ABSTRACT

Title of Thesis:	PERFECTIONISM AND DISORDERED EATING SYMPTOMS: AN ANALYSIS OF THE PROTECTIVE EFFECTS OF ETHNIC IDENTITY IN FEMALE LATINX COLLEGE STUDENTS
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Disordered eating in college student populations is highly prevalent. Even so, eating disorder research has largely centered on risk and protective factors relevant to White women, while neglecting to focus on the experiences of people with marginalized identities. The current cross-sectional study a) assessed the relation between evaluative concerns and strivings subscales of perfectionism on disordered eating symptoms in Latinx college women, and b) determined if a high sense of ethnic identity may moderate this relation such that as ethnic identity increases, the effects of perfectionism on disordered eating symptoms decreases. Latinx women from a Mid-Atlantic university (n = 113) completed self-report questionnaires of perfectionism, ethnic identity, and disordered eating. Results revealed that evaluative concerns was a positive predictor of dietary restraint, shape and weight over-evaluation, and body dissatisfaction. Moderation results were non-significant.

Key words: eating disorders, perfectionism, ethnic identity, resilience, risk, Latinx, minority stress

PERFECTIONISM AND DISORDERED EATING SYMPTOMS: AN ANALYSIS OF THE PROTECTIVE EFFECTS OF ETHNIC IDENTITY IN FEMALE COLLEGE LATINX STUDENTS

by

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Chapter I: Introduction

The high prevalence of eating disorders is an area of concern necessitating research and intervention. The lifetime prevalence of eating disorders estimates nearly 14.3% of males and 19.7% of females experience an eating disorder by age 40 (Ward et al., 2019). Risk factors associated with eating disorders include, but are not limited to, family history of eating disorders, bullying, acculturation, internalization of the thin ideal, body dissatisfaction, and perfectionism (National Eating Disorder Association [NEDA], 2021). While clinical eating disorder statistics are high, levels of disordered eating may be even more prevalent. Disordered eating behaviors may include excessive dieting, fasting, avoidance of certain food groups, eating large quantities of food in short periods of time, and purging (American Psychiatric Association [APA], 2021).

Disordered eating and clinical eating disorders are largely widespread on college campuses (Woodhall et al., 2015). Longitudinal data from a single university noted that over 13 years, weight loss specific dieting increased from 4.2% to 22% in the total student body, and clinical eating disorders increased from 23% to 32% among female students (White et al., 2011). These statistics are alarming, especially considering that eating disorders, and anorexia nervosa specifically, have the second highest mortality rate of all psychiatric disorders (Arcelus et al., 2011). It is imperative to remain cognizant of the fact that the studies and statistics reported center largely White samples; thus, marginal literature has examined eating disorders and factors associated with prevalence, risk, and protective factors in diverse college student populations.

There is scant psychological research on eating disorders in Black, Indigenous, Person of Color (BIPOC) college students. The research on eating disorders has largely focused on White women, which reduces the generalizability of knowledge regarding eating disorders (Talleyrand, 2012). In fact, a recent systematic review of representation in eating disorder psychotherapy

treatment trials in the United States determined that White women comprise the overwhelming majority of research participants (Burnette, 2022). Of all randomized controlled trials of eating disorder treatments in the US through 2020, only about 6% of participants were Latinx, while over 80% were White (Burnette, 2022). A consequence of hegemonic research has been general perceptions that eating disorders solely affect "rich, White, girls;" however, people at the intersection of other racialized, socio-economic, and gender identities develop these disorders, and may have greater risk factors for eating disorder development that are exacerbated by marginalized identities (Barrack et al., 2019). Misconceptions which suggest White women endorse all risks, while other ethnicities, such as Latinx, have greater protective factors, are not only inaccurate, but harmful in that they may negatively inform counselor bias, help-seeking behaviors, and treatment trajectories. Becker et al. (2003) determined that non-White women and Latinx women experienced reduced referrals, detection, diagnoses, and treatment from counselors and doctors—even when clinical thresholds and criteria for disordered eating symptoms were met. With already existent health disparities, a lack of diagnoses and subsequent treatment may add another layer of marginalization to minoritized persons, and potentially enhance risk for psychopathology. Disparities in diagnoses may then limit our understanding of the prevalence and risks associated with eating disorders in the context of minoritized populations; therefore, research should aim to address this issue.

Studies which have examined eating disorders among ethnically minoritized groups have found ethnic identity to be inversely related with eating disorders and the endorsement of disordered eating behaviors (Gowen et al., 1999; Rhea & Thatcher, 2013). Ethnic identity is a construct which describes one's self concept in relation to their ethnicity (Phinney, 1989). It encapsulates one's feelings of belonging, identification, and attitudes with their ethnic group

(Phinney, 1989). This conceptualization of ethnic identity is imperative when studying ethnically diverse students, as it is not necessarily one's ethnic affiliation that may be protective; but rather one's attachment and internalization of values related to one's culture—which may be in opposition to mainstream White, Eurocentric, Global North standards (e.g., thin body ideals, diet, and beauty standards)—that might relate to eating disorder protection. The research on ethnic identity as protective has largely centered Black women. Their experiences will be highlighted here as 'Latinx' and 'Black' are not mutually exclusive identities, and in fact, have considerable overlap given the influence of Black culture in Latin America.

Stronger sense of ethnic identity in Black women has been found to be associated with lower disordered eating behaviors and lower eating disorder risk (Cotter et al., 2015; Rogers Wood & Petrie, 2010; Shuttleworth & Zotter, 2011). This may be due to greater acceptance of larger bodies in Black culture which is at odds with the thin ideal in mainstream White American culture. Similarly, in Latinx women, ethnic identity and weight concerns were negatively correlated (r = -0.17) (Rakhkovskaya & Warren, 2014). While the literature is barer in Latinx experiences of disordered eating and the potential protective nature of ethnic identity, considerably more research is available on the construct of acculturation—change in culture of a group when two cultural groups are in contact with one another (Garcia-Vasquez, 1995; Redfield et al. 1936). Research suggests there is a greater frequency of eating disorders in more acculturated Latinx women (Cachelin et al., 2000; Lydecker et al., 2020). This may occur because as people internalize dominant American cultural body standards, the thin ideal, and Eurocentric cultural norms, they are put at greater risk for disordered eating (Cachelin et al., 2000; Doris et al., 2015; Warren & Akoury, 2020). Many Latinx have a recent immigrant

identity which may heighten this specific ethnic group's propensity towards assimilation and acculturation to the White, Global North majority.

Latinx women are often conflicted in determining which body ideals to internalize, as those of Latinx culture and dominant White culture tend to contrast. With this, it is imperative to make clear that despite efforts of body positivity movements, thinness is still a societally dominant and structurally pervasive ideal in the United States. One author discusses the ways that the United States is structured for thinness while oppressing larger bodies in subtle ways through: a) the size of seats on attached desks in schools, b) small airplane seat sizes and seatbelt lengths, c) limited school uniform sizes, and d) few positive representations in the media (Kotow, 2019). And while a thin ideal may be present to some extent globally (Stoll et al., 2022), its salience in the majority White Global North is particularly notable, with recent evidence being the rise of the “heroin chic” body standard (Diaz, 2022).

One risk factor, perfectionism, may be a strong drive in the intensity of disordered eating, especially as it relates to chasing a body ideal. The literature has noted perfectionism is not only a risk, but a maintaining factor in eating disorders (Egan et al., 2011). Eating disorder symptoms such as binge eating, purging, laxative abuse, restriction, and body dissatisfaction are significantly and positively correlated with perfectionism (Dickie et al., 2012; Forbush et al., 2007; Luo et al., 2013). Perfectionism is a risk factor of interest to the current study as it may relate to the exacerbation and drive to engage in disordered eating behaviors, especially for Latinx women.

There is an immense gap in the literature on the relation of ethnic identity and disordered eating outcomes in Latinx college students. There is not only limited research on the potential protective nature of ethnic identity in eating disorder development, but limited research on how

this may interact with well-known risk factors for eating disorders. It is imperative to fill these gaps to expand our knowledge on risk and protective factors which may have implications for practice, intervention development for Latinx college women, and systems level change.

The current study aims to address the gaps in the literature by asking the following questions: Is perfectionism a positive predictor of eating disorder symptoms in Latinx female college students? Is ethnic identity a protective factor (i.e., moderator) mitigating the relation between perfectionism and eating disorder symptoms in Latinx female college students by weakening perfectionism's influence?

Chapter II: Literature Review

The current chapter will provide a theoretical framework for the current study and review relevant literature regarding eating disorders, perfectionism, and ethnic identity, especially as it pertains to Latinx college women.

Theoretical Framework

Risk and Resilience

The current proposal is informed by the risk and resilience model as described by Masten (2004). Resilience research comes from the study of at-risk (e.g., children, ethnically diverse) populations, and the desire to understand differential outcomes in the development of psychopathology. Masten posits that resilience is the process by which pragmatic outcomes are achieved despite adversities, challenges, and risk (Masten, 2001). Alternatively, risks are those factors which may increase the likelihood of a negative or undesirable outcome (Masten, 2001). Resilience and risk should not be conceptualized as the "accomplishment" or "failure" of positive life outcomes, but conceptualized as a multisystem (e.g., individual, familial, communal, societal) approach by which we understand the complex and dynamic ways that internal and external psychosocial factors intersect in one's development (Masten, 2021). Risk and resilience are also not necessarily universal, as a factor which may protect an individual against one challenge, may be a risk factor in another (Rutter, 1987).

Masten (2004) suggests from a developmental perspective, adolescents develop regulatory capacities informed by intersecting systems to overcome life's difficulties. However even if these capacities are well-regulated, they may be misdirected depending on environmental contexts. In the current study, perfectionism may then be viewed as a risk factor in the context of eating disorder development, as this somewhat adaptive construct of ensuring success, may

poorly manifest into rigorous and inflexible tendencies around food and body. This could be born out of a White dominant cultural environment that promotes dieting or thinness as superior, and the bi-cultural stress of competing body ideals (Hesse-Biber et al., 2006). Thus, ethnic identity could be protective in Latinx women as it relates to a positive self-perception, strength in community, greater social resources from one's cultural group, and a preservation of cultural norms which deviate from Eurocentric norms. Furthermore, ethnic identity may moderate the risk that perfectionism serves in the development of eating disorders. When people are high in perfectionism, they may try to reach very high standards which may relate to disordered eating behaviors such as weight loss and food restriction. However, Latinx women high in ethnic identity may feel confident in their bodies and their culture, and not take drastic measures to change themselves to fit a Eurocentric norm; while on the contrary, if Latinx women have low ethnic identity, this may exacerbate high perfectionism and disordered eating outcomes by striving for Eurocentric ideals of beauty by any means necessary. The implications of utilizing a model of risk and resilience are to determine the factors related to risk and promote those protective factors which may absolve the effects of adversity. Informed by a risk and resilience model, the current study approaches disordered eating symptoms by understanding perfectionism as a risk for eating disorder symptoms, and ethnic identity as not only protective against disordered eating on its own, but its continued development throughout the lifespan as protective in moderating the effects of perfectionism on disordered eating outcomes for Latinx female college students.

Minority Stress Model

To capture the unique experiences of stress and risk relevant to Latinx women, the current study was further informed by the minority stress model. The minority stress model was

first termed by Meyer (2003) in his discussion of poor mental health outcomes experienced by lesbian, gay, and bisexual people. In short, the minority stress model provides a framework to describe the mechanisms by which stigma, prejudice, and discrimination create *excess* stress that increases risk of sub-optimal mental health (Meyer, 2003). The model described by Meyer (2003) suggests that one's position in society may relate to risk and protection that intersects with some group membership which holds a marginalized, risk status in society. In the current study, the intersection of being Latinx and female may create a minoritized status in a patriarchal and White dominant society such as the United States, while other relevant factors of social capital may relate to one's proximity and ability to utilize resources in instances of distress. The typical stressors experienced in daily life (e.g., schoolwork, peer conflicts, family) are exacerbated by unique stressors relevant to one's marginalized identity (e.g., discrimination, racism, acculturation, culture and language barriers, education status). In the context of this study, the stresses of body image disturbances that are typical in adolescence (Vannucci & Ohannessian, 2018) may be exacerbated by one's affiliation with a marginalized group—especially when that group's cultural body ideals and stereotypical body types deviate from the thin ideals of the Global North. Thus, to combat the stress, Latinx people, especially those lower in ethnic identity, may turn to their protective resources (e.g., perfectionism) to gain adjacency towards privileges that reduce minority stress, such as obtaining the ideal thin body.

Due to the several intersecting marginalized identities the current sample may face, they may be subjected to less favorable mental health outcomes. Researchers and practitioners may ignore and minimize their experiences especially as it relates to disordered eating, body dissatisfaction, and mental health concerns (Opara & Santos, 2019). In fact, Beccia and colleagues' (2019) analysis of risk amongst gender and racial lines of Black, White, and Latinx

students, found Latinx women to be three to seven times more likely to report disordered eating symptoms when compared to referent to White males. Furthermore, Latinx females in the sample had the highest engagement of disordered eating behaviors when compared to White and Black women. Thus, the study determined there was excess risk of disordered eating, especially at the intersection of race and gender for Latinx women, which contributes to evidence of intersectional marginalization risk. However, even when Latinx people present with clinical disordered eating concerns, they are less likely to be diagnosed and referred for additional support than their White counterparts (Becker et al., 2003). Thus, the current study chooses to consider undue minority stress experienced by Latinx women to understand how their marginalized identities relate to relevant risk and protection relevant to eating disorders.

