 3. Parents who showed willingness to participate in the study and who were co-

operative. 4. Parents of children with noncontributory medical history.

The questionnaire was supplied to the mothers using google forms. The questionnaire consisted of two parts. Part 1 consisted of name of the mother and a short description about both the techniques. It also included short video clips for the use of papoose board and hand over mouth technique of about 30 to 45 seconds. Part 2 included about the questions to be asked to the mother related to the acceptance of either of their techniques when the child would not co-operate in the dental office. The results were tabulated and expressed as both number and percentage. Data were analyzed using descriptive statistics and Chi square analysis for the information obtained. Fisher's exact probability test was conducted when the number of items in the groups were too small for the chi-square. All statistical analysis was done with the SPSS software program, and the level of significance was set at  $P < 0.05$ .

#### Results

A total of 245 mothers accompanying their children participated in the study.

Sn.	QUESTION	YES n (%)	NO n (%)
1	Do you think the procedures are legal to perform by a professional dentist?	159 (64.8)	87 (35.5)
2	Do you think any of the techniques shown will be helpful to perform any dental procedure in your child if the child is not cooperating?	206 (84)	39 (16)
3	Would you be willing to have your child treated by any of the treatment?	187 (76.3)	58 (23.7)
4	Do you think just seating your child in the dental chair and holding him/her there would be more successful than holding the hand over mouth?	132 (53.8)	113 (46.1)
5	Your child's hand was free for you to hold during the hand over mouth technique. Isn't this a good idea?	177 (72.2)	68 (27.7)
6	Do you think your child might have any difficulty in breathing while the hand is held over mouth?	58 (23.6)	187 (76.3)
7	Do you think the papoose board procedure was stressful?	81 (33)	164 (67)
8	Will the child be comfortable while laying on the board?	189 (77.1)	56 (22.9)
9	Do you think wrapping the child on board can have a negative effect on the child?	70 (28.5)	175 (71.4)
10	Do you think the techniques will be necessary to prevent your child from hurting himself/herself?	197 (80.4)	48 (19.5)
11	Do you think your child will be afraid during the use of restraints?	74 (30.2)	171 (69.7)

Table 1: Responses of the mother for the use of the physical restraint.

Table 1 summarizes the responses of the mothers to the use of papoose board or hand over mouth exercise in their children. The mothers were asked to check yes or no for these questions.

The legality of the procedures to be carried out in the dental office by the dentist was accepted by 64.8% of the mothers while 35.5% did not find it legal to carry this procedure.

76.3% of the mothers were willing to treat their children with either of the technique and 23.7% would not accept the treatment to be performed in their children.

77.1% of the mothers felt that the child would be comfortable while laying on the papoose board but 22.9% of mothers felt that the child would not be comfortable on the board When asked about would it prevent child from hurting himself while the dental procedure is carried out 80.4% of the mothers agreed while 19.5% mothers felt it would not prevent from hurting themselves.

Sn.	Question	Papoose board, n (%)	Hand over mouth, n (%)	None of above, n (%)
1.	Which technique would you prefer?	159 (64.8)	46 (18.7)	40 (16.3)

Table 2: Preference of the technique by the mother.

Table 2 describes about the preference of the parent towards the technique.

The study shows that 64.8% of the mothers accepted the use of papoose board in their children than 18.7% which showed their acceptance for hand over mouth exercise. Out of the entire study population 16.3% mothers did not want the use of either technique for their child.

The same results are depicted below in the bar chart.

