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Vivian Li
Nuvance Health

Kelly Frasier
Nuvance Health

Emily Woolhiser
Kansas City University

Kathleen Daly
Augusta University

Sara Christoforides
Lake Erie College of Osteopathic Medicine

See next page for additional authors

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Authors

Vivian Li, Kelly Frasier, Emily Woolhiser, Kathleen Daly, Sara Christoforides, Courtnee Harpine, Karina Stech, Stefany Acosta, and Edwin D. Lephart

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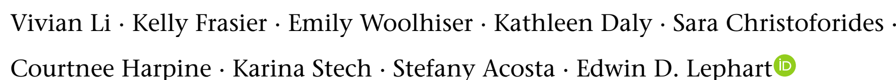
REVIEW

Exploring the Intersection of Body Dysmorphic Disorder (BDD) and Dermatological Conditions: A Narrative Review



Vivian Li · Kelly Frasier · Emily Woolhiser · Kathleen Daly · Sara Christoforides · Courtnee Harpine · Karina Stech · Stefany Acosta · Edwin D. Lephart

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ABSTRACT

This narrative literature review examined the intricate relationship between body dysmorphic disorder (BDD) and dermatological conditions, with a brief focus on those characterized by conspicuous skin irregularities such as acne vulgaris, psoriasis, and vitiligo. Highlighting the significant prevalence of BDD among individuals afflicted with dermatological issues, our analysis illuminated the profound psychological repercussions stemming from an exaggerated preoccupation with perceived skin imperfections. Through an exploration of the underlying BDD symptoms, we analyzed the complex dynamics between skin health and mental well-being, emphasizing the disorder's impact on patients' psychological and social functioning. This narrative review further investigated the consequential effects of BDD on essential aspects of dermatological treatment, including patient adherence to therapeutic regimens, overall quality of life (QOL), and the effectiveness of available treatments. In addition to presenting current therapeutic approaches, we advocate for the integration of psycho-dermatological interventions tailored to mitigate the dual burden of skin conditions and psychological distress. Future research directions proposed include longitudinal studies to assess the long-term effects of BDD on skin disease prognosis and psychosocial well-being, which aim to refine and optimize treatment modalities to contribute to a more holistic understanding of BDD within dermatological practice.

Keywords: Body dysmorphic disorder; Symptoms; Skin health; Dermatology; Acne

V. Li · K. Frasier
Nuvance Health/Vassar Brothers Medical Center, Poughkeepsie, NY, USA

E. Woolhiser
Kansas City University, Kansas City, MO, USA

K. Daly
Medical College of Georgia at Augusta University, Augusta, GA, USA

S. Christoforides
Lake Erie College of Osteopathic Medicine, Elmira, NY, USA

C. Harpine
Edward Via College of Osteopathic Medicine, Spartanburg, SC, USA

K. Stech
Lewis Katz School of Medicine at Temple University, Philadelphia, PA, USA

S. Acosta
Michigan State University College of Osteopathic Medicine, East Lansing, MI, USA

E. D. Lephart (✉)
Department of Cell Biology, Physiology and The Neuroscience Center, College of Life Sciences, Brigham Young University, Provo, UT 84602, USA
e-mail: Edwin_Lephart@byu.edu

vulgaris; Psoriasis; Vitiligo; Psychosocial disorders; Treatments

Key Summary Points

This narrative review presents the complex dynamics between body dysmorphic disorder (BDD) and skin health, mental well-being, and the impact on patients' psychological and social functioning.

Dermatological conditions (e.g., acne vulgaris, psoriasis, and vitiligo) highlight the profound psychological exaggerated preoccupation with perceived skin imperfections along with perceptions in body image where patients are reluctant to recognize such challenges.

Awareness of BDD and diagnosis of BDD are necessary in dermatological settings to effectively prescribe current therapeutic approaches with integrative psycho-dermatological interventions to mitigate the dual burden of skin conditions and psychological distress.

We encourage dermatologists to be proactive and adopt straightforward practical assessments and management therapies to benefit timely diagnosis and personal care to improve the lives of patients with BDD.