Throughout the paper, I may interchangeably use the terms Latinx, Latino, and Latina when describing the ethnicities of the sample of interest. The term Latinx is used to remove the gendered implications of using binary language, as the 'x' takes the place of the gendered "o/a" that ends descriptive words in the Spanish language. Many of the studies cited use the term Latino or Latina to describe the identities of those in the sample, which I have changed to Latinx, where appropriate.

Disordered Eating in Latinx Populations

Disordered eating can be succinctly defined as excessive shape and weight concerns, dieting, or other unhealthy weight control methods such as skipping meals, cutting out specifics food groups, and ignoring one's hunger cues (Goldschmidt et al., 2012; Hazzard et al., 2021). Disordered eating behaviors in Latinx women are prevalent. Using data from the National Latino and Asian American Study (NLAAS), Alegria et al. (2007) determined that for Latinx people in the sample (n = 2,554), 0.8% had a lifetime prevalence of anorexia nervosa, 1.61% experienced a

lifetime prevalence of bulimia nervosa, 1.92% had a lifetime prevalence of binge eating disorder, and 5.61% experienced binge eating behaviors. A study conducted by Stein and colleagues (2013) helped to determine disordered eating prevalence specific to Mexican-American women. Of note, in their sample of 472 college enrolled women 48.1% engaged in restrictive eating behaviors, 17.6% engaged in excessive exercise, 13.6% engaged in purging behaviors, and 13.3% engaged in binge eating behaviors. While these two studies help to highlight the prevalence of disordered eating behaviors within the Latinx community in the United States, they may be outdated. Furthermore, both studies utilized DSM-IV criteria to inform their chosen disordered eating behavior measures. While there are not substantial criteria differences between the DSM-IV and DSM-V outside of behavior frequency for bulimia and binge eating disorder, there are more differences in anorexia nervosa criteria. Most notably the loss of one's menstrual period for menstruating people is no longer a necessary criterion, nor is maintaining a weight that is 85% less than expected for one's height and age (Diagnostic and Statistical Manual- 4th ed, American Psychological Association, 1994; Diagnostic and Statistical Manual-5th ed, American Psychological Association, 2013). These criteria changes may help to better capture those experiencing anorexia nervosa, which may lend to differences in prevalence statistics among Latinx people.

The extant literature suggests Latinx women may experience the same (Cachelin et al., 2000; Shaw et al. 2004), if not higher proportions of disordered eating behavior when compared to other White, Black, and Asian-American women (Beccia et al., 2019; Reyes-Rodriguez, 2010). Specifically, Latinx people experience binge eating disorder (BED) (Barrack et al., 2019; Cachelin et al., 2000; Perez et al., 2016; Rodgers et al., 2018) and bulimia nervosa (BN) (Cachelin et al., 2000) at higher rates, and anorexia nervosa (AN) at lower rates when compared

to non-Hispanic White persons (Rodgers et al. 2018). Among a survey of Latinx college freshmen, 3.24% exceeded cutoffs for BN, and 9.59% reported exceeding the cutoffs of various eating disorder measures (Reyes-Rodriguez, 2010). Additionally, when self-reporting, Latinx women typically correctly self-identified if they had met criteria for past or present AN or BN as verified by The Eating Disorder Diagnostic Scale (EDDS) (Higgins et al., 2016).

Despite evidence supporting the prevalence of eating disorders in Latinx populations, Latinx women were significantly less likely to be considered for further evaluation of an eating disorder than White women by a counselor or clinician—even when they had self-acknowledged eating and weight concerns (Becker et al., 2003). Similarly, Gordon and colleagues (2006) explored clinician bias when assessing one of three vignettes of a client "Mary" who presented with eating disorder symptoms. Participants were clinical psychology graduate students and trained clinicians, 89% of whom were White. Mary was either identified as Caucasian, African American, or Hispanic in the vignettes. Results suggested eating pathology was recognized by clinicians 44.4% of the time when Mary was Caucasian, 40.5% of time when she was Hispanic, and only 16.7% of the time when she was African American. Though the margin was smaller between the Caucasian and Hispanic Mary's detection and the Caucasian and African American Mary's disordered eating detection, Hispanic women were still detected less frequently than their White counterparts which may reflect clinician bias. It is possible that a practitioner bias of reduced risk, and subsequent protection, from disordered eating in Latinx women explains this finding. For example, Gowen et al. (1999) suggested Latinx women were protected from disordered eating and clinical eating disorders via a low endorsement of Eurocentric thin ideals. Typically, Latinx culture values curvier bodies which consist of a slender waist, voluptuous breasts, and a large rear-end (Cheney, 2011; Opara & Santos, 2019; Gruber et al., 2022); which

is at odds with the dominant White culture's ideal slender body. In corroboration with Gowen and colleagues (1999) findings, Shaw et al. (2004) suggested Latinx women may internalize less of the thin ideal than White and Asian American women on a societal scale, yet do not have individual significant differences in those disordered eating behaviors that may lead to clinical diagnosis of an eating disorder. The results of Shaw and colleagues (2004) study may be explained by the finding that Latinx women often experience a contention in which they accept larger curvaceous bodies at large, but believe their own bodies are the exception, and must be thin (Viladrich et al., 2009, as cited in Stokes et al., 2016).

However, it is also important to consider that there is still a body ideal in Latin America. A body ideal sets a standard that many people cannot attain without engagement with some degree of disordered eating behaviors, as body shape and size is largely a function of genetics (Schousboe, 2004). However, it is quite possible that for Latinx women in the United States, it is not so much a lack of internalization of the thin ideal, but rather a potential difference in perception of what constitutes thin that is more inclusive than the perception of thinness from the lens of a typical cis-White American woman. These findings and hypotheses push back against previous claims in the literature which suggest Latinx people, and Latinx women specifically, are protected from eating disorders, and illuminates the importance of expanded understandings of socially and culturally constructed norms around body ideals and body image, especially for non-White women.

Perfectionism

Perfectionism is a characteristic defined generally as the setting of very high standards for oneself (Pacht, 1984). There have been proponents of suggesting perfectionism is a single maladaptive characteristic (Pacht, 1984); however, this does not account for the ways that

perfectionism may be adaptive. Thus, multi-dimensional conceptualizations of perfectionism have been explored in the literature as a method of understanding subscales and nuances of perfectionism. Perfectionism has been found to be largely associated with negative mental health outcomes such as obsessive-compulsive disorder, eating disorders, mood disorders, and anxiety disorders (Egan et al., 2011; Limburg et al., 2017).

Perfectionism as Multidimensional

Perfectionism has been characterized by the multiple dimensions that comprise the characteristic (Frost et al., 1990; Hewitt & Flett, 1991). Hewitt and Flett (1991) developed the Multi-Dimensional Personality Scale (MPS) which includes interpersonal components of perfectionism. The scale contains three dimensions: self-oriented, other-oriented, and socially prescribed. Self-oriented perfectionism is defined as unrealistic standards for oneself. Other-oriented is defined as unrealistic standards for others, and socially prescribed perfectionism is the perception of unrealistic standards from others. In relation to eating disorder research, a scale such as this may help in the understanding of ecological implications of perfectionism on eating disorder behaviors and symptoms, as it relates perfectionism to the self, to the family unit and immediate environment, and society at large.

Frost et al. (1990) offers the most extensive multidimensional approach. They provide six dimensions of perfectionism in the Frost Multidimensional Personality Scale (FMPS): concern over mistakes, personal standards, parental expectations, parental criticism, doubts about actions, and organization. Concern over mistakes is defined as negative reactions to mistakes and the perception of mistakes as failure. Personal standards encompass high standards for oneself. Parental expectations relate to the perception of parents as setting high standards for oneself; and parental criticism relates to the perception of parental concern over one’s mistakes. Doubts about

actions relate to insecurity in the quality of one's work; and organization is related to importance of order. These subscales may clarify discrete aspects of perfectionism in relation to different eating disorder symptoms.

Dual dimension models of perfectionism challenge the single pathological view of perfectionism by categorizing the construct as both normal and neurotic (Hamachek, 1978). Normative perfectionists are people who set high standards for themselves, yet have marked flexibility and adaptability, while neurotic perfectionists set high standards for themselves and exhibit rigidity and inflexibility (Hamachek, 1978). Variations of this dual group model are evident throughout the literature with labels such as adaptive and maladaptive (Rice et al., 1998), healthy and unhealthy (Stumpf & Parker, 2000), positive and negative (Terry-Short et al., 1995), and perfectionistic strivings and perfectionistic concern (Bieling et al., 2004). While a dual approach to perfectionism may seem less descriptive than that of the multidimensional model, confirmatory factor analyses have suggested that dimensions of "organization" and "personal standards" may constitute positive perfectionism, while "concern over mistakes", "parental expectations", "parental criticism", and "doubts about actions" may constitute negative perfectionism (Bieling et al., 2004).

Maintenance of Perfectionism

Intriguingly, interpersonal relationships may function to exacerbate trait perfectionism, especially its maladaptive forms. Cognitions and core beliefs relative to conditional acceptance—the idea that a person may only be accepted by others if they are perfect (Stoeber & Childs, 2010)—may relate to the maintenance of perfectionism. The 'conditional acceptance' cognitive distortion relates to a pervasive preoccupation with obtaining the appreciation, admiration, and approval of important others. Perception is reality, and for the perfectionist, the

endorsement of their perfection as proxy for their worth in interpersonal relationships may lend to avoidance behaviors that impact connections and one's personal life. It is no surprise then that this core belief of conditional acceptance may have detrimental effects on mental health outcomes through the mediation of the effect of perfectionism on depressive disorders, anxiety disorders, suicidality, and eating disorders (Affrunti & Woodruff-Borden, 2014). It is then imperative to consider the relation of perfectionism in non-White samples, who may feel pressure to be accepted in their schools, communities, societies, and beyond.

Latinx People & Perfectionism

The literature on perfectionism in Latinx populations is scant. However, perfectionism may be largely evident in this group, and may relate to maladaptive outcomes. In fact, in a sample of Puerto Rican adolescents, socially prescribed perfectionism predicted panic, while self-oriented perfectionism predicted social anxiety across the sample (Tyler, et al., 2019). Thus, perfectionism is not only evident in Latinx populations, but relates to negative mental health outcomes.

Similarly, Ortega et al. (2014) explored perfectionism in Latinx college-aged students. Research classified participants as either adaptive, maladaptive, or non-perfectionist based on scores on subscales "standards" and "discrepancy" on the Almost Perfect Scale–Revised (APS-R; Slaney et al., 2001). The "standards" subscale measures expectations one sets for oneself, while "discrepancy" measures distress relevant to one's perception of meeting (or not meeting) one's own standards. Adaptive perfectionists are high in standards and low in discrepancy, while maladaptive perfectionists are high in both categories. Results indicated maladaptive perfectionists had higher levels of depressive and anxiety symptoms, and lower self-esteem compared to adaptive perfectionists. While this study did not utilize disordered eating symptoms

as an outcome measure–a variable of interest to the current study–those negative mental health outcomes which it did assess are highly comorbid with eating disorders (Eisenberg et al., 2011).

Goel et al. (2020) examined the racial differences in parent-oriented perfectionism and disordered eating, using the parental criticism and parental expectations subscales of the FMPS (Frost et al., 1990). In their sample, Latinx college-aged women were more likely to engage in compensatory exercise when they perceived higher parental criticism and parental expectations. However, parental expectations alone were also related to their restriction of food intake. Results varied across all racial groups sampled (i.e., Black, White, Asian, and Latinx), such that parental expectations were only also found to relate to restriction of food intake in Asian American students, and parental criticism and parental expectations did not relate to compensatory exercise for any other racial group. These findings suggest that domains of perfectionism and their relation to eating disorder symptoms may differ across cultural and racial contexts, thus highlighting the importance of diversity in eating disorder literature. Taken together, the literature provides evidence of the presence of perfectionism in Latinx populations, and its relation to negative mental health outcomes.

Perfectionism and Disordered Eating Symptoms

Perfectionism as a construct has been shown to be associated with disordered eating—specifically restrictive and purging types (Bulik et al., 2003; Fairburn, 1999; Forbush et al., 2007; Woodside et al., 2002). In fact, researchers and clinicians are aware of the association between perfectionism and eating disorders such that the Eating Disorders Inventory-3 (EDI-3; Garner, 2004)—a self-report measure used to assess symptoms and psychological features of eating disorders—has a perfectionism subscale; and women with eating disorders score higher on this subscale than control groups. In the vein of setting very high standards for oneself,

individuals with eating disorders may strive for thinness to achieve dangerous and insatiable body standards, all while seeing weight gain or fatness as a failure (APA, 2021). Indeed, perfectionism as it relates to physical appearance is significantly and positively related to eating disorder symptoms of restriction, eating concerns, weight concerns, and body shape concerns (Stoeber & Yang, 2015). Furthermore, perfectionism is highly related to body dissatisfaction (Dickie et al., 2012; Ruggiero et al., 2003), such that it may drive disordered behaviors to ameliorate concerns about one's body.

