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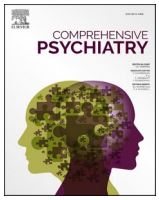

Quo vadis DSM-6? An expert survey on the classification, diagnosis, and differential diagnosis of body-focused repetitive behaviors

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ABSTRACT

Background: Many conditions we now call body-focused repetitive behaviors (BFRBs) have been subject to research for several decades, most notably trichotillomania and skin picking. However, the American Psychiatric Association did not combine these conditions into a single category, body-focused repetitive behavior disorders (BFRBDs), until the fifth edition of the DSM (2013). Several aspects of the disorder remain uncertain and controversial. For example, ongoing debate surrounds which specific conditions fall under this diagnostic category and how to best differentiate BFRBs from conditions such as nonsuicidal self-injury (NSSI). The current article presents results from a survey of experts' opinions on diagnostic criteria, with the goal of refining the diagnostic criteria.

Method: We contacted experts on BFRB via various sources and invited them to complete an online survey on the phenomenology, classification, and differential diagnosis of BFRB. We also inquired about possible alternative syndrome labels (e.g., body-focused habit).

Results: Data from the final sample of 50 experts demonstrates that most experts agree with the present classification of BFRB/BFRBD as an obsessive-compulsive and related disorder and recommend retaining the labels BFRB or BFRBD. The experts considered the following conditions BFRB, with an agreement of over 60%: trichotillomania, skin picking, dermatophagia, nail biting, and lip-cheek biting. Mixed results emerged for awake bruxism and thumb sucking in adults. Only a minority regarded night bruxism and knuckle cracking as BFRB. To differentiate BFRB from NSSI, the experts noted that the motive behind the urge (self-harm/injury versus release of tension) should be considered. Analyses of a sub-sample of experts with at least six years of clinical and/or research experience yielded results compatible with those of the entire sample.

Discussion: The survey supports the usefulness of the BFRBD diagnostic entity. However, some criteria require further refinement. Future editions of the DSM should more explicitly delineate which conditions qualify as BFRB. Furthermore, it is important to give more attention to the primary motivation behind BFRB to distinguish it from NSSI and potentially from stereotypic movement behavior.

1. Introduction

Although the syndrome of body-focused repetitive behavior disorder (BFRBD) was not introduced as a new diagnostic entity in the DSM until its fifth edition [1], various body-focused repetitive behaviors (BFRBs) were included in different versions of the DSM under other names and classifications (e.g., DSM-I: obsessive compulsive reaction, habit disturbance; DSM-III: overanxious disorder (may manifest as "*nervous habits such as nail biting or hair pulling*"); DSM-III-R/IV: "*impulse control disorder not elsewhere classified*" [2–5]). A common denominator of these conditions is the urge-driven harmful or painful manipulation of the outer body surface.

Most research on BFRBs to date has dealt with trichotillomania, which was first described in 1889 by the French dermatologist François

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Henri Hallopeau ([6]; mentions in belletristic and historical books are found much earlier) and, unlike other BFRB conditions, was mentioned in early versions of the DSM, with the notable exception of the DSM-II [7]. Much research has also been devoted to skin picking [8], so it is not surprising that skin picking and trichotillomania received a separate code in the DSM-5 [1]. Other conditions were mentioned only cursorily, if at all; for example, awake bruxism, knuckle cracking, and compulsive nose picking are considered BFRB by many experts [9–13] but have never been mentioned in any version of the DSM.

