Addressing Adversity in Binge Eating Disorder: An Urgent Call for Inclusive, Decolonial, and Trauma-Informed Research Approaches

Brenna Bray [1,2,3]

[1]*NourishED Research Foundation, 4580 Martin Drive, Boulder, 80305, CO, USA. Tel.: 206-819-9647*

[2]*National University of Natural Medicine, 2220 SW First Ave, Portland, 97201, OR, USA. Tel.: 503-552-1555*

[3]*Helfgott Research Institute, National University of Natural Medicine, 2220 SW First Ave, Portland, 97201, OR, USA. Tel.: 503-552-1555*

[4]*Graduate School, Clinical Mental Health Counseling; Undergraduate School, Psychology Dept., Naropa University, 2130 Arapahoe Avenue, Boulder, 80302, CO, USA. Tel.: +1 303-444-0202*

Correspondence*: Email: brenna@nourishedrfi.org (Brenna Bray)

ABSTRACT

Binge eating disorder (BED) is a DSM-V diagnosis characterized by episodes of consuming large amounts of food with a loss of control, accompanied by distress, guilt, and shame. Despite its high prevalence, a significant proportion of individuals with BED remain undiagnosed and untreated (~95%). This commentary addresses the disparities in BED diagnosis and treatment, particularly among marginalized populations, including racial, ethnic, sex preference, and sex/gender identity minorities. These groups exhibit two- to three times higher BED risk and prevalence rates but are ~60-90% less likely to receive a diagnosis or treatment. This commentary highlights research findings that recognize the impact of *adverse and often traumatic* systemic issues, stigmatization, and lack of justice, equity, diversity, inclusion, access, and awareness (JEDIAA) on BED prognosis (a), research (b), and clinical understanding, management, and care (c). For example, in a federally funded cross-sectional mixed-methods study, Bray et al (2022) identified 12 primary environmental factors that expert BED researchers, clinicians, healthcare administrators and policy makers associate with increased BED risk. In a secondary analysis of these risk factors and their endorsement values, Lamichhane et al (2025) found trauma and adversity to mediate and/or moderate the relationship between nearly all other identified factors *and* BED risk. Moreover, specific risk factors were identified in which other risk factors cluster on a single variable, exponentially increasing BED risk. For example, **marginalized and**

under-resourced populations were identified as having increased risk, prevalence rates, and overall likelihood of experiencing all other expert-identified risk factors both separately and cumulatively (e.g., invalidation, discrimination, systematic oppression, systemic gaps in policy, research, and clinical care, economic precarity, stigmatization, food insecurity, nutrition scarcity, interpersonal relationship trauma, predatory social media messaging, and predatory food industry practices) which represent childhood and lifetime adverse experiences (ACEs and ALEs) that – if untreated – can result in binge eating and binge eating disorder. This theory is currently being tested through linear regression and network mapping models applied to medical record and survey data obtained directly from individuals with BED (regardless of knowledge of diagnosis or formal diagnosis status). Overall, there is an urgent need for more inclusive BED research that uses mixed-methods approaches to understand the specific experiences and needs of *all* individuals with BED, including the ~95% that lack a formal diagnosis or self-awareness therein. Additionally – and especially in light of the recent changes mandated by the Trump 2025 administration – there is an urgent need for research investigating the role of trauma and adversity in marginalized populations *and* the safety, feasibility, and efficacy of social justice- and trauma-informed treatment approaches that can be incorporated into BED treatment, specifically for individuals with marginalized identities (the majority of individuals with BED). By addressing these disparities, we can improve our understanding of BED pathology and develop more effective diagnostic criteria and treatment approaches that are equitable and accessible to all individuals affected by BED.

Keywords: decolonial research, decolonial psychology, binge eating disorder, eating disorder, binge eating, disparity, justice, equity, diversity, inclusion, access, marginalization, healthcare

1 INTRODUCTION

Binge eating disorder (BED) is an autonomous DSM-V mental health and eating disorder diagnosis that impacts nearly 3 million adults in the U.S. alone.[1-3] Clinically, binge eating disorder is characterized by persistent (≥3 mo.) weekly ~2-hr episodes of rapidly consuming objectively large amounts of food (more than others would under similar circumstances) with a sense of loss of control and marked distress about the binge eating, accompanied by feelings of embarrassment, guilt, shame, disgust, depression, isolation, and often physical discomfort.[2,4]

The biopsychosocial disorder is associated with high lifetime prevalence rates (4.5–31% of U.S and global populations experiencing BED at some point in their lifetime)[1,5] and a complex and costly[6-10] health sequela that includes **childhood and lifetime adversity and trauma**,[11-16] loneliness,[17-22] impaired cognitive function and emotion regulation,[17-22] anxiety, depression, and suicidality,[12,14,23] **trauma and post-traumatic stress disorder (PTSD),**[11-14] low self-esteem,[11-13] substance-related and addictive disorders (SRADs),[12,14,23] food and ultra-processed food addiction,[24-26] overweight and obesity,[13,14,27,28] hypercholesterolemia and hyperlipidemia, diabetes,[14,27] cardiovascular disease,[29-32] and (all together) cardiometabolic disorder,[14,27,33-39] and overall significantly impaired quality of life.[1,6,7,11-13,40-46,1,12,14,17-22,40-44,47]

2 DISPARITIES IN BED DIAGNOSIS

Global and national studies suggest 5 – 31% of U.S and global populations experience BED at some point in their lifetime.[1,5] However, a variety of emerging studies also find that 93.4–96.8% of individuals who meet DSM criteria for BED never receive a formal diagnosis,[48,49] 67.3% do not perceive the need for formal treatment,[48] and 56.4–86.8% never receive or pursue standard treatment[1,48] for a variety of complex reasons.[50] Moreover, emerging studies find that treatment-seeking samples for BED tend to be grossly misrepresentative of the full population of individuals who experience this issue.[11,13,50] For example, individuals with eating disorder symptoms who are underweight, white, affluent, and/or female are more likely than their respective counterparts to perceive a need for treatment or receive a diagnosis or treatment.[48] As a result, treatment-seeking samples and populations for BED tend to be saturated by white affluent young women, contributing to the "SWAG" stereotype/misconception that ascribes all eating disorders exclusively to "skinny white affluent girls."[11,13,50] This misconception can result in gross underscreening and missed detection of BED, particularly in individuals who do not meet the SWAG demographic.[11,13,50]

3 MARGINALIZED POPULATIONS ARE UNDER-SCREENED, DIAGNOSED, TREATED, AND REPRESENTED IN BED

More recently, numerous emerging studies find that racial, ethnic, socioeconomic, sexual preference, and sex/gender identity minorities (e.g., members of the BIPOC and LGBTQ2+ communities and other marginalized populations) have two- to three times higher BED risk and prevalence rates their white, heterosexual, cis-gendered, female counterparts (including higher risk and prevalence rates of experiencing discrimination, stigmatization, unemployment, homelessness, poverty, food insecurity, and direct targeting by tobacco-owned food and beverage marketing programs).[11,13,50] At the same time, these same populations are *less* likely to recognize the need for BED treatment when present, be screened by healthcare providers for an eating disorder, pursue, access, or engage in treatment when needed, and much less likely to be included or represented in eating disorder research.[11,13,50]

