

The effect of parenting styles on children's dental anxiety

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Abstract: Dental anxiety is a common condition seen at all age levels and can be prevalent in children. It has been shown to have multiple risk factors including general fear, personal traits, previous dental experiences, parents' dental fear, gender and age. Dental anxiety can lead to avoidance of treatment and deterioration of oral health and in some countries considered a public health issue. Parents play an important role in shaping children's mental and psychological health and wellbeing and may occasionally increase the risk of developing anxiety and depression in susceptible children. Despite abundance of data on this issue there seems to be sparse information as to how parenting might affect child's anxiety at in dental settings. Therefore, this paper sheds some light on the effect of parenting styles on children's dental anxiety.

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Anxiety in Children:

Anxiety is a natural emotion in humans which involves an unpleasant feeling over anticipated future threats (Davison, 2008). It is often an overreaction to a subjective threatening situation (Bouras and Holt, 2007). Anxiety is not synonymous to fear which is an appropriate cognitive and emotional response to real or perceived immediate threats. Additionally, fear is short lived, focused and geared towards a specific threat (American Psychiatric Association, 2013). The feeling of fear can be viewed as an alarm which draws an individual's attention to eminent threats or dangers. Anxiety on the other hand, has longer duration, is unfocused and is triggered by anticipation of undefined future events or situations (Bouras and Holt, 2007). Dental phobia which is a closely related term, is characterized by marked and persistent anxiety which may be related to specific dental procedures such as drilling or injections or may be generalized to all dental procedures (Bracha HS, Vega EM, 2006).

Anxiety can be associated with adverse physiological functions known as the "fight-or-flight responses" and may elicit unpleasant sensations such as agony, dread, or terror. It can also lead to physiological, behavioral, or emotional symptoms. Some of the physiologic symptoms can include headaches, vertigo, nausea, indigestion, shortness of breath, palpitations, fatigue and excessive sweating (World Health Organization., 2009) (Testa *et al.*, 2013). Anxious individuals may also have changes in their sleep patterns or eating habits and an increase in motor functions (Barker, 2003).

Anxiety can be either a short term emotional state or a long-term trait. The latter reflects a

generalized tendency to respond with anxiety to anticipated threats and has been shown to be more common with certain personality traits such as neuroticism (Jeronimus *et al.*, 2016). Moreover, anxiety can be considered a form of mental disorders known as "anxiety disorders". These have underlying genetic components and often occur with other mental illnesses. Anxiety disorders include among others generalized anxiety, panic attacks, specific phobias, social anxiety or separation anxiety disorder (American Psychiatric Association, 2013).

It is normal for children to experience varying levels of anxiety at different developmental stages. For example, preschool children generally experience a form of anxiety known as separation anxiety when forced away from their parents or caregivers. Children may also have transient anxieties such as fear of darkness, strangers, or fear of certain animals (American Academy of Child and Adolescent Psychology, 2013).

Anxious children generally worry about many things even before they happen. They are generally concerned about the wellbeing of their family members, friends or school. They can have low self-esteem and worry about making mistakes or embarrassing themselves in public (American Academy of Child and Adolescent Psychology, 2013).

When anxiety is prolonged and intense it becomes a form of anxiety disorder which is among the most common mental health conditions (American Psychiatric Association, 2013). Anxiety disorders may arise suddenly or build up over time and the child may not be able to discern their cause. This kind of anxiety

can affect and interfere with the child's daily activity and well-being.

Anxiety disorders include generalized anxiety, obsessive compulsive disorder, specific phobias, social anxiety, panic attacks, and posttraumatic stress disorders (American Psychiatric Association, 2013). The cause of such anxiety may be genetic, caused by stressful childhood experiences, modeled by parents' behavior or caused by unknown reasons. Children with such anxieties may have trouble sleeping, become fatigued during the day, have trouble concentrating or become easily irritable (American Psychiatric Association, 2013).

Dental anxiety:

Dental anxiety refers to a state of unease and apprehension associated with receiving dental care coupled by the fear of losing control (Moola, Pearson and Hagger, 2011).

The prevalence of dental anxiety has been reported by various studies in different countries with some groups of individuals reporting higher levels than others. Dental anxiety affects 16.1% of Australians (Armfield, Spencer and Stewart, 2006), 10% of Icelanders (Ragnarsson, 1998) and 17.1% of individuals from Singapore (Chellappah *et al.*, 1990). Chinese and Japanese individuals seem to have higher levels of dental anxiety which affects up to 30% 42.1% (Schwarz and Birn, 1995)(Weinstein *et al.*, 1992). A Dutch study shows dental fear to affect 24.3% of individuals 18-93 years of age which was reported to be less than fear of snakes (34.8%), heights (30.8%) and physical injuries (27.2%) (Oosterink, de Jongh and Hoogstraten, 2009).

