

Posttraumatic Dental-Care Anxiety (PTDA): *Is "dental phobia" a misnomer?*

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ABSTRACT

In this brief review article, we suggest that the term "dental phobia" may be a misnomer. The problem with using the term "phobia" in a dental-care context is as follows: by definition, phobias involve a fear that is "excessive or unreasonable," which the individual recognizes as such, and in which the anxiety, panic attacks and phobic avoidance are not better accounted for by another disorder, including posttraumatic stress disorder

(PTSD). In our experience, most individuals with dental "phobia" do not recognize their symptoms as "excessive or unreasonable" and in that sense, resemble individuals with PTSD. Our review of the dental-care literature suggests that true (innate) dental phobias (akin to unreasonable fear at the sight of blood or a syringe) probably account for a smaller percentage of cases, and that the vast majority of dental-care anxiety (DA) cases stem from aversive dental experiences. Research has documented that individuals who reported having experienced painful dental treatments and perceived a lack of control in the dental situation were approximately 14 times more likely to also report higher dental fear, and approximately 16 times more likely to report being less willing to return to the dental treatment. Therefore, we propose that this psychological condition should be conceptualized as Posttraumatic Dental-Care Anxiety (PTDA), and should be classified as part of the Posttraumatic Stress Disorder (PTSD) spectrum in the forthcoming Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-V).

INTRODUCTION

There is increasing interest in the interface between dental research and stress disorders research (Bracha, Ralston, Williams, Yamashita, & Bracha, 2005; Bracha et al., 2004; Bracha, Blanchard, Lloyd-Jones, Williams, & Blanchard, 2004). In a series of recent articles, Bracha et al. have reviewed blood phobia, injection phobia and closely related fear conditions and argued that these are innate fears rather than acquired fears (Bracha, 2005; Bracha, 2004; Bracha, Bracha, Williams, Ralston, & Matsukawa, 2005; Bracha, Yoshioka, Masukawa, & Stockman, 2005). In this article, we briefly review the relevant literature on anxiety related to dental care and conclude that unlike blood and injection fears, most dental care anxieties are acquired rather than innate. We argue that what is currently known as "dental phobia" should not be classified with the other specific phobias (such as blood phobia) but rather within the posttraumatic stress disorder (PTSD) spectrum. Thus, dental phobia may be a misnomer.

A better term for this condition is Posttraumatic Dental-care Anxiety (PTDA) and we propose this term should be used in the next edition of the official psychiatric taxonomy (the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition [DSM-V]) scheduled for release in 2012.

It is also worth noting that fear of being hospitalized, often referred to as hospital phobia, is similarly unlikely to be an innate fear and primarily resembles PTSD-like traumatic avoidance (Mayou & Smith, 1997). We have argued that hospital phobia, like dental phobia, should be classified as a part of the PTSD spectrum in the forthcoming revision of the psychiatric taxonomy (Bracha, 2005).

TERMINOLOGICAL ISSUES

There are numerous differences between dental fear/anxiety and specific phobias (such as blood phobia and injection phobia), with which it has been classified. Most importantly, it is unclear as to whether, in the majority of cases, the dental fear is truly *excessive or unreasonable*. Phobias, by definition, must have the following elements: "the person recognizes that the fear is excessive or unreasonable" and the "anxiety, Panic Attacks or phobic avoidance associated with the specific object or situation are not better accounted for by another mental disorder, including ... posttraumatic stress disorder" (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision). We propose that the term "Posttraumatic Dental-care Anxiety" (PTDA) is more accurate since it specifies that the mode of acquisition is typically not innate (as with blood phobia), but rather acquired, most frequently through direct conditioning akin to PTSD.

Several large studies have conclusively documented that true phobias are innate ancestral fears (non-associative fears) (Kendler et al., 1995; Hettema, Annas, Neale, Kendler, & Fredrikson, 2003; Kendler, Myers, & Prescott, 2002; Kendler, Myers, Prescott, & Neale, 2001; Neale et al., 1994). The best-known examples are snake phobia and insect phobia. However, there are also three associative (non-innate) modes of acquisition

for fear: direct conditioning, vicarious learning and negative information (Rachman, 1977). Rachman also theorizes that direct conditioning results in stronger physiological and behavioral reactions (and more severe fear) than the other two non-innate pathways.

