Parental Collaboration in Achieving Pain-Free Pediatric Dentistry

Ağrısız Çocuk Diş Hekimliğinde Ebeveyn İş Birliği

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ABSTRACT Dental treatment has traditionally been linked, to a certain extent, to pain. Pain - be it physical, emotional or a combination of both - accounts for the early onset of dental fear and anxiety (DFA), which is one of the most cited reasons for avoidance or postponing of dental visits, consistently associated with poor oral health. In order to grow generations of children with healthy teeth and positive dental behaviour, it is very important to prevent dental fear and anxiety in young patients. Parents' attitude and parenting styles play a crucial role, not only in shaping children's dental compliance, but also in guiding their long-term perception towards dental care. Parental presence in the dental setting may help by providing the child with a sense of security. However, the quality of parental involvement, rather than mere presence, can – and will - substantially influence the young patient's compliance either in a positive or in an unwanted manner. Authoritative parenting was associated with more desirable child behaviour in the dental setting and low caries experience compared to authoritarian and permissive parenting styles. In order to help parents correctly assist and efficiently support their children before, during and after dental treatment sessions, targeted programs comprising psychological advice are needed. The PaFein+ project is designed to give parents and families this kind of information, contributing to early prevention of dental fear and anxiety and, on the long run, to growing generations of individuals with a positive attitude towards oral health and dental treatment.

Keywords: Dental anxiety; parents; education; pain-free

ÖZET Diş tedavisi, geleneksel olarak belirli ölçüde ağrı ile ilişkilendirilmiştir. Fiziksel, duygusal ya da her iki bileşeni içeren ağrı, diş hekimliği korkusu ve anksiyetesinin (Dental Fear and Anxiety, DFA) erken dönemde ortaya çıkmasının başlıca nedenlerinden biri olarak kabul edilmektedir. DFA, diş hekimi ziyaretlerinden kaçınma veya bu ziyaretlerin ertelenmesinin en sık bildirilen nedenleri arasında yer almakta olup, tutarlı biçimde yetersiz ağız sağlığı ile ilişkilendirilmektedir. Sağlıklı dişlere sahip ve diş hekimliğine yönelik olumlu davranışlar geliştiren nesiller yetiştirebilmek amacıyla, çocuk hastalarda diş hekimliği korkusu ve anksiyetesinin önlenmesi büyük önem taşımaktadır. Ebeveyn tutumları ve ebeveynlik stilleri, yalnızca çocukların dental uyumunun şekillendirilmesinde değil, aynı zamanda diş hekimliği bakımına yönelik uzun dönem algılarının yönlendirilmesinde de kritik bir rol oynamaktadır. Dental ortamda ebeveyn varlığı, çocuğa güven duygusu sağlayarak süreci destekleyebilmektedir. Bununla birlikte, ebeveyn katılımının yalnızca varlığı değil, niteliği de genç hastanın uyumunu olumlu ya da olumsuz yönde anlamlı ölçüde etkileyebilmektedir. Otoritatif ebeveynlik stilinin, otoriter ve izin verici ebeveynlik stilleri ile karşılaştırıldığında, dental ortamda daha istenen çocuk davranışları ve daha düşük çürük deneyimi ile ilişkili olduğu bildirilmiştir. Ebeveynlerin, çocuklarını diş tedavisi seansları öncesinde, sırasında ve sonrasında doğru biçimde yönlendirebilmeleri ve etkin şekilde destekleyebilmeleri için, psikolojik danışmanlık bileşenleri içeren hedeflenmiş programlara ihtiyaç duyulmaktadır. PaFein+ projesi, ebeveynlere ve ailelere bu tür bilgileri sunmayı amaçlamakta; böylece diş hekimliği korkusu ve anksiyetesinin erken dönemde önlenmesine katkı sağlamayı ve uzun vadede ağız sağlığına ve diş tedavisine yönelik olumlu tutuma sahip bireylerin yetişmesine destek olmayı hedeflemektedir.

Anahtar Kelimeler: Dental anksiyete; ebeveynler; eğitim; ağrısız

TO CITE THIS ARTICLE:
Vinereanu A, Munteanu A, Tanase M. Parental collaboration in achieving pain-free pediatric dentistry. In: Kargül B, Kuşcu ÖÖ, Peker MS, eds. Pain-Free Dentistry in Children (The Future of Dentistry: PaFein+ Dentistry). 1st ed. Ankara: Türkiye Klinikleri; 2026. p.32-7.