Dental anxiety is common among children with up to a third suffering from this condition especially among females. In their study with 11 to 15-year-old Saudi children and their caregivers Alaki *et al.* found that 34% of children had severe dental anxiety which was related their caregivers' anxiety. This finding was more prevalent among females and is higher with specific types of dental treatment including teeth extractions and root canal treatment. It was also significantly associated with the level of caregivers' dental anxiety (Alaki *et al.*, 2012). A study by Chhabra *et al.* showed that the prevalence of dental anxiety among 5 year old children was 7.9%, 7.1% for 6 year old, 6.6% in 7 year old, 6.5% in 8 year old, 6.3% in 9 year old and 5.8% in 10 year old children (Chhabra, Chhabra and Walia, 2012).

Dental anxiety has been shown to be of multifactorial nature where genetic, behavioral, and cognitive factors may all play a role. Some children are genetically more prone to anxiety in general including dental anxiety. They do not directly inherit dental anxiety but external factors may interact with genetic susceptibility and result in heightened dental

anxiety (Gregory and Eley, 2007). Dental anxiety may also arise by means of classical conditioning. A child who experiences pain during dental treatment may later feel anxious with the sight of his or her dentist (Kryukov, 2012). Children may also indirectly acquire dental anxiety through observing anxious children receiving dental treatment (Rachman, 1978).

Anxiety in children increases their sensory receptivity and perception of pain (Wood JJ, McLeod BD, Sigman M, Hwang WC, 2003). Anxious children however, may not pose more behavioral problems in dental settings (Aminabadi *et al.*, 2012). Not all anxious children display disruptive dental behavior and not all children with such behavior are anxious (Aminabadi *et al.*, 2012). Their anxiety is generally manifested as avoidance of dental treatment rather than aggression or resistance (Barrett, Dadds and Rapee, 1996). However, anxiety in children should not be dismissed by their caregivers or treating dentists. Anxious children may be quiet, compliant and eager to please.

Due to subjective fear of pain and trauma anxious children avoid dental treatment and miss dental appointments which causes them to have higher decayed, missing or filled teeth (DMFT). The poorer oral health of these children puts them in a vicious circle and leads to further deterioration of oral health (Ingersoll, 1982).

Parenting styles:

Parents can play a major role in the development of childhood anxiety and in shaping their emotional health (Hudson and Rapee, 2005). Certain types parental-children interactions have been found to foster anxiety and depression in children including overprotection, parental insecurity and insecurity.

Parents generally use a variety of styles in modeling children's behavior and upbringing. Parenting styles can be defined as a psychological construct which represents a standard strategy that parents use in rearing their children (Spera, 2005). This may include the more common authoritarian, authoritative, permissive and uninvolved styles as well as less common ones. Research shows that parenting accounts for 4 percent of the variance in anxiety in school aged children and 8 percent in child depression (McLeod, Weisz and Wood, 2007).

The authoritarian style (high control, low warmth) emphasizes obedience regardless of child circumstances or personality. These parents are demanding of their children but are not responsive. They aim to control their children and make decisions their behalf and often impose harsh punishments. Children reared as such have been shown to be unhappy, lack the ability to make decisions on their own or cope with new and unfamiliar situations. Moreover, they may be at higher predisposition to

develop anxiety, depression and poor self-esteem (Baumrind, 2005)(Kathleen Stassen. Berger, 2011).

On the other hand, an authoritative rearing style (high warmth, high control) stresses on warmth and response to children's essential needs without lacking behavioral expectations or consistent rule-setting. Parents with this style set limits to their children and are willing to modify them if they see fit. Unquestioned submission is not the corner-stone of this parent-child relationship. This kind of rearing style has been shown to be negatively related to childhood anxiety and produces well-adjusted children who are confident and independent. Hence, this rearing is considered to be the "gold standard" of parenting styles (Baumrind, 2005)(Kathleen Stassen Berger, 2011)(Aminabadi *et al.*, 2015)

Permissive or indulgent rearing (high warmth, low control) provides children with abundant love and sensitivity without expectations on the child's behalf or setting rules and consequences to behavior. This style does not enforce rules or consequences to child's behavior and can result in children having very high self-esteem but lacking achievement or impulse control. This may also increase children's predisposition to problems such as addiction to alcohol and drugs. Children reared as such often become demanding and immature. They generally do not do well in school and tend to be under achievers (Dornbusch *et al.*, 1987)(Maccoby and Martin, 1983)(Rosenthal, 2014)(Baumrind, 2005).

Uninvolved rearing style which is the most harmful lacks love and warmth and has no expectations from the child. Uninvolved parents do not play any roles in their children's daily activities and do not provide any guidance or set limits which can result in children lacking self-esteem and the ability to cope. Such rearing practice has been reported to be associated with juvenile deviant behavior (Maccoby, E.E.; Martin, J.A., 1983).

