# DEVELOPMENT AND INITIAL VALIDATION OF A MEASURE OF INTERNALIZED DIET CULTURE

by

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# ABSTRACT

VICTORIA GALICA MORRIS. Development and initial validation of a measure of internalized diet culture. (Under the direction of DR. CHARLIE L. REEVE)

Scholars argue that a unique diet culture exists in Westernized nations which conflates health outcomes and moral character, by attaching morality to food choices, eating and exercising behaviors, and physical appearance. Several seemingly separate fields of research have recently emerged that examine specific aspects of these cultural attitudes and ideologies reflective of Westernized diet culture, such as thin ideal internalization and internalized food values. However, there remains a substantial need for a more thorough understanding of the nature of this "diet culture" and how these idealized body types and eating and exercising behaviors become internalized as part of an individual's intrapersonal identity. Thus, drawing on Bronfenbrenner's bioecological framework and myriad feminist and internalization theories, the first aim of this dissertation was to describe the conceptualization of "internalized diet culture" (IDC) and delineates its nomological network. The second aim of this dissertation was to develop and begin to validate a standardized system of measurement that assesses the degree to which individuals have internalized diet culture. Across two separate studies, data from subject matter experts and 896 participants were used to develop a four-factor model and standardized measure of IDC. Providing evidence of validity, the Internalized Diet Culture Scale (IDCS) global score and most subscale scores were (a) positively related to disordered eating behaviors, thin idealization, weight bias internalization, fatphobia, and body shame and surveillance, (b) negatively related to intuitive eating, body satisfaction, flexible views of beauty, self-esteem, and self-compassion, and (c) negligibly related to

social desirability. The empirical and applied implications of the conceptualization of IDC, as well as the development of the IDCS, are discussed.

# ACKNOWLEDGEMENTS

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# CHAPTER 1: INTRODUCTION

The global dieting and fitness industries are worth nearly $1.3 trillion as of 2017, with another $1.1 billion spent on beauty and anti-aging products annually (Global Wellness Institute, 2018). Indeed, research suggests that approximately 36% of individuals are actively dieting at any one time (International Food Information Council, 2018). This statistic is likely a gross underestimation given the number of people who refer to their dieting behaviors as "lifestyle changes" and may not accurately report dieting engagement (CDC; Centers for Disease Control and Prevention, 2011; Weight Matters Campaign, 2018). These widespread dieting behaviors coincide with rising rates of compulsive or excessive exercise engagement, where individuals exercise so frequently as to actually cause a decline in health, rather than an improvement (Goodwin, Haycraft, Willis, & Meyer, 2011; Homan, 2010; Taranis, Touyz, & Meyer, 2011).

Moreover, there has been a 200% increase in fat removal and body sculpting plastic surgery procedures within the United States since 2000 (ASPS; American Society of Plastic Surgery, 2018), including a 20% increase in these procedures from 2016 to 2017. Most recent statistics show that 17.5 million body shaping plastic surgery procedures were performed in 2017, most commonly including tummy tucks, liposuction, breast augmentation, and nose and eyelid reshaping (ASPS, 2018). These figures suggest that concern over one's physical appearance is widespread within the United States and many Westernized societies (Boero, 2007; Evans, 2006; Firth, 2012; Patterson & Johnston, 2012).

Social scientists have increasingly identified macro-level factors, such as institutional weight discrimination, structural stigma, national marketing campaigns, and

messages from the mass media that influence individuals' dietary choices, exercise and eating behaviors, as well as attitudes and cognitions towards certain foods, eating behaviors, and physical appearance (Ashmore, Friedman, Reichmann, & Musante, 2008; Counihan, 1992; Dunkley, Wertheim, & Paxton, 2001; Fegitz & Pirani, 2018; Flint et al., 2016; James, 2004; Perez, Kroon Van Diest, Smith, & Sladek, 2018; Story, Neumark-Sztainer, & French, 2002; Vartanian & Dey, 2013). At the same time, as engagement in dieting, extreme exercising, and other body sculpting techniques continue to rise, so do reports of poor body image, low self-esteem, and disorder eating behaviors and diagnoses (Jones, Vigfusdottir, & Lee, 2004; Klaczynski, Goold, & Mudry, 2004; Leit, Gray, & Pope Jr, 2002; Ortega-Luyando et al., 2015; Pike, Hoek, & Dunne, 2014; Swami, 2015). Empirical evidence suggests a clear association between these trends and Westernized cultural ideals that value physical attractiveness and the pursuit of weight loss over holistic health and wellness (Hayes & Ross, 1987; Klaczynski et al., 2004; Pike et al., 2014; Swami, 2015; Vartanian, Herman, & Polivy, 2007).

