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## Abstract:

**Aim:** To assess the knowledge and attitude of general practitioners while managing children in their dental operator.

**Materials and method:** A survey was carried out where 150 dental surgeons were given a questionnaire consisting of information regarding behaviour management techniques and perspectives of dental surgeons while dealing with children at dental clinic.

**Results:** Most of the dental surgeons preferred calling pediatric dentist for treating children. They are aware about the behaviour management techniques and prefer non-pharmacological techniques over pharmacological ones. They prefer distraction, positive reinforcement, TSD over HOME, voice control and physical restraints. Most of them preferred sedating the child over GA.

**Conclusion:** The general practitioners do have knowledge about various behaviour management techniques but are not able to implement them effectively so to avoid hassle they do not treat children in their day-to-day practice and prefer calling a pediatric dentist.

**Keywords:** Behaviour management techniques, general practitioners, Managing child patients, pharmacological, non-pharmacological

## Introduction:

Children are not young adults, their behaviour, attitude, ability to understand, imagination, logical thinking, reasoning, etc., vary considerably from that of adults. Moreover, every child is different from each other.<sup>1</sup> Management of behaviour is an integral component while treating children in dental practice. The experience of the children during the first dental visit becomes his experience for lifetime. They should be properly managed so as to shape their behaviour in favourable way.<sup>2</sup>

The pediatric treatment triangle shows that parents play a major role while treating a child. It is necessary to gain the trust of the parents as the fear and anxiety might be transferred from parent to the child. Communication has to be established with parents prior to the appointment of the child thereby, alleviating their fears.<sup>3</sup>

The children are not usually co-operative in the dental procedure. Every child has to be managed in a different manner according to his age and understanding. Proper knowledge of different behaviour management techniques is necessary with which the dental procedure can be carried out efficiently. The most commonly used techniques are tell-show-do, audio-visual distraction and modelling and hand over mouth exercise (HOME)

is the least preferred.<sup>4</sup> In some unco-operative and fearful patient it may be necessary to perform the treatment under sedation or general anesthesia.

Treating children requires formal training and knowledge. Since the general practitioners are the usually visited by the parents for treatment of their children. The aim of this study is to assess of knowledge and attitude of general practitioners while managing children in their dental operator.

## Method:

A cross sectional study was conducted with 150 dental surgeons (from Ahmedabad district) selected by stratified cluster sampling method. A self-constructed questionnaire consisting of 22 questions as shown in Figure 1 was distributed to dental surgeons. The close-ended questions were asked regarding preference for treating child or not and knowledge about various behaviour management techniques like voice control, modelling, distraction, HOME, TSD, positive reinforcement, sedation and general anesthesia.

An online questionnaire was distributed to two groups: group 1- dental practitioners with the clinical experience of more than 3 years and group 2- dental practitioners with the clinical experience of less than 3 years. The results were collected through the Google forms application.