Stoeber et al. (2017) noted that in their sample of English female college students (M_{age} = 19.6), self- and socially-prescribed perfectionism, in addition to all aspects of perfectionistic self-presentation (perfectionistic self-promotion, non-display of imperfection, non-disclosure of imperfection) were related to eating disorder symptoms of bulimia, dieting behavior, and oral control. Both types of perfectionism and all types of self-presentation were positively correlated with dieting behavior, while socially-prescribed perfectionism and nondisclosure of imperfections were positively correlated with bulimia and disordered eating behaviors, such as cutting food into small pieces and taking longer than others to eat. In relation to all disordered eating behaviors, self-presentation explained 10.4-23.5% of variance in symptoms, while both socially and self-prescribed perfectionism explained 7.9-12.1% of variance. This research adds to the evidence of several aspects of perfectionism being implicated in disordered eating behaviors.

Bouguettaya and colleagues (2019) contend that perfectionism is not simply a related construct to disordered eating, but rather perfectionism may serve as a social identity. In their sample of young Australian women, participants suggested personal perfectionism developed from their familial standards. However, qualitative analyses of social perfectionism—adherence to the standards of a group—revealed participants experienced a shift in adolescence from the

value of parental reinforcement to that of their peers. And, because young women are socialized to engage in body related social interactions (e.g., comparison of diet, body weight, fat talk) they may experience reinforcement when they for example, prove their "self-control" in relation to food, or experiences weight loss. Thus, Bouguettaya and colleagues (2019) suggest it is the reinforcement of perfectionism from peers and the expectations of what it means to be accepted by a group that is related to the risk and onset of disordered eating. This may be especially true for Latinx college women, as acceptance into the dominant White culture may be of high importance, thus making ethnic identity important to explore in the context of the current study.

Halmi (2000), utilizing the FMPS (Frost et al., 1990) determined that women with histories of anorexia nervosa were far more elevated in all dimensions of perfectionism, except for organization, when compared to control participants without eating disorder histories. Utilizing the same measure of perfectionism, Bulik et al. (2003) investigated the relation between trait perfectionism and eating disorders in a sample of 1,010 White female twins (M_{age} = 42.5). Their results determined that concern over mistakes and personal standards predicted anorexia nervosa, while concern over mistakes alone was a significant predictor for bulimia nervosa. These two studies combined provide evidence for personal standards and concern over mistakes being heavily implicated in eating disorder symptoms.

In their exploration of facets of perfectionism on disordered eating outcomes, Habashy and Culbert (2019) found only maladaptive forms of perfectionism (e.g., concern over mistakes, doubts about action, parental criticism, parental expectation, and perfectionistic self-presentation) to be positively associated with disordered eating behaviors in a sample of diverse college women. This is consistent with research such as that of Boone et al. (2010) which found that "evaluative concerns" perfectionism was related to eating disorder symptoms of eating

restraint, eating concerns, weight concerns, and shape concerns. Boone and colleagues (2010) utilized the subscales "concern over mistakes" and "doubts about action" from the FMPS (Frost et al., 1990) to measure "evaluative concerns" perfection, and the "personal standards" subscale to measure personal standards perfectionism. They note that "evaluative concerns" perfectionism relates to an individuals' negative self-evaluation while "personal standards" perfectionism relates to simply setting high standards for oneself.

Terry-Short and colleagues (1995) assessed positive and negative perfectionism within four groups of women: athletes, women with eating disorders, clinically depressed women, and a control group. Results of their study indicated women with eating disorders were not only high on both positive and negative perfectionism but were significantly higher in these domains than the control group. They contend that positive perfectionism is reinforced by perceived positive consequences; thus, achieving a thinner body or a heightened sense of control via disordered eating behavior may be a positively reinforcing experience for women with eating disorders. A study by Chan and Owens (2006) utilized the Positive and Negative Perfectionism Scale (PANPS; Terry-Short et al., 1995) developed by the previous authors to assess relations of perfectionism and eating disorder symptoms in a sample of Chinese immigrants in New Zealand. Results of their study determined negative perfectionism significantly predicted eating disorder symptoms of bulimia, body dissatisfaction, and drive for thinness. Similarly, Chan et al. (2010) found that both negative perfectionism and positive perfectionism predicted eating disorder symptoms in a sample of Korean immigrants in New Zealand but had varying effects on different aspects of eating disorder symptoms. Specifically, positive perfectionism was related to drive for thinness, while negative perfectionism was related to body dissatisfaction. Findings of these studies suggest positive and negative perfectionism are not purely adaptive and

maladaptive, respectively, but rather, they may relate to different manifestations of eating disorder symptoms. This echoes the results of previously reviewed studies which have found that discrete subscales of perfectionism may relate to various symptoms of disordered eating.

Women with eating disorders exhibit the setting of high standards, marked inflexibility and criticalness towards oneself, and the internalization of standards set by others. The literature taken together provides evidence that personal standards (Bulik et al., 2003; Halmi, 2000; Terry & Short, 1995) and concern over mistakes (Boone et al., 2010; Habashi & Culbert, 2009; Halmi, 2000) are specifically salient subscales of perfectionism implicated in disordered eating.

Ethnic Identity

A challenge when delving into the literature on ethnic identity is the tendency for researchers to mistakenly describe categorical ethnicity as ethnic identity in their models. For the purposes of this review and the current study, it is imperative to note that ethnic identity is not simply one's race or ethnicity, but rather, it is one's fluid identification with a specific ethnic group, involvement in cultural practices of the group of membership, and feelings of connectedness and belonging to the ethnic group. More succinctly, ethnic identity encompasses one's cognitions, beliefs, behaviors, and feelings that are related to being a member of their ethnic group (Phinney, 1996, Phinney & Ong, 2007).

Ethnic Identity Development

While all adolescents go through a period of identity development (Erikson, 1968), the content and process of identity development differs for ethnically and racially diverse adolescents. Phinney (1993) describes the content of ethnic identity development as the ethnic behaviors and attitudes towards one's own ethnic group, while the process is described in terms of one's own ethnic identity realization, and the role of one's ethnicity in their lives. This process

of ethnic identity development is characterized by three stages: unexamined ethnic identity, ethnic identity search/moratorium, and ethnic identity achievement affirmation (Phinney, 1993). Phinney (1993) defines unexamined ethnic identity as the internalization of values of the dominant culture, while ethnic identity search/moratorium is the active searching and exploration of ethnic identity. Finally, ethnic identity achievement affirmation refers to one's security in ethnic group membership (Phinney, 1993).

Umaña-Taylor and colleagues' (2009) four-year longitudinal study on Latinx adolescent's ethnic identity development supports the Phinney (1989) model, and suggests ethnic identity increases during adolescence. Results indicated that Latinx female adolescents had an accelerated transition into ethnic identity exploration and search/moratorium when compared to Latinx male adolescents. Furthermore, their identity achievement affirmation—feeling positively towards one's ethnic identity—increased over the four-year period. These findings provide an understanding of the trajectories of Latinx ethnic identity development over the three stages proposed by Phinney (1989). Interestingly, Umaña-Taylor (2004) found ethnic identity seemed to be higher in Latinx high-school aged adolescents attending predominantly White-schools when compared to Latinx students in evenly mixed schools, and predominantly Latinx schools. This finding suggests ethnic identity may be more notable in Latinx students when their minority status is more evident. It is critical to consider how we promote ethnic identity in Latinx students as our school systems diversify, because majority White cultural expectations are far more salient beyond K-12 education as evidenced in the lack of diversity in higher education institutions.

It is imperative to recognize that ethnic identity development is not a finite process. In fact, Torres and colleagues (2012) suggest that in adulthood Latinx people may experience a

"looping process," as participants in their sample began to question aspects of their identity. Features such as major life change (e.g., attending college, graduate school, marriage), changes to environment, and engagement in advocacy brought about the process of ethnic identity re-evaluation. Thus, ethnic identity may be particularly relevant in the current sample, as they are not emerging into adulthood but are likely experiencing a major life transition to university life which may lend to a re-evaluation of their ethnic identity.

Ethnic Identity as Protective

Ethnic identity is an important construct when researching ethnically minoritized students, as it may serve as a protective factor against poor mental health outcomes by increasing self-esteem (Umaña-Taylor, 2004; Umaña-Taylor, 2009), and promoting a positive self-concept (Umaña-Taylor, 2004). By increasing positive self-concept, ethnic identity may be protective against depression and anxiety in African American samples (Williams et al., 2012), and psychological stressors, such as discrimination in Latinx samples (Umaña-Taylor & Updegraff, 2007). Specifically, in Latinx populations, higher ethnic identity in youth relates to a reduced sense of negative well-being (Potochnick et al., 2012). Critical to the current study, ethnic identity is related to lower endorsement of disordered eating symptoms (Rakhkovskaya & Warren, 2014).

Ethnic Identity and Disordered Eating Symptoms

In addition to positive mental health outcomes, strong ethnic identity has been shown to be protective against disordered eating symptoms in minoritized peoples (Rodgers et al., 2018). A strong sense of attachment, pride, and affiliation with one's ethnic group is supportive of a strong sense of self and values which may relate to reduced pressures to assimilate to the dominant culture. Further, Latinx culture specifically values collectivism and body diversity, and

the endorsement of these two principles via a strong ethnic identity may lend to both a decreased valuation of body as important to one's sense of self, and a decreased endorsement of Eurocentric ideals of thinness (Opara & Santos, 2019). All of the positive considerations of ethnic identity are imperative to discuss, as Latinx students typically exhibit a low sense of belonging (Dueñas & Gloria, 2020).

A study by Abrams and colleagues (1993) found African American women, though heavier than White women in their sample, were less likely to endorse disordered eating behaviors. This finding was believed to be attributed to greater body acceptance within the Black community which may mitigate the symptoms of eating disorder development. Rogers Wood and Petrie (2010) found that the more strongly African American women identified with their ethnicity, the less they had internalized Western beauty ideals of being attractive and thin (r = -0.21). Given that internalization of Western societal beauty ideals was found to be related to higher reported levels of disordered eating, higher ethnic identity may be protective. Another study by Shuttlesworth and Zotter (2011) found that ethnic identity was inversely related to the onset of bulimia and binge eating behaviors in Black women. In their sample, Black women with low ethnic identity had high levels of binge eating and bulimic behaviors; and inversely, Black women with high ethnic identity had low levels of binge eating and bulimic behaviors. The findings of these three studies provide evidence that strong ethnic identity may be protective in the onset of disordered eating behavior for Black women, and it is possible that these results may extend to other ethnically diverse samples such as Latinx women.

Many studies have focused on ethnic identity in Black women as compared to White women, while considerably fewer studies have looked at these factors on disordered eating in Latinx populations. A study by Rakhkovskaya and Warren (2014) noted that for Latinx women,

ethnic identity, and weight concerns—an eating disorder symptom—were negatively correlated, suggesting that as ethnic identity increases, weight dissatisfaction decreases. Thus, strengthening ethnic identity may lend to protection against disordered eating outcomes. Another study asked young women to view sexualized and non-sexualized pictures of women and then list descriptive statements about themselves (Schooler & Daniels, 2014). Descriptions from participants largely revolved around their own body and appearance. Interestingly, for those in the sample who identified as Latina in their list of descriptive statements, descriptions of their body were more positively valanced than others in the sample. While ethnic identity in this study was operationalized as one's ethnic label rather than the sense of belonging and affiliation with one's ethnic group, the mere naming of one's ethnic affiliation in a descriptive list may relate to a high sense of salience and attachment to one's ethnicity. Another study of Mexican American, Black, and White urban adolescent females' ethnic identity, self-esteem, and at-risk disordered eating behavior noted that for the full sample, as ethnic identity increased, drive for thinness (r = -0.1) and bulimia scores (r = -0.11) decreased (Rhea & Thatcher, 2013). While these results were statistically significant at the .01 alpha level, the magnitude of the correlations were relatively weak. Additionally, in contrast to the potential protective nature of ethnic identity, Mexican American women in the sample exhibited high levels of ethnic identity overall, yet this did not relate to drive for thinness, body dissatisfaction, or bulimia. This finding suggests in Mexican American women, ethnic identity was not directly related to eating disorder symptoms. A criticism of this result is that the researchers did not control for factors of acculturation, which may account for variability in results.

Interestingly, one study assessing the cross-cultural societal body ideals and fat stigma found that Puerto Rican participants on the island endorsed fatphobic ideals similar to those held

in the continental United States (Brewis et al., 2011). Even so, Latinx folks still tend to see culture as having a direct influence on their body image as collectivism, food, and tradition are revered above and beyond one's body. That is not to say complex relationships with one's body do not exist. One specific body ideal–*La Maja*–is highly prevalent in Latin America and encapsulates the ideal woman as one who has a curvy figure (full hips, rear-end, and breasts) while also maintaining thinness (Rodriguez-Soto & Ginzburg, 2019). Many Latinx women exist in a paradoxical dialect in which they perceive thinness and slimness to be preferred and ideal *and* do not find this preference to disrupt their own body image entirely (Rodriguez-Soto & Ginzburg, 2019). It is possible then that aspects of the cultural link to body image may be protective even when a thin ideal is endorsed.

Ethnic Identity as a Moderator of Perfectionism

Perfectionism is a known predictor for the development of eating disorders; however, ethnic identity may be a protective factor in moderating perfectionism's outcome on disordered eating symptoms. Ethnic identity is evidenced to moderate the relation between eating disorders and known eating disorder predictors with moderators such as negative body image (Schooler & Daniels, 2014) and bulimic symptoms (Shuttlesworth & Zotter, 2011); thus, ethnic identity may also moderate perfectionism–a known eating disorder predictor. Women high in ethnic identity, even if perfectionistic, may feel secure in their body type, may not have body related goals, nor a desire to achieve a Eurocentric thin ideal by any means necessary. Thus, if ethnic identity can significantly moderate perfectionistic tendencies and disordered eating symptoms, it may reduce the risk for clinical psychopathology related to eating disorders. A similar model has been tested in Chan and colleagues (2010).