Thus, the overall aim of the current dissertation is to develop a theoretical model explaining why we are seeing mounting evidence that many Americans are choosing to engage in unhealthy eating and exercising behaviors (Loprinzi, Branscum, Hanks, & Smit, 2016; McGuire, 2011; Reedy & Krebs-Smith, 2010), and are endorsing negative thoughts surrounding food and physical appearance (Brennan, Lalonde, & Bain, 2010; Funk & Kennedy, 2016; Taparia & Koch, 2015). Drawing on Bronfenbrenner's (1979) bioecological framework and myriad feminist and internalization theories (Bartky, Diamond, & Quinby, 1988; Conboy, Medina, & Stanbury, 1997; Foucault, 1977; Garner, Garfinkel, Schwartz, & Thompson, 1980; Johnson, 1995; Ryan & Connell, 1989;

Spitzack, 1990; Wiseman, Gray, Mosimann, & Ahrens, 1992), the first aim of this dissertation is to develop a conceptualization of "internalized diet culture," and delineate its nomological network.

Second, while several measurement devices have been developed to assess individual differences in these aforementioned outcomes, there appears to be no existing standardized system of measurement to assess the degree to which individuals have internalized the larger set of cultural beliefs regarding food, eating behaviors, and physical appearance that make up diet culture. The creation of such a device can help researchers elucidate an important source of variance in these health outcomes. Thus, the empirical aim of the current dissertation is to document the process of developing and validating a measure of internalized diet culture.

# CHAPTER 2: CONCEPTUALIZATION OF INTERNALIZED DIET CULTURE

In line with Bronfenbrenner's (1979) bioecological framework, it is generally accepted that environmental and cultural contexts, broadly defined, have a substantial influence on individuals' health beliefs and behaviors (Airhihenbuwa, 1995; Hernandez & Blazer, 2006; Iwelunmor, Newsome, & Airhihenbuwa, 2014; Napier et al., 2014). Specifically, the bioecological framework acknowledges that individuals are embedded within multiple systems; moreover, it considers the bidirectional relationships between individuals and these systems, as well as interactions between the systems (Bronfenbrenner & Morris, 2007). This more holistic approach is useful for identifying the myriad factors that influence individuals' health beliefs and behaviors.

Within the United States, anthropologists, sociologists, and feminist researchers, as well as professionals in the health, fitness, and nutrition fields, widely acknowledge the existence of a unique diet culture that impacts the cognitions and behaviors of many Americans (e.g., Counihan, 1992; Fox, 2003; Gagliardi, 2018; Harrison, 2019; Johnson, 1995; Kniazeva & Venkatesh, 2007; Lyons, 2009; Rothblum, 2011). While several variants exist, diet culture can be defined as a system of knowledge, values, and meanings that supports interpretations of health choices as moral character, by attaching morality to food choices, eating behaviors, and physical appearance. Thus, rather than attributing individuals' dieting, exercising, and other body modification behaviors solely to individual-level factors, the bioecological model provides a framework for understanding the influence of factors at the micro-, meso-, exo-, macro-, and chrono-systems. Indeed, there is widespread recognition that dieting behaviors are influenced by cultural, social, political, religious, and economic factors (Gagliardi, 2018). Substantial