4 DISPARITIES IN BED TREATMENT

Another impact is that most standard treatments for BED are informed by testing in clinical treatment-seeking samples, whose pathology may differ significantly from that of the ~56%-97% of individuals with BED who never receive a formal diagnosis or care.[1,48,49] Standard of care interventions for BED include psychological interventions (e.g., cognitive behavioral therapy (CBT), CBT-self-help, interpersonal therapy, and psychodynamic therapies), medications (antidepressants, anticonvulsants, and anti-obesity/weight loss medications), nutritional counseling, and behavioral weight loss [51]. A variety of additional evidence-based practices are gaining traction in the context of BED, including family-based therapy (FBT) and other psychodynamic therapies with guideline support [51,52] as well as humanistic therapy [52], dialectical

behavioral therapy (DBT), and DBT guided self-help [53,54]. However, all of these interventions have low treatment success rates (38.3–43.6%[1,40]), high recurrence rates (49–64%[1,55]), high treatment dissatisfaction,[56] and early discontinuation of care.[56]

4 CALL FOR DECOLONIAL APPROACHES

The lack of justice, equity, diversity, inclusion, access, and awareness (JEDIAA) among minority, marginalized, and under-served populations in BED occur at the levels of the patient, healthcare providers and systems, and socioculturally.[11,13,50] These pose significant challenges to BED research[11,13,50] and to our current clinical understanding of BED pathology.[11,13,50] For example, the clinical understanding of BED is often informed from clinical case findings/experience and from research that historically pulls from clinical (treatment-seeking) populations that – as addressed above – tend to be saturated by the SWAG demographic and are grossly misrepresentative of the full population of individuals who experience BED.[11,13,50]

It follows then that the historically conventional clinical understanding of BED pathology and the approved treatment approaches that derive from it may be more aligned with the experiences of the ~3 – 46% of individuals with BED who *do* receive a formal BED diagnosis and treatment, and less aligned with the experiences of the ~54–97% of individuals who lack access to BED detection, diagnostic, and clinical resources and support.[1,11-13,40,47-50,55-59]

5 SOCIOCULTURAL MOVEMENT

More recently two concurrent sociocultural phenomena spawned a new era of BED research methods and designs that begin to paint a new picture of BED pathology. On the one hand, the "me too" and "Black Lives Matter" movements have helped raise and demand awareness of the lack of JEDIAA that exists socioculturally[60,61, 62-64;65-70,71-80] and some BED research slowly began to reflect and respond in turn.[11,13,48,50,81-84] At the same time, the Coronavirus 19 (COVID-19) pandemic (~2019–2023) placed a temporary firewall between BED research recruitment efforts and BED clinicals and treatment centers that, while not completely impenetrable, prompted an increase in observational and qualitative studies that were (and remain) more inclusive of non-treatment-seeking individuals with BED.[11,13,14,84-86] This new era of decolonial psychology in BED research has helped improve our understanding of the experience of BED from a more complete population of individuals who experience it.[11,13,14,84-86] These studies align with a growing awareness of the importance for JEDIAA both socioculturally, clinically, and in research broadly and specific to eating disorders and BED.[1,11,13,48-50]

6 Reconceptualizing Binge Eating Disorder

A recent federally-funded cross-sectional mixed-methods study (Bray et al., 2022) identified 12 primary environmental factors that expert BED researchers, clinicians, healthcare administrators and policy makers associate with increased BED risk.[11] These included:
   (1) Invalidation and invalidating environments (100% expert endorsement).
   (2) Systemic issues (e.g., policy gaps) and systems of oppression (100% expert endorsement).

(3) Gaps in in BED research and clinical care (100% expert endorsement).
(4) Marginalized and under-represented populations (100% expert endorsement).
(5) Economic precarity (93% expert endorsement).
(6) Stigmatization and its psychological impacts (93% expert endorsement).
(7) Trauma and adversity (79% expert endorsement).
(8) Food insecurity/scarcity (64% expert endorsement).
(9) Interpersonal factors (64% expert endorsement).
(10) Social messaging and social media (50% expert endorsement).
(11) Nutrition insecurity/scarcity (43% expert endorsement).
(12) Predatory food industry practices (29% expert endorsement.

Lamichhane et al., 2025 (in prep) applied heat map and neural network mapping techniques to this qualitative data to explore the ways these factors relate to one another (Figs 1 and 2). These findings revealed a **predominant role of childhood and lifetime adversity and trauma** as mediating and moderating the relationship of each individual factor and BED prevalence and risk.[87,88]

Lamichhane et al's network maps were developed to demonstrated specific clusters of risk factor nodes, in which multiple risk factors tend to co-occur, exponentially increasing risk for BED. One such cluster was **marginalized and under-resourced populations**, wherein invalidation, discrimination, systematic oppression, systemic gaps in policy, research, and clinical care, economic precarity, stigmatization, food insecurity, nutrition scarcity, interpersonal relationships, social media messaging, and predatory food industry practices (e.g., all other environmental factors identified by experts as increasing risk for BED) individually and collectively represent lifetime (and often childhood) adverse experiences that remain continuous and cumulative throughout the lifespan, significantly contributing to the central risk factor of trauma, adversity, and PTSD that – when untreated – can result in binge eating and binge eating disorder).[87,88] This theory remains to be directly tested through linear regression and network mapping models applied to medical record and survey data obtained directly from individuals with BED (regardless of knowledge of diagnosis or formal diagnosis status), which Bray et al and colleagues at the NourishED Research Foundation are actively addressing.

7. Recognizing Adversity, Trauma, & Health Disparity in Binge Eating Disorder

Lamichhane et al (2025) represents just one publication in a rapidly growing literature base that increasingly endorse the role of childhood or lifetime adversity (ACEs and ALEs) and trauma in contributing to binge eating disorder risk, prevalence, and overall development and maintenance.[11-13,15,16,47,50,57,89-109]

For example, and a ten-year longitudinal study conducted in 100 junior high-school students found a positive association between ACEs and increased levels of binge eating symptoms emerging at 10-year follow-up (e.g., in adulthood)($\beta = 0.37$, SE = 0.19, CI=(0.03; 0.7), *p* =.0485).[96] Of

the ACEs assessed, parental mental health (e.g., having a parent who experienced a mental illness during the participant's childhood) was individually associated with emergence of adult binge eating symptoms ($\beta = 0.84$, SE = 0.40, CI = 0.04, 1.64, p =.0409). Higher levels of emerging adult depression and anxiety symptoms were also associated with higher levels of emerging binge eating symptoms ($\beta = 0.02$, SE = 0.01, CI=(0.01; 0.04), p =.0020),[96] suggesting that ACEs, anxiety, and depression symptoms contribute to binge eating symptoms.

A 2023 longitudinal cohort study of 331 undergraduate students also found that experiencing one to two ACEs *together with* frequent discrimination was significantly associated with higher cognitive restraint, as assessed using the Eating Pathology Symptom Inventory (EPSI) subscale, suggesting that a combination of low ACEs together with discrimination may also contribute to binge eating psychopathology.[198] While the correlations identified in longitudinal studies can only indirectly *suggest* causative value, a 2024 odds ratio meta-analysis of 30 observational studies found that childhood maltreatment increased the odds of having binge eating disorder 1.76-fold (OR 1.76, 95% CI 1.38-2.26; Z = 4.52; P < 0.001; I^2 = 80.2%)[89]

More recently, a 2025 latent profile analysis (LPA) of 646 adults with self-reported binge eating symptoms, identified a four-profile model that best fit participant reports of eating disorder psychopathology (including binge eating symptoms, internal shame, body shame, and psychological distress), binge eating functions (emotion regulation, hedonic hunger, compensatory eating, numbness/dissociation, emotion expression, self-punishment, control, and self-protection),[106] demographic data, and ACEs.[93] The four primary profiles included in the model were:

1. **<u>Emotional Avoidance</u>** (encompassing 13% of participants), characterized by high endorsement of binge eating functions reflecting reduction or avoidance of negative emotional experiences (emotion regulation, numbness/dissociation) and relatively low endorsement of functions relating to emotional expression, suggesting that for participants in this profile, binge eating is less related to what is historically considered a typical eating disorder presentation (e.g., with eating patterns, behaviors, and psychopathology encompassing body dissatisfaction and dietary restraint) and more specifically focused on the avoidance of unwanted emotional experiences, serving a perceived beneficial function. Interestingly, this profile had a higher proportion of men (similar to the complex trauma/adversity profile) and lower levels of internal shame, body shame and total ED psychopathology (consistent with other findings in men [110]), highlighting a potentially novel *male* binge eating profile, in which men may be more likely to engage in binge eating that is associated with avoiding unwanted negative emotions (a function that has previously been endorsed more broadly in non-sex/gender-specific populations)[111-113].