THE ROLE OF SEVERE PHYSICAL PAIN IN INDUCING DENTAL ANXIETY

A recent landmark study on survivors of a terrorist bombing suggests that experiencing *physical pain* (painful physical injury) is a key risk factor for the development of extreme fear of particular situations (Jehel, Paterniti, Brunet, Duchet, & Guelfi, 2003). Similarly, studies note that dental fear and dental anxiety are typically highly related to previous painful dental experiences. One large study from Singapore (1564 adolescents, ages 13 to 15) found that individuals who reported having experienced *painful* dental treatments and perceived a lack of control in the dental situation were 13.7 times more likely also to report higher dental fear, and 15.9 times more likely to report being less willing to return to dental treatment (Milgrom, Vignehsa, & Weinstein, 1992). Milgrom, et al., note that "the etiology of severe clinical fear appears strongly related to direct conditioning in the presence of pain and vulnerability" (two factors closely related to criteria for a traumatic event in PTSD). Other studies also find traumatic dental experiences (especially during childhood) to be the largest cause of later dental fears (Moore, Brodsgaard, & Birn, 1991; Davey, 1989). Further, fears in children (ages 3 to 11) were found to vary consistently based on the degree of invasiveness of the procedure (Rape & Bush, 1988). Other researchers found that children whose last dental visit was for a toothache or tooth extraction were twice as likely to be afraid of the dentist compared to those whose last dental visit was for other reasons (Milgrom, Mancl, King, & Weinstein, 1995).

Another study found that among patients attending a dental fear clinic, the majority (59 percent) reported at least one aversive dental event prior to the onset or worsening of dental anxiety (de Jongh, van der Burg, van Overmeir, Aartman, & van Zuuren, 2002). They noted that among patients attending a dental fear clinic the average scores on the PTSD Impact of Events Scale were comparable to

those of individuals exposed to the 1988 Lockerbie airplane disaster (Livingston, Livingston, Brooks, & McKinlay, 1992). Moreover, Impact of Events Scale scores in the dental fear clinic were comparable to those of motor vehicle accident (MVA) victims (Mayou, Ehlers, & Hobbs, 2000). This second finding is especially powerful since MVAs are among the best-studied PTSD-inducing incidents (Pitman & Delahanty, 2005; Pitman et al., 2002; Vaiva et al., 2003a; Vaiva, Ducrocq, Cottencin, Goudemand, & Thomas, 2000; Vaiva et al., 2003b).

CONCLUDING REMARKS

It must be noted that while many older studies on dental-care anxiety have methodological problems that limit the generalizability of the results, several more recent studies cited above have used more methodologically sound approaches. These recent studies consistently point to a primarily conditioning-based mode of acquisition resulting from a physically painful dental experience, supporting our view that the term Posttraumatic Dental-care Anxiety (PTDA) better fits the phenomenon presently labeled dental phobia, dental fear or dental anxiety. Treatment of PTDA is probably best achieved by referral to a psychologist with a thorough understanding of anxiety disorders, as well as specific expertise in differential diagnosis, state of the art assessment, and empirically supported (evidence-based) treatment of traumatic response, including PTSD. In general, the psychological treatments of PTDA often mirror elements of treatments of PTSD.

SUMMARY

A good number of recent studies note that individuals with anxiety or fear associated with dental-care are a heterogeneous group, but that the vast majority of patients attribute their fears to aversive dental experiences, especially involving high levels of pain during dental treatment. Thus, unlike true innate phobias (e.g., fear of snakes, insects, and high elevations), most cases of what is currently termed "dental phobia" can be better conceptualized as an often sub-threshold (according to DSM-IV TR criteria) form of PTSD. Thus, we conclude that dental phobia should probably be renamed "Posttraumatic Dental-care Anxiety" (PTDA) and classified in the PTSD spectrum in the forthcoming Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V). ■

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