NON-PHARMACOLOGICAL METHODS OF CONTROLLING THE CHILDREN'S BEHAVIOR AT THE DENTAL APPOINTMENT

[1]Ortikova Nargiza Xairullaevna, [2]Rizaev Jasur Alimjanovich

[1,2]Samarkand State Medical Institute, Uzbekistan

[1]giza1003@mail.ru

Abstract. Patients behavior wile dental curing depends on his mental condition. Depressive disorders also promote progression dental diseases. An individual plan of treatment and features of cooperation with patients must be defined depending on psycho-emotional condition of sick. That lets to cooperate patient with doctor and raise the quality of dental help end also minimize risks of development conflict situations. On purpose to define psycho-emotional deviations of sick dentists use different scales and questionnaires that have certain benefits.

Key words: Dentistry, dentophobia, psychological awareness, music therapy, relaxation.

Knowing as many non-pharmacological behavioral management techniques (NBCM) as possible allows the clinician to use them as needed, thereby contributing to a positive dental experience in children.

We have developed our own “childish language” to describe treatments, materials, etc. (see table 1). It is clear that it should be adapted depending on the patient's level of understanding.

For example, a 15-year-old boy with an average understanding is unlikely to be told that he will “tickle his teeth,” while a 5-year-old girl with an average understanding is unlikely to understand the term “local anesthesia”.

It is important that the doctor and the assistant use the same "childish language"; parents should also be encouraged to use the same "childish language" when talking about dental procedures with their child.

Non-verbal communication is essential for all interactions with the child. For young children, it may be helpful to mimic non-verbal communication skills similar to those of a children's television presenter, such as smiling, cheerful tone of voice, and sitting, so that the doctor is at the child's eye level.

Appropriate physical contact with the patient, such as light patting on the arm, can also be used to enhance positive behavior [15].

Non-verbal communication generally provides support and enhances the effectiveness of all non-pharmacological behaviors.

Table 1. Examples of children's language for use in the dental environment

Term	**Children's words**
Turbine handpiece	Dental shower
Mechanical handpiece	Tickler
30-40% phosphoric acid for etching	Blue Teeth Shampoo
Dental vacuum cleaner	Mini vacuum cleaner

Saliva ejector	Juice straw
Local anesthetic	Magic sleepy juice for teeth
Puster (pistol) 3 in 1	Washing and drying
Light lamp	machine (magic hair dryer)
Seal	Magic torch
Crown	Dental plaster
Matrices	Princess crown (soldier's helmet)
Cotton rolls	Shield for other teeth
Rubber dam	Cheek ticklers
Clump	Dental cloak
Forceps	Shiny Teeth Ring
Fluoride varnish	Tooth hug
Fissure sealants	Superhero toothpaste

Non-pharmacological methods of behavior management include [2, 5]:

• Tell-Show-Do;

• Strengthening control;

•Voice control;

• Modeling;

• Formation of behavior and positive reinforcement;

• Distraction;

• Managed images;

• Systematic desensitization;

• Negative reinforcement;

• Focus;

• Glove dolls;

• Guess;

• Sleeping statues;

• Secret prize.

Algorithm for the initial consultation-consultation (before the use of the NLCM):

1. Greet the child by calling him or her by name.

2. Introduce the assistant and if the child does not want to sit in the “most comfortable chair in the room,” smile and invite the patient to sit next to the parent.

3. Explain to your child that “to hear everything about you and your teeth, we might even peep to see how many are hiding there - do you know how many teeth you have?”.

1. Tell, show, do.

A three-step process including:

“Tell” is a short, age appropriate description of the procedure to be followed.

Show - demonstration of the procedure to be performed; equipment to be used.

"Do" - procedures performed with a minimum delay after the first two stages.

It is effective in anticipating anxiety in pediatric patients who are visiting the dentist for the first time [6].

Useful in children with low levels of anxiety, but ineffective for use in very anxious children [16].

It is able to reduce the physiological signs of anxiety in children aged 6–15 years [18].