---

[1] The ACEs most commonly reported were: emotional abuse (34.7% prevalence), emotional neglect (31.9%), family member mental illness (26.4%), loss of biological parent (21%), family member substance use (17%), physical abuse (13.4%), family member in prison (7.9%), sexual abuse (5.5%), and physical neglect (5.2%). The most commonly reported forms of discrimination were: gender (45.9% prevalence), race (42.3%), age (36.3%), physical appearance (24.5%), ancestry or national origins (15.4%), height (13.6%), religion (12.4%), weight (11.2%), education or income level (9.7%), political beliefs (5.7%), sexuality (5.4%), and illness (5.1%).

2. **Emotion Reactivity** (encompassing 48.6% of participants), characterized by a higher endorsement of a wider range of emotion-related functions (relative to the emotional avoidance profile)(e.g., binge eating to express emotions or for emotional self-harm/punishment) combined with higher endorsement of emotional regulation and numbness/dissociation functions. This profile also showed a high prevalence of younger women, higher prevalence of probable bulimia nervosa diagnosis, and the second highest prevalence of ACEs (after the Complex Trauma/Adversity profile), with emotional abuse and household mental illness being predominantly high. The authors describe this profile as largely depicting "a group of younger, mostly female individuals, with a history of ACEs related to emotional invalidation [99] and negative self-evaluative emotions such as internal shame,[100,114] as well as reduced emotion regulation and distress tolerance [115,116]."[93] The statistical identification and endorsement of this profile suggests that for a considerable portion of individuals (~50%), binge eating is used to manage distressing emotions that are often associated with childhood or lifetime adversity through a variety of different ways (e.g., reducing emotional intensity, avoiding emotional experiences, and communicating emotions externally or directing them internally when direct emotional communication may not feel safe). This possibility is also strongly endorsed in the literature.[13,105,117-119]

3. **Complex Trauma/Adversity** (encompassing 20.7% of participants), characterized by higher endorsement of the binge eating functions most closely linked to experiences of childhood maltreatment (e.g., control and self-protection)[106] *and* high endorsement of binge eating functions associated with numbness/dissociation, emotion expression, and self-punishment (that did not differ statistically from endorsement levels observed in the Emotion Reaction profile). This profile was associated with a higher overall prevalence of ACEs, especially those related to lack of control, lack of predictability, and physical vulnerability (e.g., physical abuse and neglect, sexual abuse, parental intimate partner violence as well as emotional abuse and household member incarceration), which are known to evoke the highest levels of stress hormone output and dysregulation in humans and rodents.[120] This profile also showed higher levels of psychological distress, internal shame, binge eating severity, and eating disorder psychopathology, as well as higher proportions of men (alongside the Emotional Avoidance profile). The authors describe this profile stating "taken together, these characteristics are suggestive of a group [of individuals] with a background of significant trauma, exhibiting high levels of psychological distress, shame, and eating disorder psychopathology, and engaging in binge eating to serve multiple psychological needs," [93] The higher prevalence of male sex/gender and lower levels of internal shame, body shame and total ED psychopathology observed in this profile and in the emotional avoidance profile (and consistent with other findings in men[110]) – paired with the fact that ACEs are experienced proportionately across sex and gender[101,102] – suggest that men with eating disorders may tend to have a more significant trauma history contributing to current symptoms[93] *and* that men who engage in binge eating may be more likely to do so because of the associations between binge eating and avoiding unwanted negative emotions (a function that has previously been endorsed more broadly in non-sex/gender-specific populations).[111-113]

4. **"Classic" Dietary Restraint** (encompassing 17.7% of participants), characterized by high endorsement of compensatory eating due to dietary restraint and high levels of hedonic hunger (also observed in the emotion reactivity profile) together with higher levels of emotion regulation than observed in other profiles, suggesting that in this profile, binge eating may be related to dietary restraint – which can be intentional/voluntary *or* involuntary (e.g., as a consequence of low socioeconomic status/food insecurity/insufficiency) and – to a lesser extend – the ability of binge eating to evoke hedonic reward responses and regulate negative emotions.

A multivariate analysis of variance (MANOVA) with Tukey post-hoc tests found that mean profile factor scores significantly differed across the four profiles, including binge eating functions, binge eating severity, eating disorder psychopathology, beliefs about binge eating, internal shame, body shame, psychological distress, total number of ACEs, BMI, and age ($p < 0.05$). Strongest relationships between profile type and each individual binge eating function (indicated by highest partial eta squared values, η2), were observed in self-protection, control, emotional expression, and self-punishment, all of which were highest in the complex trauma/adversity group (η2=0.61, 0.45, 0.41, and 0.40 respectively).

7 Binge Eating Disorder is a Public Health/Policy Issue

Together, these findings align with a growing body of literature that identifies binge eating disorder as not only a mental health issue but also a public health/policy issue.[6,9-11,14,40,48,50,81,103,104,121-136] Policy changes aimed to reduce public health disparity and adversity – specifically related to *reducing* factors known to increase BED prevalence and risk – hold potential to drastically reduce BED prevalence *and* the public health costs associated not only with BED but also with its health sequela (trauma/adversity, depression, anxiety, PTSD, overweight and obesity, diabetes, cardiovascular disease, cardiometabolic disorder). Factors that are endorsed in the literature as holding the strongest potential for improving public health impact and public health costs related to BED are outlined below.

7.1 Reducing Discrimination & Marginalization

1. **Discrimination** (including discrimination based on race, ethnicity, sex/gender identity, religious preference *and* body shape/size, education level, and socioeconomic status).[11,13,50,87-89,98]

2. **Marginalization**.[11,13,50,87-89,98]

7.2 Improving Food and Nutrition Security

7.2.1 Clinical Recognition of *Forced/Involuntary* Food Restraint as Adversity in Binge Eating that Requires New Treatment Approaches

Food and nutrition insecurity/scarcity (especially in government assistance programs, such as food pantries, food banks, SNAP, and WIC to reduce the impacts of food restriction that prompt binge eating and BED).[11]

Associations between household food insecurity and/or fluctuations in food availability and eating disorders, including binge eating disorder, are strongly supported in the literature.[11-13,48,50,81-83,125,126,128,129,137-149](18) For example, a 2020 systematic review and meta-analysis found that binge eating disorder is 1.65 times more common in participants with food insecurity than in food-secure individuals (8.6% vs. 5.2% prevalence; $p = 0.02$).[83] Studies also demonstrate receiving government assistance before 18 years of age (e.g., welfare, food stamps, SNAP)[140] or having low- and very low food security[137] are both associated with increased odds of having binge eating disorder (government assistance aOR = 2.95).[140] Moreover, studies conducted at food pantries in San Antonio, TX, USA in 2015-2016 [81,126,139] found 51.5% of respondents reported deliberately trying to limit food consumption or going >8 hours without eating,[81] which was significantly correlated with overall level of eating disorder pathology ($r = 0.25$, $p = 0.0001$) and higher BMI.[81] Three main reasons reported for food minimization were lack of resources, SNAP or food stamps being insufficient, and family reasons.[81] Examples included "minimizing effects of hunger for other family members (e.g., children), 'stretching' food to make it last longer, and prioritizing medical expenses [e.g., diapers and tampons]."[81]