GENERAL INTRODUCTION

For many years, body dysmorphic disorder (BDD) has been recognized as a highly debilitating mental disorder associated with notable psychosocial impairment with high rates of suicidality [1–3]. Some of the characteristics and repetitive behaviors associated with BDD include fixation on perceived imperfections of physical appearance, skin picking, mirror checking, and camouflaging (with make-up) to cover up disliked body areas [2–7]. Since a wide range of patients with BDD seek cosmetic/dermatological intervention [2, 3, 6–9], dermatologists and cosmetic surgeons are the frontline providers for these patients.

The purpose of this narrative overview is to provide an updated broad perspective on (1) BDD in dermatology patients with only perceived or minor skin defects, (2) psychological distress from skin disorders themselves in patients without BDD, and the main focus presented therein, and (3) the interplay between BDD and dermatological conditions by presenting the prevalence of BDD in dermatological patients and the basic aspects of dermatological care for patients with BDD. This review identified previous journal articles and reviews primarily focused on articles published from January 2019 through June 2024 using the keywords BDD, symptoms, skin health, dermatology, cosmetic (treatments/surgery) psychosocial disorders, self-esteem, depression, and medications including using different keyword combinations (retrieved from January 25 to June 7, 2024). Sixty percent of the studies cited in this narrative overview were from the last 5 years. The following databases were utilized: PubMed, which is maintained by the US National Library of Medicine at the National Institutes of Health (USA), Science Direct and Scopus by Elsevier, and Google Scholar. Also, background references (where appropriate) include the keywords: BDD, symptoms, treatments, skin health, dermatology, cosmetic dermatology, skin disorders, psychosocial disorders, and treatments, and/or combinations (without a year-limit range for searching these topics). This article is based on previously conducted studies and does not contain any new studies with human participants or animals performed by any of the authors.

OVERVIEW OF BODY DYSMORPHIC DISORDER (BDD)

Body dysmorphic disorder (BDD) has been described for more than a century [1, 10, 12]. In 1891, the Italian physician Enrico Morselli called this disorder "dysmorphophobia," and since then, BDD has had many names including beauty hypochondria and dermatological

hypochondriasis, among many others [1, 10, 13]. Notably, in 1987, BDD was given a separate diagnostic status in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM III) [13]. Subsequently, many leading researchers on BDD have advanced this disorder into public awareness [1, 8, 11, 12]. In 2016, DSM-V included BDD as a disorder class: Obsessive-Compulsive and Related Disorders that outline: (A) preoccupation with one or more perceived defects or flaws in physical appearance… not observable or appearing slight to others, (B) the individual performs repetitive behaviors or mental acts in response to concerns about their appearance, (C) preoccupation causes significant distress/impairment in social, occupation or other areas, and (D) their appearance is not better explained by concerns with fat or weight that meet an eating disorder [13].

BDD typically is seen in late adolescence, affects between 1.7% and 2.9% of the general population, and has been characterized by the general theme of preoccupation with perceived imperfections in one's appearance [1, 6]. Preoccupations in BDD largely focus on the hair, skin, and nose, though they can be directed towards any part of the body [1, 3, 5, 7]. Such preoccupations and compulsive behaviors are intrusive and uncontrollable, leading to functional impairments in social and occupational settings [2, 3, 5, 7]. Patients with BDD tend to have poor QOL and high rates of suicidality [2, 3, 6, 8]. Other psychiatric conditions are often seen concurrently with BDD, including major depressive disorder, obsessive-compulsive disorder, and social anxiety disorder [1, 3, 6, 9]. Those with BDD may not pursue mental health services because of perceived accuracy of their self-perceptions and embarrassment about their symptoms [2, 3, 5, 10]. See Table 1 for the prevalence and characteristics of BDD.

INTRODUCTION TO DERMATOLOGICAL CONDITIONS AND THEIR PSYCHOLOGICAL IMPACT

Approximately one-third of the world's population is impacted by one or more dermatological conditions [14]. Even though skin conditions associated with readily visible changes in appearance may not meet the criteria for BDD, by definition, conspicuous dermatological

Table 1 Prevalence and characteristics of body dysmorphic disorder (BDD) [2, 3, 7, 9, 14]