An example of this method is the fissure sealing of a 7 year old child without dental experience:

"Tell":

“You have beautiful teeth in your mouth and I would like to help you keep them happy”;

“What we can do is paint a smiling face on our teeth to keep them happy”;

“It’s a bit like going to a hairdresser, so first we will apply blue shampoo to the tooth to make it beautiful and clean”;

“First, we will wash the tooth and do the styling with a magic hairdryer, so it will be a little noisy like hairdressers”;

“Once your tooth is clean and dry, we can draw an emoticon on it, and then light the magic torch on the smiley face”;

"The magic torch makes the paint dry very quickly so you can eat your lunch (dinner) right now."

Show:

“I will paint a small smiley face on your nail so you can see what your lucky teeth will look like. What nail will we paint? ”;

The physician should then perform the usual fissure sealing procedures, but on the patient's nails.

If the child is very anxious and does not allow the composite or glass ionomer cement to be applied to the nail, it is possible to apply it to the parent's nail first.

Often, saliva ejector operation is something unfamiliar and noisy that can disturb the child. Ask if they have a vacuum cleaner at home, and tell them that you have a “mini vacuum cleaner” that makes a little noise, like their vacuum cleaner at home can help present this equipment in a way that is comfortable for them. It is also helpful to make a "puddle of water" in your own hand and show how the "mini vacuum cleaner" works before using it on a child's finger.

Use non-frightening words such as tickling to describe the feeling of suction

"Do":

Then it is important to carry out the procedure with a minimum delay, so that all information (sensations) that should be experienced during the procedure, etc., are fresh in the child's mind.

Where it is necessary to seal fissures in more than one tooth, the child should be given the "illusion of choice", for example:

"(Child's name), on which tooth would you like the smiley - the first top or the bottom?", Not "Can I draw a smiley on the top tooth first?"

Advantages: the method is useful for almost all patients who are able to communicate, especially for those patients who are "monitors" ("observers" - prone to exaggeration and overestimation of danger).

Disadvantages: not always suitable for those patients in whom detailed information can lead to an increase in anxiety

2. Strengthening control.

Teach the patient a signal that will allow him to control the situation to some extent. The most common example is that a child raises his hand as a "stop signal". The dentist must respond quickly to this signal while working.

It has been found to reduce pain during dental procedures, including injections [9].

Regular, planned breaks during dental treatment, regardless of patient behavior, have been found to be effective in reducing disruptive behavior in young children undergoing dental treatment [13].

Another way is to coordinate with the patient the number to be counted to in certain procedures, such as high-speed teeth preparation for 5 seconds. The dentist adheres to this number when preparing, and the patient can use their fingers to count at the same time as the doctor who counts aloud. Thus, verbal and physical distraction is combined.

Benefits: useful for all patients who are already able to communicate. Especially useful for those patients whose anxiety is associated with a feeling of loss of control.

Disadvantages: Requires alternative brake lights for patients with physical difficulties. Entering a stop signal too early may indicate that there is something to worry about.

Note: With strong dental fear and anxiety, the signal should be taught early in the initial consultation. Conversely, for those with a low to moderate level of anxiety, the introduction of the signal can be delayed until the start of rehabilitation treatment [7].

3. Voice control.

In this technique, the physician alters the tone, volume of the voice, or the rate of speech to influence or direct the patient's behavior.

It was found that the method reduces destructive behavior without negative consequences [4].An important component of the technique is the physician's facial expression [3].

Benefits: useful for young children who are more responsive to tone of voice rather than words used. May be useful for inattentive children.

Disadvantages: a frequent and sharp increase in voice (even if the technique was discussed in advance with the parent) is not very pleasant for the doctor, child and parents.

Speaking very softly (whispering) to a small crying child who needs to stop crying to hear can sometimes be more effective and acceptable. Not suitable for children with mental or emotional disabilities. Not available to every doctor

4. Simulation.

A technique that involves observing others and then testing yourself. For simulation, a live model or record preview can be used.