The present article reports on a survey of experts on BFRB/BFRBD (i.e., clinicians and/or researchers) with the aim of informing DSM decision makers about possible modifications to subsequent editions of the DSM. First, we were interested to learn which conditions experts consider as BFRBs. As mentioned, only trichotillomania and skin picking have been explicitly coded as BFRB in the DSM-5 [1], while other conditions are often considered as BFRBs in the literature but without formal acknowledgement in the DSM (e.g., compulsive nose picking, awake bruxism, thumb sucking in adults, joint cracking). Second, although BFRBs are included under the category of obsessive-compulsive and related disorders, they show some striking differences from obsessive-compulsive disorder (OCD). Whereas individuals with BFRB simply give in to the urge/impulse, (compulsive) behavior in OCD is typically more deliberate, with the goal of reducing negative emotions and neutralizing the obsessive thoughts (e.g., checking to neutralize the fear that people were injured by one's car; for a discussion of differential diagnoses, see [14]). Moreover, comorbidity between BFRB with OCD is rather low [11,15]. We therefore explored whether the experts deem other overarching DSM categories more suitable, such as addiction (BFRBs are sometimes framed as behavior addiction; [16]) or impulse control disorders (trichotillomania was classified under this category in the DSM-III-R and DSM-IV [4,5]). We felt that this question was relevant as categorizations can imply ecological models or place emphasis on certain pathological aspects and thus may shape treatment decisions. For example, categorizing BFRBs as an impulse control disorder may indicate a close association with disinhibition/lack of control, while OCD and related disorders, the current category, implies over-control. Third, we aimed to discern whether researchers and clinicians recommend keeping the somewhat cumbersome label body-focused repetitive behavior or prefer other terms (e.g., as in the DSM-I [2]). Fourth, BFRB conditions have been listed in DSM editions together with conditions that are now labeled as stereotypic movement behavior (SMB) or non-suicidal self-injury (NSSI) behavior. For example, in the DSM-III-R, "*impulse control disorder not elsewhere classified*" included symptoms such as "*head-banging, nail-biting, scratching, gnawing, excoriation, and other acts of self-mutilation*" ([4], p. 327). The DSM-5 [1] separates the three (BFRB, NSSI, SMB), but newer research indicates that diagnostic distinctions are rather blurry and some overlap exists. For example, the usage of instruments is not confined to individuals with NSSI but is also seen in SMB (poking of the eye with a finger or instrument; amputation of digits) and BFRB as well (for example, in trichotillomania [17]). The DSM is ambiguous in this regard. While the DSM-5 states in one place that excoriation (skin-picking) disorder, unlike NSSI, is not associated with the usage of implements (p. 806), it acknowledges elsewhere that "*many use tweezers, pins, or other objects*" (p. 254). The latest text revision [18] removed the latter statement but added that symptoms of trichotillomania and skin picking might be considered NSSI if they co-occur with other self-injurious behavior. In fact, studies show that co-occurrence of BFRBs is actually common [11,19,20].

2. Methods

During the period between November 6, 2023, and January 6, 2024, we contacted experts on BFRB via several sources. First, we emailed all authors of articles on BFRB published in the last three years. This group of experts overlapped with authors of a recent special issue about BFRB published in *Cognitive Therapy and Research*, who were contacted via a separate email. Second, we advertised the study on the International OCD Research Listserv for experts on OCD and obsessive-compulsive related disorders, including BFRB, which is moderated by two of the co-authors (AA and AdN) of the current study. This international listserv has more than 120 expert members from over 18 countries.

A total of 100 individuals accessed the landing page; 58 individuals proceeded to the first page, and 51 completed at least one question on BFRB. Blind to the data, we discarded one individual who conceded that he or she had no knowledge of the DSM-5 criteria of BFRB and had less than 3 years of experience with the disorder. Thus, the final sample encompassed 50 experts. We also formed a subsample of 39 experts who disclosed that they had at least six years of experience with research and/or treatment of BFRB (note that we did not find evidence of an overrepresentation of researchers from a particular institution, which could have created a response bias). The study was approved by the local ethics committee of psychologists at the University Medical Center Hamburg (Germany; LPEK-0715) according to the Declaration of Helsinki.

2.1. Survey

This survey was set up with the online survey software Unipark®; the median completion time was 6 min. We designed the survey to be rather short to achieve a large pool of participants. Potential participants were informed that the survey was directed at mental health professionals with clinical and/or research experience with BFRB and that we would pose questions on the phenomenology, differential diagnosis, and classification of BFRBs. Further, we stated that we might share the results of the survey with the American Psychiatric Association, particularly the editors of the future DSM-6, with the intent of contributing to future classification and diagnostic criteria for the condition. As reimbursement for participation, completers received free access to an e-learning on BFRB, encompassing a 10-h online curriculum on diagnosis, classification, etiology, and treatment of BFRB.