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Figure 1: Questionnaire

<p>1. Name * _____</p> <p>2. Do you perform treatment on children at your clinic?</p> <p><input type="checkbox"/> Always</p> <p><input type="checkbox"/> Sometimes</p> <p><input type="checkbox"/> never</p> <p>3. Do you prefer calling a pediatric dentist for performing treatment on child?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>4. Do you find child co-operative during treatment?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>5. Are you aware about the 'behaviour rating scales' for assessing child's behaviour?</p> <p><input type="checkbox"/> yes</p> <p><input type="checkbox"/> no</p> <p>6. Are you aware of different 'behaviour management techniques' that can be used to achieve co-operation?</p> <p><input type="checkbox"/> yes</p> <p><input type="checkbox"/> no</p> <p>7. Which behaviour management technique would you prefer? a. Pharmacological b. Non pharmacological</p> <p><input type="checkbox"/> a</p> <p><input type="checkbox"/> b</p> <p>8. Do you allow the parent to stay in the clinic while the treatment is being performed?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>9. Do you demonstrate the procedure to the child before performing?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> Sometimes</p> <p><input type="checkbox"/> Never</p> <p>10. Do you use words/ phrases to encourage the child?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>11. Do you ever modify your voice or tone to direct child's behaviour?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> Sometimes</p> <p><input type="checkbox"/> Never</p>	<p>12. Do you praise the child when he/she does something that is asked to do?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> Sometimes</p> <p><input type="checkbox"/> Never</p> <p>13. Does playing video or music direct the child's focus away from dental treatment?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> Sometimes</p> <p><input type="checkbox"/> Never</p> <p>14. Do you show the syringe needle and say that it would pain?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>15. Do you sedate the unco-operative child?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>16. Do you prefer to treat the child under general anaesthesia in a hospital to achieve cooperation?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>17. Do you perform treatment on elder sibling prior to child's treatment to expect specific behaviour?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>18. Are you aware of HOME technique?</p> <p><input type="checkbox"/> yes</p> <p><input type="checkbox"/> No</p> <p>19. Do you know the protocol to be followed for HOME?</p> <p><input type="checkbox"/> yes</p> <p><input type="checkbox"/> No</p> <p>20. Do you promise the child any complimentary gifts if he/she co-operates with you?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> Never</p> <p>21. Do you immobilize the child by yourself, the dental staff or parent when needed?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> sometimes</p> <p><input type="checkbox"/> never</p> <p>22. Do you stop the procedure if any discomfort is felt by the child?</p> <p><input type="checkbox"/> always</p> <p><input type="checkbox"/> Sometimes</p> <p><input type="checkbox"/> Never</p>
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## Results:

	<b>always</b>	<b>sometimes</b>	<b>never</b>
<b>Prefer treating</b>	4.26%	29.79%	64.89%
<b>Calls pediatric dentist</b>	62.77%	26.60%	9.57%

	<b>yes</b>	<b>no</b>
<b>Aware about behaviour rating scales</b>	19.15%	79.79%
<b>Aware about behaviour management</b>	14.89%	84.04%

	<b>always</b>	<b>sometimes</b>	<b>never</b>
<b>Allow parent to stay in clinic</b>	52.13%	40.43%	6.38%
<b>Demonstrate procedure to the child before performing</b>	64.89%	31.91%	2.13%
<b>Use words to encourage the child</b>	70.6%	27.28%	1.06%
<b>Modify voice or tone</b>	47.87%	45.87%	5.19%
<b>Praise the child</b>	74.47%	23.40%	1.06%
<b>Play video or music to distract child</b>	53.11%	35.32%	8.51%
<b>Treat elder sibling</b>	11.7%	69.15%	17.02%
<b>Promise gifts</b>	43.62%	47.87%	7.45%
<b>Immobilize the child</b>	10.64%	68.09%	20.21%
<b>Stop the procedure</b>	73.40%	25.53%	0%

	<b>always</b>	<b>sometimes</b>	<b>never</b>
<b>Sedate the child</b>	52.13%	40.43%	6.38%
<b>Treat under G.A.</b>	5.32%	40%	54.68%

## Discussion:

Understanding of child psychology and managing the behaviour accordingly plays an important role during the treatment of children. Children should be guided towards a desirable behaviour so as to successfully perform the treatment and instil a positive attitude towards dentistry.