Prevalence	1.7 to 2.9% of the general population or > 5 to 10 million people in the USA
Age	Most common age of onset 12 to 13 years old Average age of onset 16–17 years old Two-thirds of people with BDD have onset before age 18
Gender	More common in women than men (approximately 60% women vs. 40% men)
Affects	Any race/ethnicity worldwide, from all socioeconomic classes
Symptoms (percentage)	1. Fixated on one of more imperfections or physical abnormalities that are undetectable to others or seem only minor to others (88%) 2. Checking disliked body areas in mirrors or other reflective surfaces (87%) 3. Excessive grooming (e.g., applying make-up, styling, removing hair, facial, or body hair) (60%) 4. Seeking reassurance about perceived defects ("Do I look okay?") (54%) or touching disliked body/skin areas to check constantly (52%) 5. Skin most common affected part of body (54%), then the nose (39%) followed by hair (35%), along with skin picking (40%)

diseases, such as psoriasis, vitiligo, and acne vulgaris, carry a high noticeable burden of negative feelings (depression and anxiety) that are important to consider [14, 17].

Acne Vulgaris

Embarrassment and stigma surrounding acne vulgaris can be discouraging factors regarding seeking treatment, especially in the adolescent population [17, 18]. Perceived stigmatization is common in patients with skin disease(s) such as acne and places a large psychosocial burden on these individuals [19]. For example, in a total of 245 patients diagnosed with acne from 11 dermatological centers in Spain, BDD was observed in women (56%), where most patients worried about their face (86%) [20]. Also, the three most frequent compulsive behaviors were mirror checking (91%), camouflaging (80%), and using make-up (72%) [20].

Vitiligo

In those with vitiligo, fixation with spread of the disease to visible areas and daily thoughts of their disorder have negative effects on interpersonal relationships [15]. Notably, in this regard, a systematic review of the psychosocial effects of vitiligo that included 168 studies reported depression and anxiety as the most commonly observed disorders [21]. Factors associated with a significantly higher burden included sex (female), visible or genital lesions, age (< 30 years old), and greater body surface area of vitiligo involvement [21].

Psoriasis

Psoriasis similarly affects low self-esteem and social adaptations [15, 22]. Patients with psoriasis may experience other defects like joint and cardiovascular complications along with a variety of psychiatric disorders (e.g., depression, anxiety, bipolar mood disorder, and cognitive impairment) [22]. Additionally, the emotional state of patients with psoriasis impacts the severity of their skin condition [15, 22, 23]. While each dermatological disease process may be unique, the psychological burden carried by people with dermatological conditions has a negative impact on QOL [15, 24].

Also, one of the latest developments in the field of psycho-dermatology includes the condition "charismaphobia," which is a mental condition that involves the excessive and persistent fear of being or becoming unattractive [25].

Significance of Investigating the Intersection of BDD and Dermatological Conditions

BDD is a highly debilitating disorder with demonstrated psychological distress, perceived stigmatization, and notable psychosocial impairment [2, 4, 16, 22, 24]. For example, using a network theory analysis perspective on BDD and major depression disorder, Summers et al., in 2020, reported causal interactions between symptoms observed like excessive checking of perceived physical appearance defects (behavioral symptoms) that tend to maintain and exacerbate appearance-related pre-occupation (cognitive system) and depressed mood and anxiety [24]. In support of this network analysis, Dingemans et al., in 2022, showed that obsessive-compulsive disorder (OCD), eating disorder (ED), autism spectrum disorders (ASD), and BDD share obsessive-compulsive (OC) symptoms that often occur together as perpetuating factors where focused relevant treatments should be considered [26].

Also, Mattina et al., in 2020, and McGrath et al., in 2023, reviewed BDD as to its prevalence, symptomatology, illness course, and prognosis, etc., which were dependent upon sex differences (i.e., fluctuations of sex steroid hormones and altered hypothalamic-pituitary-adrenal/gonadal axes) [27, 28]. In this regard, Phillips and Kelly, in 2021, reviewed BDD in women and showed a higher prevalence in girls and women (at 60%) compared to boys and men (at 40%) [2].

Regarding BDD and self-esteem, in 2021, Kuck et al. carried out a meta-analysis study collected from 25 publications with a total of 6278 participants and demonstrated that low self-esteem, while an important hallmark of BDD, goes beyond the influence of depressive

symptoms [29], meaning that the negative impact of BDD is not limited to appearance but also extends to other domains of self [28]. Finally, patient perceptions of beauty based on social media-induced dissatisfaction with appearance have been termed "snapchat dysmorphia" and "selfie-dysmorphia" [30, 31]. Therefore, clinicians have a professional obligation to be educated on new and relevant trends to ensure adequate patient safety and advocate for consumer education [31].