These findings support a growing body of research emphasizing that historical "dietary restraint" conceptualizations of binge eating disorder – in which dietary restraint is viewed as *voluntary* (e.g., dieting behaviors) related to body weight/shape/size overvaluation and attempts to control body weight/shape/size(3) – more likely fit a *minority* of individuals with binge eating disorder (e.g., 18-21%),[13,93] but not the majority.[11-13,15,16,47,89-105,107-109] These findings highlight a new perspective: that food restriction – a factor highly endorsed in the literature as preceding binge eating(3) – may in many cases be *forced/involuntary* (e.g., as a result of food/economic/nutritional insecurity/scarcity).[11-13,48,50,81-83,125,126,128,129,137-149] To the extent that this is the case, more traditional treatment approaches that target *voluntary/intentional/elective* food restriction (via dieting) – e.g., cognitive behavioral therapy (CBT), the first-line therapeutic intervention for any eating disorder, including binge eating disorder,(3, 5, 6) which posits that dieting behavior drives binge eating and results from overevaluation of eating and body weight/shape/size(3) – may not fully align or suffice. This may explain the low treatment outcomes observed in standard treatment options for binge eating disorder (e.g., 38.3–43.6% treatment success rates,[1,40] 49-64% recurrence rates,[1,55]), high treatment dissatisfaction,[56] and early discontinuation of care [56] observed across all standard treatment approaches), and the ~50% remission rates observed specifically in CBT.(32)[11] This recognition is supported in the literature.(7, 33-35){Bray, In Prep #7278}{Bray, 2022 #8566;Bray, 2023 #7854}

These findings also align with a growing body of literature that recognizes economic, food, and nutrition insecurity and scarcity as one of "unconventional ACEs"

7.2.2 Policy Changes Addressing Food and Nutrition Insufficiency in Government Assistance Programs

The growing body of research presented here and elsewhere suggest that limitations in current government assistance programs – or the way these programs are being used – may increase odds of recurrent binge eating, leading to binge eating disorder.[11]

While research continues to emerge on the prevalence and nature of the relationship between food/economic/nutrition insecurity/scarcity and binge eating disorder pathology, experts in the field and a growing body of research recognize this issue as systemic and likely requiring public education and policy change.[11]

Additionally, it is important to include individuals with economic precarity and food scarcity/insecurity in research going forward, especially the ***% of individuals with binge eating disorder who use government assistance *and the* ~95% who lack formal diagnoses or awareness of their conditions.[add citations and fill in stat]. It is equally important that such research include qualitative components that can capture the needs, process evaluations, and lived experiences of these individuals *and* identify prevention and treatment options accessible to them. For individuals with food/nutrition insecurity, family nutritional support that accounts for food pantry limitations and practical support in meal planning on a budget may be more helpful than approaches that focus on body acceptance.

***

7.3 Regulating Food Processing, Additives, Advertising, & Marketing Practices

3. **Harmful food processing, additive, advertising, and marketing practices** (e.g., to reduce the impacts of processed foods on reward responses that prime binge eating).[11]

7.4 Reducing Stigmatization

4. **Stigmatization** (specifically in work, school, and social media spaces).[11]

This growing body of evidence also emphasizes several critical points related to binge eating disorder management, care, and conceptualization:

(A) The importance of **screening for adverse childhood and lifetime experiences** (ACEs and ALEs) as well as other mental health conditions in patients with binge eating.[11-13,15,16,47,89-105]

(B) That individuals who struggle with binge eating symptoms may have co-occurring conditions, of which a **traditional treatment for BE may not fully suffice**.[11-13,47,50,93,106-109]

(C) That there is an urgent need for **alternative treatment approaches to binge eating disorder that are affordable, accessible, and socioculturally sensitive and inclusive** (to address the needs of the ~56%-97% of individuals with BED who never receive a formal diagnosis or care and often lack access to healthcare more broadly[1,48,49]).[11-13,47,50]

(D) There is also an **urgent need for alternative treatment approaches that are trauma- and social justice informed**.[11-13,47,50,57] Trauma-informed approaches like eye movement desensitization and reprocessing (EMDR), Contemplative Buddhist approaches that endorse Brilliant Sanity (recognizing the core clarity in all beings, and recognizing external symptoms as reflections of an individual's best attempt to use the resources available to them for healing and coping as a thing that can be celebrated rather than shamed), self-compassion, loving kindness (e.g., Metta and Maitri meditation), and non-dual therapy, and social justice therapy interventions have been endorsed by experts in the field and in the literature and warrant empirical validation and testing.[57]

7 Conclusions

While the call for raising the narrative of the lived experience of BED from those who experience it is an important first step[11,13,50] it is far from being complete or even satisfactory at this point. There is an urgent need for more inclusive study recruiting methods in BED research that can collect information from individuals who meet diagnostic criteria for BED (regardless of formal diagnostic status or awareness). There is also a need to further explore the relationship between childhood and lifetime adverse experiences and binge eating. This should be addressed through linear regression models and network maps that can identify the predictive value of ACEs and ALEs in BED and convey this data also in a way that is visually impactful (e.g., network mapping). Finally, there is an urgent need for research testing the safety, feasibility, and efficacy of alternative treatment options for binge eating disorder that are affordable, accessible, socioculturally sensitive and inclusive AND trauma and social-justice informed. Contemplative Buddhist practices of Brilliant Sanity, self-compassion, and loving kindness (e.g., Metta and Maitri) can be helpful for patients and practitioners alike. Research should also aim to develop and validate tools that can help identify *who* may benefit from these types of approaches and how best to determine whether these approaches are most appropriate.

References:

1. Hudson JI, Hiripi E, Pope HG, Jr., Kessler RC. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological psychiatry.* 2007;61(3):348-358.
2. APA. *Diagnostic and Statistical Manual of Mental Disorders: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.* Arlington, VA: American Psychiatric Association; 2013.
3. APA APA. Binge-Eating Disorder (F50.81). In Section II: Diagnostic Criteria and Codes: Feeding and Eating Disorders. In: *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition Text Revision (DSM-5-TR).* 5-TR ed. Washington, DC; London, England; https://ia801602.us.archive.org/24/items/dsm-5-tr/DSM-5-TR.pdf: American Psychiatric Association; 2022:393-396.
4. APA APA. Guideline Statements and Implementation: Binge-Eating Disorder. In: *The American Psychiatric Association Practice Guideline for the Treatment of Patients with Eating Disorderss, Fourth Edition.* 4 ed. Washington, DC; https://psychiatryonline.org/doi/epdf/10.1176/appi.books.9780890424865: American Psychiatric Association; 2023:47-50.
5. Termorshuizen JD, Watson HJ, Thornton LM, et al. Early Impact of COVID-19 on Individuals with Eating Disorders: A survey of ~1000 Individuals in the United States and the Netherlands. *medRxiv.* 2020.
6. Streatfeild J, Hickson J, Austin SB, et al. Social and economic cost of eating disorders in the United States: Evidence to inform policy action. *The International journal of eating disorders.* 2021;54(5):851-868.
7. van Hoeken D, Hoek HW. Review of the burden of eating disorders: mortality, disability, costs, quality of life, and family burden. *Current opinion in psychiatry.* 2020;33(6):521-527.
8. Maguire S, Bryant E, Ivancic L. Universal healthcare reform for community treatment of eating disorders in Australia: report of the first 2 years of operation. *Public Health Res Pract.* 2023;33(2).
9. Bryant E, Koemel N, Martenstyn JA, Marks P, Hickie I, Maguire S. Mortality and mental health funding-do the dollars add up? Eating disorder research funding in Australia from 2009 to 2021: a portfolio analysis. *Lancet Reg Health West Pac.* 2023;37:100786.
10. Presskreischer R, Steinglass JE, Anderson KE. Eating disorders in the U.S. Medicare population. *The International journal of eating disorders.* 2022;55(3):362-371.
11. Bray B, Bray C, Bradley R, Zwickey H. Binge Eating Disorder Is a Social Justice Issue: A Cross-Sectional Mixed-Methods Study of Binge Eating Disorder Experts' Opinions. *Int J Environ Res Public Health.* 2022;19(10):6243 - 6280.
12. Bray B, Bray C, Bradley R, Zwickey H. Mental health aspects of binge eating disorder: A cross-sectional mixed-methods study of binge eating disorder experts' perspectives. *Frontiers in psychiatry.* 2022;13:953203.
13. Bray B, Sadowski A, Bray C, Bradley R, Zwickey H. Clinical aspects of binge eating disorder: A cross-sectional mixed-methods study of binge eating disorder experts' perspectives. *Frontiers in psychiatry.* 2023;13.
14. Keski-Rahkonen A. Epidemiology of binge eating disorder: prevalence, course, comorbidity, and risk factors. *Current opinion in psychiatry.* 2021;34(6):525-531.