For the best effect, to help reduce fear and / or reduce destructive behavior, the model should [11]: (1) be of a similar age, undergo the same treatment as planned for the patient, with a positive outcome and reward received for the corresponding behavior; (2) be a “coping” model, ie. demonstrate her fears and difficulties and how she copes with the situation with which the worried child identifies.

Models can be sisters or brothers, accompanying parent. A favorite doll can also be used as a model in the absence of an alternative.

In some cases, the doctor himself can act as a model, for example, for radiography.

Benefits: useful for all patients who are already able to communicate. Useful for all patients, especially those with little dental experience or "monitor" patients.

Disadvantages: The living model must exhibit positive behavior.

5. Behavior shaping and positive reinforcement.

Behavior shaping is a sequence of specific steps to achieve the desired behavior.

Reinforcement is the reinforcement of this desired behavior to increase the likelihood that such behavior will repeat itself in the future.

The most positive reinforcers are social stimuli, such as facial expressions, verbal praise, and parental approval (such as hugging).

An empathic response focused on a child with specific behaviors assessed immediately after the appropriate behavior, such as “It's good that you sit with your mouth wide open,” is more effective than general positive comments, such as “good girl / boy” at the end. reception.

Positive reinforcers are things like giving a child good behavior. This should be perceived as a reward for good behavior and not an attempt to bribe, i.e. should be used to develop positive behavior, not reward. It should be noted that children who receive stickers irregularly tend to report more fear than those who do not receive them at all [17].

Giving the child a certificate can also be a good positive reinforcement; the wording can be modified depending on the child's anxiety level, for example, low anxiety = "reward for intelligence" and high level of anxiety = "reward for bravery".

Note: Positive behavior should be regularly maintained to encourage repetition; the temptation to comment on negative behavior must be avoided

6. Distraction.

A technique whereby the patient's attention is diverted from the dental procedure.

Examples include: (1) video distraction (eg, watching a cartoon) combined with negative reinforcement (eg, turning off a cartoon when a child exhibits destructive behavior) [12]; (2) audio

distraction, such as music or audiobook; (3) manual stimulation of distracting devices (metal balls, spinner).

Physical short-term distractions can be effective, such as pulling the lip when injecting local anesthetic, counting the patient's fingers while etching a tooth, wiggling toes when taking casts, etc.

Verbal distractions can also be used, for example, the dentist talks to the child during treatment and suggests using physical distractions, such as having the child use “thumbs up” and “thumbs down” for “yes” or “no” answers.

Note: For patients with high levels of anxiety, this method is less effective than other LMDPs.

7. Managed images.

The dentist encourages the patient to tag to create a state of relaxation and well-being with a three-step process: relaxation, visualization, and positive suggestion [2].

The “image” must be adapted to the patient, for example, if the child hates the feeling of sand between the toes and does not like swimming, then the beach scene is unlikely to be relaxing.

When used in conjunction with other relaxation techniques, such as progressive muscle relaxation and controlled breathing, it can be especially effective in adolescent patients.

Also works well with young children, whose imagination, under the guidance of a doctor, can "work to its fullest" so that they really feel like they are somewhere else.

Note: For patients with high levels of anxiety, this method is likely to be less effective than other LMTCs.

8. Systematic desensitization.

A technique that helps a person to overcome certain anxieties (fears, phobias) by gradually applying a specific stimulus with a high threat, most often a local injection of anesthetic [1].The hierarchy of fearful stimuli should be drawn up in collaboration with the patient.

After the patient has been taught to relax, stimuli from low to high fear should be gradually used at the rate determined by the patient, with the support of the physician.

It is imperative that the patient learns to relax. A variety of techniques should be used, such as relaxation and hypnosis, breathing techniques, etc.

After relaxation of the patient has been achieved, a gradual introduction of stimuli causing low anxiety, such as a dental mirror, may begin.

Note: It may take a series of meetings to overcome the fear.

9. Negative reinforcement.

Strengthening behavior by eliminating a stimulus that the patient finds unpleasant. This is not a punishment, which is the use of an unpleasant stimulus in the manifestation of inappropriate behavior [10].