PREVALENCE OF BDD IN DERMATOLOGICAL PATIENTS

Epidemiological Data on BDD Prevalence Among Dermatological Patients

Notably, cosmetic intervention (of any kind) was sought by 33–76% of BDD patients, rendering dermatologists and cosmetic surgeons frontline providers for these patients [2, 3, 9, 14, 32]. Previous studies reported that individuals seeking dermatological treatment exhibit a significantly higher prevalence of BDD than the general population with studies indicating that approximately 9% of patients presenting to dermatology clinics meet the diagnostic criteria for BDD in contrast to the 2% prevalence rate among the general population [33]. This trend is particularly pronounced in cosmetic dermatology settings, highlighting the importance of dermatologists in recognizing potential BDD signs in their patients [33, 35].

In more recent publications, using systematic review and meta-analysis, one journal article analyzing 22 investigations representing 7159 subjects estimated that 20% of BDD patients sought cosmetic and/or dermatological treatment [28]. In another report, 15% of BDD patients (mean age, 34.5 years) sought plastic surgery, with most being were women (74.4%), whereas among dermatology patients, 13% had BDD, with a mean age of 27.8 years and 76% that were women [28].

Factors Contributing to the Development of BDD in Individuals Seeking Dermatological Interventions

BDD's origin in those with skin conditions is multifaceted, shaped by genetic, psychological, and social factors. Heritability of BDD has been estimated to be 37% to 49%, which may be higher in women than in men [2], and the societal emphasis on physical appearance and the stigma associated with visible skin conditions can exacerbate feelings of inadequacy and self-consciousness [8, 10, 27, 28, 36, 39]. Moreover, those seeking aesthetic treatments often express skin-related complaints that mirror internal conflicts, suggesting a deeper, unresolved desire for change or personal dissatisfaction [34]. Psychological studies have linked higher scores on the Dysmorphic Concerns Questionnaire (DCQ) to increased anxiety, depression, and obsessive–compulsive disorder (OCD) in patients with BDD commonly exhibiting comorbid major depressive disorder (MDD) [24, 40, 41].

Comparative Analysis of BDD Prevalence Across Different Dermatological Disorders

The dermatological manifestations of BDD are diverse, ranging from concerns about pigmentation, acne, and scars to issues with hair loss and signs of aging [2, 3, 7, 8, 10].

For example, from an observational, cross-sectional, comparative multicenter study that included 8296 participants, 5487 patients with skin conditions, of whom 56% were female, recruited among dermatological outpatients at 22 clinics in 17 European countries, with 2808 healthy controls (66% female). They were assessed by the Dysmorphic Concern Questionnaire along with sociodemographic data, psychological factors, and physical conditions with dermatological diagnosis by dermatologists, which showed that BDD symptoms were five times more prevalent in patients with dermatological conditions than in healthy skin controls [42]. Also, patients with hyperhidrosis, alopecia, and vitiligo are 11-fold more likely to

exhibit BDD symptoms compared to healthy skin controls, while those with atopic dermatitis, psoriasis, acne, hidradenitis suppurativa, prurigo, and bullous diseases had a more than six-fold increase in risk of BDD symptoms [40]. Conversely, other research has identified hyperpigmentation and acne as the most prevalent concerns among individuals with BDD [43]. See Table 2 for BDD prevalence among dermatology patients and across different dermatological disorders.

PATIENTS WITH BDD AND DERMATOLOGICAL INDICATIONS

Obsessive Preoccupation with Perceived Skin Flaws

BDD is more common in patients with dermatological disorders such as skin pigmentation, acne, scars, excessive facial or body hair, facial asymmetry, thinning scalp hair, and symptoms of aging [20, 44]. The perceived severity of skin lesions is exaggerated by patients with BDD, and preoccupation with skin imperfections is out of proportion with the objective severity of the condition [8, 42, 45–47]. Multiple terminologies are used to reference patients with BDD in dermatology including dermatological hypochondriasis, dysmorphic syndrome, dysmorphobia, and dermatological non-disease [44].