Chan et al. (2010) investigated the question of the moderating role of acculturation and ethnic identity on perfectionism and disordered eating in a sample of Korean immigrants in New Zealand. The results of their study suggested both negative and positive perfectionism were associated with eating disorder symptoms. Regarding moderating effects, Chan and colleagues' (2010) cross-sectional study found ethnic identity was a significant moderator of the relation between negative perfectionism and body dissatisfaction for men in their sample, but not women. In fact, for men, high negative perfectionism was only associated with higher body dissatisfaction when they endorsed a strong Korean ethnic identity. Given Korea's high value on thinness for both men and women, having a strong Korean ethnic identity may lend to increased body dissatisfaction and disordered eating. Alternatively, having lower ethnic identity as an immigrant in New Zealand where there may be less pressure for men to be thin than in Korean culture, may lend to absorbing those cultural body norms. Furthermore, it is likely that there was no moderating effect of ethnic identity on positive or negative perfectionism and body dissatisfaction for women, given that New Zealand's mainstream culture still values thinness in women. This finding informs the current study as Latinx cultural standards accept a larger body type than that of United States mainstream culture, thus suggesting that a higher Latinx ethnic identity may decrease the eating disorder symptom of body dissatisfaction, rather than increase it as in Chan and colleagues' (2010) study.

As previously discussed, perfectionism is often maintained by feelings of conditional acceptance, by which individuals feel they must be perfect to belong (Stoeber & Childs, 2010). However, a strong ethnic identity may promote acceptance and belonging within ethnic groups and may buffer the negative effects of cognitions relative to conditional acceptance in perfectionists. This effect may be particularly salient for Latinx individuals, who may struggle to

feel a sense of belonging in the context of the United States. Clearly, there is negligible literature which include disordered eating symptoms, perfectionism, and ethnic identity as factors in a model; let alone, with ethnic identity as a moderator of relations between a predictor and disordered eating outcomes. Furthermore, the literature is scant on identifying and analyzing the relation of these constructs in Latinx women samples. Thus, the current proposal fills a clear gap in the literature as it seeks to understand the relation between perfectionism and disordered eating symptoms, and how ethnic identity may moderate this effect in a sample of Latinx college women.

The Current Study

The present study aims to assess latent ethnic identity as a potential moderator of the relation between latent perfectionism and latent disordered eating symptoms in Latinx collegiate women. Perfectionism as a predictor and risk for disordered eating outcomes is well established in the literature. Furthermore, ethnic identity is supported as a protective factor for poor mental health outcomes, and disordered eating, in racially and ethnically minoritized groups. However, this is the first study to my knowledge to evaluate a risk and resilience model with these variables in a Latinx sample.

Hypotheses

I hypothesize all subscales of perfectionism will be significant, positive predictors of disordered eating subscales. Specifically, the evaluative concerns subscale of perfectionism will be a positive predictor of dietary restraint, shape and weight overevaluation, and body dissatisfaction. Further, the strivings subscale of perfectionism will be a positive predictor of dietary restraint, shape and weight overevaluation, and body dissatisfaction.

I also hypothesize ethnic identity will be a significant moderator of the relation between the evaluative concerns subscale of perfectionism and dietary restraint, shape and weight overevaluation, and body dissatisfaction. Moreover, ethnic identity will be a significant moderator of the relation between the strivings subscale of perfectionism and dietary restraint, shape and weight overevaluation, and body dissatisfaction. Both of these moderations are predicted to weaken the relation between perfectionism and disordered eating.

Chapter III. Method

Participants

A total of 208 students accessed the study; however, only 189 attempted to complete the survey. Of the 189 participants, only 113 had at least 90% completion of variables of interest and thus, only their data utilized in analyses. Inclusion criteria necessitated participants to be assigned female at birth, at least 18 years of age, a student attending a 4-year university, and Latinx identified. In sampling, the phrase assigned female at birth was utilized to intentionally sample participants who were socialized as "girl" or "woman," regardless of their current gender identification status. Thus, the subsequent usage of the word "woman" in reference to the current sample is meant to highlight this experience. It is important to note 4 participants identified as gender queer and another 3 identified as non-binary. This research is not meant to erase the diversity of their identities, but rather tap into the similarities and socialization experiences that relate to expectations relevant to body ideals, eating habits, perfectionism, and ethnic identity development.

The age range of the sample was between 18 and 34 years old with a mean age of 20.85(2.44) years. A majority of the sample (64.6%) were born in the United States with one or both parents who were not, and 22.1% of participants were immigrants themselves. Regarding regional Latinidad status, 38.9% of participants had lineage in Central America, 30.1% in South America, 12.4% in Mexico, and 12.4% in the Caribbean. More in depth demographic statistics are provided in Table 1. Of the sample, 23% met the clinical cut off for disordered eating concerns as determined by average scores of 4 or greater on the full-scale EDE-Q.

Procedure

The current study was approved by the University of Maryland's Institutional Review Board (IRB). Cross-sectional data was collected between March 2022 and June 2022. All data was self-report in nature. Participants were recruited through snowball sampling methods, social media, SONA system, and a listserv generated by the registrar at the University of Maryland. Therefore, participants responded to either a(n): a) flyer that described the nature of the study alongside a link and QR code to participate, b) email to the registrar list with study context and link, or c) SONA study link. In any event, interested subjects were directed to the Qualtrics survey and screened for eligibility through four questions which inquired about the aforementioned inclusion criteria. If eligible, the participant continued to the survey which then presented a Consent Form. Those participants who electronically signed the consent form then proceeded to the remainder of the survey. While no monetary compensation was provided for participation, those who decided to complete the study through the link on the SONA platform were eligible for a 0.5 SONA credit. Given the nature of the disordered eating data collected, mental health resources were provided at the end of the survey. On the disordered eating scale, global score averages of 4 or more are considered clinically significant; thus, those participants who met this cut-off were contacted directly with the same list of mental health resources from the survey. Of the 113 participants sampled, 26 were contacted for additional support.

Measures

Demographic Information

Demographics were obtained for all participants in the sample. Survey questions inquired about region of Latinidad, immigration generation status, socio-economic status, year in university, racial identity, gender identity, whether the participant received free and reduced

meals in K-12 education, and perceived percentage of White students in their high school. These data supported contextualization of the sample, while year in university, socio-economic status and perceived percentage of White students in high school were utilized as controls in analyses.

Perfectionism

The FMPS-Brief is an eight-item measure which takes existing items from the FMPS subscales of personal standards, concern over mistakes, and doubts about actions to provide an assessment of perfectionism (Burgess et al., 2016). The FMPS-B has two, four-item subscales: evaluative concerns and strivings. An example of an evaluative concerns item is, "If I fail at work or school, I am a failure as a person." An example of a strivings item is, "I set higher goals than most people." Items are scored on a Likert scale from 1 (strongly disagree) - 5 (strongly agree), where 3 is the neutral point. Scores are calculated as an average where higher scores indicate a greater endorsement of trait perfectionism.

In the original scale development, Burgess and colleagues (2016) determined the two-factor FMPS-B to have adequate model fit in community samples (CFI = 0.95; RMSEA = 0.09) and clinical samples of adults with either hoarding disorder or obsessive-compulsive disorder (CFI = 0.96; RMSEA = 0.09). The evaluative concerns subscale demonstrated strong internal consistency as evident by Cronbach's alpha in community samples ($\alpha = 0.83$) and clinical samples ($\alpha = 0.85$). Further, the strivings subscales demonstrated strong internal consistency in clinical ($\alpha = 0.85$) and community samples ($\alpha = 0.81$). Woodfin and colleagues (2020) also determined the full-scale FMPS-B to demonstrate good internal consistency in students at a University in Norway ($\alpha = 0.83$). Finally, Lee and Anderman (2020) utilized the FMPS-B in a sample of university students (3.3% Latinx) and determined an adequate fit to the data (RMSEA = 0.08, SRMR = 0.04, CFI = 0.96). The brief scale was chosen for use in analysis after the

original, full-scale FMPS was tested for factor structure and found inadequate fit to the current data. The alphas and fit to the current data are noted in Table 4 and discussed in the results.

Ethnic Identity

Ethnic identity is defined as a fluid identification with a specific ethnic group and involvement in cultural practices of the group of membership. The Multigroup Ethnic Identity Measure Revised (MEIM-R; Phinney & Ong, 2007) will be utilized in the current study to measure ethnic identity. The 6 item scale measures ethnic identity factors of exploration and commitment utilizing a 5-point Likert scale (1 = *strongly disagree,* 5 = *strongly agree*). An example of ethnic identity exploration is "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs," while an example of commitment is "I have a strong sense of belonging to my own ethnic group." Higher scores indicate stronger ethnic identity. Phinney's work with ethnic identity is largely recognized, which may relate to the MEIM-R being a widely utilized scale in the cited literature.

In the original development of the MEIM-R, psychometric properties were explored for subscales of exploration (α = 0.76) and commitment (α = 0.78) and determined to demonstrate good internal reliability, as determined by Cronbach's alpha (Phinney & Org, 2007). Subscales were highly correlated, yet distinct (r = 0.74). Furthermore, the validity of the scale was explored in its initial development and adequate fit indices were reported (CFI = 0.98, SRMR = 0.05, RMSEA = 0.04). The entire scale demonstrated strong internal reliability (α = 0.81). The MEIM-R is supported for use across diverse racial and ethnic samples, including the sample of interest (Brown et al., 2014). Brown et al (2014) explored measurement invariance of the MEIM-R across racial and ethnic groups. For the Hispanic subgroup in the sample (n = 240), the exploration subscale (α = 0.84), commitment subscale (α = 0.86), and the full-scale (α = 0.88) of

the MEIM-R demonstrated strong internal reliability. Further, model fit indices were strong (CFI = 0.97, SRMR = 0.04, RMSEA = 0.08) thus suggesting it may be a useful measure of ethnic identity in the current sample.

Eating Disorder Symptoms

A brief version of the EDE-Q, henceforth referred to as the EDE-Q7 (Grilo et al., 2015), utilizes a three-factor seven-item correlated solution that has also shown adequate fit. The EDE-Q7 utilizes items from the full-scale EDE-Q to comprise the three factors: dietary restraint (original EDE-Q items 1, 3, 4), shape and weight overvaluation (original EDE-Q items 22, 23), and body dissatisfaction (original EDE-Q items 25, 26). An example of an item from the EDE-Q7 is "Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?" Items are assessed from a frequency scale of 1 - 7. Selecting a score of 1 would suggest a frequency of no days; a score of 4 would suggest a frequency of 13-15 days, while a score of 7 suggests a frequency of everyday. Higher scores reflect high frequency of engagement in disordered eating behaviors. Scores of 4 or greater on any subscale or the full-scale are clinically significant.

In a sample of Hispanic university women, Serier and colleagues (2018) determined the 3-factor, 7 item model to fit their data best (CFI = 0.995, RMSEA = 0.098). This model also fit well to a sample of female university students in the UK (CFI = 0.98, RMSEA = 0.087, SRMR = 0.03) (Jenkins & Davey, 2020). Finally, Unikel Santoncini et al. (2018) assessed the EDE-Q7 in a sample of Mexican university women and a sample of Mexican women in outpatient treatment for eating disorders. There was good internal consistency in both samples as evidenced in high alphas across subscales (α = 0.80 - 0.90) and the full-scale (α = 0.90). The brief scale was chosen for use in analysis after the original, full-scale EDE-Q was tested for factor structure and found

inadequate fit to the data. The alphas and fit to the current data are noted in Table 4 and discussed in the results.

Analytic Procedures

Prior to analysis, descriptive statistics, and internal reliabilities (i.e., means, standard errors, alpha coefficients) were assessed using IBM SPSS Statistics Version 26 software. To increase the psychometric support for the proposed scales, confirmatory factor analyses (CFA) were conducted utilizing MPlus Version 8 Modeling Software (Muthen & Muthén, 1998-2018). For each factor, items with factor loadings greater than or equal to 0.40 are considered adequate. Fit indices including standardized root mean squared residual (SRMR), root mean square error of approximation (RMSEA), and comparative fit index (CFI) were assessed for each CFA. Cut-offs to determine adequate model fit are SRMR values less than 0.08, RMSEA values less than 0.08, and CFI values of 0.90 or greater (Hu & Bentler, 1999).

Successively, a latent path analysis was conducted to evaluate the relation between latent perfectionism subscales and latent disordered eating symptoms. Finally, a latent path analysis was conducted to evaluate latent ethnic identity as a moderator of the relation between latent perfectionism subscales and latent disordered eating symptoms. Analyses controlled for year in university, estimated percentage of White students in their high school, and socioeconomic status. Maximum likelihood standard error estimation approach (MLR) was utilized for both analyses. Model fit was determined through the aforementioned cut-offs.

Chapter IV: Results

Descriptives

Table 2 presents the means, standard deviations, and ranges for continuous variables. Further, Table 3 provides correlations for all continuous variables. Table 4 provides alpha coefficients for all subscales of ethnic identity, perfectionism, and disordered eating outcomes.

