Body Dysmorphic Disorder: What Dental Hygienists Should Know

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Body dysmorphic disorder (BDD) is an increasingly prevalent, yet significantly under-reported and overlooked mental health condition in oral health care settings. Dental hygienists work in nearly all of the settings where people with smile-related BDD will likely seek care. This article explores the prevalence and significance of BDD from a dental hygiene perspective and provides insight into what dental hygienists must know about this condition, which is associated with extreme distress over a perceived physical "flaw" that is slight or insignificant to others. Undergoing surgical or cosmetic treatments to alter one's appearance rarely improves how a client with BDD feels about their "flaw," and it usually worsens the problem. In fact, 25% of those affected have attempted or committed suicide. Thus, diligent awareness and screening for BDD are critical in obtaining informed consent before beginning any procedures. Manual searches were conducted in the Georgian College Library Page 1+ service, as well as PubMed on the topic of body dysmorphic disorder and teeth, body dysmorphic disorder and dentistry, body dysmorphic disorder and dental hygiene and body dysmorphic disorder and young people. Twenty-three (23) peer-reviewed sources were consulted in this research. This article concludes that increased awareness of BDD among dental hygienists and the introduction of mandatory screening for BDD are the best ways to combat this growing concern.

INTRODUCTION

Body dysmorphic disorder (BDD) is a harrowing mental health condition that has been surging among adolescents over the past decade.[1] BDD is an obsessive-compulsive disorder, defined by the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision* (DSM-5-TR) as a "preoccupation with one or more perceived defects or flaws in physical appearance that are not observable or appear slight to others."[2] Teeth are the third most prevalent preoccupation for those with BDD,[3,4] yet the condition remains chronically overlooked in the oral health care field.[5,6] Even so, people living with BDD who have teeth- or smile-related preoccupations will likely seek treatment from places where registered dental hygienists typically practise, including but not limited to, general dentistry, orthodontic, orthognathic, prosthodontic, periodontic, and cosmetic practices.[4,6] Likewise, dental hygienists often provide aesthetic tooth whitening services and coronal polishing,

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which can also be sought by people with smile-related BDD.[7,8] Sadly, their condition is associated with feelings of shame, depression, and poor quality of life regardless of the treatment result, which highlights the need for prompt reform and the widespread adoption of BDD screening.[9,10]

The goal of this literature review is to identify the prevalence and significance of BDD from a dental hygiene perspective and provide insight into what needs to be done to best manage BDD at the clinical level. While the College of Dental Hygienists of Ontario (CDHO) places a high value on personal autonomy and self-determination, and the dental hygiene scope of practice remains mainly preventive,[11] the sum of this research has shown that BDD is a serious and prevalent issue that all oral health professionals may confront, as teeth are one of the top areas of concern cited among those with BDD.[3,6,7,9,12-15] Second, failure to recognize BDD poses legal and/or ethical concerns when obtaining informed consent for treatment.[4] Third, dental hygienists regularly practise in settings where people with smile-related BDD are likely to seek treatment.[4-6,8,9,12] Finally, dental hygienists play a vital role in maintaining client rapport and careful anamnesis,[11] making them uniquely suited to manage and screen for BDD in these settings. For these reasons, this review concludes that increased awareness within the dental hygiene profession and the introduction of mandatory screening for BDD are the best ways to combat this growing concern.

METHODS

Manual searches in the Georgian College Library Page1+ service and PubMed were conducted on the topics of body dysmorphic disorder and dentistry, body dysmorphic disorder and dental hygiene, and body dysmorphic disorder and young people. Only peer-reviewed sources published since 2008 were included. Relevant sources not available in full text were obtained through Georgian College's interlibrary loan service. Primary search terms were body dysmorphic disorder, dental, BDD, BDD screening, smile dysmorphia, dentistry, dental hygiene, adolescents, youth, body dysmorphia, and teeth. Twenty-three (23) peer-reviewed works met the eligibility criteria and provided valuable insight into this research. Reference was also made to the CDHO Registrant's Handbook and CDHO's Knowledge Network. In addition, manual web searches to determine specific facts, such as the prevalence of other disorders compared to BDD, were made and cited as required.

RESULTS AND DISCUSSION: WHAT IS BODY DYSMORPHIC DISORDER?