Chart

1

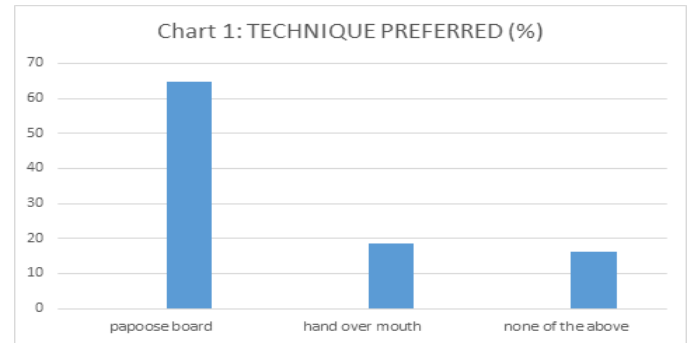


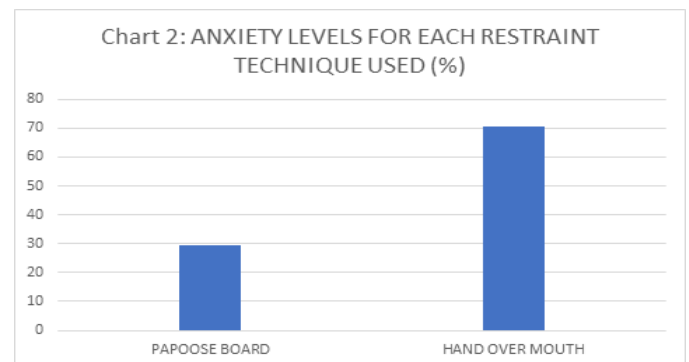
Table 3: Anxiety level towards the particular technique.

Sn.	Question	Papoose board n (%)	Hand over mouth technique, n (%)
1	Which technique do you feel is more anxious?	72 (29.3)	173 (70.6)

Table 3 describes about the anxiety level of the mother for both the techniques.

The anxiety level for each technique was assessed which showed that 70.6% of the mothers were anxious about the use of hand over mouth technique and 29.3% of the mothers were anxious for papoose board technique The same is depicted in the chart below.

Chart 2



	Papoose board	Hand over mouth
Technique acceptance	43 ( $p < 0.001$ ) *	99 ( $p > 0.7$ ) *
Anxiety towards restraints	86.5 ( $p < 0.002$ ) *	36 ( $p > 0.5$ ) *

Table 4: Mean deviation of the techniques.

\* ( $p < 0.005$  = significant)

Table 4 shows the mean deviation and the significance values for both the techniques.

The overall study showed the acceptance of papoose board technique with  $p < 0.001$  which was statistically significant. Also, the anxiety towards the hand over mouth technique was more with  $p > 0.5$  which was not significant.

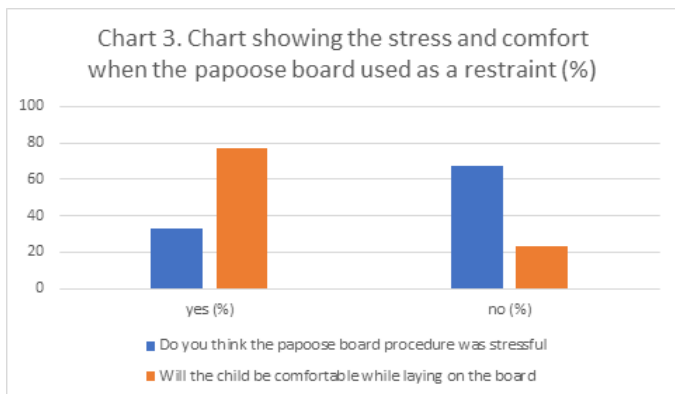


Chart 3: Shows the relation of stress and comfort level for each of the restraint.

67% of the mothers felt that the papoose board technique is not stressful to be performed in their children. 77.1% of the mothers found that board would be comfortable for them to lie while the procedure is carried out in the dental office.

## Discussion

A video depicting various BMTs were chosen rather than photographs because it provides a simple and effective method of making the parents understand and explore each technique more deeply. Videos are more

immersive and meaningful. According to this study, the most accepted technique was papoose board techniques. Mothers responding to the survey reported mainly positive opinions toward the use of the Papoose Board for their children's dentistry which supports the current study as 64.8% mothers prefer papoose board over hand over mouth technique which is 18.7%. Even though 66% of the mothers indicated that using a Papoose Board was stressful for their child, 96% said it was necessary supporting the previous statement of the current study. According to a study done in which that shows the mothers appear to have a strongly positive opinion toward the use of the Papoose Board as is demonstrated by the following statistics: 90% realized that immobilizing their children protected the children from harming themselves which reduced to 80.4% which is in favour of the statement. 70% felt that their children were comfortable 60% did not rate their children more afraid 68% did not report a later negative effect 86% would be willing to have their next child treated with the Papoose Board.