Confirmatory Factor Analyses

MEIM-R

A confirmatory factor analysis (CFA) was conducted to assess the factor structure of the MEIM-R and determine its utility as a latent ethnic identity factor in analyses. Consistent with the scale development procedures (Phinney & Ong, 2007), a correlated two-factor six item factor structure was assessed. The data had adequate fit with the expected model, although RMSEA did not cross the fit cutoff (RMSEA = 0.14; CFI = 0.92; SRMR = 0.06). However, when utilized in analyses, a two factor-solution constrained the model. Thus, a single order factor was assessed to determine if the fit could be adequate for us in analyses. While the single order solution produced worse fit (RMSEA = 0.18; CFI = 0.85; SRMR = 0.07), all factor loadings exceeded the 0.4 cut-off. Thus, the single factor MEIM-R solution was utilized in subsequent analysis as it was deemed adequate and did not constrain the analysis. The single factor MEIM-R is illustrated in Figure 6.

EDE-Q7

Given the psychometric support for a brief version of the EDE-Q (EDE-Q7) in the assessment of disordered eating, the three-factor 7-item solution was attempted in this sample. Results of the CFA indicated adequate fit (RMSEA = 0.01; CFI = 1.00, SRMR = 0.02). All items

loaded onto the expected factors with loadings that exceeded the 0.4 cut-off. Figure 1 provides a visual of the CFA and estimates.

FMPS-B

The FMPS-B which measures perfectionism has been assessed in the literature and has demonstrated strong psychometrics. Results assessing the FMPS-B eight-item two-factor solution in the current sample determined that the data had adequate fit (RMSEA = 0.08; CFI = 0.93, SRMR = 0.07). All items loaded onto the related factors with loadings that exceeded the 0.4 cut-off. Figure 5 illustrates the CFA and estimates for the FMPS-B.

Predictive Effect of Perfectionism

The first goal of the analyses was to test latent perfectionism as a predictor of latent disordered eating symptoms. The FMPS-B subscales of personal strivings and evaluative concerns were utilized as predictors of the EDE-Q7 subscales—year in university, estimated percentage of White students in their high school, and socioeconomic status. A conceptual model is illustrated in Figure 2. Goodness of fit indices determined the model fit adequately to the current data (RMSEA = 0.06; CFI = 0.95; SRMR = 0.07). Unstandardized estimates, standardized estimates, and confidence intervals for all predictors and controls are noted in Table 8.

Evaluative concerns was a positive predictor of all disordered eating symptoms of dietary restraint (Estimate = 0.64(0.24), p = 0.01, 95% CI [0.16, 1.11]), shape and weigh overevaluation (Estimate = 0.76(0.22), p = 0.001, 95% CI [0.33, 1.19), and body dissatisfaction (Estimate = 0.67(0.21), p = 0.001, 95% CI [0.27, 1.06]).

On the contrary, personal strivings was not a significant positive predictor of dietary restraint (Estimate = -0.35(0.35), p = 0.32, 95% CI [-1.03, 0.34]), shape and weight

overevaluation (Estimate = -0.14(0.26), p = 0.58, 95% CI [-0.65, 0.37]), and body dissatisfaction (Estimate = -0.04(0.24), p = 0.86, 95%. CI [-0.52, 0.44]). In fact, in opposition to the hypotheses, personal strivings was negatively related to disordered eating subscales.

Moderation Analysis

The second goal of analyses was to test an interaction between latent perfectionism and latent ethnic identity on latent disordered eating symptoms. Latent ethnic identity was the moderator. In the analyses, year in university, estimated percentage of White students in their high school, and socioeconomic status. A conceptual model is provided in Figure 3. Given the strong fit of the previous model, the moderation should exhibit the same, if not stronger fit. Unstandardized estimates, standardized estimates, and confidence intervals for all predictors and controls are noted in Table 9.

Interactions

Two interactions were included in the model, along with main effects. In contrast to the hypotheses, the interaction between evaluative concerns and ethnic identity on dietary restraint (Estimate = 0.09(0.39), p = 0.81, 95% CI = [-0.67, 0.86]), shape and weight overevaluation (Estimate = -0.03(0.31), p = 0.91, 95% CI = [-0.63, 0.57]), and body dissatisfaction (Estimate = 0.06(0.27), p = 0.83, 95% CI = [-0.47, 0.59]) were all non-significant.

Further, the interactions between personal strivings and ethnic identity on dietary restraint (Estimate = 0.32(0.42), p = 0.44, 95% CI = [-0.50, 1.15]), shape and weight overevaluation (Estimate = 0.12(0.35), p = 0.72, 95% CI = [-0.56, 0.81]), and body dissatisfaction (Estimate = -0.04(0.26), p = 0.87, 95% CI = [-0.47, 0.56]) were all non-significant. Thus, ethnic identity was not a significant moderator of the relation between the subscales of perfectionism and discrete

disordered eating symptoms in the current sample. Figure 4 provides a visual model denoting significant effects and estimates for the moderation analysis.

Chapter V: Discussion

The overarching contributions of the current cross-sectional study are the novel main effects of evaluative concerns perfectionism on their relation to disordered eating symptoms in Latinx women. Further, this study contributes to the scant literature on Latinx women and their experiences with perfectionism, ethnic identity, and disordered thoughts and behaviors relevant to food. This study is the first, to my knowledge, to examine ethnic identity as a protective moderator of the relation between perfectionism and disordered eating in Latinx women. Results support disordered eating as prevalent in the sample. Further, results indicate that one aspect of perfectionism—evaluative concern—is a significant positive predictor of all disordered eating symptoms in the current sample. Interestingly, ethnic identity was approaching significance as a negative predictor of body dissatisfaction. Even so, ethnic identity was not a significant predictor of body dissatisfaction, shape and weight overevaluation, or dietary restraint, though all estimates were inversely related to these symptoms, as expected. Regarding ethnic identity as a moderator in the relation between perfectionism and disordered eating, interactions were not significant. These findings are somewhat consistent with the literature, in that perfectionism is a well-established positive predictor of disordered eating outcomes. Conversely, the moderation results were unexpected, and this discussion explores potential explanations.

Perfectionism and Disordered Eating

Of the two perfectionism subscales utilized in analyses—evaluative concerns and personal standards—only the evaluative concerns subscale was found to be a significant predictor of all disordered eating symptoms—dietary restraint, body dissatisfaction, and shape and weight overevaluation. Further, the correlation between evaluative concerns and all subscales of disordered eating were positive, moderately strong, and significant at the 0.01 level.

These results are consistent with extant literature as evaluative concerns may be seen as a more maladaptive form of perfectionism (Bieling et al., 2004; Boone et al., 2010). Bieling et al. (2004) conducted a confirmatory factor analysis which revealed two factors—negative and positive perfectionism—which included items from the concerns over mistakes and personal standards subscales of the FMPS. The FMPS-B subscales of evaluative concerns and strivings then translate well into this same conceptualization whereby evaluative concerns and strivings can be seen as negative and positive perfectionism, respectively. Strivings may be seen as more adaptive relative to evaluative concerns as the evaluative concerns may relate to psychopathologies as it may invoke self-criticism and negative self-talk when one perceives they have fallen short of their expectations. Thus, the contrasting scales not only have statistical, but conceptual and intuitive support for their potential relation to psychopathology.

The results of the current study align with other more dated research on the relation between evaluative concerns perfectionism and disordered eating (e.g., Boone et al., 2010; DiBartolo et al., 2008). Additionally, the results are in agreement with more recent research by Habashy and Culbert (2019) who in their study of perfectionism and internalization of thinness found that only evaluative concerns perfectionism was positively associated with disordered eating behaviors in a sample of diverse college women. Habashy and Culbert's (2019) study is a meaningful comparison to the current study as nearly 75% of the sample were Hispanic, Black, Asian-American, multi-racial or Pacific Islander. Two large drivers of the current research are the need for more recent and updated literature, and ethnically diverse participants in studies relevant to disordered eating outcomes. Our studies taken together suggest that for diverse and Latinx university women, evaluative concerns perfectionism may be associated with disordered eating behaviors and symptoms.

It is interesting however, that a more adaptive form of perfectionism—strivings—negatively predicted disordered eating outcomes, suggesting as perfectionistic strivings increase, disordered eating symptoms decrease. Other research has indicated that in addition to negative perfectionism positive perfectionism also predicted disordered eating symptoms (Chan et al., 2010), specifically drive for thinness in Korean participants. Furthermore, Halmi et al. (2000) noted in their sample of women with anorexia, all dimensions of perfectionism—except for organization—were elevated, which includes those dimensions that are seen as more adaptive (e.g., personal standards). Though non-significant, strivings estimate in the current study were most negatively predictive of dietary restraint—a hallmark symptom of anorexia nervosa. In fact, in the current sample of Latinx women, the relation between perfectionistic strivings and disordered eating symptoms of shape and weight overevaluation, body dissatisfaction, and dietary restraint was weak and non-significant.

Perhaps, the valence of negativity around one's general efforts and perceived failures relates to a poor sense of self and worth. In fact, about 56% of the sample agreed or strongly agreed that a failure at work or school would make them a failure (Item CM4; FMPS-B). It was previously discussed that cognitions and core beliefs relative to conditional acceptance may relate to the maintenance of perfectionism (Stoeber & Childs, 2010) through the perception that one must be perfect to be accepted by others. Moreover, about 60% of the sample endorsed with agreement or strong agreement that being liked is inversely related with making mistakes (Item CM21; FMPS-B), such that the less mistakes one makes, the more others will like them. Thus, it follows the need for acceptance and subsequent *making oneself acceptable* through engagement with disordered eating may be particularly relevant for Latinx women because they tend to have lower sense of belonging (Dueñas & Gloria, 2020) and high stress related to pressures to

acculturate (Simmons & Limbers, 2019). From a minority stress and risk and resilience perspective, Latinx women may experience an undue risk at the interaction of marginalization of ethnicity and gender that may heighten the already significant human need for connection and acceptance. And, given the Eurocentric thin ideal that is pervasive in the United States, Latinx bodies may feel like a mistake to be fixed—a project to master for the praise and acceptance of others. Future research should explore sense of belonging in line with disordered eating outcomes in Latinx women to test this interpretation.

Ethnic Identity x Perfectionism on Disordered Eating

Unexpectedly, ethnic identity did not significantly or inversely moderate the relation between perfectionism and disordered eating symptoms. These results are inconsistent with Chan et al. (2010) who examined and determined a significant impact of ethnic identity as a moderator of the relation between perfection and disordered eating symptoms. Their study was conducted with Korean immigrant participants in New Zealand—which offers a different cultural perspective than the current study's context. Their research determined ethnic identity to be a significant positive moderator of the relation between negative perfectionism and body dissatisfaction for men in their sample, such that a strong endorsement of Korean ethnic identity was associated with higher body dissatisfaction for participants high in perfectionism (Chan et al., 2010). The authors noted these results to be unsurprising as Korean culture values thinness for men.

In contrast to the values discussed in the aforementioned study, Latinx culture tends to value more curvaceous bodies (Opara & Santos, 2019). And, while there are still some ideals related to thinness present within subcultures, this does not tend to impede overall body satisfaction as body diversity is more widely accepted in Latinx culture (Rodriguez-Soto &

Ginzburg, 2019). In the current sample, while the effect of ethnic identity and body dissatisfaction approached significance—an effect that is typically supported in the broader literature with non-White women (i.e., Rhea & Thatcher, 2013; Rodgers et al., 2018; Schooler & Daniels, 2014; Rogers Wood & Petrie, 2010)—results yielded no significant effects of ethnic identity on any disordered eating symptoms investigated. Interestingly, all the estimates were negative, suggesting a potential inverse relation between variables; though, the results were insufficient to make directional claims.

Investigation of the ethnic identity variable revealed a positive skew of the data such that 51% of the sample obtained an average ethnic identity score of at least 4 (where max = 5). Figure 7 provides a histogram of the ethnic identity data. It is quite possible that there was not enough variability in the sample's ethnic identity scores to derive meaningful patterns or relations between ethnic identity and other more normally distributed variables. These data deviated from other studies that utilized the MEIM-R and found significant differences within their Latinx sample's ethnic identity scores and relations to other variables of interest (i.e., Quiñones et al., 2022; Rakhovskaya & Warren, 2014).

Two potential explanations prevail for the skew of ethnic identity scores. First, the specific cultural location of the University of Maryland (UMD) may be important. UMD is in the DMV—the location where Virginia, DC, and Maryland marry. The DMV not only has a high concentration of people of color, but a high concentration of Central American and Latinx populations which may make ethnic identity exploration more accessible. UMD itself also reflects a high-level diversity as 50.2% of the undergraduate population are members of a racially or ethnically minoritized group (Office of Institutional Research , Planning, and Assessment [IRPA], 2022). Further, Latinx students have consistently comprised 10% of all

undergraduates at the university since 2020 (IRPA, 2022). All these contextual factors may relate to the higher levels of ethnic identity in the current sample of Latinx students, as their environments are conducive to positively strengthening one's sense of ethnic belonging.