Avoidance behaviors are common, where patients with BDD frequently evade social settings and situations in which their undesirable characteristics may be seen [48, 51]. Stigmatization is the greatest predictor for symptoms in BDD [22, 42]. BDD has a chronic course, with symptoms fluctuating over time and frequently intensifying during times of stress. However, most patients with BDD report a longitudinal increase of symptoms rather than a continuous or declination in symptoms [47].

According to cognitive-behavioral theories of BDD, gazing rituals, such as mirror staring, are an important component of compulsions and contribute to persistence of the disorder [7, 8, 51, 52]. Patients with BDD feel exposed, vulnerable to scrutiny, and embarrassed as a result of their concern with their perceived shortcomings [31, 53].

Additionally, patients with BDD may engage in pathological skin picking (PSP), also known as skin picking disorder (SPD), which is uncontrollable picking of the skin that causes lesions resulting in extreme distress [7, 8, 51]. PSP can also develop alongside dermatological diseases including acne or psoriasis [50, 51]. Some

Table 2 BDD prevalence among dermatology patients and across different dermatological disorders

1. BDD prevalence among dermatology patients
The range of BDD patients who sought cosmetic treatment (aesthetic, dermatology, plastic surgery, etc.) of any kind ranges from 33 to 76% [2, 3, 9, 14, 19, 28, 32]
9% to 15% of patients presenting to dermatology clinics meet the diagnostic criteria for BDD vs. 2% of the general population. [9, 28, 32, 33]
13% to 20% of BDD patients sought cosmetic and/or dermatology treatment [9, 28, 32]
13% to 15% of BDD patients sought plastic surgery [9, 32]
20% of BDD patients having rhinoplasty surgery [9]
2. BDD prevalence across different dermatological disorders
Patients with hyperhidrosis, alopecia, and vitiligo have an 11-fold risk to exhibit BDD symptoms vs. healthy skin controls [42]
Patients with atopic dermatitis, psoriasis, acne, hidradenitis, suppurativa, prurigo, and bullous disease had > 6-fold increases in risk of BDD symptoms vs. healthy skin controls [42]

patients with BDD may even indulge in excessive skin picking with instruments such as fingers, needles, or scissors, leading to more obvious deformities [44, 50]. Skin picking and hair plucking habits in patients with BDD are often intended to fix perceived skin or hair faults, which is distinct from the impulsive picking/pulling seen in SPD or trichotillomania, which are not motivated by ideas of aberrant or unattractive appearances [54].

Patients with BDD frequently seek help from multiple health practitioners without receiving satisfactory results [44, 55]. Some patients may use excessive grooming or disguises to conceal perceived faults including undergoing skin procedures to change their complexion or appearance [44, 50]. Also, one study found that women with non-inflammatory residual lesions and obsessive grooming behaviors are more likely to match BDD diagnostic criteria [20]. Furthermore, patients with BDD usually seek reassurance regarding their appearance from medical professionals and peers, although patients with BDD lack insight and may remain unconvinced when informed that their perceived problems are not real [44, 51]. If BDD is not recognized, it may have a direct impact on the dermatological therapies provided to the patient [42, 56, 58]. As a result, dermatologists play a critical role in detecting and referring these individuals to mental health professionals for appropriate treatment.

IMPLICATIONS OF BDD ON DERMATOLOGICAL CARE

Treatment Adherence Among Dermatological Patients with BDD

BDD presents significant challenges in dermatological care, impacting treatment adherence, QOL, and therapeutic outcomes for affected individuals [56, 58]. For example, as mentioned, excessive skin picking can damage skin further and impair progress of treatment regimens [2, 44, 50, 51]. Consequently, dermatologists may encounter difficulties in managing dermatological conditions effectively in patients with concurrent BDD.

Quality of Life (QOL) and Psychological Well-Being of Individuals with BDD and Dermatological Conditions

Furthermore, individuals with BDD and dermatological conditions experience diminished QOL and psychological well-being [2, 42, 51, 59, 60]. Patients with BDD are ten times more likely to meet criteria for depression and four times more likely to meet criteria for an anxiety disorder [2, 9, 51, 59]. Individuals with BDD have significantly higher rates of suicidal ideation and suicidal behaviors than those without the disorder [2, 61]. The lifetime prevalence of suicide attempts in patients with BDD is higher than in those without the disorder; after controlling for sadness and anxiety symptoms, 25% of those patients with BDD attempted suicide compared to 5% of the general population [56, 61]. This interplay between BDD and QOL underscores the importance of addressing psychological factors in dermatological care to improve the well-being of affected individuals.