Dental fear and anxiety (DFA) are common findings in paediatric patients worldwide, especially in school and preschool children, and they are often significantly associated with poorer oral health.[1,2]

DFA is often underestimated in terms of occurrence, causes and – perhaps even more important - long-term consequences. When DFA occurs in early years, it does not

necessarily fade away with time, and negative perceptions regarding dental care risk negatively impact oral health throughout life, as individuals with DFA tend to avoid or postpone dental visits, while pathology augments and complications may occur.[3] This makes DFA an important point to take into account when elaborating prevention strategies.

Parents act as role models for their children. Parental influences are extremely complex and important, ranging from direct information sharing to habits and values, social skills, management of emotions and personality shaping.[4] Parents' crucial role in influencing their children's attitude towards new situations and/or challenges have been widely studied and consistently proven for many decades, with the visual cliff experiment conducted by Gibson and Walk in 1960 being a relevant, frequently cited example.[5] From this perspective, parents need to be regarded (and educated) as key determinants for children's attitudes towards medical encounters, health in general and oral health in particular.

A genetic component of (dental) fear has also been described and documented in literature;[6] this can be regarded as another reason why parents need to be taught how to overcome their own fears and negative feelings in order to be able to positively shape their children's perceptions when facing new, potentially threatening situations.

PARENTAL INFLUENCE ON CHILD BEHAVIOR

A child's ability to interact in a positive way in the dental office substantially depends on how they have been raised and disciplined at their homes.[7] ***Parents' attitude*** and ***parenting styles*** play a crucial role in shaping children's dental compliance.[8,9] Although the relationship between children and parents constantly evolves in time and is very much influenced by changes in society, recent studies emphasize the role of parental involvement in influencing child's dental compliance.[10,11]

Decades ago, Baumrind had already categorized parenting styles into 3 major types: authoritarian, permissive and authoritative.[12]

The authoritarian parenting style is defined by strong parenting practices, including physical punishment, yelling, and commands.[7] Authoritarian parents are unresponsive to the needs of their children and have high expectations of them.[13]

On the contrary, permissive parents are warm and responsive, but they are indulgent with their children. These children have an increased risk of caries because there is no control on their diet and oral hygiene practices.[7] Additionally, children with permissive parents may show negative behaviour in the dental office: they may refuse to open the mouth, scream and even have a temper tantrum.[14]

The authoritative parenting style is characterized by warmth and emotional support while continuing to enforce high control on the child's behaviour; it relies less on giving orders and more on reasoning and explanations.[13] Studies have shown that authoritative parenting was associated with more desirable child behaviour in the dental setting and lower caries experience compared to the other two parenting styles.[7-9,14]

Assuncão, et al., Simunovic, et al. and Yigit, et al. demonstrated that there is a strong correlation between the level of parents' anxiety and child's fear.[15-17] Regarding the relationship between parental dental anxiety and the child's behaviour in the dental office, studies demonstrated that it is rather the mother's degree of anxiety that influences the child's anxiety.[18] If the mother has a high degree of anxiety, then the child will usually also have dental anxiety.[19-22] Moreover, the level of mother's anxiety also influences the frequency of tooth brushing and the frequency of visits to the dentist. Anxious mothers often tend to postpone visits to the dentist with their child. Thus, the possibility of early diagnosis of dental conditions is reduced, as well as their prevention or minimally invasive treatment.[11]

A study performed by Adeniyi, et al. demonstrated that higher maternal psychological distress was associated with higher dental anxiety in 6- to 12-year-old children, but there was no association between maternal depression and child's dental anxiety level.[23]

Costa, et al. analysed the relationship between anxiety disorders in adolescent mothers and dental fear in children aged between 24-36 months and they noticed that agoraphobia and social phobia of young mothers were associated with children's dental fear.[24]

Busato, et al. conducted a study on 40 mother-child pairs and showed that maternal anxiety had an influence on child anxiety, but mother's age and education level were not related to maternal anxiety.[25]

Uziel, et al. showed that intra-family relationships and behavior, parents' education, dental fear, and memories from previous treatments play an important role in defining the level of dental anxiety in their adolescent children.[26]

PARENTAL PRESENCE IN THE DENTAL SETTING

Parental presence in the dental setting is a controversial topic in pediatric dentistry.[27] The debate about the role par-

ents should play in the dental office is as old as the profession. As society changes, so does the perception of that role. Although multiple studies have investigated the dynamic of dentist, parent and child, their findings differ greatly. A survey of pediatric dentists by Marcum et al revealed that pediatric dentists who chose to exclude parents from the dental operatory felt that parental presence wasted time, disrupted the child and made the dentist uncomfortable. Practitioners who allowed parents in the operatory responded that it was a "parental right" to be present during their child's dental visit. A single pre-operative instruction to parents to be a passive observer was effective.[28]

