A review and critical analysis about dental phobia

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Abstract
Many dentally fearful people will only seek dental care when they have a dental emergency, such as a toothache or dental abscess. People who are very fearful of dental care often experience a “cycle of avoidance,” in which they avoid dental care due to fear until they experience a dental emergency requiring invasive treatment, which can reinforce their fear of dentistry. Sometimes, one of the biggest challenges that a dentist has is when a patient with a phobia cannot necessarily articulate where their fear comes from. This makes the phobia more difficult to understand and manage, and is often the case when the phobia is based around a long-distance childhood memory. The patient does not necessarily need to be conscious of the memory for it to influence their behavior as an adult. The first step was to understand the fear and to identify the problem. During a full consultation with the dentist, he/she will identify the primary symptoms as anxiety, stress and fear and spent time with the dentist to try to understand what triggers them. The aim of the present article to review of dental phobia related articles. There is therefore a need to develop culturally sensitive instruments which would enhance the objective assessment of treatment need and treatment outcomes of dental fear in patient. Such instruments would help in effectively determining the efficacy of various treatment modalities for dental phobia in adults as well as children.

Key Words: Dental phobia, dental anxiety.

Introduction:
Dental fear or dental phobia has continued to generate a lot of interest in general dentistry. This is because of the handicapping complications associated with it. For one, it causes stress for many dentists who have to manage such patient especially those who have associated behavioral problems. In addition, chair time required managing and some specialized training is also needed for the effective management of this patients. Dental anxiety shares similar characteristics with many clinical anxiety disorders, and this is especially the case with other specific fears and phobias. These often debilitating conditions comprise several different dimensions, including cognitive, emotional, behavioral and physiological components. In addition, dental anxiety and fear are associated with a range of aversive health consequences. The reasons people fear attending the dentist are varied and include pain, cost of treatment, lack of control while in the dental chair, embarrassment and fear of the unknown. The cause of dental anxiety is usually a previous bad experience, but can be caused indirectly through horror stories about dental treatment from family, friends and even the media. What do you fear most about going to the dentist? Just the thought of having a needle inserted into your cheek and a cavity removed from your tooth is enough to bring tears to the eyes. However, surprisingly it is not the actual dental procedure that most often terrifies patients. According to surveys, the site of a needle and the sound of the drill were the two most feared elements of dentistry. However, to effectively manage of this type of patient, it is important to determine the prevalence of problems in a community so as help in planning of public health services. There is also some physiological factor related with dental pain that may sometime create some extra stress to patient. Because of the oral cavity's proximity to the brain, as well as the complex nerve structure of the head and neck, dental pain is often more severe than pain in other parts of the body. One of the most troublesome biological factors that dentists must deal with is bacterial infection. In addition to the sensitivity caused

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by infections, the initial inability of oral infections in the teeth and bony structures to drain results in the buildup of pressure. As bacteria quickly multiply and produces gaseous toxins, pressure increases and pain results. If an infection is neglected for even a day or two, the pressure can become intolerable. Direct experience is the most common way people develop dental fears. Most people report that their dental fear began after a traumatic, difficult, and/or painful dental experience. However, painful or traumatic dental experiences alone do not explain why people develop dental phobia. The perceived manner of the dentist is an important variable. Dentists who were considered "impersonal", "uncaring", "uninterested" or "cold" were found to result in high dental fear in students, even in the absence of painful experiences, whereas some students who had had painful experiences failed to develop dental fear if they perceived their dentist as caring and warm.

A search and review of publications related to various identification tools used for assessing in dental phobia was done. Attention was paid to the findings with the main focus being the function for which instrument were designed. The features as an ideal instrument for use in the measurement of dental phobia were examined.