The survey first asked about the participants' demographics, professional experience, and terminal academic degree (see Table 1). A question on prior knowledge of the diagnostic criteria for BFRB served as an exclusion criterion; we discarded entries by participants with no knowledge of the DSM-5 criteria of BFRBD and less than 3 years of clinical or research experience. We also asked whether the participants were a member of any organization related to BFRB or a member of an editorial board of journals on psychological disorders (optional response). We then asked which conditions participants would count as BFRB (multiple choice; see Table 2), which name they preferred for the conditions currently identified in the DSM-5 as body-focused repetitive behaviors (see Table 3), and which overarching section they deemed most appropriate for BFRB (see Table 4). The final items related to the question of whether a BFRBD may be diagnosed when the individual uses an instrument or whether this would qualify as an NSSI (Table 5)

Table 1
Sample characteristics.

Variable	M (SD) / frequency (%)
Background	
Age in years	39.38 (18.56)
Female/Male	31/19 (62%/38%)
Years of clinical experience	9.84 (9.55)
Years of research experience	6.94 (7.48)
Profession (multiple professions may apply)	
Psychologist	21 (42%)
Psychiatrist	6 (12%)
Psychotherapist	21 (42%)
Other (e.g., neuroscientist)	10 (20%)
Highest academic degree/rank	
Master's degree	17 (34%)
M.D./Ph.D.	17 (34%)
Professor	16 (32%)

Table 2
Conditions counted as BFRBs by experts (first percentage: full sample; second percentage: experts with at least six years experience; order as displayed in survey).

Condition	Yes (1)	Rather yes (2)	Not really (3)	No (4)
Trichotillomania/hair pulling	50 (100%; 100%)	0	0	0
Skin picking/excoriation disorder	50 (100%; 100%)	0	0	0
Nail biting	37 (75.5%; 79.5%)	11 (22.4%; 17.9%)	0 (0%; 0%)	1 (2%; 2.6%)
Lip-cheek biting	34 (69.4%; 76.9%)	10 (20.4%; 17.9%)	3 (6.1%; 0%)	2 (4.1%; 5.1%)
Nose picking	25 (52.1%; 53.8%)	8 (16.7%; 15.4%)	12 (25%; 23.1%)	3 (6.3%; 7.7%)
Dermatophagia/skin biting	41 (82%; 82.5%)	7 (14%; 12.5%)	1 (2%; 2.5%)	1 (2%; 2.5%)
Knuckle or neck cracking	13 (26.5%; 23.1%)	11 (22.4%; 25.6%)	15 (30.6%; 30.8%)	10 (20.4%; 20.5%)
Thumb sucking	13 (26.5%; 20.5%)	17 (34.7%; 35.9%)	12 (24.5%; 30.8%)	7 (14.3%; 12.8%)
Awake bruxism/teeth grinding	13 (26%; 20%)	15 (30%; 30%)	15 (30%; 32.5%)	7 (14%; 17.5%)
Night bruxism/teeth grinding during the night	6 (12%; 10%)	8 (16%; 17.5%)	17 (34%; 27.5%)	19 (38%; 45%)

Notes. Due to rounding, percentages may not always add up to 100%.

Table 3
Terms experts prefer for the disorders currently labeled "body-focused repetitive behavior disorders" (first percentage: full sample; second percentage: experts with at least six years of experience; multiple endorsements were possible; order as displayed in survey)

Term	Frequency	Percent
Body-focused repetitive behavior disorder	26	52% (55%)
Body-focused repetitive behaviors	24	48.5% (52.5%)
Body-focused habit	0	0% (0%)
Body-focused habit disorder	6	12% (7.5%)
Body-focused impulse control disorders	5	10% (7.5%)
Other	4	8% (2.5%)

Table 4
Section experts deem most appropriate for BFRB in the DSM-5 (first percentage: full sample; second percentage: experts with at least six years of experience; order as displayed in survey).

Section	Frequency	%
Obsessive-Compulsive and Related Disorders [current classification] (1)	27	55.1% (56.4%)
Trauma- and Stressor-Related Disorders [possible reason: stress is a frequent trigger of BFRB] (2)	5	10% (2.6%)
Somatic Symptom and Related Disorders [possible reason: the consequences of BFRB are primarily somatic] (3)	2	4.1% (5.1%)
Disruptive, Impulse-Control, and Conduct Disorders [possible reason: BFRB has previously been classified as an impulse-control disorder] (4)	8	16.0% (20.5%)
Substance-Related and Addictive Disorders [possible reason: this category includes behavioral addictions such as gambling, and BFRB patients sometimes describe their behavior as addictive] (5)	2	4% (5.1%)
Neurodevelopmental Disorders [possible reason: this category includes stereotypic movement behavior] (6)	1	2% (0%)
Other	4	8% (10.3%)

Notes. Three experts endorsed "other" and commented that the disorder should have its own category. One suggested an impulsive/compulsive category along with both OCD and tic disorders.