Passos de Luca, et al. recently conducted a systematic review evaluating the influence of parents' presence in the dental office on children's behaviour, anxiety and fear during dental treatment. They conclude that, in children up to 12 years old, parental presence in the dental setting does not influence children's behaviour and DFA; however, these results seem to have a very low certainty of evidence.[29]

The presence of a parent in the dental office may help by providing the child with a sense of security and comfort.[10] However, it is the quality of parental involvement, rather than mere presence, that can substantially influence the young patient's compliance.[10] Children can learn appropriate behaviour through observation of parental behaviour and actions. Thus, parents who are calm and exhibit supportive behaviours during dental visits can serve as role models for their children, encouraging them to adopt similar attitudes and behaviours.[30,31] Several studies demonstrated that children who had parents actively involved during dental appointments manifested lower levels of DFA and better cooperation during dental treatments. In consequence, positive interaction between parents and dental team can lead to better experience in the dental setting for children.[32,33]

Both over empathetic and authoritarian parents may, despite their incontestable good will, compromise the child's ability to cope with the challenge represented by the dental visit.[14]

Given the above, programs that raise families' awareness with regard to these aspects and encourage the kind of approach that would foster stress-free dental encounters are needed. This can help avoid potential onset of DFA since early childhood and thus ensure conditions for the child to develop into a young adult with positive attitude towards oral health and dental visits.

PARENT EDUCATION AND ACTIVE PARTICIPATION: INTRODUCING PAFEIN+ PROJECT

For all the mentioned reasons, parental engagement in friendly, stress-free dental visits seems to be crucial on the long run. However, mere encouragement of parental engagement may not be enough; shaping parents' involvement by providing them beforehand with information on how to efficiently manage the child's dental visit can sometimes be really useful, and initiatives in this respect need to be developed.

Bagattoni, et al. recently published a study on child's preparation before the first dental visit using a booklet with suggestions for parents. Two days before the visit, parents received by e-mail a booklet with explanations about the importance of the first dental visit in promoting a positive attitude in the dental office and with suggestions on how the parent should prepare the child for this visit. During this first appointment, only visual examination of the oral cavity was performed, without any operative or invasive procedures (filling or X-rays). This research showed that children whose parents received the booklet reported less pain and tended to evaluate the visit as more enjoyable than unprepared children.[34]

Several studies demonstrated that pre-appointment parental counselling is very effective because parents who are informed about the procedures their child will undergo and about the ways they should talk to their children about these procedures (explanations, demonstration videos, drawings, etc.) have a lower level of dental anxiety and fear, giving rise to more cooperative behaviour during dental treatment.[34,35]

A new parental counselling initiative is currently put together and promoted by an international Erasmus + project, the PaFein+ 2023-1-TR01-KA220-HED-000155608. The project reunites dental professionals from three countries (Türkiye, Romania, Italy) and focuses on promoting means and techniques that would help avoid pain in paediatric dentistry. The ultimate long-term goal of PaFein+ is to prevent DFA and grow generations of children with healthy teeth and positive dental behaviour, while also reducing the negative impact of dentistry upon the environment by decreasing the need for the use of sedation and general anaesthesia (GA) in pediatric dentistry (PD).

One of the identified ways for reaching this goal was to provide appropriate behaviour guidance tools to all involved in providing dental care to young patients – both dental professionals and parents. While dental profession-