**Discussion:**

A controlled study of 34 patients with dental phobia was carried out to explore predisposing and etiological factors of phobia of dentistry. Dental trauma was found to be the most important etiological factor in dental phobia and two such experiences distinctly separated the two groups. Other predisposing factors are discussed as well as the length of time between the last dental treatment and inclusion in this study, duration and intensity of pain and pain threshold. A study was carried out among 79 patients in United States of America presenting for emergency extraction rated their anxiety and pain before, during, and two weeks after the procedure. Measures of trait dental anxiety and fear of pain also were collected. All patients exaggerated their recall of procedure pain, but only those high in trait dental anxiety exaggerated their recall of anxiety. Highly anxious patients reported more pain prior to the procedure and expected more pain; ratings of anxiety and pain for all participants assimilated over time. A study was carried out in Denmark to obtain information about a group of young drug addicts' dental habits, knowledge, and attitudes. An improvement in the dental behavior in this group and a decrease in their dental disease is undoubtedly closely connected with stopping drug abuse, or at least reducing it, together with an improvement in these individuals' entire situation. A study was carried out to find out prevalence of dental anxiety and the association between dental anxiety and personality in a population-based sample of 895 US urban children, from 5 to 11 years of age, from low-income families. Dental anxiety was reported by the child using the Dental Subscale (DS) of the Children's Fear Survey Schedule, and behavioral problems and personality traits were evaluated by parent report on the Child Behavior Checklist (CBCL). Mean DS scores were 31.1 (SD = 10.3) for boys and 34.3 (SD = 11.0) for girls. CBCL score means were 33.3 (SD = 23.2) for boys and 28.5 (SD = 19.1) for girls. 75% of US adults experience some degree of dental fear, from mild to severe. Approximately 5 to 10 percent of U.S. adults are considered to experience dental phobia; that is, they are so fearful of receiving dental treatment that they avoid dental care at all costs. Between 45-55% of patients who attended the dentist are anxious in the dental environment. The reasons people fear attending the dentist are varied and include pain, cost of treatment, lack of control while in the dental chair, embarrassment and fear of the unknown. The cause of dental anxiety is usually a previous bad experience, but can be caused indirectly through horror stories about dental treatment from family, friends and even the media. What do you fear most about going to the dentist? Just the thought of having a needle inserted into your cheek and a cavity removed from your tooth is enough to bring tears to the eyes. However, surprisingly it is not the actual dental procedure that most often terrifies patients. According to surveys, the site of a needle and the sound of the drill were the two most feared elements of dentistry.
Management:
When you make the appointment to see the dentist, tell the receptionist you are nervous about treatment. This first appointment will usually be to discuss your fears about treatment and to do an initial examination of your teeth.\(^{15}\)

Behavior Management: This is the simplest method of treatment for nervous patients. It involves a careful and sympathetic approach from the dentist, with explanations of what is being done and allowing the patient control over the procedure. Some patients may want to bring a friend along for support. It may also be possible to play relaxing music or to watch a video while having treatment.\(^{16-18}\)

Dental Health Maintenance: Of course, the most important way to reduce the pain involved in maintaining oral health is by focusing on preventive care instead of the treatment of problems. If you’ve put off going to the dentist for years and have neglected regular flossing or brushing, you may be experiencing advanced stages of tooth decay or gum disease - both painful problems. The further decay spreads the more radical the treatment required. This causes trauma to the tooth and gums that results in discomfort.\(^{19-20}\)

New Advances in Dentistry
Dentistry has come a long way over the last few years and many of you will be surprised on your next visit. Even if you have put off going to the dentist and are experiencing problems, your dentist has new ways to provide relatively painless treatment. For invasive procedures such as wisdom teeth extraction, biopsies and complex root canal surgery, nerve block is often administered. This involves the injection of an anesthetic to block sensation to the nerve that sends pain signals to the brain. By blocking the nerve with an anesthetic, the dentist can numb the area requiring treatment for a specific period of time. To eliminate the discomfort associated with injections, topical agents are applied to tissues prior to the injection a soothing atmosphere and calm, reassuring dentist can make your next dental visit more pleasant.\(^{21-23}\)

Conclusion:
The various existing measures for assessing different aspects of dental fear have served various research purposes. However, their uses as measures to determine treatment need and treatment outcomes are limited. There is therefore a need to develop culturally sensitive instruments which would enhance the objective assessment of treatment need and treatment outcomes of dental fear in children. Such instruments would help in effectively determining the efficacy of various treatment modalities for dental phobia in adults as well as children. The final part of a possible solution could be counseling, therapy or hypnosis, conducted by a certified professional. This should only be applicable to patients suffering from a deep-seated dental phobia. In the majority of cases, the starting points of patients would be to speak to their dentist, rather than a doctor. As dental phobias become more widely understood, more and more dentists are becoming familiar with how to treat them effectively.

References:
10. Getka EJ, Glass CR. Behavioral and cognitive-behavioral
approaches to the reduction of dental anxiety. Behavior
Seattle, Wash.: University of Washington, Continuing Dental
Education.
prevalence of dental fear and avoidance: a recent survey
June 2011]; 107(4): 609–10. Available from URL:
13. Bernstein DA, Kleinknecht RA, Alexander LD. Antecedents of
113–24.
children's oral health care: a qualitative study of carers of
young children. Community Dent. Oral Epidemiol., December
at a dental fears research clinic. Special Care in Dentistry,
16. Lundgren J, Carlsson SG, Berggren U. Relaxation versus
cognitive therapies for dental fear—a psychophysiological
17. Buchanan H, Coulson NS. Accessing dental anxiety online
support groups: an explorative qualitative study of motives
263–9.
18. Coulson NS, Buchanan H. Self-reported efficacy of an
online dental anxiety support group: a pilot study. Community
cbi.nlm.nih.gov/pubmed/18205639.
19. Wright GZ, Alpern GD, Leake JL. A cross-validation of
some variable affecting children's cooperative behaviour. J.
20. Machen JB and Johnson R. Desensitisation, model
Self-report measurements of dental anxiety and fear in
1998; 252-258.
film modeling on the reduction of anxiety – related behaviours
in individuals varying in level of previous experiences in the
child's uncooperativeness in dental treatment from maternal

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