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Body-focused repetitive behaviors: More prevalent than once thought?

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ABSTRACT

Body-focused repetitive behaviors (BFRBs), such as hair pulling, skin picking, and nail biting are common habits, but their pathological manifestations have been considered rare. Growing evidence suggests pathological forms of these behaviors can be conceptualized as a class of related disorders. However, few previous studies have examined the collective prevalence of related pathological BFRBs. The current study examined the self-reported prevalence of current (past month) subclinical and pathological BFRBs in a large (n = 4335) sample of college students. The study also examined the chronicity and impact of these behaviors. Results showed that 59.55% of the sample reported occasionally engaging in subclinical BFRBs, and 12.27% met criteria for a pathological BFRB, suggesting these conditions may be quite common. Of the various BFRB topographies, cheek biting was the most common. Both subclinical and pathological BFRBs tended to be chronic (i.e., occurring for longer than 1 year). Although persons with pathological BFRBs were distressed about their behavior, few experienced functional impairment or sought help for the behavior. Implications of these findings for the conceptualization and treatment of body-focused repetitive behaviors are discussed.

Introduction

Body-focused repetitive behaviors (BFRBs) include hair pulling, skin picking, nail biting, teeth grinding, and other similar actions (e.g., cheek/lip biting; Grant et al., 2012). Occasional engagement in BFRBs appears to be somewhat common, with current (point prevalence in past month) prevalence rates of 34–64% for nail biting (Hansen et al., 1990; Woods et al., 1996), 9.7–10.5% for hair pulling (Duke et al., 2010; Woods et al., 1996), 20–92% for skin picking (Bohne et al., 2002; Hayes et al., 2009; Keuthen et al., 2000; Teng et al., 2002), 42–43% for cheek biting (Teng et al., 2002; Woods et al., 1996), and 15–31% for diurnal teeth grinding (Manfredini et al., 2013; Woods et al., 1996). Pathological forms of BFRBs (i.e., those performed frequently, despite attempts to stop, causing physical impact and distress and/or functional impairment [American Psychiatric Association, 2013]) are thought to be considerably less common. Based on previous studies, current clinical hair pulling (i.e., trichotillomania) likely impacts 3.2% of college students (Woods et al., 1996) and between 0.9–4.4% of psychiatric inpatients (Grant et al., 2005; Müller et al., 2011). Similarly, current clinical skin picking (i.e., excoriation disorder) likely impacts 3.8% of college students (Keuthen et al., 2000) and 6.8–11.8% of psychiatric inpatients (Grant et al., 2007; Müller et al., 2011).

A significant limitation of many previous prevalence studies is the failure to comprehensively assess multiple forms of BFRBs at once (e.g., subclinical and clinical hair pulling along with subclinical and clinical skin picking, etc.). Rather, previous studies have assessed the prevalence of persons who met criteria for specific pathological BFRBS (i.e., trichotillomania vs. excoriation disorder vs. pathological nail biting). This is potentially problematic, given the growing understanding that BFRBs are a related class of conditions. Not only do BFRBs show similar phenomenology, comorbidity patterns, and psychological sequelae, evidence also suggests that a single latent trait may underlie the conditions (Maraz et al., 2017). Further, they co-occur at high rates (Snorrason et al., 2012) and respond to similar treatments (Woods and Houghton, 2016). A review of the literature suggests only one study has examined the prevalence of persons with any pathological BFRB (Teng et al., 2002). In that study, the authors defined pathological BFRBs as BFRBs that are (1) performed at least 5 times per day and (2) cause functional impairment. Results of that study showed that 60 of 439 (13.7%) undergraduate college students had at least one pathological BFRB at the time of the study.

If pathological BFRBs are as common as Teng et al. (2002) found, greater attention should be given to developing our understanding of and treatment for these conditions, especially given that evidence shows that they are misunderstood, concealed, and undertreated. BFRBs are typically viewed negatively by peers (Boudjouk et al., 2000;

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Houghton et al., 2016; Ricketts et al., 2012; Woods et al., 1999) and are commonly perceived as unhygienic behavioral manifestations of anxiety (Ekman and Friesen, 1972; Troisi et al., 1998; Waxer, 1977). Studies have consistently shown that individuals with pathological BFRBs feel misunderstood by peers and shamed by their symptoms, leading them to engage in significant efforts to conceal their symptoms (Weingarden and Renshaw, 2015). Furthermore, persons with pathological BFRBs are reluctant to seek treatment, and when doing so, they find providers with little knowledge of their condition, who frequently prescribe unproven and ineffective interventions (Franklin et al., 2008; Tucker et al., 2011; Weingarden and Renshaw, 2015; Woods et al., 2006). A survey of community health professionals found that physicians and psychologists correctly answered only 61% of general knowledge questions about pathological hair pulling (Marcks et al., 2006), and another series of studies found that 90% of dermatologists and psychiatrists were not aware of any psychological resources for patients with pathological skin picking (Jafferany et al., 2010a,b).