Second, it is quite possible that the MEIM-R was not sensitive enough for use in the current sample. For example, item 2, "I have a strong sense of belonging to my ethnic group," and item 6, "I feel a strong attachment towards my ethnic group," may sound distinct to the psychologist or researcher, but may be too subtle when read by a layperson. Unsurprisingly, these two items were the most highly correlated when compared to all other items on the MEIM-R ($r = 0.65$, $p = 0.00$). Moreover, all items on the MEIM-R are positively valanced which may have contributed to a semblance of redundancy when completing the survey. It is possible that more discriminating measures of ethnic identity should be explored or developed for use with minoritized groups in diverse contexts. Finally, this scale only taps into feelings of belonging and exploration with one's cultural group but does not take into consideration concurrent feelings of belonging and exploration with dominant American culture.

Conceptually, it was hypothesized that a strong ethnic identity may promote acceptance and belonging for Latinx women which may buffer the negative effects of cognitions relative to conditional acceptance, especially for those high in perfectionism. From a risk and resilience perspective, a strong endorsement of Latinx ethnic identity could provide Latinx women with an arsenal of contexts and resources such as belonging, strong familial support, collectivistic values, positive peer relationships, engagement with cultural foods and traditions, access and interactions with diverse bodies and people, and safety—all of which may be protective against the perfectionistic pull towards engagement with disordered eating behaviors (Rakhovskaya & Warren, 2014; Umaña-Taylor, 2009). Further, from the minority stress perspective Latinx

women may have excess risk as they may not only seek belonging in the dominant culture but may have bodies and phenotypes that oppose the Eurocentric thin ideal. This, in combination with more maladaptive forms of perfectionism, may lend to one's body being the outlet for attempts to assimilate and change. Taken together, this conceptualization related to the consideration of ethnic identity as a possible protective factor for Latinx women who exhibit high trait perfectionism. While these potential relations are important to consider, they were not supported by the data.

Limitations and Future Directions

The present study has a few limitations to outline. Firstly, sampling was intentional; thus, the results of this study are neither able nor designed to be generalized to the whole of Latinx women. Latinx women are not a monolith, though some experiences may be similar. Secondly, while data was obtained on participants' origin of Latinidad (e.g., Central America, Caribbean) and immigrant generation, there was not a big enough sample size to make meaningful comparisons between groups. Future research should consider these variables and the value of comparisons to better understand similarities and differences across the diversity of values in Latin America. Thirdly, there may be other moderating factors which may account for variability in disordered eating symptoms. For example, trauma and aversive childhood experiences may relate to the onset of disordered eating behaviors (Forrest et al., 2021) for Latinx people, which may impact its relation with perfectionism, above and beyond ethnic identity. Other potential moderating or mediating factors may be gifted education in K-12, recency of immigrant generation, parental educational attainment, acculturative stress, and racial demographics of one's community and schools (e.g., Doris et al., 2015; Kerr & Multon, 2015; Keski-Rahkonen & Mustelin, 2016). These variables should be explored in more robust models in future research.

Fourthly, cultural body ideals were assumed based on the literature and not assessed in the sample. Future research should make efforts to determine Latinx participant's personal body ideals, perception of their own body size, perceptions of Latinx body ideals, and typical United States body ideals. These data may better inform the impact of ethnic identity on body image and related disordered eating. Finally, the quantitative and cross-sectional nature of the current research does not allow for the strengths of temporal precedence provided by longitudinal studies. Future research should assess ethnic identity, perfectionism, disordered eating, and other relevant variables over time to better determine causal relations. Furthermore, qualitative research in the literature on disordered eating in Latinx samples is rather scant. It is increasingly imperative to explore qualitative research methods in tandem with quantitative methods to obtain knowledge and a more holistic understanding of lived experiences to inform *how* ethnic identity and perfectionism influence disordered eating.

Conclusions and Implications

The results of the current study contribute to the limited literature on Latinx women's experiences with perfectionism, ethnic identity, and disordered eating. Results determined the evaluative concerns type of perfectionism was predictive of disordered eating symptoms of dietary restraint, shape and weight overevaluation, and body dissatisfaction. While ethnic identity did not significantly moderate the relation between perfectionism and disordered eating, it was determined that participant data was positively skewed towards high ethnic identity scores–which may have affected moderation outcomes. Furthermore, nearly one fourth of the sample met clinical thresholds for disordered eating behaviors, which validates prevalence of disordered eating and need for continued research in Latinx women.

It is increasingly imperative that practicing psychologists and helping professionals recognize that disordered eating afflicts more than just White, cis, thin, wealthy women. Latinx women struggle with disordered eating, especially when they are high in maladaptive forms of perfectionism such as evaluative concerns. While implications from cross-sectional studies should be taken with caution, it would be worthwhile to consider school-based interventions to combat the harmful effects of maladaptive perfectionism that are not only supported by this research, but the literature at large. While the current study utilized data from college students, high school and secondary school students may benefit from an evaluative concerns perfectionism-relevant prevention and intervention as perfectionism is a trait that may continue to without support. Universities and schools are ideal places for prevention and intervention work relevant to perfectionism as academic environments tend to cultivate and intensify perfectionist qualities in students–both in its adaptive and maladaptive forms (Damian et al., 2017).

Although the moderating effects of ethnic identity were non-significant, the largely positive skew of ethnic identity in the current sample sheds light on potential issues with ethnic identity measurement. The MEIM-R which was utilized in the current research may not be sensitive enough to capture the nuances of ethnic identity belonging and exploration, especially for Latinx who live in highly diverse areas. While it is a well-researched measure that is often used in ethnic identity research, it only contains six items–all of which are positively valanced, which may not allow for rich interpretations of one's ethnic identity. It is possible that more discriminative measures of ethnic identity should be explored or developed for use with minoritized groups in diverse contexts. Furthermore, it may be imperative to discern ethnic identity from a bi-cultural lens such that one's belonging and exploration relevant to the

dominant culture's values are explored in tandem with their home culture's values. As more Latinx families plant roots in the United States and grapple with bicultural values and acculturative stress, it is increasingly important that our assessment instruments match these contexts.

Table 1

Sample Demographics

	Full Sample	
Demographic Variables	*N*	*%*
Year in College		
1	24	21.2
2	19	16.8
3	42	37.2
4	25	22.1
Other	3	2.7
Gender		
Woman	106	93.81
Non-Binary	3	2.65
Gender Fluid / Queer	4	3.55
Immigrant Status		
Immigrant	25	22.1
At Least 1 Immigrant Parent	73	64.6
Born in US – No Immigrant Parents	10	8.8
No Recent History	5	4.4
Annual Family Income		
Less than $25,000	10	8.9
$25,000 - $44,999	22	19.6
$45,000 - $74,999	20	17.9
$75,000 - $99,999	21	18.8
$100,000 - $125,000	13	11.6
Higher than $125,000	26	23.2
Race		
Black	1	0.9
American Indian / Indigenous	13	11.5
Pacific Islander / Native Hawaiian	1	0.9
White	58	51.3
Mixed Race	24	21.2
Declined to Respond	16	14.2
Origin of Latinidad		
Mexico	14	12.4
Central America	44	38.9
South America	34	30.1
Caribbean	14	12.4
Mixed Regions	6	5.3

	Declined to Respond	1	0.9
FARMS			
	Received	53	48.2
	Did Not Receive	53	48.2
	Unsure	4	3.6

Note. Total sample, $n = 113$.

Table 2

Descriptive Statistics

Variables	M(SD)	Min	Max
Strivings	3.91(0.73)	1.75	5.00
Evaluative Concern	3.42(0.96)	1.00	5.00
Ethnic Identity	3.85(0.82)	1.50	5.00
Body Dissatisfaction	4.35(2.00)	1.00	7.00
Shape / Weight Overevaluation	4.58(1.85)	1.00	7.00
Dietary Restraint	3.55(2.07)	1.00	7.00
Percentage White in HS	47.82(27.99)	0	99.00
Age	20.85(2.44)	18	34

Note. Clinical cut-off for disordered eating behaviors on the full-scale EDE-Q is an average of 4.

Table 3

Correlations

	1	2	3	4	5	6	7
1. Dietary Restraint	-						
2. Shape / Weight Overevaluation	0.56**	-					
3. Body Dissatisfaction	0.66**	0.77**	-				
4. Ethnic Identity	-0.02	-0.14	-0.19*	-			
5. Evaluative Concerns	0.28**	0.38**	0.36**	-0.04	-		
6. Strivings	0.05	0.04	0.09	0.08	0.30**	-	
7. % White High School	-0.07	-0.05	-0.14	-0.14	-0.07	-0.08	-

Note. ** Correlation significant at the 0.01 level (2-tailed) *Correlation significant at the 0.05 level (2-tailed)

Table 4

Scale Reliability

	Number of Items	Total Possible Range	M(SD)	α
EDE-Q7	7	1-7	4.05(2.52)	**0.91**
Dietary Restraint	3		3.53(2.32)	**0.86**
Shape/Weight Overevaluation	2		4.33(2.14)	**0.87**
Body Dissatisfaction	2		4.56(1.95)	**0.91**
FMPS-Brief	8	1-5	3.66(0.68)	**0.78**
Strivings	4		3.91(0.96)	**0.75**
Evaluative Concerns	4		3.42(1.2)	**0.81**
MEIM-R	6	1-5	3.85(0.83)	**0.84**
Exploration	3		3.88(1.12)	**0.74**
Commitment	3		3.79(1.15)	**0.81**

Note. Cronbach's alpha coefficients noted in bold meet an acceptable validity level 0.65 or higher. EDE-Q7= Eating Disorder Examination Questionnaire (Grilo et al., 2015). FMPS-Brief = Frost Multidimensional Perfectionism Scale - Brief (citation). MEIM-R = Multigroup Ethnic Identity Measure-Revised (Phinney & Ong, 2007).

Table 5

Multigroup Ethnic Identity Measure--Revised (MEIM-R)

Item No.	Item
1	I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.
2	I have a strong sense of belonging to my own ethnic group.
3	I understand pretty well what my ethnic group membership means to me.
4	I have often done things that will help me understand my ethnic background better.
5	I have often talked to other people in order to learn more about my ethnic group.
6	I feel a strong attachment towards my own ethnic group.

Note. Items 1, 4, and 5 assess exploration; Items 2, 3, and 6 assess commitment. The usual response options are on a 5-point scale, from *strongly disagree* (1) to *strongly agree* (5), with 3 as a neutral position.

Table 6

Frost Multidimensional Perfectionism Scale (FMPS)

Item no.	Subscale	Item
1	PE	My parents set very high standards for me.
2	PS	If I do not set the highest standards for myself, I am likely to end up a second-rate person.
3	PS	It is important to me that I be thoroughly competent in what I do.
4	**CM**	**If I fail at work or school, I am a failure as a person.**
5	CM	I should be upset if I make a mistake.
6	PE	My parents wanted me to be the best at everything.
7	**PS**	**I set higher goals than most people.**
8	**CM**	**If someone does a task at work/school better than I do, then I feel as if I failed the whole task.**
9	CM	If I fail partly, it is as bad as being a complete failure.
10	PE	Only outstanding performance is good enough in my family.
11	PS	I am very good at focusing my efforts on attaining a goal.
12	CM	I hate being less than the best at things.
13	**PS**	**I have extremely high goals.**
14	PE	My parents expect excellence from me.
15	CM	People will probably think less of me if I make a mistake.
16	CM	If I do not do as well as other people, it means I am an inferior being.
17	**PS**	**Other people seem to accept lower standards from themselves than I do.**
18	**CM**	**If I do not do well all the time, people will not respect me.**
19	PE	My parents have always had higher expectations for my future than I have.

20	**PS**	**I expect higher performance in my daily tasks than most people.**
21	**CM**	**The fewer mistakes I make, the more people will like me.**

Note. Items in bold are those items reflected in the FMPS-B which was utilized in analyses.

Table 7

Eating Disorder Examination Questionnaire

Item no.	Subscale	Item
1	**RE**	**Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?**
2	RE	Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?
3	**RE**	**Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?**
4	**RE**	**Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?**
5	RE	Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?
6	SC	Have you had a definite desire to have a totally flat stomach?
7	EC	Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?
8	SC	Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?
9	EC	Have you had a definite fear of losing control overeating?
10	SC	Have you had a definite fear that you might gain weight?
11	SC	Have you felt fat?
12	WC	Have you had a strong desire to lose weight?
13	EC	Over the past 28 days, on how many days have you eaten in secret (i.e., furtively)? … Do not count episodes of binge eating.

14	EC	On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? … Do not count episodes of binge eating.
15	EC	Over the past 28 days, how concerned have you been about other people seeing you eat? … Do not count episodes of binge eating.
16	**WC**	**Has your weight influenced how you think about (judge) yourself as a person?**
17	**SC**	**Has your shape influenced how you think about (judge) yourself as a person?**
18	WC	How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for the next four weeks?
19	**WC**	**How dissatisfied have you been with your weight?**
20	**SC**	**How dissatisfied have you been with your shape?**
21	SC	How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?
22	SC	How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?

Note. Items in bold are those items reflected in the EDE-Q7—the eating disorder measure utilized in analyses.