literature discusses the impact of personal characteristics, family, peers, and the mass media on individuals' beliefs about appropriate standards for diet, exercise, and physical appearance (e.g., Andersen & DiDomenico, 1992; Bailey-Davis et al., 2017; Campo & Mastin, 2007; Clark & Tiggemann, 2006; Dunkley et al., 2001; Ferreira, Trindade, & Martinho, 2016; Fitzgerald, Heary, Kelly, Nixon, & Shevlin, 2013; Herbozo, Tantleff-Dunn, Gokee-Larose, & Thompson, 2004; Woolverton, Spalding, Warikoo, Dunn, & Richmond, 2016). Many of these factors are thought to influence personal behavior via a complex process of internalizing messages that individuals encounter both physically and psychologically. Using a geological metaphor to depict internalization, it has been stated that "Culture shapes a series of experiences across the lifecourse, and these experiences 'layer up' within individuals, forming a complex sedimentation of culture within individuals" (Zittoun & Gillespie, 2015, p. 477).

Furthermore, many Feminist scholars have written extensively about the internalization of cultural norms and attitudes. Broadly, Feminist Theory examines gendered social roles, experiences, expectations, and inequalities (Brabeck & Brown, 1997; Garner et al., 1980). Feminist scholars were among the first to write about the culture of dieting that perpetuates the internalization of body and food choice ideals. This public recognition of "diet culture" emerged during the 1960's feminist movement, when women were encouraged to *take control of their bodies* (Gagliardi, 2018). Despite this seemingly empowering narrative, written accounts from this time period describe women's increasing engagement in restrictive dieting and excessive exercising behaviors (Gagliardi, 2018). Further, during this same historical time, nutritional science was advancing, advertisements for appetite suppressors first emerged and Weight Watchers

was established, making it socially acceptable to talk about weight in public (Bartky et al., 1988; Gagliardi, 2018). While writings on this topic initially focused on identifying the systems-level factors that led to the rise of diet culture, substantial literature has examined the consequences of such cultural attitudes, beliefs, and norms.

Several feminist scholars have written lengthy descriptions of the cultural factors that perpetuate discrimination and oppression by objectifying bodies (Bartky, 1997; Conboy et al., 1997; Duncan, 1994; Foucault, 1977; Garner et al., 1980; Germov & Williams, 1999; Johnson, 1995; Spitzack, 1990; Wiseman et al., 1992). Specifically, there is widespread stigma surrounding particular body sizes, mainly fat bodies (Ashmore et al., 2008; Brewis, 2014; Lydecker et al., 2016; Vartanian & Dey, 2013), and various eating behaviors, such as the consumption of sugar, fat, carbohydrates, or fast food (Counihan, 1992; Guthman, 2003; Roth, Herman, Polivy, & Pliner, 2001; Vartanian et al., 2007). This stigma often leads to discrimination (Flint et al., 2016; Puhl et al., 2015). Moreover, there is a common perception that individuals' bodies, as well as their eating and exercising behaviors, are open for public comment (Bombak, 2015). Thus, the recognition that one is being surveyed, critiqued, and discriminated against by others leads to a perpetual process of self-critiquing and self-regulating (Bartky, 1997). Feminist scholars explain this process using the analogy of the Panopticon, a prison model in which all prisoners are constantly visible to a single guard located in a centralized tower. Prisoners are unable to identify where in the tower the guard is located, creating a threat of constant surveillance that causes the prisoners to self-regulate their behaviors to better adhere to the standards of the guard (Bartky, 1997; Duncan, 1994; Germov & Williams, 1999). Feminist scholars argue that, similarly, individuals embedded in Westernized

culture feel that their eating and exercising behaviors, as well as their bodies, are under constant surveillance; thus, they begin self-regulating their eating and exercising behaviors in an attempt to adhere to cultural standards (Bartky, 1997; Duncan, 1994; Germov & Williams, 1999).