Other recognizable parenting styles may include attachment, positive, narcissistic, dolphin and over parenting (Kathleen Stassen Berger, 2011)(Walton, 2014)(Jackson, 2010).

The correlation between mothers' emotional intelligence (EI) and children's total anxiety has also been studied. Emotional intelligence refers to a individuals' ability to understand their emotions as well as other's and to discriminate between different emotions and label them appropriately (Mayer, Roberts and Barsade, 2008). In their study of this correlation Aminabadi *et al.* found that EI was not correlated with the child's total anxiety although a negative correlation with some subscales of mothers' EI and child anxiety was existent. Mothers with higher IE generally have less anxious children. Mothers' emotional intelligence can affect that of their children

through behavioral modeling. These mothers (generally authoritative) appropriately understand their feelings, regulate their emotions and control their impulses leading to their children being more well-rounded and adjusted (Aminabadi *et al.*, 2012). On the other hand authoritarian mothers were found to have more anxious children who do not cope well with new experiences(Wood JJ, McLeod BD, Sigman M, Hwang WC, 2003).

Parenting styles and dental anxiety:

The effect of parenting on child's dental anxiety has been studied by some researchers. It seems that this relationship is not straight forward and when existing may be due to other compounding factors. Some studies documented the existence of an association especially in younger children.

Despite the reported effect of parenting on children's coping skills and anxiety (Berger, 2011) (Aminabadi, 2015) this effect seems to be debatable when applied to dental anxiety (Krikken *et al.*, 2013). Parenting is viewed as a continues interaction between parent and children which can be modified by the child's personality and behavior (Kiff, Lengua and Zalewski, 2011). Krikken *et al.* studied the role of parents on child's dental anxiety and behavior in referred and non-referred 4-12-year old patients (Krikken *et al.*, 2013). their findings showed that dental anxiety was not influenced by rearing styles. Moreover, past traumatic dental experiences and irregular visits to the dentist were more correlated to anxiety than rearing styles. These finding are supported by other research which showed lack of association between rearing styles and child dental fearfulness (Rapee and Heimberg, 1997).

Additional studies support similar findings where an association between rearing styles and child's dental behavior and anxiety was lacking. Anxious children may display more disruptive behavior in dental setting compared to non-anxious children but parenting styles were not shown to be associated with either anxiety or disruptive behavior (Krikken and Veerkamp, 2008). It has been reported however that parenting style was more associated with parental attitude towards children's dental treatment rather than children's dental anxiety (Krikken and Veerkamp, 2008).

Contrary to previous findings, other research found some correlation between parenting and child dental anxiety. In their research with three to six year-old children Howenstein *et al.* reported that children of authoritative parents generally had better behavior during their first dental visits as well as better oral health (Howenstein *et al.*, 2015). This finding was also supported by Aminabadi *et al.* who reported that authoritative parenting was positively correlated with child's dental behavior and negatively with child's

anxiety (Aminabadi *et al.*, 2015). Authoritative parents were more convinced that the behavior of their children could be managed by the dentist compared to permissive or neglectful parents (Krikken and Veerkamp, 2008). Permissive parents were less likely to tell their children that the dentist will not hurt them compared to authoritarian parents.

Reports show that parenting styles are becoming more lenient and permissive which has resulted in increasing behavioral difficulties from children in dental settings (Law, 2007). A survey by Casamassimo *et al* showed that as many as 43% of the diplomats of the American Academy of Pediatric Dentists (AAPD) were dissatisfied with their current practice as a result of changes in parenting style which to their opinion can be seen as “probably bad” or “bad” in nature (Casamassimo, Wilson and Gross, 2001).

Dental anxiety is a common condition seen at all age levels and can be prevalent in children. It has been shown to have multiple risk factors including general fear, personal traits, previous dental experiences, parents’ dental fear, gender and age (Shim *et al.*, 2015). Dental anxiety can lead to avoidance of treatment (Barrett, Dadds and Rapee, 1996) and deterioration of oral health and in some countries considered a public health issue (Alvesalo *et al.*, 2009). Parents play an important role in shaping children’s mental and psychological health and wellbeing and may occasionally increase the risk of developing anxiety and depression in susceptible children (Hudson and Rapee, 2005). Despite abundance of data on this issue there seems to be sparse information as to how parenting might affect child’s anxiety at in dental settings. Therefore, this paper sheds some light on the effect of parenting styles on children’s dental anxiety.

Summary and conclusions:

There seems to be scarcity of data with regards to the nature of association between parenting styles and children’s dental anxiety. The current evidence shows that an association may exist but further studies need to confirm this and show its exact direction.

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