Table 8

Latent Perfectionism Predicting Latent Disordered Eating Behaviors

	Dietary Restraint				Shape & Weight Overevaluation				Body Dissatisfaction			
Variables	**Unstd Est. (SE)**	**Std. Est. (SE)**	**Unstd *p*-value**	**95% Unstd. CI**	**Unstd Est (SE)**	**Std. Est. (SE)**	**Unstd *p*-value**	**95% Unstd CI**	**Unstd. Est. (SE)**	**Std. Est. (SE)**	**Unstd *p*-value**	**95% Unstd. CI**
Concern	0.64(0.24)	0.30(0.12)	**0.01**	[0.16, 1.11]	0.76(0.22)	0.43(0.11)	**0.001**	[0.33, 1.19]	0.67(0.21)	0.36(0.11)	**0.001**	[0.27, 1.06]
Strivings	-0.35(0.35)	-0.13(0.12)	0.32	[-01.03, 0.34]	-0.14(0.26)	-0.06(0.11)	0.58	[-0.65, 0.37]	-0.04(0.24)	-0.02(0.10)	0.86	[-0.52, 0.44]
Controls												
Year	0.02(0.20)	0.01(0.10)	0.97	[-0.37, 0.41]	0.10(0.16)	0.06(0.09)	0.53	[-0.21, 0.40]	0.10(0.15)	0.06(0.08)	0.49	[-0.19, 0.40]
SES	-0.14(0.13)	-0.10(0.10)	0.38	[-0.40, 0.13]	0.12(0.11)	0.10(0.09)	0.28	[-0.09, 0.32]	-0.18(0.11)	-0.15(0.10)	0.12	[-0.40, 0.05]
% White	-0.003(0.01)	-0.04(0.10)	0.59	[-0.02, 0.01]	-0.003(0.10)	-0.04(0.10)	0.71	[-0.02, 0.01]	-0.01(0.01)	-0.07(0.09)	0.43	[-0.02, 0.01]

Note. Bolded *p*-values are significant. Year = year in college; SES = socio-economic status; % White = Percentage perceived White population in High School

Table 9

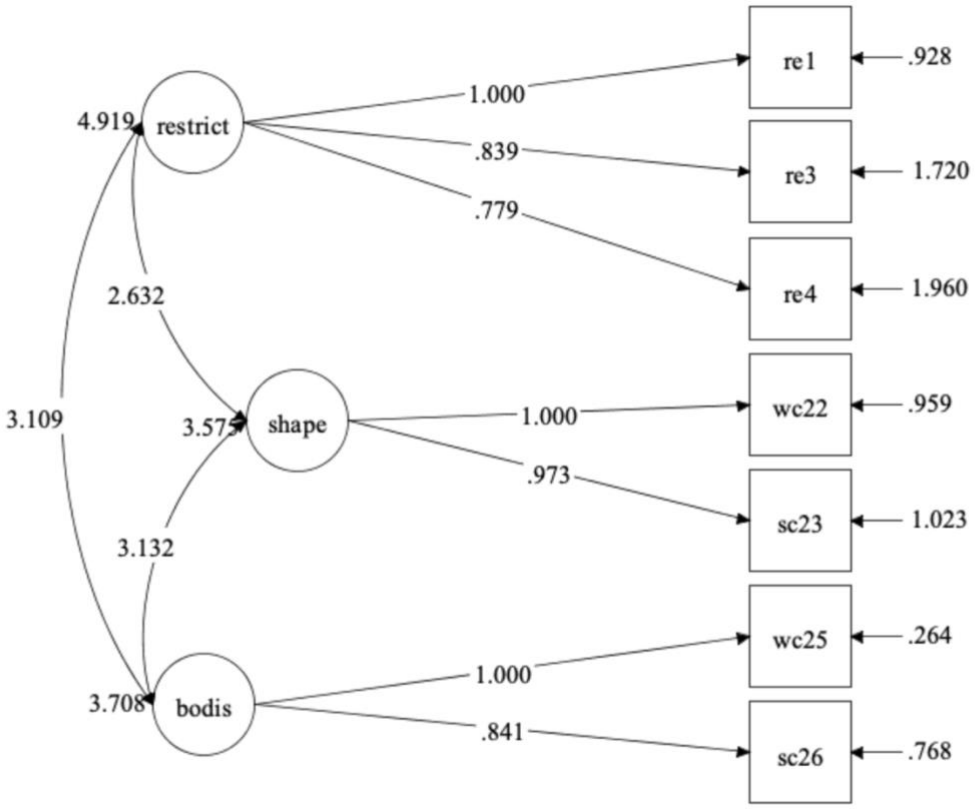
Latent Perfectionism x Ethnic Identity Predicting Latent Disordered Eating Behaviors

	Dietary Restraint				Shape & Weight Overevaluation				Body Dissatisfaction			
Variables	**Unstd Est. (SE)**	**Std. Est. (SE)**	**Unstd *p*-value**	**95% Unstd. CI**	**Unstd Est (SE)**	**Std. Est. (SE)**	**Unstd *p*-value**	**95% Unstd CI**	**Unstd. Est. (SE)**	**Std. Est. (SE)**	**Unstd *p*-value**	**95% Unstd. CI**
Concern	0.66(0.25)	0.31(0.12)	**0.01**	[0.17, 1.15]	0.75(0.23)	0.42(0.11)	**0.001**	[0.29, 1.21]	0.66(0.21)	0.36(0.11)	**0.001**	[0.26, 1.07]
Strivings	-0.31(0.34)	-0.11(0.12)	0.36	[-0.98, 0.36]	-0.13(0.29)	-0.06(0.13)	0.66	[-0.70, 0.44]	-0.05(0.24)	-0.02(0.10)	0.85	[-0.52, 0.43]
Ethnic ID	-0.09(0.34)	-0.03(0.11)	0.79	[-0.75, 0.57]	-0.22(0.26)	-0.09(0.10)	0.41	[-0.74, 0.30]	-0.49(0.27)	-0.19(0.10)	0.07	[-1.03, 0.04]
Inter 1	0.09(0.39)	0.03(0.13)	0.81	[-0.67, 0.86]	-0.03(0.31)	-0.01(0.13)	0.91	[-0.63, 0.57]	0.06(0.27)	0.02(0.11)	0.83	[-0.47, 0.59]
Inter 2	0.32(0.42)	0.08(0.11)	0.44	[-0.50, 1.15]	0.12(0.35)	0.04(0.11)	0.72	[-0.56, 0.81]	0.04(0.26)	0.01(0.08)	0.87	[-0.47, 0.56]
Controls												
Year	-0.02(0.21)	-0.02(0.10)	0.87	[-0.44, 0.38]	0.07(0.16)	0.04(0.10)	0.66	[-0.25, 0.39]	0.06(0.16)	0.04(0.09)	0.69	[-0.25, 0.37]
SES	-0.16(0.15)	-0.12(0.11)	0.28	[-0.45, 0.13]	0.10(0.12)	0.08(0.10)	0.41	[-0.13, 0.32]	-0.23(0.12)	-0.19(0.10)	**0.05**	[-0.45, 0.001]
% White	-0.002(0.01)	-0.03(0.11)	0.80	[-0.02, 0.01]	-0.003(0.01)	-0.05(0.11)	0.67	[-0.02, 0.01]	-0.01(0.01)	-0.09(0.09)	0.33	[-0.02, 0.006]

Note. Bolded p-values are significant. Inter 1 = Evaluative Concern x Ethnic Identity Interaction; Inter 2 = Strivings x Ethnic Identity Interaction; Year = year in college; SES = socio-economic status; % White = Percentage perceived White population in High School

Figure 1

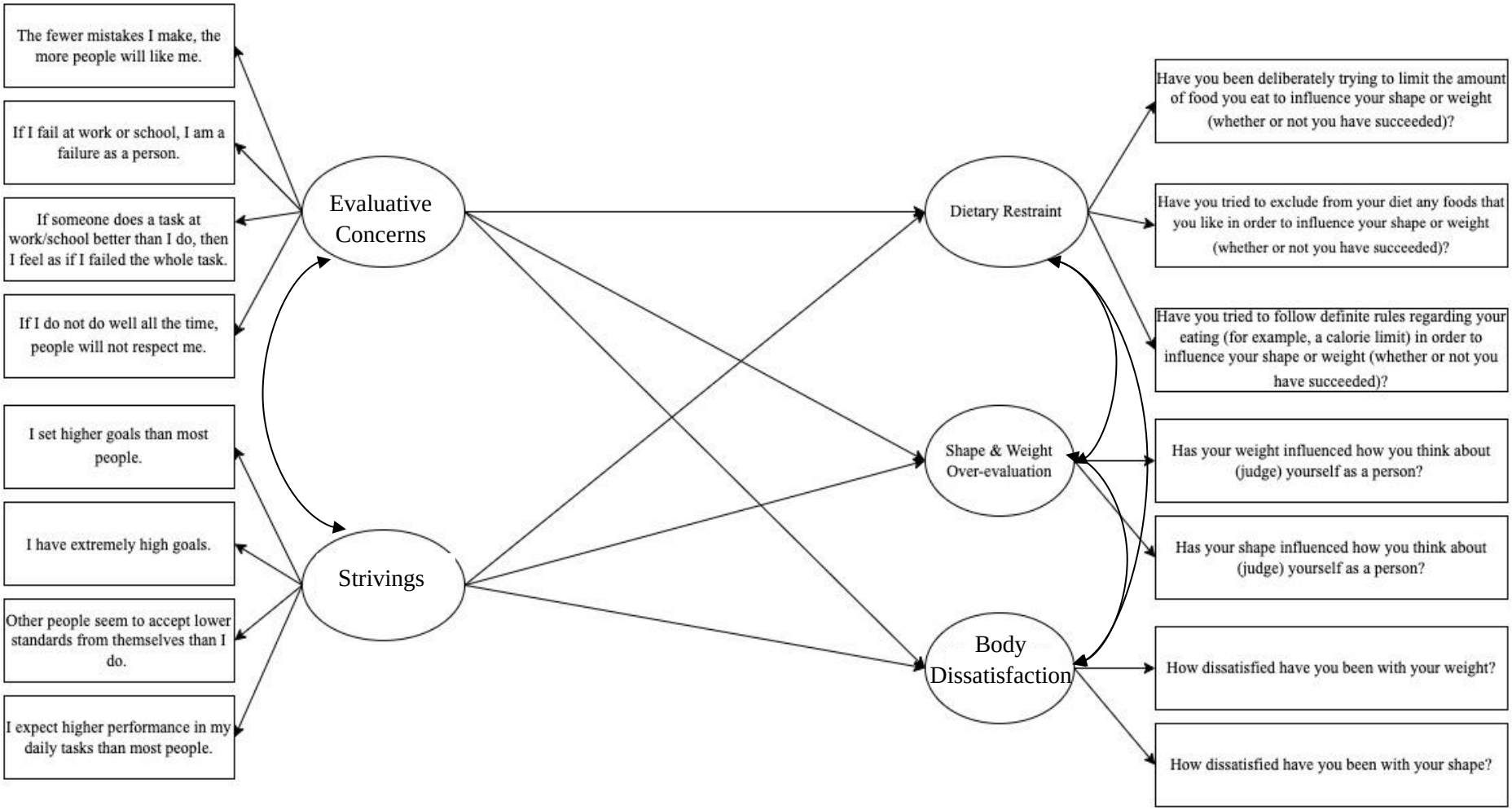
Unstandardized EDE-Q7 CFA



Note. Restrict = Dietary Restraint; Shape = Shape and Weight Overevaluation; Bodis = Body Dissatisfaction

Figure 2

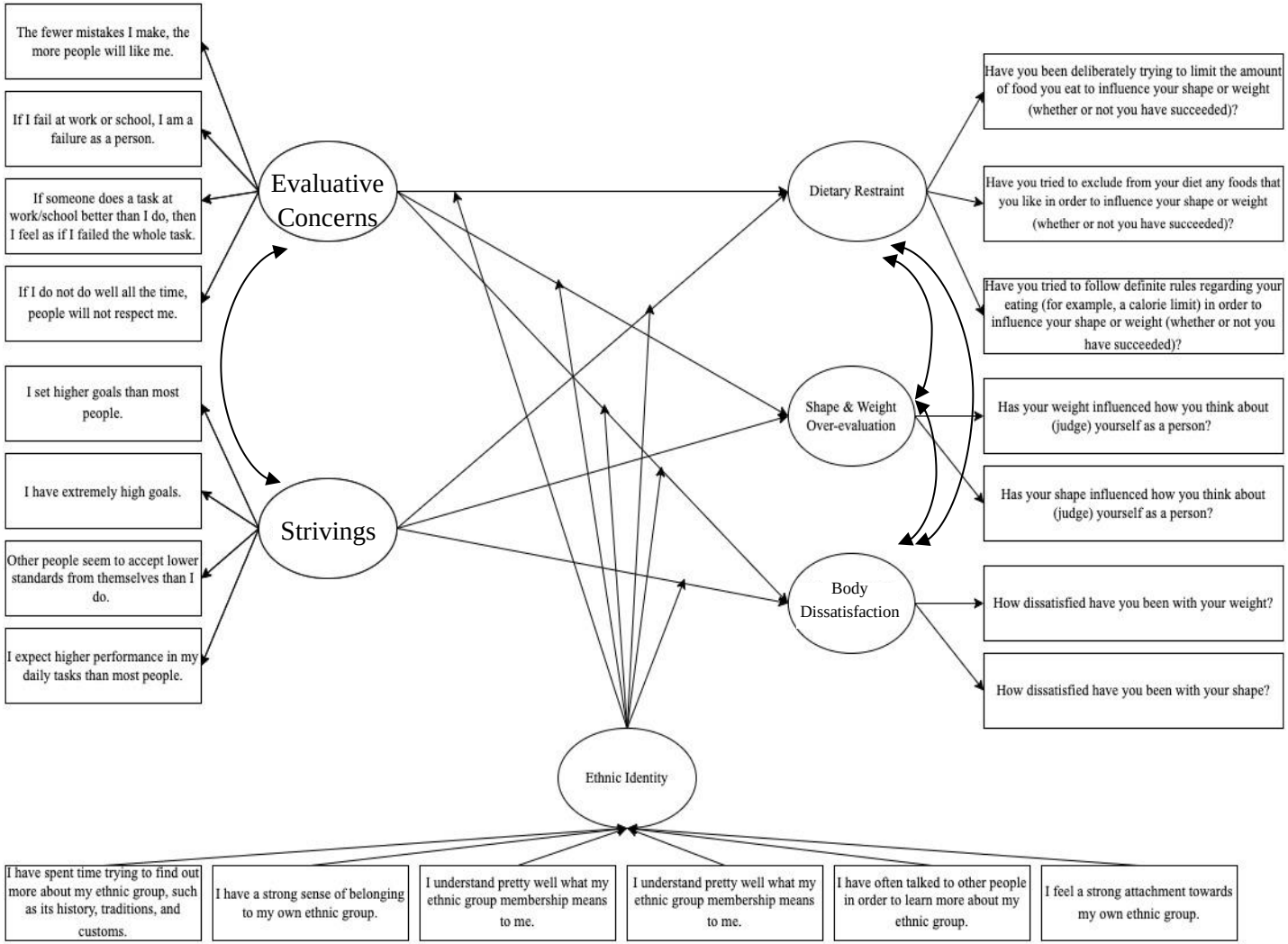
Conceptual Perfectionism on Disordered Eating Model



Note. Controls are excluded from the figure.