The most common example is the selective removal of parents: when a patient exhibits inappropriate behavior, the parent (s) are asked to leave the office; when showing adequate behavior, the parent is asked to return.

After being removed from the office, the parent must be within earshot, but not visible to the child.It is important to discuss and agree with the parent about the use of this technique in advance.

Notes: Not suitable for young children who are keenly attached to their parents.

10. Focus.

The use of a magic trick has been shown to be an effective LMEP in young children, which leads to a reduction in the time the child spends in the dental chair [14].

As soon as the child sits in the "magic chair" by pressing the "magic buttons" of the child, make the chair move, for example, press the nose and the chair rises, press the chin and the chair will tilt back, etc. (at the same time, press the corresponding control buttons).

Note: the child should not guess that the "magic" comes from pressing the buttons of the control unit, and not the "magic buttons" of the child. It is unlikely to have an effect in older children.

11. Glove dolls.
Inflate the glove, then have your child help you draw a face on it, including a big smile to draw teeth. Have your child help you count the number of teeth in the glove doll and then count their own teeth

12. Guess.
For young children who can count to 20 or so. Ask them to guess how many teeth they have and offer a reward (like a sticker) if they get close to the number you want. Using a mirror, have your child count their teeth. They can then watch you count their teeth to "make sure you are not cheating."

13. Sleeping statues.
For 5-9 year olds who love to compete - competing with the “last little boy or girl” can help reward good behavior,For example: “(Child's name), can you lie still like a 'sleeping statue' and see how long you can remain still? The last little boy / girl managed to stay put until we counted to 100, he / she was very smart, how do you think you can beat him / her? I bet you can! "

14. Secret Prize.
For example, a patient doesn't want a sticker. For such patients, the reward for good behavior from the “mystery prize box” may tempt them enough to complete difficult treatments such as removal.

The prize box is high on the shelf so that it can be seen, but the child does not know what is inside until the end of the reception. It can contain a variety of inexpensive items such as pens, pencils, notepads, hairpins, rulers, toothbrushes, etc.

If it is necessary to conduct local anesthesia in children at the dental appointment, we have developed a scheme to facilitate its implementation (see Table 2).

Table 2. Scheme for LMLC to facilitate local anesthesia for a 6-15 year old child at the dental appointment.

	Manipulation	Prepare everything you need for local anesthesia in another office.
	Before injection	It is necessary to honestly describe the process, sensations (prick, bursting), time frame and time during which the area will feel “numb, funny, different”. Ideally, provide this information at your appointment before you administer the local anesthetic, using age appropriate, positive language, allowing

		the patient to be informed.
		Make sure the parent also understands the process to ensure they can help their child prepare for the local anesthetic.
NMUP	Abstraction	Ask the child to open his eyes wide, hold his chin. You can listen to music.
	Tell-Show-Do	If your child asks how they will get the injection, be honest and use age appropriate language to explain the process.
Coping strategy	Relaxation	Ask the patient to focus on their breathing, 3 breaths, hold and 5 breaths, while exhaling, you can do local anesthesia.
Pharmacological method	Anesthetic ointment	Effective when used for at least 2-5 minutes after drying the injection area [8].

Conclusions: this article contains the NMAP that we use at the pediatric dental outpatient appointment. Knowledge of these methods will allow pediatric dentists to improve interaction with patients, prevent them from developing a negative impression of dental treatment.

It is known that negative dental experience acquired in childhood affects the attitude towards this type of medical care throughout the entire subsequent life of a person, leading to delayed or even delayed visits, and thereby worsening dental status.