15. Wiss DA, Avena N, Gold M. Food Addiction and Psychosocial Adversity: Biological Embedding, Contextual Factors, and Public Health Implications. *Nutrients.* 2020;12(11).
16. Wiss DA, Brewerton TD. Adverse Childhood Experiences and Adult Obesity: A Systematic Review of Plausible Mechanisms and Meta-Analysis of Cross-Sectional Studies. *Physiology & behavior.* 2020;223:112964.
17. Todisco P, Maragno L, Marzotto A, et al. Connections between eating psychopathology, loneliness, and quality of life: insights from a multi-center study. *Frontiers in psychiatry.* 2024;15:1439179.
18. Southward MW, Christensen KA, Fettich KC, Weissman J, Berona J, Chen EY. Loneliness mediates the relationship between emotion dysregulation and bulimia nervosa/binge eating disorder psychopathology in a clinical sample. *Eating and weight disorders : EWD.* 2014;19(4):509-513.
19. Mason TB. Loneliness as a moderator of the association of affective symptoms and binge eating among college women. *Eating behaviors.* 2024;54:101903.
20. Levine MP. Loneliness and eating disorders. *J Psychol.* 2012;146(1-2):243-257.
21. Gardizy A, Lindenfeldar G, Paul A, Chao AM. Binge-Spectrum Eating Disorders, Mood, and Food Insecurity in Young Adults With Obesity. *J Am Psychiatr Nurses Assoc.* 2024;30(3):603-612.
22. Dingemans A, Danner U, Parks M. Emotion Regulation in Binge Eating Disorder: A Review. *Nutrients.* 2017;9(11).
23. Juli R, Juli MR, Juli G, Juli L. Eating Disorders and Psychiatric Comorbidity. *Psychiatria Danubina.* 2023;35(Suppl 2):217-220.
24. Fauconnier M, Rousselet M, Brunault P, et al. Food Addiction among Female Patients Seeking Treatment for an Eating Disorder: Prevalence and Associated Factors. *Nutrients.* 2020;12(6).
25. di Giacomo E, Aliberti F, Pescatore F, et al. Disentangling binge eating disorder and food addiction: a systematic review and meta-analysis. *Eating and weight disorders : EWD.* 2022;27(6):1963-1970.
26. Praxedes DRS, Silva-Júnior AE, Macena ML, et al. Prevalence of food addiction determined by the Yale Food Addiction Scale and associated factors: A systematic review with meta-analysis. *European eating disorders review : the journal of the Eating Disorders Association.* 2022;30(2):85-95.
27. Yu Z, Muehleman V. Eating Disorders and Metabolic Diseases. *Int J Environ Res Public Health.* 2023;20(3).
28. McCuen-Wurst C, Ruggieri M, Allison KC. Disordered eating and obesity: associations between binge-eating disorder, night-eating syndrome, and weight-related comorbidities. *Annals of the New York Academy of Sciences.* 2018;1411(1):96-105.
29. Yurkow S, Ivezaj V, Grilo CM. Improvements in cardiovascular disease risk factors associated with modest weight loss following treatment in patients with binge-eating disorder and obesity. *The International journal of eating disorders.* 2023;56(11):2074-2083.
30. Friars D, Walsh O, McNicholas F. Assessment and management of cardiovascular complications in eating disorders. *Journal of eating disorders.* 2023;11(1):13.
31. Longitudinal Association of Depressive Symptoms, Binge Eating, and Quality of Life With Cardiovascular Risk Factors in Young Adults With Youth-Onset Type 2 Diabetes: The TODAY2 Study. *Diabetes Care.* 2022;45(5):1073-1081.

32.   Klatzkin RR, Gaffney S, Cyrus K, Bigus E, Brownley KA. Binge eating disorder and obesity: preliminary evidence for distinct cardiovascular and psychological phenotypes. *Physiology & behavior.* 2015;142:20-27.

33.   Pereira R, Araújo J, Severo M, Ramos E, Oliveira A. Disordered Eating Profiles in Adolescence to Early Adulthood and Future Cardiometabolic Health. *Pediatrics.* 2024;154(6).

34.   Mohammedsaeed W, El Shikieri AB. Cardiometabolic Risk Factors among Women with Eating Disorders in Saudi Arabia. *J Nutr Metab.* 2024;2024:5953893.

35.   Byrne ME, Shank LM, Lavender JM, et al. A systematic review and meta-analysis of loss-of-control eating in relation to cardiometabolic health components and inflammatory markers. *Obes Rev.* 2024;25(11):e13805.

36.   Raney JH, Al-Shoaibi AA, Shao IY, et al. Racial discrimination is associated with binge-eating disorder in early adolescents: a cross-sectional analysis. *Journal of eating disorders.* 2023;11(1):139.

37.   Zhou JC, Rifas-Shiman SL, Haines J, Jones K, Oken E. Adolescent overeating and binge eating behavior in relation to subsequent cardiometabolic risk outcomes: a prospective cohort study. *Journal of eating disorders.* 2022;10(1):140.

38.   Nagata JM, Garber AK, Tabler J, Murray SB, Vittinghoff E, Bibbins-Domingo K. Disordered eating behaviors and cardiometabolic risk among young adults with overweight or obesity. *The International journal of eating disorders.* 2018;51(8):931-941.

39.   Leone A, Bedogni G, Ponissi V, et al. Contribution of binge eating behaviour to cardiometabolic risk factors in subjects starting a weight loss or maintenance programme. *The British journal of nutrition.* 2016;116(11):1984-1992.

40.   Kessler RC, Berglund PA, Chiu WT, et al. The prevalence and correlates of binge eating disorder in the World Health Organization World Mental Health Surveys. *Biological psychiatry.* 2013;73(9):904-914.

41.   da Luz FQ, Hay P, Touyz S, Sainsbury A. Obesity with Comorbid Eating Disorders: Associated Health Risks and Treatment Approaches. *Nutrients.* 2018;10(7):829.

42.   Pawaskar M, Witt EA, Supina D, Herman BK, Wadden TA. Impact of binge eating disorder on functional impairment and work productivity in an adult community sample in the United States. *International Journal of Clinical Practice.* 2017;71(7):e12970.