Figure 3

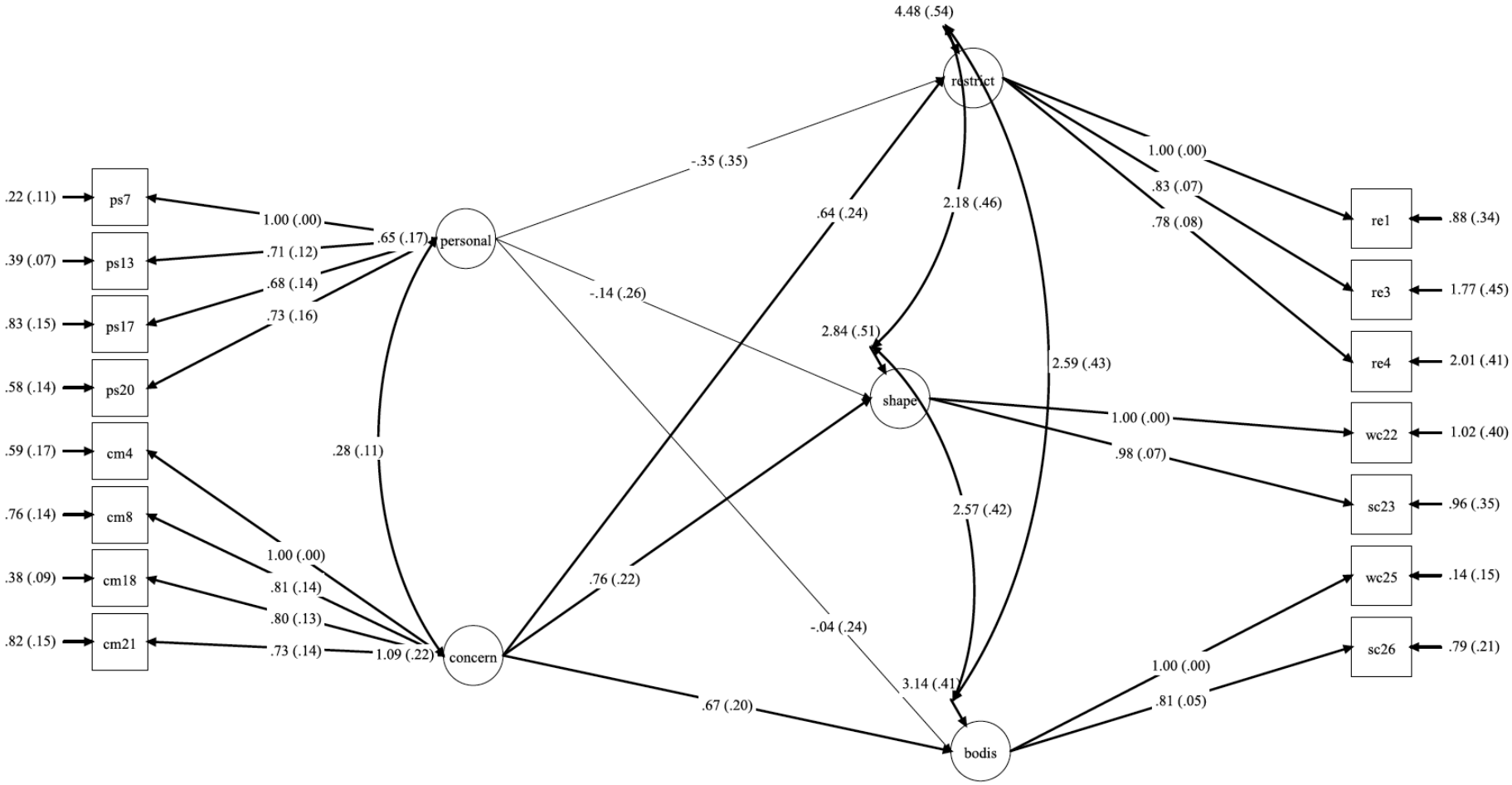
Conceptual Moderation Model



Note. Controls are excluded from the figure.

Figure 4

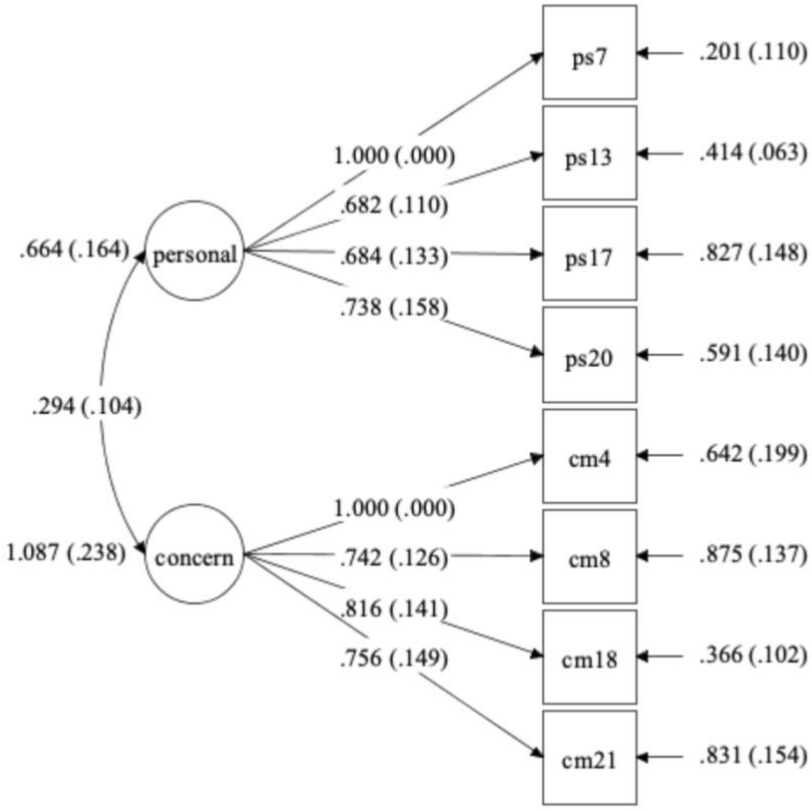
Perfectionism LPA Model with Estimates



Note. Controls are not depicted in the model. Bold lines depict significant effects. Personal = Strivings; Concern = Evaluative Concerns; Ethn = Ethnic Identity; Restrict = Dietary Restraint; Shape = Shape and Weight Overevaluation; Bodis = Body Dissatisfaction.

Figure 5

Unstandardized FMPS-B CFA



Note. Personal = Strivings; Concern = Evaluative Concerns

Figure 6

Unstandardized MEIM-R Single Order CFA

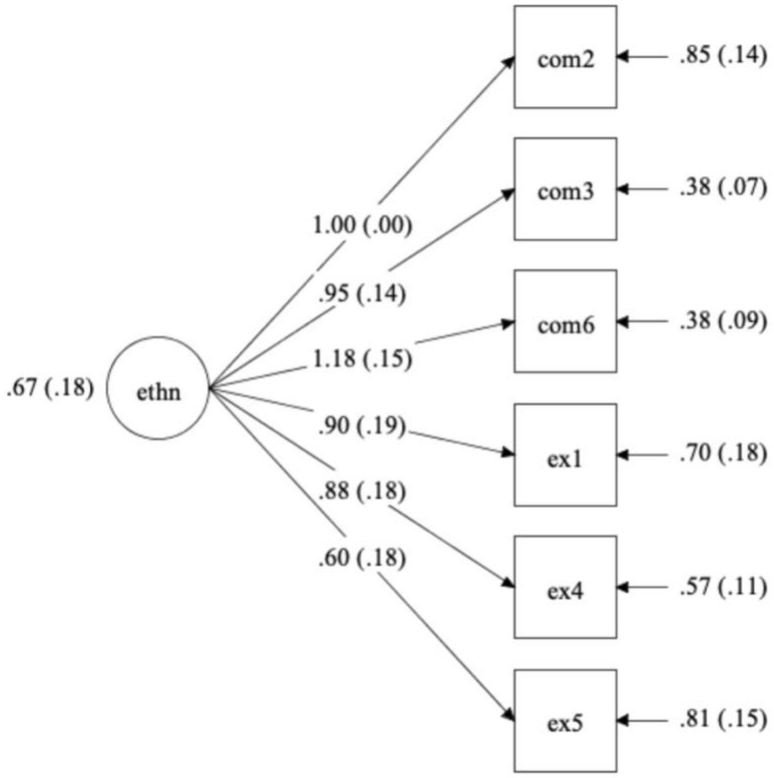
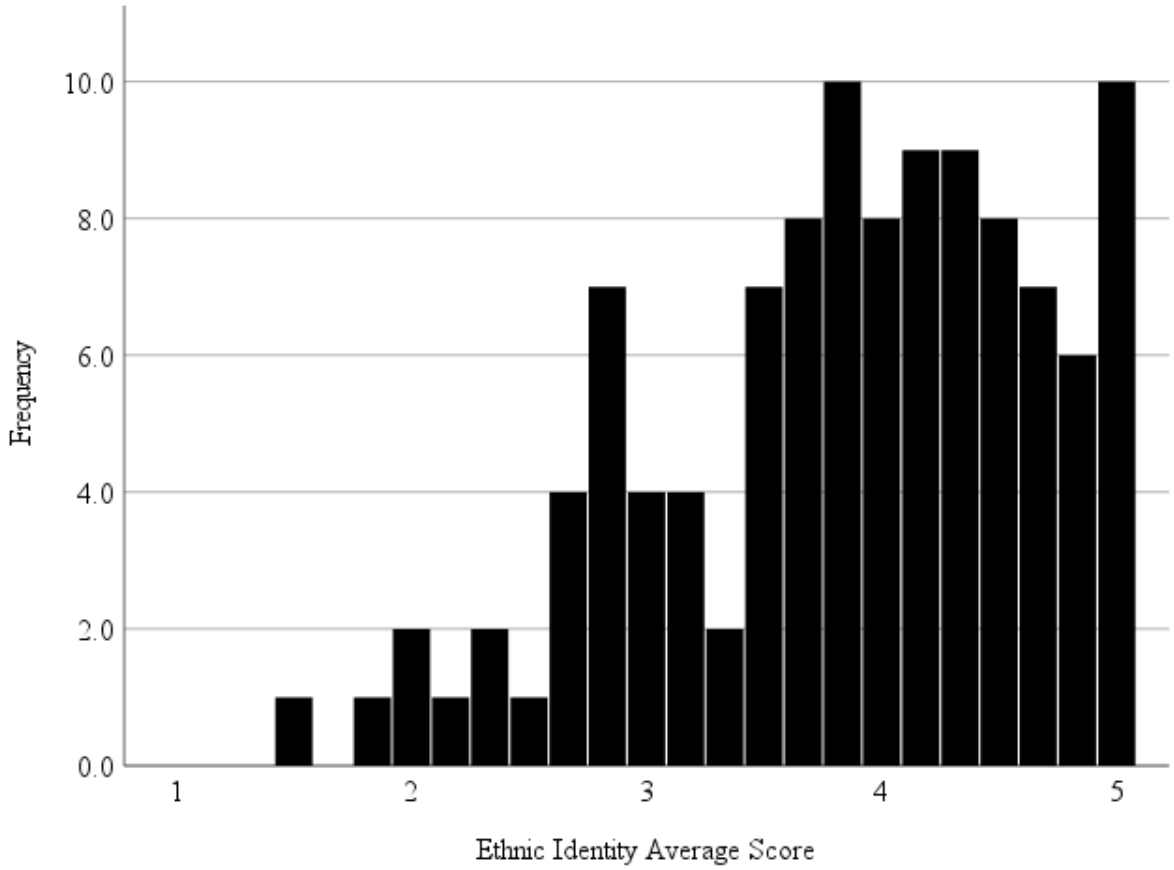


Figure 7

Histogram of Ethnic Identity Skew



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