BDD is an obsessive-compulsive-type disorder classified in the DSM-5-TR.[2] To be diagnosed, individuals must report or show signs of repetitive behaviours related to an obsession with their area of concern, such as constant mirror checking, skin picking or excessive "selfies," and editing the flaw from photos.[2] Most importantly, an individual's preoccupations will cause "...clinically significant distress or impairment in social, occupational, or other important areas of functioning,"[2] such as avoiding social gatherings, calling in sick to work or being unable to have normal conversations due to the perceived "flaw." Individuals living with BDD may have negative thoughts and preoccupations that occur for three to eight hours daily.[2] Sadly, 25% of those affected have also attempted suicide.[16] The BDD diagnosis is also specified by the degree of insight the individual seems to have on their body dysmorphic beliefs, which on average is poor[2]; over one-third of individuals with BDD are classified as having "absent/delusional" insight into their dysmorphic thinking or delusional views about the severity of the flaw itself.[2] Likewise, these individuals may also be aware that their thoughts are abnormal and feel somewhat ashamed of how they feel in order to avoid seeming vain.[17] For these reasons, the BDD Foundation recommends asking clients directly about their appearance concerns, as individuals may be too shy or embarrassed to bring them up plainly.[17] Doing so can differentiate BDD from other mental health concerns such as depression and anxiety. Thankfully, successful treatment of BDD is possible and usually includes a combination of cognitive behaviour therapy and medication.[2,5,17]

PREVALENCE AND SIGNIFICANCE

According to the Anxiety and Depression Association of America (ADAA)[18] and the DSM-5-TR,[2] BDD affects about 1 in 50 people in the general population, making the overall prevalence among US adults 2.4%. In Canada, it is estimated that over 350,000 people are affected.[2] It is steadily increasing in prevalence, with a more poignant increase occurring among adolescents.[1,5,9,19] This increase is suggested to be related to this age group's high social media use and/or exposure to body-image-distorting messaging.[1,5,9,19] Some studies show that the prevalence is relatively higher among young or adolescent females than among young males[6,9,19] but other research suggests otherwise.[13-15] A systematic review by Dons et al.[6] found that the average age of individuals diagnosed with BDD in the cited literature is between 19.1 and 32.6 years old.

Interestingly, a 2020 study[1] and a 2022 systematic review[19] on BDD concluded that there is indeed a link between the prevalence of BDD symptomology and social-networking-site usage. It is cited that those who frequently compare themselves on social media are at higher risk of exacerbating "sub-BDD" body insecurities into maintained BDD.[19] Thus, it is important for dental hygienists and other clinicians to provide individualized BDD screening

methods, tailored to the age groups and typical social media use, so that the most accurate screening and client rapport can be achieved.[5,19]

Furthermore, the risk of developing BDD is higher among individuals with a first-degree family history of obsessive-compulsive disorder (OCD),[2] as well as among people with eating disorders such as anorexia nervosa (AN).[3] In a 2018 study[3] on BDD and eating disorders, it was found that 26.23% of patients with AN likely also had BDD. In addition, those with AN citing non-weight related concerns, such as their hair, skin or teeth, had the highest impairment rates.[3] Moreover, Dons et al.[6] found that 71% to 80% "... of the BDD group previously consulted an orthodontist concerning the same problem, relative to 8% in the non-BDD group," which is also supported by Sathyanarayana et al.'s findings.[20] Other mental health disorders have also been linked to a higher likelihood of developing BDD.[21]

On top of looking out for typical BDD behaviours such as compulsive mirror checking and/or clear distress about a certain body part, dental hygienists may want to pay closer attention to clients who present with clinical signs of eating disorders,[3,5,20] take antidepressants and/or have a mental health condition,[2,21] have a close family history of OCD,[2] or who have had previous orthodontic consultations yet seek additional therapy for seemingly insignificant aesthetic reasons.[6,20] Furthermore, special attention should be paid to adolescent clients since they are more likely to have body image concerns,[1,9,19] and early detection allows for better treatment results and prevention of unnecessary aesthetic procedures.[1,5,22]