Therapeutic Efficacy and Treatment Outcomes in Dermatological Patients with BDD

Patients with BDD may request increasingly invasive, ineffective interventions and have unrealistic expectations about treatment options causing frustration for both patients and providers [51, 58, 62–66]. BDD does respond well to cognitive behavioral therapy (CBT) [2, 7, 8, 49] (see below). The presence of underlying BDD complicates the assessment and management of dermatological conditions necessitating a comprehensive approach that integrates psychological interventions with dermatological treatments.

INTEGRATED PSYCHODERMATOLOGICAL INTERVENTIONS FOR BDD AND DERMATOLOGICAL CONDITIONS

Overview of Integrated Diagnosis and Treatment Approaches

Proper diagnosis of BDD is crucial, and it is not uncommon for BDD to be misdiagnosed as an eating disorder, OCD, or social anxiety, etc. [2, 7, 9]. In the US, diagnosing BDD is set forth by the Diagnostic and Statistical Manual of Mental Disorders (DSM 5-TR) [13].

When a patient visits a dermatologist, there are three elements in the BDD diagnosis process: (1) warning signs (also known as red flags), (2) medical history, and (3) in-office observation along with a structured interview and a BDD questionnaire [67]. Examples of "red flags" include patients (1) feeling surgery will solve all their problems, (2) refusing to go through standard per-operative evaluations/procedures, (3) having a history of previous psychological treatments and going to several physicians and/or other medical professionals for treatment without satisfaction, and (4) bringing in social imagines/photos of celebrities and asking the medical staff for their validation of how they can improve their appearance to look like them [67]. Also, not every dermatology practice uses a disability questionnaire, but there are BDD questionnaires that are only seven questions long that patients can easily fill out (in a few minutes), and other diagnostic screening and assessment tools have been reviewed elsewhere [34, 56, 67– 71].

In brief, cognitive behavioral therapy (CBT) is the first-line therapy for BDD (see below) [2, 7, 9, 58], and the first-line medication treatment for BDD includes serotonin-reuptake inhibitors (SSRIs) like fluoxetine (Prozac), sertraline (Zoloft), and escitalopram (Lexapro), which usually improve BDD obsessions and compulsive behaviors; reduce distress, anxiety, and depression; and improve functioning [2, 7, 9, 58]. Both treatments (CBT and SSRIs) can work well together, and both therapies are recommended for patients with severe BDD [2, 7, 9, 34, 44] (see below).

Effectiveness of Cognitive-Behavioral Therapy (CBT) in Addressing BDD Symptoms in Dermatological Patients

CBT has emerged as a cornerstone in addressing BDD symptoms within the context of dermatological care [2, 7, 9, 58, 67] because retrospective studies suggest that patients with BDD typically do not benefit from cosmetic procedures [72]. Several controlled studies using CBT for patients with BDD between 1987 and 2014 demonstrated that CBT proved to be more effective compared to no treatment [73, 74]. CBT models of BDD incorporate biological, psychological, and social/culture factors in the development and maintenance of BDD [74]. CBT in patients with BDD typically begins with assessment(s) including psycho-educational during which the therapist explains and individualizes the BDD treatment that includes cognitive restructuring, exposure and ritual prevention, and relapse prevention [75, 76]. Despite its benefits, only 17.4% of patients with BDD receive CBT [77,78]. Also, approximately 60% of dermatological surgeons inquire about the mental health issues of their cosmetic patients, where most medical professionals are aware of BDD, but less than two-thirds consider it a contraindication to treatment [71]. Predicting which patients with BDD may have the best outcomes with CBT is complex as current research has inconsistent findings. A 2016 meta-analysis and a 2023 systematic review of current studies on CBT and BDD concluded that there were no uniform predictors of CBT treatment success in BDD patients observed [79–81]. However, other studies found that motivation to change, enhanced initial treatment credibility, a strong therapeutic alliance, and beliefs about the process, duration, and outcomes of therapy (treatment expectancy) are associated with more favorable outcomes of CBT in patients with BDD [80–83]. Additionally, a study of 80 participants with BDD that utilized a smartphone app of CBT treatment for BDD found that immediate versus delayed