43.   Mustelin L, Bulik CM, Kaprio J, Keski-Rahkonen A. Prevalence and correlates of binge eating disorder related features in the community. *Appetite.* 2017;109:165-171.

44.   Apovian CM. Obesity: definition, comorbidities, causes, and burden. *The American journal of managed care.* 2016;22(7 Suppl):s176-185.

45.   Gudmundsdóttir S, Linnet J, Lichtenstein MB, et al. Low quality of life in binge eating disorder compared to healthy controls. *Dan Med J.* 2023;70(4).

46.   Arija Val V, Santi Cano MJ, Novalbos Ruiz JP, Canals J, Rodríguez Martín A. [Characterization, epidemiology and trends of eating disorders]. *Nutricion hospitalaria.* 2022;39(Spec No2):8-15.

47.   Bray B, Sadowski A, Bray C, Bradley R, Zwickey H. Clinical aspects of binge eating disorder: A cross-sectional mixed-methods study of binge eating disorder experts' perspectives. *Frontiers in psychiatry.* 2022;13:1087165.

48. Sonneville KR, Lipson SK. Disparities in eating disorder diagnosis and treatment according to weight status, race/ethnicity, socioeconomic background, and sex among college students. *The International journal of eating disorders.* 2018;51(6):518-526.

49. Cossrow N, Pawaskar M, Witt EA, et al. Estimating the Prevalence of Binge Eating Disorder in a Community Sample From the United States: Comparing DSM-IV-TR and DSM-5 Criteria. *The Journal of clinical psychiatry.* 2016;77(8):e968-974.

50. Bray B, Kalu B, Shallcross A, et al. Treatment Access Barriers in Binge Eating Disoder: A cross-sectional mixed-methods study of binge eating disorder experts' perspectives. *International Journal of Environmental Health Research (planned).* Submitting Feb, 2025;Submitting Feb 2025.

51. Hilbert A, Hoek HW, Schmidt R. Evidence-based clinical guidelines for eating disorders: international comparison. *Current opinion in psychiatry.* 2017;30(6):423-437.

52. Hilbert A, Petroff D, Herpertz S, et al. Meta-analysis of the efficacy of psychological and medical treatments for binge-eating disorder. *Journal of consulting and clinical psychology.* 2019;87(1):91-105.

53. Kenny TE, Carter JC, Safer DL. Dialectical behavior therapy guided self-help for binge-eating disorder. *Eating disorders.* 2020;28(2):202-211.

54. Carter JC, Kenny TE, Singleton C, Van Wijk M, Heath O. Dialectical behavior therapy self-help for binge-eating disorder: A randomized controlled study. *The International journal of eating disorders.* 2020;53(3):451-460.

55. Grilo CM, Masheb RM, Wilson GT, Gueorguieva R, White MA. Cognitive-behavioral therapy, behavioral weight loss, and sequential treatment for obese patients with binge-eating disorder: a randomized controlled trial. *Journal of consulting and clinical psychology.* 2011;79(5):675-685.

56. Kazdin AE, Fitzsimmons-Craft EE, Wilfley DE. Addressing critical gaps in the treatment of eating disorders. *International Journal of Eating Disorders.* 2017;50(3):170-189.

57. Bray B, Shallcross AJ, Sadowski A, et al. Complementary and Integrative Health Use in Binge Eating Disorder: A Cross-Sectional Mixed-Methods Study of Binge Eating Disorder Experts' Perspectives. *Int J Nurs Health Care Res (Lisle).* 2024;7(5).

58. Bray B, Clement KA, Bachmeier D, Weber MA, Forster GL. Corticosterone in the ventral hippocampus differentially alters accumbal dopamine output in drug-naive and amphetamine-withdrawn rats. *Neuropharmacology.* 2020;165:107924.

59. Bray B, Shallcross A, Sadowski A, et al. Complementary and Integrative Health Use in Binge Eating Disoder: A cross-sectional mixed-methods study of binge eating disorder experts' perspectives. *Int J Nurs Health Care Res.* 2024;7(1549).

60. Zimerman A, Rotenstein LS, Jena AB. Trends in Scientific Collaboration Between Men and Women Following the #MeToo Movement. *Journal of general internal medicine.* 2024;39(2):201-206.

61. Siuta RL, Martin RC, Dray KK, Liu S-NC, Bergman ME. Who posted #MeToo, why, and what happened: A mixed methods examination. *Frontiers in Public Health.* 2023;11.

62. Goldberg AE. LGBTQ-parent families: Diversity, intersectionality, and social context. *Curr Opin Psychol.* 2023;49:101517.

63. Ray CGL, Hudson Mariouw K, Anderson KM, et al. Current status of inclusion of black participants in neuropsychological studies: A scoping review and call to action. *Clin Neuropsychol.* 2022;36(2):227-244.

64. Pugh E, Robinson A, De Vito AN, Bernstein JPK, Calamia M. Representation of U.S. Black Americans in neuropsychology research: How well do our reporting practices show that Black lives matter? *Clin Neuropsychol.* 2022;36(2):214-226.

65. Lee BH. #Me Too Movement; It Is Time That We All Act and Participate in Transformation. *Psychiatry Investig.* 2018;15(5):433.

66. Zacharias RL. Learning from Me Too. *Hastings Cent Rep.* 2018;48(4):inside back cover.

67. Nahai F. "Me Too" Isn't Just About Somebody Else. *Aesthet Surg J.* 2018;38(10):1153-1155.

68. Me too. *Vet Rec.* 2018;182(5):144.

69. Vaish R, Dhar H, D'Cruz AK. Beyond Me, Too. *J Glob Oncol.* 2016;2(4):248-249.

70. Gyawali B. Me, Too. *J Glob Oncol.* 2016;2(3):99-104.

71. Negbenebor NA, Garza EW. Black Lives Matter, but What About Our Health? *J Natl Med Assoc.* 2018;110(1):16-17.

72. Lowe NK. Black Women's Lives Matter. *J Obstet Gynecol Neonatal Nurs.* 2021;50(4):363-368.

73. Henwood F, Kapadia D. Black Lives Matter: Extended Special Section. *Sociol Health Illn.* 2021;43(8):1731-1738.

74. Dowd A. COVID-19/Black Lives Matter. *J Anal Psychol.* 2021;66(3):378.

75. Lebow JL. Black Lives Matter and Family Therapy. *Fam Process.* 2020;59(4):1359-1361.

76. Kelly S, Jeremie-Brink G, Chambers AL, Smith-Bynum MA. The Black Lives Matter Movement: A Call to Action for Couple and Family Therapists. *Fam Process.* 2020;59(4):1374-1388.

77. Hodge DA, West G, Warren RC. Black lives matter: Implications for care ethics. *Nurs Ethics.* 2020;27(6):1375-1376.

78. Harris SM. Black Lives Matter to Systemic Family Therapists. *J Marital Fam Ther.* 2020;46(3):383-384.

79. Brunton SA. Black Diabetic Lives Matter. *Clin Diabetes.* 2020;38(4):323.

80. Why Black lives matter in science. *Nat Methods.* 2020;17(7):645.

81. Middlemass KM, Cruz J, Gamboa A, et al. Food insecurity & dietary restraint in a diverse urban population. *Eating disorders.* 2020;29(6):1-14.

82. Perez M, Ramirez AL, Trujillo-ChiVacuán E. An introduction to the special issue on the state of the art research on treatment and prevention of eating disorders on ethnic minorities. *Eating disorders.* 2019;27(2):101-109.