The prevalence and severity of BDD among clients seeking oral health care are clear; teeth are a prime concern among the general BDD population. A study by Perez-Rodriguez et al.[4] demonstrated that teeth were the third most prevalent area of concern among BDD-positive prosthodontic and general dentistry patients, with 45.9% of them citing it as a perceived flaw. Likewise, Dons et al.[6] found that up to 86% of participants with BDD had concerns with their teeth or face. Even more significant were Yüceer et al.'s[15] findings that teeth were the most commonly listed concern among BDD-symptomatic male high school students, with 30.3% of them identifying it as a concern. Moreover, Veale et al.'s[9] 2016 systematic review found that 11% of orthognathic patients and 5% to 10% of adult orthodontic and cosmetic dentistry patients were affected by BDD. Similarly, Sathyanarayana et al.[20] found that 5.2% of orthodontic patients were likely to have BDD. Kashan et al.[10] also concluded that people seeking facial cosmetic and dentoalveolar surgeries were most likely to have BDD, compared to other smile-related treatments. While more research is still needed, especially on BDD client satisfaction post-treatment,[9] BDD is of significant concern to all oral health care professionals.

The literature shows that BDD is more prevalent, or equally as prevalent, as many other serious health conditions that dental hygienists currently pay close attention to in clinical practice. For example, BDD is more prevalent in Canada than dementia,[23] methamphetamine abuse,[24] and systemic lupus erythematosus.[25] Yet, BDD awareness remains extremely low among dental hygienists, and it is not mentioned anywhere within the CDHO Knowledge

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Network.[26] In the absence of this information, the most important thing a dental hygienist can do to protect the well-being of BDD individuals is to properly screen all clients for BDD symptoms and know when to refer their clients to their family physician or their treating psychologist or psychiatrist for proper BDD assessment and treatment.[5,17]

LEGAL AND ETHICAL ISSUES RELATED TO INFORMED CONSENT

Many of the cited works in this review discuss the ethical and legal implications of BDD and a clinician's ability to obtain informed consent for treatment.[4,5,9,19] That being said, most of the literature shows that BDD clients report high treatment dissatisfaction and poor patient-centred outcomes, regardless of the quality of the work provided.[4,5,8,9,27]

An impairment as severe as BDD raises questions about an individual's capacity to consent,[11] as their lack of insight and preoccupation with their perceived flaw will likely overshadow all else.[2,8,9,12] According to the *CDHO Handbook*, "To give informed consent, the client must not only understand the information but must also appreciate the reasonably foreseeable consequences of the decision."[11] Dental hygienists are responsible for assessing each client's capacity to provide informed consent,[11] but the high rates of treatment dissatisfaction among BDD individuals show how this can be challenging; it is difficult for medical professionals and BDD clients to mutually understand all risks, benefits, and the likely results of treatment, let alone agree upon realistic treatment goals.[4] Furthermore, some dissatisfied BDD clients have been violent towards or taken legal action against their clinician due to their unmet and distorted expectations.[2]

Many other ethical dilemmas arise when considering the potential outcomes associated with either providing or denying someone with BDD the procedures they request. On the one hand, Rosten et al.[16] and others[2] maintain that the treatments requested by BDD clients rarely improve a BDD client's perception of the defect. Rather, undergoing treatment often makes their harmful preoccupations worse.[2,16] On the other hand, not fulfilling their requests can significantly increase the risk of self-mutilation or seeking unsafe medical procedures elsewhere.[2,5,27] Some individuals with BDD may even perform surgery on themselves, which is dangerous and often worsens the situation.[2] Of course, more research is required on how to best deal with these difficult situations,[5,6,9] but it is clear that increased screening,[22] physician referrals,[5,17] and overall improved awareness within the dental hygiene profession is a good place to start.