It is also potentially important to understand the direct physical impact of BFRBs. Researchers have suggested that BFRBs may represent part of a continuum of self-harm behaviors (Stanley et al., 1992), but BFRBs typically belong on the milder end of the spectrum and align closely with grooming behaviors that are engaged in by many animals (Bordnick et al., 1994; Kurien et al., 2005). Evidence has shown that BFRBs and more severe forms of self-harm share certain characteristics such as negative affect, obsessive-compulsive characteristics, and increased somatization (Croyle and Waltz, 2007; Stanley et al., 2001), and many persons who report severe forms of self-harm (i.e., cutting) also report milder forms of self-harm such as skin picking. However, BFRBs are typically not performed to deliberately inflict pain, which contrasts with the purpose of self-harm such as non-suicidal self-injury (APA, 2013) and provides an important distinction between these pathologies.

Given that the Teng et al. (2002) study was conducted in only 439 college students and may not have stringently defined pathological BFRBs (i.e., did not provide definitions of symptoms as habits versus normal grooming or incidental behavior) and did not assess for distress, larger and more methodologically rigorous studies are needed to corroborate the high prevalence rates observed in that study. The current study was hence undertaken to investigate the prevalence of pathological BFRBs in a much larger sample of college students using more stringent diagnostic criteria. Furthermore, we investigated rates of subclinical BFRBs to examine the prevalence of non-pathological forms of these behaviors. Finally, to provide insight into the chronicity and impact of subclinical and pathological BFRBs, we investigated course and self-reported impairment and whether there were any gender differences with regard to these factors.

2. Method

2.1. Participants

From June 2014 until May 2017, an electronic survey was used to recruit undergraduate research participants at a large, public university. Potential participants consisted of undergraduate students enrolled in introductory psychology courses who were required to participate in research studies for course credit (alternative options for fulfilling this requirement were provided). A link to the study was posted on a website that included several other research participation opportunities available to students to fulfill their research credits. Other than the length of time required to complete the study and the amount of credits offered for participation, no descriptive information about the content of the study was provided until after potential participants followed the link and viewed the informed consent document. The informed consent document described the content and objective of the study, which was to screen participants for BFRBs. IRB approval for the procedure was obtained, and all study procedures followed the ethical guidelines of the World Health Organization.

The only inclusion/exclusion criteria for the study were that participants were (a) at least 18 years of age, (b) enrolled in a psychology course at the hosting institution that offered research credit, and (c) fluent in English. A total of 4532 participants provided informed consent and began the survey, but 97 participants/data points either failed to provide complete responses or were duplicate responses, leaving 4435 complete surveys that were suitable for analyses. The majority of the participants identified as female (n = 3,072; 69.3%), and the mean age was 18.77 years (SD = 1.13; Range = 18–44).

2.2. Materials and procedure

The content of the survey was brief and designed by the authors to screen participants for a larger, in-person study on BFRBs. After providing informed consent, participants provided limited demographic information and were asked to indicate whether they engaged in BFRBs within the last month. For the purposes of this study, BFRBs were defined as daily engagement in hair pulling, skin picking, nail biting, cheek biting, teeth grinding while awake, and/or skin biting. Nocturnal bruxism was not screened for, as evidence indicates that diurnal bruxism is more common and has a closer link to anxiety and stress than nocturnal bruxism (Funch and Gale, 1980; Glaros, 1981). Brief descriptions of each of these behaviors were provided to reduce instances of false positives. When a participant reported that they currently (i.e., in the last month) engaged in one of these specific BFRBs, they were asked follow-up questions regarding the frequency (e.g., “fewer than 5 times per day” or “5 or more times per day”), physical impact (e.g., “Has this behavior caused permanent scarring or damage?”, “Has this behavior caused any injuries?”), psychosocial distress (e.g., “Does this behavior bother you a lot?”), and functional impact of that BFRB (e.g., “Does this behavior interfere with day-to-day activities?”), as well as whether they had ever sought medical attention because of that behavior. Frequency was assessed as $\geq$ 5 times a day based on the methodology of Teng et al. (2002), as there is no established cutoff for number of times one must engage in a BFRB daily to be considered disordered. Pathological BFRBs were operationalized as BFRBs that (a) occurred at least 5 times per day, (b) caused physical damage (e.g., hair loss or skin lesions) and (c) caused significant distress and/or functional impairment. Persons who reported that their symptoms only occurred while under the influence of alcohol or drugs were not considered to have a pathological BFRB (true for 0.5% of cases). By comparison, subclinical BFRBs were operationalized as BFRBs that did not meet the full criteria for pathological BFRBs as described above. For instance, someone with a subclinical BFRB could endorse physical impact but no resulting distress or impairment, or they could report distress or impairment but no physical impact. Whether participants had made repeated attempts to stop engaging in symptoms (DSM-5 Criterion B) was not assessed. Upon completion of the survey, which required ~5 min of time, participants were automatically granted a research credit commensurate with between 0–30 min of time spent participating.

3. Results

3.1. Prevalence

The majority of participants reported a current (past month) BFRB (n = 3185; 71.81%). Most of the BFRBs endorsed were subclinical (n = 2641; 59.55%), which was defined as a current BFRB not meeting full criteria for a pathological BFRB as described in the previous section. Most were female (n = 1839; 69.3%), whereas 30.6% were male (n = 807). The most commonly reported subclinical BFRB was cheek biting (see Table 1). Of those reporting only subclinical BFRBs, 46.97% (n = 1496) reported only 1 current BFRB, 34.57% (n = 1,101) reported 2 current BFRBs, 15.16% (n = 483) reported 3 current BFRBs, 2.83% (n = 90) reported 4 current BFRBs, 0.44% (n = 14) reported 5 current