Notably, unless broader cultural beliefs and attitudes are altered, individuals internalizing these largely impossible standards for eating, exercising, and physical appearance will likely experience adverse consequences (Bartky, 1997; Bartky et al., 1988; McKinley & Hyde, 1996). As Feminist scholar Sandra Lee Bartky (1997) writes:

> Today, massiveness, power, or abundance in a woman's body is met with distaste. The current body of fashion is taut, narrow-hipped, and of a slimness bordering on emaciation; it is a silhouette that seems more appropriate to an adolescent boy or a newly pubescent girl than to an adult woman. Since ordinary women have normally quite different dimensions, they must of course diet. (p. 132)

While these standards for physical ideals are often discussed with reference to female bodies, there is substantial evidence to show that men are also affected by socially perpetuated body standards; although typical male body ideals tend to focus more on muscularity, rather than thinness (Bordo, 1999; Daniel & Bridges, 2010; Gough, 2007; Labre, 2005; Leit et al., 2002). Yet there is little scientific understanding of the broader cultural beliefs about diet and exercise that perpetuate such ideals for individuals across the gender spectrum. Despite this lack of empirical knowledge, numerous popular media sources, including health and wellness blogs, social media accounts, books, and other news sources, describe a set of broader diet culture beliefs, which insinuate that

individuals' moral value or worth is dependent on their eating and exercising behaviors, and physical appearance. This widespread discussion of diet culture in popular media suggests that individuals commonly experience messages that attach morality (e.g., good vs. bad, virtuous vs. sinful) to various bodies, foods, and types or rates of physical activity. Thus, it is crucial that research explores individuals' experiences of diet culture and its potential consequences.

**Internalized Diet Culture**

Several highly specific and seemingly disparate literatures have recently emerged that discuss personal dieting and health decisions that are impacted by broader cultural norms and ideologies. Perhaps the most notable example is seen in research examining women's internalization of the thin ideal, in which individuals personally adopt the specific cultural belief that thin bodies are ideal and women should strive for thinness (Dakanalis et al., 2015; Sands & Wardle, 2003; Thompson & Stice, 2001). Furthermore, there is literature examining "fitspiration," a social media content trend that promotes the pursuit of physically fit bodies through diet and exercise (Boepple & Thompson, 2016). Though seemingly benign, fitspiration discourses often use shaming, guilt-inducing, and morally-based language to promote fitness for the sake of appearance, regardless of the negative impact on one's mental health and overall well-being (Boepple & Thompson, 2016; Holland & Tiggemann, 2017; Tiggemann & Zaccardo, 2015). Another example is found in the research examining the values that influence individuals' food choices. This literature suggests that many individuals internalize food-related cultural attitudes, such as ideal food production (e.g., organic), how traditional a choice food is, and the

perceived impact of a food choice on one's weight (De Boer, Hoogland, & Boersema, 2007; Lyerly & Reeve, 2015; Steptoe, Pollard, & Wardle, 1995).

Research examining these concepts, as well as interventions designed to address their outcomes, continue to increase in complexity, without a thorough understanding of their underlying cause. However, these seemingly distinct literatures manifest a similar theme regarding cultural ideals for eating, exercising, and physical appearance, which individuals strive to obtain because they believe their moral value is dependent on achieving such standards. Given the commonalities amongst these literatures, the conceptualization of a higher-order construct that encapsulates these narrow and often gender-specific indicators, such as internalization of food values, thin ideal internalization, and the like, will provide a parsimonious strategy for unifying the currently disparate theoretical and empirical landscape. Thus, the current empirical investigation of internalized diet culture is inspired by the identification of the significant overlap in the basic theoretical and conceptual premises among these separate literatures and attempts to amalgamate them.

*Internalized diet culture* can be defined as the degree to which an individual has accepted broader cultural beliefs regarding appropriate or ideal eating practices and physical appearance standards as their own personal beliefs and standards. In particular, the aspect of "diet culture" of concern is the attachment of morality to food choices, eating behaviors, and physical appearance. This definition aligns with the myriad theories of internalization that exist in regard to various social phenomena, including racism, sexism, stigma, oppression, homophobia, and the thin ideal, among others (Bearman, Korobov, & Thorne, 2009; Harper, 2007; Heilman, 2018; Liebow, 2016; Ritsher,

Otilingam, & Grajales, 2003; Thompson & Stice, 2001; Zittoun & Gillespie, 2015). As explained by Ryan and Connell (1989), theories of internalization share a defining commonality in that they "…describe a continuum in which a social value or regulation is adopted as one's own or identified with. The more internalized a value or regulation, the more it is experienced as autonomous or as subjectively located closer to the self" (p. 750). Thus, individuals who present a higher degree of internalized diet culture will show greater evidence of modifying their behavior to more closely approximate the standards set forth through Westernized diet culture (Thompson, Van Den Berg, Roehrig, Guarda, & Heinberg, 2004).