treatment, non-female gender identity, higher treatment expectancy, lower BDD severity, and sexual minority status were predictors of better outcomes [82]. These positive predictors represent areas where providers may assess their patients' likelihood to respond to treatment and opportunities to use education to build trust for improved patient outcomes [68–70]. Furthermore, the psychological construct of body image is a useful foundation to understand an individual's experience of their body in relation to the social world [72]. Thus, further studies are warranted to optimize CBT treatment results for patients with BDD.

Role of Psychotropic Medications in Managing BDD Symptoms and Dermatological Conditions

Psychotropic medications play a role in managing BDD symptoms and dermatological conditions [84]. BDD responds to selective serotonin reuptake inhibitor (SSRI) pharmacotherapy [2, 9, 84]. For example, clomipramine (Anafranil), a tricyclic antidepressant (that inhibits serotonin reuptake), and fluoxetine (Prozac), a SSRI, have demonstrated efficacy in treating BDD by reducing obsessive thoughts and compulsive behaviors associated with BDD [2, 9, 84–87]. Escitalopram (Lexapro) continuation also reduces relapse rates and prolongs time to relapse in BDD patients [2, 84, 86]. These medications can alleviate symptoms of anxiety and depression thereby improving overall functioning and treatment response in individuals with BDD and dermatological conditions. However, some research indicates that SSRIs may be a predictor of worse treatment outcomes in patients with BDD treated with CBT [2, 7, 84]. Appearance-altering side effects of pharmacological interventions must be considered as such adverse effects may reduce patient compliance, particularly in the BDD population [2, 84–88]. Pharmacological interventions should be used judiciously in conjunction with psychological therapies to achieve optimal outcomes in dermatology patients with BDD; however, some BDD patients only respond to both therapies [2, 6, 7].

By combining psychological and dermatological treatments, healthcare providers can effectively alleviate distress, improve treatment adherence, and enhance overall well-being in patients with BDD and dermatological conditions [2, 68]. However, further research is warranted to elucidate the long-term efficacy and cost-effectiveness of integrated interventions (i.e., combination CBT and SSRI therapy) in the BDD population, since there are no studies on this combination therapy [2, 84–88].

FUTURE DIRECTIONS FOR RESEARCH

Investigating the Long-Term Effects of BDD on Dermatological Prognosis

BDD leads to persistent negative effects on self-perception [86–88]. One study, reviewed by Phillips and Kelly, in 2020, followed 166 patients with BDD over the course of 4 years and found a 0.20 probability for full remission and a 0.55 probability for full or partial remission [2]. Remission was also negatively affected by duration and severity of BDD symptoms [2, 89]. Further developing the understanding of the long-term psychological effects of BDD is important as persistent negative alterations in self-perception may play a role in mediating the longitudinal course of BDD and continued seeking of interventions.

Longitudinal Studies Assessing the Impact of BDD on Psychosocial Functioning

Individuals with BDD are commonly preoccupied with their appearance, making dermatologists one of the most consulted physicians in this patient population [88–94]. Patients with BDD feel misunderstood when pursuing care and often seek additional opinions leading to unnecessary testing, procedures, and health care-related expenses [89–93]. For example, one study of patients with BDD found that, while some subjects reported improvements in the appearance of their perceived defects after

dermatological or surgical intervention, worries about the appearance of their perceived flaws persisted and new appearance concerns developed [91]. The overall severity of BDD decreased by only 3.6% of all treatments in the study [91]. A survey of 265 cosmetic surgeons found that 84% had done a cosmetic procedure on a patient with BDD; however, only 1% of those cases resulted in complete remission of BDD symptoms [92]. While successful from a clinical standpoint, these treatments do not alleviate BDD symptoms causing patient dissatisfaction [94, 95]. Although there may be initial improvements with cosmetic interventions, many patients relapse and seek additional treatment [63, 67, 93, 94].