The results of the present study showed that most of the dental surgeons do not treat child in their regular routine. If parents bring children to the general practice, the dentist usually prefer calling the pediatric dentist so as to manage and treat the patient. The examination of children is a difficult task for the dental surgeons as they usually do not co-operate easily.<sup>5</sup>

Presence of parents, especially mother has a greater impact on child as it provides the sense of safety to the child. Margaret Mahler in her theory of separation-individualization laid emphasis on importance of the relationship between a child and her mother.<sup>6</sup> Though presence of parents being useful, sometimes it also creates problems during treatment. In present study, 52.13% of the dental surgeons preferred always treating child in the presence of the parents while 40.43% said they sometimes allow parents in the operatory and only 6.38% did not allow the parents in the operatory. Similar results were found in a study conducted by Shroff *et al.* in 2015 in which they concluded that a greater number of undergraduate dentists prefer the parents to be present in the dental operatory during the treatment.<sup>7</sup>

Among the two major categories of behaviour management, majority of the dentists in this study preferred to opt for non-pharmacological behaviour management strategies similar to the study by Ravindran, *et al.*<sup>1</sup> Various studies have been conducted for the parental acceptance of behaviour management techniques and most of them preferred non-pharmacological ones over pharmacological ones and had shown lower acceptance for the aversive methods. The studies conducted by Sharath *et al.*<sup>9</sup> and Adair *et al.*<sup>10</sup> and Sotto *et al.*<sup>11</sup> have suggested that TSD is considered as the essential treatment plan for the child in their study and was highly accepted by parents too.

Dental anxiety influences the behaviour of children in the operatory. The behaviour management techniques such as modelling, distraction, positive reinforcement can be used to

reduce anxiety of the child. Modeling is not only helpful in acquisition of new behaviors but also in reducing undesirable behavior. In this study, 12% of the dentists always used modelling whereas 69% sometimes used it in their practice. Johnson and Machen reported that same age and gender is effective within live modeling. Rajasekhar *et al.* revealed that most of the participants have responded for siblings as an effective model in their study.<sup>8</sup>

Another technique that has been found to be effective is positive reinforcement as it provides sense of accomplishment during this stage of development and strengthens the future behaviour. In this study, 74% of the dentists praised the child for good behaviour during treatment and 43% also gave gifts. Rajasekharan *et al.* in his study found positive reinforcement to be effective over other methods in day-to-day practice.<sup>8</sup>

The aversive techniques such as voice control, HOME, physical restraints are usually not preferred in dental clinics but they are sometimes used in unco-operative patients with parental consent. The results of this study stated that most of the dentists are aware of HOME technique and the protocol used for it. Oredugba and Sanu reported that HOME is the less frequently followed management techniques<sup>12</sup>. In contrast to this, Allen *et al.* stated that traditional behavior management techniques, namely TSD, restraints, HOME were better than the newer ones such as modelling.<sup>13</sup>

In the age of 2-4 years, concept of centration can be observed among children where the child has tendency to focus or center on only one aspect and ignore other aspects of a multifaceted experience. The focus is on the most striking or compelling aspect of the experience. Distracting the child by leading him to focus on other interesting and curious aspects in the environment would be helpful.<sup>8</sup> In this study, 80% of the dentists used AV aids for distracting children during the treatment. Barreiros D *et al.* in 2018 concluded that AV distraction reduced anxiety levels in children.<sup>14</sup>

In the present study, a greater number of dentists preferred not to perform procedure under general anaesthesia. They preferred limiting this treatment for unco-operative patients. Whereas, sedation was preferred by most of the dentists (52.13%- always, 40.43%- sometimes). Nitrous oxide

(N2O) is an attractive agent for sedation in pediatric dentistry because it provides rapid onset and offset of sedation. Similarly, Boynton *et al.*<sup>15</sup> in 2007 and Brahm *et al.*<sup>16</sup> in 2013 had concluded in their study that maximum number of undergraduate dentists prefer conscious sedation rather than general anesthesia. In contrast, Eidelman E et. al in 2000 found that quality of treatment performed under GA is better than under conscious sedation.<sup>17</sup>

### Conclusion:

The general dental practitioners do know about different techniques but are not able to effectively implement them so as to achieve child's cooperation. They usually refrain from treating the children in day-to-day practice as it takes lot of time and efforts to deal with them.

The behaviour management techniques if used wisely and appropriately, treatment can be performed successfully in a child with positive approach towards dentistry.

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