83. Hazzard VM, Loth KA, Hooper L, Becker CB. Food Insecurity and Eating Disorders: a Review of Emerging Evidence. *Current psychiatry reports.* 2020;22(12):74.

84. Bondü R, Bilgin A, Warschburger P. Justice sensitivity and rejection sensitivity as predictors and outcomes of eating disorder pathology: A 5-year longitudinal study. *The International journal of eating disorders.* 2020;53(6):926-936.

85. Janse van Rensburg M. COVID19, the pandemic which may exemplify a need for harm-reduction approaches to eating disorders: a reflection from a person living with an eating disorder. *Journal of eating disorders.* 2020;8:26.

86. Kenny TE, Boyle SL, Lewis SP. #recovery: Understanding recovery from the lens of recovery-focused blogs posted by individuals with lived experience. *The International journal of eating disorders.* 2020;53(8):1234-1243.

87. Lamichhane H, Tesha R, Pirzadeh A, et al. Network Mapping Methods for Qualitative Data: Application & Comparison of Two Social Network Mapping Protocols. *International Journal of Environmental Health Research.* 2025, in prep;In Prep.

88. Pirzadeh A, Kalu B, Lamichhane H, et al. Network Mapping of Environmental Factors Associated with Binge Eating Disorder: Secondary Analysis of a Cross-Sectional Mixed-Methods Study of Binge Eating Disorder Experts' Opinions. *International Journal of Environmental Health Research.* 2025, in prep;In Prep.

89. Amiri S, Sabzehparvar M. Childhood maltreatment and the risk of eating disorders: a meta-analysis of observational studies. *Neuropsychiatr.* 2024.

90. Berg KH, Natvik E, Eik-Nes TT. Patient experiences of a 10-weeks weight-neutral treatment program for clinical binge eating disorder in a higher weight population. *Journal of eating disorders.* 2023;11(1):228.

91. Chuku BA, Obi NJ, Anats CJ, et al. The Relationship Between Childhood Sexual Abuse and Eating Disorders Among African American Adolescents in the United States. *Cureus.* 2023;15(4):e37949.

92. Hymowitz G, Karvay Y, Salwen-Deremer J, Molina L, Gonzalez A, Toro-Huamanchumo CJ. Examining adverse life experiences, disordered eating behaviors and cognitions and weight loss treatment in Peru. *Eating behaviors.* 2025;56:101939.

93. O'Loghlen E, Galligan R, Grant S. A latent profile analysis of the functions of binge eating. *Journal of eating disorders.* 2025;13(1):13.

94. Ray TN, Esquivel AP, McMaster HS, Jacobson IG, Maguen S, Cohort Family Study Team FTM. Risk and Protective Factors of Probable Binge Eating Disorder in US Military Spouses: Findings From the Millennium Cohort Family Study. *American journal of epidemiology.* 2024.

95. Różycka J, Nowacki A, Łukowska M, et al. Psychological differences in food addiction and binge eating in a general Polish population. *Sci Rep.* 2025;15(1):3919.

96. Schwartz A, Navarro MC, Salamon R. A 10-year Longitudinal Study: The Relationship between Adverse Childhood Experiences, Mental Health Indicators, and Binge Eating Symptoms among Emerging Adults. *Child Psychiatry Hum Dev.* 2024.

97. Yoon C, Joseph T, Moussa G, Voss T, Ledoux T, Johnston C. Associations of positive childhood experiences with binge-eating disorder characteristics and intuitive eating among college students. *Appetite.* 2023;191:107073.

98. Nelson JD, Martin LN, Izquierdo A, et al. The role of discrimination and adverse childhood experiences in disordered eating. *Journal of eating disorders.* 2023;11(1):29.

99. Waller G, Corstorphine E, Mountford V. The Role of Emotional Abuse in the Eating Disorders: Implications for Treatment. *Eating disorders.* 2007;15(4):317-331.

100. Reupert A, Gladstone B, Helena Hine R, et al. Stigma in relation to families living with parental mental illness: An integrative review. *International Journal of Mental Health Nursing.* 2021;30(1):6-26.

101. Carlson JS, Yohannan J, Darr CL, Turley MR, Larez NA, Perfect MM. Prevalence of adverse childhood experiences in school-aged youth: A systematic review (1990–2015). *International Journal of School & Educational Psychology.* 2020;8(sup1):2-23.

102. Keyes KM, Eaton NR, Krueger RF, et al. Childhood maltreatment and the structure of common psychiatric disorders. *British Journal of Psychiatry.* 2012;200(2):107-115.

103. Nagata JM, Ganson KT, Austin SB. Emerging trends in eating disorders among sexual and gender minorities. *Current opinion in psychiatry.* 2020;33(6):562-567.

104.   Hay P, Aouad P, Le A, et al. Epidemiology of eating disorders: population, prevalence, disease burden and quality of life informing public policy in Australia-a rapid review. *Journal of eating disorders.* 2023;11(1):23.

105.   Wiss DA, Brewerton TD, Tomiyama AJ. Limitations of the protective measure theory in explaining the role of childhood sexual abuse in eating disorders, addictions, and obesity: an updated model with emphasis on biological embedding. *Eating and weight disorders : EWD.* 2022;27(4):1249-1267.

106.   O'Loghlen E, Galligan R, Grant S. The functions of binge eating scale (FBES): Development and preliminary psychometric validation. *Appetite.* 2023;183:106479.

107.   Wiss D, Brewerton T. Separating the Signal from the Noise: How Psychiatric Diagnoses Can Help Discern Food Addiction from Dietary Restraint. *Nutrients.* 2020;12(10).

108.   Wiss D, Avena N. Food Addiction, Binge Eating, and the Role of Dietary Restraint: Converging Evidence from Animal and Human Studies. In: Frank GK, Berner LA, eds. *Binge Eating.* Springer Nature Switzerland AG; 2020:193-209.

109.   Wiss DA, Brewerton TD. Incorporating food addiction into disordered eating: the disordered eating food addiction nutrition guide (DEFANG). *Eating and weight disorders : EWD.* 2017;22(1):49-59.

110.   Shingleton RM, Thompson-Brenner H, Thompson DR, Pratt EM, Franko DL. Gender differences in clinical trials of binge eating disorder: An analysis of aggregated data. *Journal of consulting and clinical psychology.* 2015;83(2):382-386.

111.   Fernandes J, Ferreira-Santos F, Miller K, Torres S. Emotional processing in obesity: a systematic review and exploratory meta-analysis. *Obes Rev.* 2018;19(1):111-120.

112.   Sipos V, Schweiger U, Jauch-Chara K, Faßbinder E. [Treatment of Eating Disorders by Emotion Regulation]. *Psychotherapie, Psychosomatik, medizinische Psychologie.* 2017;67(9-10):431-435.

113.   Haynos AF, Crosby RD, Engel SG, et al. Initial test of an emotional avoidance model of restriction in anorexia nervosa using ecological momentary assessment. *Journal of psychiatric research.* 2015;68:134-139.

114.   Constantian MB, Zaborek N. The Prevalence of Adverse Childhood Experiences, Body Shame, and Revision Request Rate in 218 Plastic Surgery Patients: What Drives Postoperative Dissatisfaction? *Plastic and Reconstructive Surgery.* 2021;148(6):1233-1246.

115.   Leijdesdorff S, van Doesum K, Popma A, Klaassen R, van Amelsvoort T. Prevalence of psychopathology in children of parents with mental illness and/or addiction: an up to date narrative review. *Current opinion in psychiatry.* 2017;30(4):312-317.

116.   Rosenstein LK, Ellison WD, Walsh E, Chelminski I, Dalrymple K, Zimmerman M. The role of emotion regulation difficulties in the connection between childhood emotional abuse and borderline personality features. *Personal Disord.* 2018;9(6):590-594.