The prudent practitioner is well advised to pursue a course of practice which will satisfy the most rigorous informed consent scenario. The dentist will minimize legal problems by obtaining express consent for any procedure which the average patient might find objectionable. When asked about the procedures performed to be legal or not to the mothers the majority (64.8%) said that procedure was legal. When they are used properly, most common behavior management techniques typically would not cause noticeable physical injury to a patient. Obviously, a lawsuit charging the unconsented use of HOME. Miller suggests that in the few instances where legal action has arisen over the unconsented use of techniques such as HOME, the problem really has been one of poor parent management.

The pediatric dentist who is sympathetic to parental concerns and takes time to address them before proceeding with treatment will serve to enhance rapport and to cultivate a feeling of trust. Ultimately, the best defense for potential disputes is to prevent them from arising in the first place.<sup>6</sup>

The procedures which were demonstrated under the knowledge of parents a majority (76.3%) chose the use of behaviour management technique. Scott and Garcia-Godoy et al<sup>7</sup> reported that an informed parent was more likely to show greater acceptance of a Behaviour Management Techniques and that HOME and papoose board showed a statistically greater degree of no acceptance than all other Behaviour Management Techniques.

Lawrence et al<sup>9</sup>. concluded that informed parents were more positive for Behaviour Management Techniques than uninformed parents, but both were generally assertive regarding the techniques used, as said 76.3% were willing for the behaviour management techniques in which 67% of mothers said that the use of papoose board is not stressful for their children.

Physical restraint by either dentist or assistant and papoose Board was viewed more favourable than oral premedication and general anesthesia. This consistent hierarchy is very similar to the one found by Murphy et al<sup>11</sup>. in their study. Paryab et al<sup>12</sup> also reported that 82% of the parents in his study showed the highest acceptance rate for physical restraint by dental assistant or parent. This also upholds the responses received from mothers as 64.8% prefers use of papoose board over home or no use of physical restraints.

Frankel et al<sup>1</sup> assessed the attitude of mothers toward the use of papoose board and concluded that 90% of the mothers approved the use of it and 96% thought the papoose board was necessary to perform the dentistry,

which coincides with the study. The papoose board is seen by the dentist to be a valuable tool in the management of the patient who lacks cooperative ability. As shown by Frankel, if the papoose board is explained in the positive sense, parents are more receptive to its use.

Nathan further explains the aversive techniques.<sup>10</sup> From data collected at the National Conference and Workshops on Child Behavior Management at Iowa City, Iowa, 66 percent of the surveyed population of pediatric dentists indicated they used HOME periodically in their office, but the acceptance rate is less as 18.7% and also is more anxious (70.6%) compared to other method by the responses from mothers. When the dentists were asked if parents objected, 38 percent found that parents did object to it, 63 percent in the experimental group and 81 percent in the control group objected to HOME, favours the current study as the acceptance rate of HOME is less compared to that of papoose board. If parents see the technique, with or without explanation, they may be less receptive.

With respect to the Papoose Board, our findings are different from the findings in some previous reports where the Papoose Board was ranked the least acceptable technique (below general anesthesia). Our results are in keeping, to some degree, with another study conducted on mothers which reported that most mothers approved the use of Papoose Board. Which abets the present study. They thought the Papoose Board was necessary to perform the treatment, as the mothers are less anxious (29.3%) to use of papoose board. despite its being stressful for the child, and would have had it used on their other children should they require it. However, in the former study both fathers and mothers participated, while in the later study, only mothers participated.<sup>2</sup>

## Conclusion

In the limitations of the questionnaire study, we can conclude that papoose board is most accepted physical restraint technique over hand over mouth technique. Also, it can be said that the anxiety levels for the use of papoose board is less than the hand over mouth technique, by the responses from the participated mothers.

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