Table 5
Questions on usage of instruments/implements (first percentage: full sample; second percentage: experts with at least six years of experience; order as displayed in survey).

Items	Frequency	%
When implements (tweezer, scalpel, needle, etc.) are used, it is not a BFRB but a nonsuicidal self-injury. (1)	4	8.2% (7.7%)
The statement that excoriation (skin-picking) disorder is not associated with the use of an implement should be dropped. BFRB may be performed using implements. (2)	44	89.8% (89.7%)
Other	1	2% (2.6%)

and also inquired how to differentiate among BFRB, SMB, and NSSI versus collapsing these conditions into one category (with possible qualifiers; see Table 6). Participants could also provide their name and email address at the end of the survey, which allowed us to validate a subgroup of experts; these were sent a confirmation email; holders of the email accounts were instructed to contact us if they had not entered the email address themselves (no one reported this).

2.2. Participants

As can be seen from Table 1, experts were on average in their late 30s, predominantly female, and psychologists and/or psychotherapists. All had completed at least a master's degree; two thirds of the sample was at the post-doc or professor level. Eighteen (36%) were members of editorial boards of journals or organizations relevant to BFRB. Email addresses with names were provided by 21 participants, allowing us to validate experts.

Table 6
Experts' opinions on how to categorize BFRB, NSSI, and SMB (first percentage: full sample; second percentage: experts with at least six years of experience; order as displayed in survey).

Item	Disagree (1)	Don't know (2)	Agree (3)
The current (DSM-5) definition is good and does not need to be expanded on.	31 (63.3%; 66.7%)	13 (26.5%; 20.5%)	5 (10.2%; 12.8%)
The DSM-6 should leave this section/chapter essentially unchanged but should be more specific regarding differential diagnosis. For example, if the condition meets the criteria for both BFRB and NSSI, the DSM-6 should recommend the former when the behavior is about relieving tension or stress and the latter when there is a clear intention of self-injury or harm and violence is involved.	10 (20.4%; 17.9%)	11 (22.4%; 17.9%)	28 (57.1%; 64.1%)
A new disorder category should be created that covers all three conditions (NSSI, BFRB, and SMB) with specifiers (somatic consequences: self-injury / no injury; motives: no clear motive / stress reduction / self-injury or self-harm).	26 (53.1%; 59%)	14 (28.6%; 28.2%)	9 (18.4%; 12.8%)
A new disorder category should be created in the DSM-6 that includes only NSSI and BFRB, with specifiers (somatic consequences: self-injury / no injury; motives: no clear motive / stress reduction / self-injury).	27 (55.1%; 56.4%)	15 (30.6%; 28.2%)	7 (14.3%; 15.4%)

Notes. Due to rounding, percentages may not always add up to 100%.

3. Results

Tables 1 to 6 present data from the final sample. As mentioned in the methods section, we also performed analyses on a subsample comprising 39 experts with high (at least six years) clinical and/or research experience on BFRB. Responses of the full sample and the subgroup with high expertise were similar (the difference was always less than 10%). Trichotillomania and skin picking were considered BFRB by all participants (see Table 2). The following conditions were considered BFRB with more than 50% endorsement: dermatophagia (full endorsement: 82%; full or partial endorsement: 93.5%), nail biting (75.5%; 98%), lip-cheek biting (69.4%; 89.8%), nose picking (52.1%; 68.8%). Thumb sucking (26.5%; 61.2%) and awake bruxism (26%; 56%) only received a majority endorsement when the options "full" and "somewhat" were pooled together. The experts did not count the following conditions as BFRB, even when full and partial endorsements were collapsed: bruxism during the night (12%; 38%) and knuckle or neck cracking (26.5%; 48.9%).

Preference for any one of the diagnostic labels was rather weak; body-focused repetitive behavior disorder (52%; multiple response options could be given) and body-focused repetitive behaviors (48.5%) were endorsed by approximately half of the sample. Slightly more than half (55.1%) of the participants thought that BFRBs are best classified under the category Obsessive-Compulsive and Related Disorders (Table 4). Of note, three experts commented in the "other" response option that BFRBD should be classified under its own category.