117.   *Binge Eating: A Transdiagnostic Psychopathology.* Switzerland: Springer Nature; 2021.

118.   Caslini M, Bartoli F, Crocamo C, Dakanalis A, Clerici M, Carrà G. Disentangling the Association Between Child Abuse and Eating Disorders: A Systematic Review and Meta-Analysis. *Psychosomatic medicine.* 2016;78(1):79-90.

119.   Pearson CM, Wonderlich SA, Smith GT. A risk and maintenance model for bulimia nervosa: From impulsive action to compulsive behavior. *Psychological review.* 2015;122(3):516-535.

120.   Bray B, Scholl JL, Tu W, Watt MJ, Renner KJ, Forster GL. Amphetamine withdrawal differentially affects hippocampal and peripheral corticosterone levels in response to stress. *Brain research.* 2016;1644:278-287.

121.   AHRQ AfHRaQ, Berkman ND, Brownley KA, et al. Management and Outcomes of Binge-Eating Disorder, Comparative Effectiveness Review Number 160. 2015.

122.   Moreno R, Buckelew SM, Accurso EC, Raymond-Flesch M. Disparities in access to eating disorders treatment for publicly-insured youth and youth of color: a retrospective cohort study. *Journal of eating disorders.* 2023;11(1):10.

123.   Puhl R, Suh Y. Health Consequences of Weight Stigma: Implications for Obesity Prevention and Treatment. *Current obesity reports.* 2015;4(2):182-190.

124.   Economics DA. *The Social and Economic Cost of Eating Disorders in the United States of America: A Report for the Strategic Training Initiative for the Prevention of Eating Disorders and the Academy for Eating Disorders.* https://www.hsph.harvard.edu/striped/report-economic-costs-of-eating-disorders/: Deloitte Access Economics and the Academy for Eating Disorders; June, 2020 2020.

125.   Stinson EJ, Votruba SB, Venti C, Perez M, Krakoff J, Gluck ME. Food Insecurity is Associated with Maladaptive Eating Behaviors and Objectively Measured Overeating. *Obesity (Silver Spring, Md).* 2018;26(12):1841-1848.

126.   Becker CB, Middlemass K, Taylor B, Johnson C, Gomez F. Food insecurity and eating disorder pathology. *The International journal of eating disorders.* 2017;50(9):1031-1040.

127.   Christensen KA, Forbush KT, Richson BN, et al. Food insecurity associated with elevated eating disorder symptoms, impairment, and eating disorder diagnoses in an American University student sample before and during the beginning of the COVID-19 pandemic. *The International journal of eating disorders.* 2021;54(7):1213-1223.

128.   Rasmusson G, Lydecker JA, Coffino JA, White MA, Grilo CM. Household food insecurity is associated with binge-eating disorder and obesity. *The International journal of eating disorders.* 2018;52(1):28-35.

129.   Christensen KA, Forbush KT, Richson BN, et al. Food insecurity associated with elevated eating disorder symptoms, impairment, and eating disorder diagnoses in an American University student sample before and during the beginning of the COVID-19 pandemic. *The International journal of eating disorders.* 2021.

130.   Giel KE, Bulik CM, Fernandez-Aranda F, et al. Binge eating disorder. *Nat Rev Dis Primers.* 2022;8(1):16.

131.   Haynos AF, Roberto CA. The effects of restaurant menu calorie labeling on hypothetical meal choices of females with disordered eating. *The International journal of eating disorders.* 2017;50(3):275-283.

132.   Pirie I. Disordered eating and the contradictions of neoliberal governance. *Sociol Health Illn.* 2016;38(6):839-853.

133.   Udo T, Grilo CM. Epidemiology of eating disorders among US adults. *Current opinion in psychiatry.* 2022;35(6):372-378.

134.   Westwater ML, Fletcher PC, Ziauddeen H. Sugar addiction: the state of the science. *Eur J Nutr.* 2016;55(Suppl 2):55-69.

135.   Gearhardt AN, Bueno NB, DiFeliceantonio AG, Roberto CA, Jiménez-Murcia S, Fernandez-Aranda F. Social, clinical, and policy implications of ultra-processed food addiction. *Bmj.* 2023;383:e075354.

136. LaFata EM, Gearhardt AN. Ultra-Processed Food Addiction: An Epidemic? *Psychotherapy and psychosomatics.* 2022;91(6):363-372.
137. Rasmusson G, Lydecker JA, Coffino JA, White MA, Grilo CM. Household food insecurity is associated with binge-eating disorder and obesity. *The International journal of eating disorders.* 2018.
138. Hazzard VM, Barry MR, Leung CW, Sonneville KR, Wonderlich SA, Crosby RD. Food insecurity and its associations with bulimic-spectrum eating disorders, mood disorders, and anxiety disorders in a nationally representative sample of U.S. adults. *Soc Psychiatry Psychiatr Epidemiol.* 2021:1-8.
139. Becker CB, Middlemass KM, Gomez F, Martinez-Abrego A. Eating Disorder Pathology Among Individuals Living With Food Insecurity: A Replication Study. *Clinical Psychological Science.* 2019;7(5):1144-1158.
140. Coffino JA, Grilo CM, Udo T. Childhood food neglect and adverse experiences associated with DSM-5 eating disorders in U.S. National Sample. *Journal of psychiatric research.* 2020;127:75-79.
141. Hay P, Mitchison D. Urbanization and eating disorders: a scoping review of studies from 2019 to 2020. *Current opinion in psychiatry.* 2021;34(3):287-292.
142. Hoynes HW, Ziliak JP. Increasing SNAP purchasing power reduces food insecurity and improves child outcomes. In. *Brookings.* Vol 2022. https://www.brookings.edu/blog/up-front/2018/07/24/increasing-snap-purchasing-power-reduces-food-insecurity-and-improves-child-outcomes/: The Brookings Institution; 2018.
143. Levine C. Geographic Inequities in SNAP Limit Its Effectiveness. In. *Nonprofit Quarterly.* https://nonprofitquarterly.org/geographic-inequities-in-snap-limit-its-effectiveness/: Brookings Institution; 2018.
144. Linsenmeyer WR, Katz IM, Reed JL, Giedinghagen AM, Lewis CB, Garwood SK. Disordered Eating, Food Insecurity, and Weight Status Among Transgender and Gender Nonbinary Youth and Young Adults: A Cross-Sectional Study Using a Nutrition Screening Protocol. *LGBT health.* 2021;8(5):359-366.
145. Ziliak JP. *Modernizing SNAP Benefits.* https://www.hamiltonproject.org/assets/files/ziliak_modernizing_snap_benefits.pdf: Center for Poverty Research, Department of Economics, University of Kentucky; 2016.
146. Bray B, Austin B, Shallcross A, et al. Breaking Barriers to Binge Eating Disorder Treatment Access and Engagement. *TBD.* Submitting April 2025.
147. Bray B, Bradley R, Zwickey H. Binge Eating Disorder Pathology: Perspectives from Registered and Licensed Dieticians in the Field. *Nutrition (Burbank, Los Angeles County, Calif).* In Prep.
148. Bray B, Bray C, Bradley R, Zwickey H. Binge Eating Disorder Is a Social Justice Issue: A Cross-Sectional Mixed-Methods Study of Binge Eating Disorder Experts' Opinions. *Int J Environ Res Public Health.* 2022;19(10).
149. Bray B, Kalu B, Shallcross A, et al. Treatment Access Barriers in Binge Eating Disoder: A Narrative Review. *TBD.* Submitting April, 2025;Submitting April 2025.