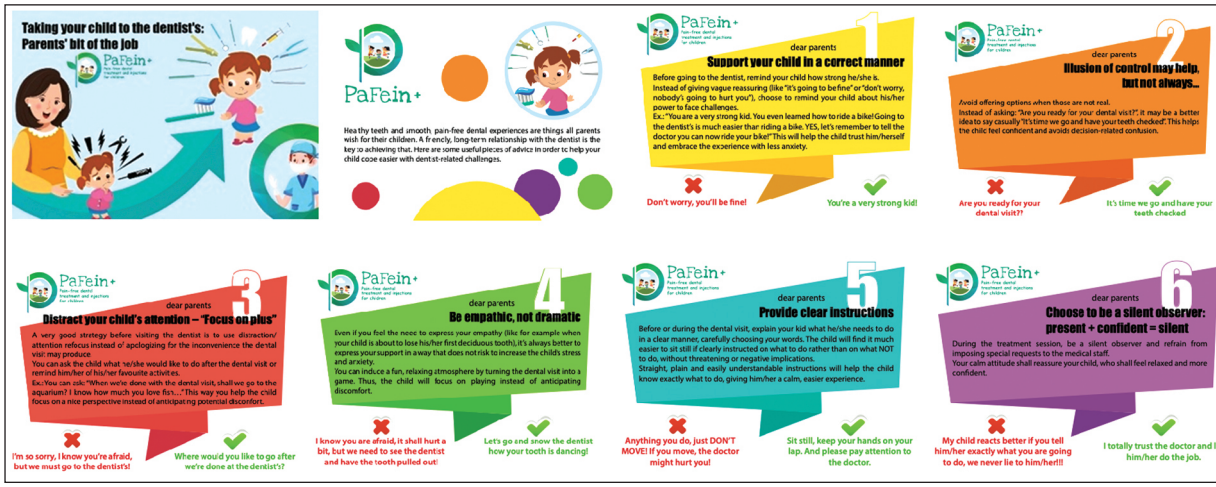

FIGURE 1: Booklet with advice for parents

als may have access to this kind of information during their undergraduate or postgraduate training programs, families tend to be less aware of their key role in determining children's reactions and responses to medical interventions, so parents do not necessarily anticipate the effect that their undoubtedly well-intended interventions (e.g. dentist stories/anecdotes from own childhood) might have upon children's perceptions and reactions.

Families and parents were thus set as a main target group for training in supportive behaviors and communication, before, during and after dental visits, so that the dental encounters are naturally integrated in life and potential risk for DFA is minimized.

A booklet with advice on how to efficiently prepare and handle the child's dental encounter was prepared by a team of pediatric dentists and trained psychologists (Figure 1).

The PaFein+ Parental Guide booklet informs about parental behaviors and communication strategies that support stress-free dental visits. It emphasizes reinforcement of the child's self-confidence through calm, matter-of-fact communication, along with the use of distraction and positive anticipation. The booklet also highlights the importance of expressing empathy without dramatization and providing clear, positively framed instructions. Parents are advised to remain quietly supportive and to demonstrate trust in the dental team, while dentists may use developmentally appropriate euphemistic language to reduce anxiety and support effective dentist–child communication.

The material was shared through social media (digital version) and directly (brochures)in the Pedodontics clinic of Carol Davila University, Bucharest, and reached an estimate of roughly **7700** Romanian families during the first month. Parents were subsequently encouraged to complete a feedback questionnaire on the perceived usefulness of the educational initiative (Figure 2).

As the great majority of the respondents (97.9%) felt the provided educational material would, to variable extents, help them better manage their children's dental visits in the future, the initiative was taken further and an educational cartoon video was subsequently produced. Validated by trained psychologists, the material shows parents how to positively support their children before, during and after the dental encounter, what words and attitudes to avoid and how to encourage young patients to efficiently

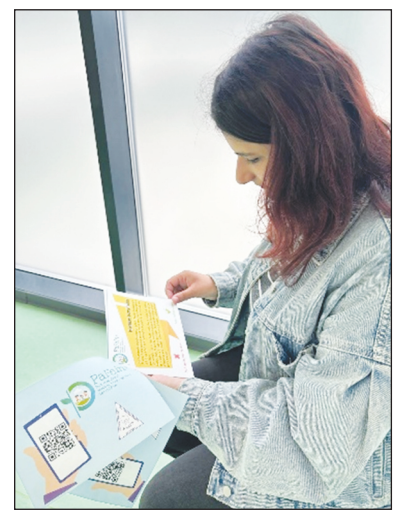

FIGURE 2: Brochure read by a mother in dental clinic waiting room

face the challenge without unwanted psychological consequences. The cartoon is shared through social media in order to reach as many parents and families as possible. Results of this initiative will be made public in the near future.

CONCLUSIONS

1. Efficient prevention strategies in dentistry should also take into account dental fear and anxiety.
2. Families' role in shaping children's attitude towards various aspects of healthcare is not to be neglected.
3. Welcoming parents to the dental team is expected to substantially contribute to growing generations of young people with healthy teeth and a positive, trust-based, long-term relationship with the dentist.
4. Besides home oral care and nutrition advice, educational programs targeting parents and caregivers need to also take into account the psychological approach and integrate prevention of dental fear and anxiety in upgraded strategies for efficient prevention of oral disease.
5. Efficient behavioural guidance exerted by both the dental professionals and parents may reduce the need for sedation and general anaesthesia in paediatric dentistry, thus reducing the impact of human activities upon the environment. Initiatives in this respect are needed and well-perceived by the public.

Source of Finance

This research was partially supported by Erasmus+ 2023-1-TR01-KA220-HED-000155608 PaFein+ Project

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