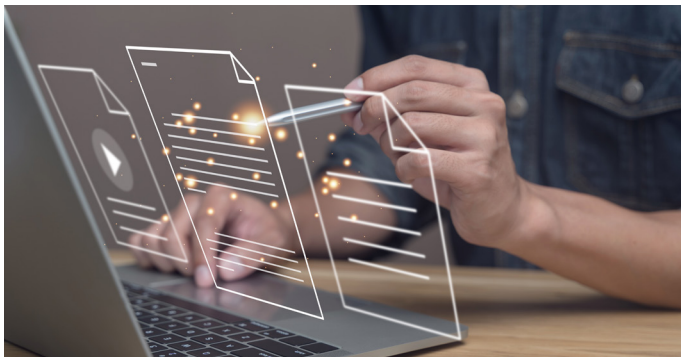
WHITENING AND BLEACHOREXIA

Undoubtedly, the most popular cosmetic dental treatment in recent years is tooth whitening[8]; an aesthetic service often provided by dental hygienists, dental assistants, and aestheticians. Unsurprisingly, studies have also shown how preoccupation with an aspect of one's physical appearance is a significant motivating factor for undergoing certain cosmetic dental procedures such as teeth whitening.[7-9,19] While no research on the specific prevalence of "tooth shade" as a BDD preoccupation was sourced, a case report by Lee et al.[7] examined a client presenting with an obsessive preoccupation with tooth bleaching, a symptom the authors referred to as "bleachorexia." The client also presented with severe gingival inflammation and tissue sloughing related to extreme overuse of tooth-bleaching products and excessive, ritualistic toothbrushing.[7] Notably, this case report claimed that "Patients with bleachorexia obsession behave like patients with body dysmorphic disorder."[7] Clearly, dental hygienists play a vital role in managing and assessing possible contraindications before performing whitening services and/or making other aesthetically driven referrals, yet BDD and bleachorexia remain frequently ignored by most dental hygienists. While home whitening products are readily available to clients over the counter, mandatory screening and awareness of this condition would allow dental hygienists to better recognize these BDD behaviours among their clientele and increase the likelihood that dental hygienists would appropriately tailor their care plans to meet the client's unmet needs.[22]

SCREENING TOOLS FOR BODY DYSMORPHIC DISORDER

A variety of screening tools have been used in the literature for determining the prevalence of BDD within their study samples, with an overall consensus that BDD questionnaires are simple and effective methods for identifying individuals with symptoms.[1,3-6,8-10,12-16,20-22,27-30] Some of the more common and effective screening tools used in the research were the DCQ (Dysmorphic Concern Questionnaire),[4] the BDDQ (Body Dysmorphic Disorder Questionnaire),[9] the BIDQ (Body Image Disturbance Questionnaire),[21] and the BDD-YBOCS (Yale-Brown Obsessive Compulsive Scale Modified for Body Dysmorphic Disorder).[6] Many researchers modified the items slightly, and some used elements from multiple screening tools in their research as required to best suit their study sample. For example, Collins et al.[21] modified the BDDQ into 7 self-reported questions rated on a 5-point scale, known as the BIDQ. Likewise, other researchers piloted their own screening methods for BDD, such as Honigman et al.[29] with the "PreFACE" questionnaire provided to facial cosmetic surgery patients before and after treatment, and Schulte et al.[12] with their Likert-scale adaptation of the BDDQ. A consensus on the most commonly used BDD screening tools varied, but the BDDQ[9] and the BDD-YBOCS[6] were each cited as being most frequently seen in the literature based on findings from different systematic reviews.

Including risk-benefit questions about one's potential to self-harm is also recommended.[2,5,12] That way, clinicians can accurately assess the need for referral and the degree of self-harm potential. Utilizing the BDD Foundation's[30] online BDD screening tool may also be helpful for chairside use or for developing an appropriate questionnaire for clients. Undoubtedly, using a BDD screening tool is easy and effective and can provide dental hygienists with invaluable insight into their clients' underlying and



potentially unmet human needs. In practice, if the screening tool indicates likely BDD, a referral to a client's family physician or treating psychiatrist/psychologist for a definitive diagnosis should be made before including unnecessary aesthetic treatments in the client's care plan.[5,17,27]

CONCLUSION

This review has explored the prevalence of BDD and its significance to the dental hygiene profession. It has also offered insight into screening methods that can be used to prevent a multitude of harmful consequences caused by BDD. Overall, this review argued that BDD screening and awareness must become mandatory for dental hygienists for the following key reasons: BDD is widely prevalent, harmful, and underreported among dental clientele; teeth are a leading area of concern for individuals living with BDD; unrecognized BDD poses serious legal and ethical questions related to informed consent and determining capacity; and lastly, dental hygienists play a critical role in anamnesis, establishing client rapport, and work in a wide array of clinics from which smile-concerned individuals with BDD may seek care. From bleachorexia to BDD-related smile dysmorphia, BDD is a serious medical concern the dental hygiene profession and medical field as a whole must no longer ignore.

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