The vast majority of participants (89.8%) indicated that using instruments (such as tweezers in the case of skin picking and hair pulling) are not counter-indicators for a diagnosis of BFRBD. With respect to differential diagnosis, a majority (63.3%) disagreed that the current definition of BFRBD is sufficient. A majority (57.1%; 64.1% with at least six years of experience) recommended that a diagnosis of BFRBD should be made if the behavior is intended to relieve tension or stress and NSSI if there is a clear intention of self-injury or harm. A minority of respondents (18.4%) recommended forming a new disorder category that includes NSSI, BFRB, and SMB.

4. Discussion

Our survey aimed to shed light on the phenomenology, terminology, and classification of BFRB/BFRBD, a rather recent diagnostic entity in the DSM. Findings show that most experts favor the labels body-focused repetitive behavior disorder and body-focused repetitive behaviors over other labels as well as its classification under the section Obsessive-Compulsive and Related Disorders. While trichotillomania, skin picking, dermatophagia, nail biting, and lip-cheek biting are considered BFRB by the vast majority of experts, only a slim majority (when pooling full and partial endorsement) regarded awake bruxism and thumb sucking in adults as BFRB. Knuckle cracking and night bruxism were not counted as BFRB (the latter is not accompanied by any awareness). We were also interested in the differential diagnosis of BFRB and NSSI. The initial version of the DSM-5 was ambiguous regarding whether BFRB involves the usage of instruments, as NSSI does. On one hand, it is acknowledged in the section on excoriation disorder that many use tweezers, pins, or other objects, but in the chapter on the differential diagnosis of NSSI and excoriation disorder it is claimed that the latter is not associated with the use of instruments ([1], p. 806). Although the DSM-5-TR changed this criterion in 2022 (see introduction), the belief that instruments are indicative of NSSI is still common, especially in countries that have not yet implemented the text revision.

Experts corroborated the distinction between SMB and NSSI; most experts rejected the notion of combining these categories, unlike in prior editions of the DSM where these conditions were at times combined (DSM-III-R and IV). Notwithstanding, experts suggested that the next edition of the DSM should highlight the importance of the primary motive for the dysfunctional behavior with the goal of sharpening the distinction, especially since the criterion of usage of instruments fails to distinguish among BFRB, NSSI, and SMB.

Our study has some limitations. First, the panel of experts reflected a limited sample size. However, this reflects that BFRB is a small field with relatively few experts. We took care to contact every scientist contributing to research on BFRB and its conditions within the last 3 years. Second, we did not survey experts on NSSI and SMB; this should be done in the future as at least some BFRB conditions are very close to these disorders and are actually counted as such by some researchers (e.g., [21]). Lastly, the survey was administered online and participants were provided the opportunity to complete it anonymously. As we did not include items designed to assess the validity of the responses, it is possible that some participants used a false identity or completed the survey twice (which was possible if cookies were deleted). To control for such fraudulent actions, we conducted post-hoc checks. For example, those who provided their email address were sent a confirmation email asking them to contact us if a third person had used their email addresses (no one reported this). In addition, the study did not include any monetary compensation, which might have attracted people or bots with primarily financial motivations. Together with the fact that the study was sent directly to experts, the probability of fraudulent entries in this study is extremely low.

To conclude, our survey shows that most experts favor the labels body-focused repetitive behavior disorder and body-focused repetitive behaviors as well as the classification of BFRB as an obsessive-compulsive and related disorder. In addition to trichotillomania and skin picking, the experts agreed that nail biting, lip-cheek biting, and dermatophagia should be entered in the DSM under the category of BFRBD. Our survey also highlights the need to differentiate BFRB from conditions such as NSSI.

CRediT authorship contribution statement

Steffen Moritz: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Luca Noemi Hoyer:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Formal analysis, Conceptualization. **Noam Sarna:** Writing – review & editing, Writing – original draft. **Amitai Abramovitch:** Writing – review & editing, Writing – original draft, Investigation. **Cristian Curran:** Methodology, Validation, Writing – review & editing. **Alessandro S. De Nadai:** Writing – review & editing, Writing – original draft, Investigation. **Stella Schmotz:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Conceptualization.

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