The longitudinal course of BDD is associated with persistent effects on QOL and well-being where the psychosocial functioning and QOL in patients with BDD is worse than that of the general population of the USA [2, 9, 89]. In a study of 176 patients with BDD, the investigators found a marked reduction in mental health-related quality of life, QOL enjoyment, satisfaction, and social adjustment in patients with BDD compared to population norms, which may be a cause for concern [2, 92].

Exploration of Novel Treatment Modalities for BDD and Dermatological Conditions

Several studies have explored the use of the SSRI fluoxetine as a treatment for BDD patients to improve their psychosocial functioning and overall quality of life. A 12-week placebo-controlled study of fluoxetine demonstrated significant improvements in quality of life and psychosocial functioning and reduction in body dysmorphic symptoms compared to placebo [2, 7, 84]. Fluoxetine also showed efficacy in the reduction of compulsive skin-picking behaviors in small-randomized trials [84, 85]. Smaller open-label studies on the SSRI citalopram and the antiepileptic levetiracetam demonstrated significant improvements in functioning and quality of life [2, 95]. Additional research is also needed to classify predictors of success in the treatment of BDD with CBT [77, 79, 95, 96]. Effective treatment of BDD may reduce treatment seeking and improve habits relating to the skin, but further research is essential to better understand the appropriate treatment(s) for patients with BDD.

Addressing Gaps in Knowledge and Understanding Through Further Research

Further research studies are needed to evaluate the role of the dermatologist in the treatment of BDD [96, 98]. A 2023 report by Rieder et al. suggested building awareness of social media's association with adolescent skin disease and mental health [97] along with considering best practices in treating BDD [84, 98]. Also, a 2024 report by Hoeppner et al. examined a comparison of cognitive behavioral therapy and supportive psychotherapy, where most patients with BDD needed ≥ 11 therapy sessions for a first treatment response, and treatment response was earlier for CBT for BDD than for supportive psychotherapy [99]. Finally, in 2023 Bernstein et al. reported on the creditability and expectancy of smartphone-based cognitive behavioral therapy among adults with BDD [100]. In this study, patients viewed app-based CBT-BDD as equally credible but with lower expectancy, while expectancy was higher for those with greater insight and past non-CBT BDD therapy [100].

Future Objectives

Sample sizes, sex distribution, and age ranges have been limited in current studies and should be expanded in future research. Additionally, there needs to be a broader range of measures on patient outcomes to fully understand the impact of cosmetic treatments on BDD [94–98]. The prevalence of BDD in dermatological conditions makes it imperative for dermatologists to recognize the signs of the condition to inform collaboration with psychiatrists, therapists, and other professionals to provide appropriate, multidisciplinary care [2, 68, 98–100].

SUMMARY AND CONCLUSION

This narrative literature review examined the intricate relationship between body dysmorphic disorder (BDD) and dermatological conditions. The prevalence and characteristics of BDD are displayed in Table 1. Also, a brief focus on the conspicuous skin disorders such as acne vulgaris, psoriasis, and vitiligo are presented. The prevalence of BDD among dermatology patients is shown in Table 2. BDD is often not diagnosed because many people are reluctant to talk about their problems or it is not recognized by the health care professional. BDD is diagnosed by the Dysmorphic Concern Questionnaire and the Body Dysmorphic Disorder Questionnaire-Dermatology Version (BDDQ-DV) and/or the Diagnostic and Statistical Manual of Mental Disorders (DSM 5-TR) [13]. Treatment typically involves CBT or SSRI medications that are a class of antidepressants [2, 7, 9, 66, 84]. The prevalence of BDD in dermatological conditions makes it imperative for dermatologists to recognize the signs of this condition to make informed collaboration(s) with psychiatrists, therapists, and other professionals to provide appropriate, multidisciplinary care [2, 7, 68, 98–100]. Assuredly, further research is essential to better understand the treatment of BDD and dermatological conditions using pharmacotherapy (with SSRIs) and CBT alone and in combination.

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Declarations

Conflict of Interest. Vivian Li, Kelly Frasier, Emily Woolhiser, Kathleen Daly, Sara Christoforides, Courtnee Harpine, Karina Stech and Stefany Acosta have nothing to disclose. Edwin Lephart is an Editorial Board member of Dermatology and Therapy. Edwin Lephart was not involved in the selection of peer reviewers for the manuscript nor any of the subsequent editorial decisions.

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