References:

1. Abu-Melhim ARH, Abood MH Investigating the Effectiveness of Systematic Desensitization in Reducing Anxiety among Jordanian EFL Learners // Conference: International Conference: Innovation in Teaching and Learning English: New Methods and Approaches At: Bejaia, Algeria Volume: Arab World English Journal (AWEJ), Conference Proceedings, pp. 54-70

2. Appukuttan D.P. Strategies to manage patients with dental anxiety and dental phobia: literature review. Clin Cosmet Investig Dent. 2016; 10: 35–50 doi: 10.2147 / ccide.s63626

3. Armfield J., Heaton L. Management of fear and anxiety in the dental clinic: a review. Australian Dental Journal, 2013: 58 (4), 390-407. doi: 10.1111 / adj.12118

4. Behavior Guidance for the Pediatric Dental Patient. 2015, AAPD https://www.aapd.org/globalassets/media/policies_guidelines/bp_behavguide.pdf

5. Campbell C. (Ed.). (2017). Dental Fear and Anxiety in Pediatric Patients. Springer International Publishing AG 2017 p. 252 doi: 10.1007 / 978-3-319-48729-8

6. Carson P., Freeman R. Tell-show-do: reducing anticipatory anxiety in emergency paediatric dental patients, International Journal of Health Promotion and Education, 1998;36:3, 87-90, DOI: 10.1080/14635240.1998.10806065

7. Chapman H.R., Kirby-Turner N. Visual/verbal analogue scales: examples of brief assessment methods to aid management of child and adult patients in clinical practice. Br Dent J. 2002;193(8):447-450
8. de Freiras G.C., Pozzobon R.T., Blaya D.S., Moreira C.H. Efficacy of Benzocaine 20% Topical Anesthetic Compared to Placebo Prior to Administration of Local Anesthesia in the Oral Cavity: A Randomized Controlled Trial. Anesth Prog. 2015;62(2):46-50. doi:10.2344/0003-3006-62.2.46
9. Gilchrist F., Marshman Z., Deery C., Rodd, H. D. The impact of dental caries on children and young people: what they have to say? International Journal of Paediatric Dentistry, 2015;25(5), 327–338. doi:10.1111/ipd.12186
10. Kawia H.M., Mbawalla H.S., Kahabuka F.K. Application of Behavior Management Techniques for Paediatric Dental Patients by Tanzanian Dental Practitioners. Open Dent J. 2015;31;9:455-61. doi: 10.2174/1874210601509010455. PMID: 26962374; PMCID: PMC4768663.
11. Miltenberger R. G. Behavior modification: Principles and procedures. – Thomson Wadsworth, 2008 632p.
12. Newton T., Asimakopoulou, K., Daly B., Scambler S., Scott S. The management of dental anxiety: time for a sense of proportion? //British dental journal. 2012; 213 (6):271-274
13. O'Callaghan P.M., Allen K.D., Powell S., Salama F. The efficacy of noncontingent escape for decreasing children's disruptive behavior during restorative dental treatment. J Appl Behav Anal. 2006;39(2):161-171. doi:10.1901/jaba.2006.79-05
14. Peretz B., Gluck G. Magic trick: a behavioural strategy for the management of strong-willed children. Int J Paediatr Dent. 2005;15(6):429-436. doi:10.1111/j.1365-263X.2005.00668.x
15. Porritt J., Rodd H., Morgan A., Williams C., Gupta E., Kirby J., Marshman, Z. Development and Testing of a Cognitive Behavioral Therapy Resource for Children's Dental Anxiety. JDR Clinical & Translational Research, 2016;2(1):23–37. doi:10.1177/2380084416673798
16. Samra-Quintero P.A., Bernardoni-Socorro C., Borjas A.M., Fuenmayor N.R., Estévez J., Arteaga-Vizcaíno M. Changes in blood pressure in children undergoing psychological treatment before dental procedures. Acta Odontol Latinoam. 2006;19(1):9-12
17. Welly A., Lang H., Welly D., Kropp P. Impact of dental atmosphere and behaviour of the dentist on children's cooperation //Applied psychophysiology and biofeedback. 2012;37(3):195-204
18. Zhu M., Yu H., Xie B., Li H., He Q., Li H., Li X. Experiential learning for children's dental anxiety: a cluster randomized trial. BMC Oral Health, 2020;20(1). doi:10.1186/s12903-020-01204-5