Prior to data collection, internalized diet culture was first conceptualized as a multi-dimensional model comprised of five sub-domains (see Figure 1). Specifically, these sub-domains of behavior included: 1) assigning moral value to food, eating behaviors, and physical appearance, 2) judging one's own moral character, or others', based on food choices, eating behaviors, and physical appearance, 3) believing that food choices, eating behaviors, and physical appearance dictate one's value and worth, 4) placing greater value on physical appearance than overall health and wellness, and 5) setting strict (i.e., extreme or inflexible) rules regarding food consumption, including the type or amount of food consumed, timing of food consumption, etc. Each of these domains has independently received empirical attention.

*Subdimension 1: Assigning moral value to food, eating behaviors, and physical appearance.*

There is a plethora of research showing that individuals frequently assign moral value (i.e., good vs. bad, virtuous vs. sinful) to specific foods (e.g., carrots vs. cakes),

food groups (e.g., protein vs. carbohydrates), and physical appearance (e.g., thin vs. obese) (Connors, Bisogni, Sobal, & Devine, 2001; De Boer et al., 2007; McPhail, Chapman, & Beagan, 2011; Ruby & Heine, 2011; Vartanian et al., 2007). For example, the aforementioned research examining internalized food choice values discusses the widespread cultural beliefs that organic foods or foods associated with weight loss and control are considered "good," ideal, or morally preferable (Connors et al., 2001; De Boer et al., 2007).

Moreover, in her qualitative examination of Westernized "food rules," Counihan's (1992) participants labeled a series of foods as "bad," including sugar, red meat, fat, high-cholesterol foods, "junk food" and any food with excess grease. They also described a plethora of "bad" eating behaviors, including eating that is, "…done solely for pleasure (except in exceptional circumstances), in excess, in between meals or late at night, without control, and beyond the point of minimally satisfying hunger. Snacking, binging, eating on the run, eating alone, and stuffing oneself" (p. 58). Furthermore, phrases such as, "I was so good today" (when referring to one's dietary intake) and the notion that one must exercise to "earn" their calories or compensate for overindulging or eating "bad" foods are commonplace in modern Westernized culture (Ackard, Brehm, & Steffen, 2002; Hollland, Brown, & Keel, 2014; Wammes, Breedveld, Kremers, & Brug, 2006).

In addition, contemporary marketing campaigns use moral language, such as "sinfully delicious," to successfully promote numerous food-related products and business, such as cookbooks, bakeries, chocolate and other foods (Campbell, 2012; Contois, 2015). One well-known example that received widespread media attention in

2009 involved Federici Gelato Italiano, a popular ice cream brand. The company's advertising campaign depicted a nun and a priest engaged in sexualized behaviors while holding a carton of Federici ice cream. The taglines for this campaign included "submit to temptation," "kiss temptation," and "sinfully delicious" (Friedland, 2009). More recently, in early 2019, news media platforms across the United States ran a story about "The Most Sinful States in America" where obesity rates were used as a key indicator of "excesses and vices" (McCann, 2019). Collectively, these discourses speak to the frequency at which individuals in modern Westernized society use moral language to describe various foods, eating behaviors, and physical appearances.

*Subdimension 2: Judging one's own moral character, or others', based on food choices, eating behaviors, and physical appearance*.

Given the established prevalence at which individuals assign moral value to foods, eating behaviors, and physical appearance, it is not surprising that moral judgements about oneself or others are also made based on certain eating behaviors or body types (McPhail et al., 2011; Ruby & Heine, 2011; Saguy & Gruys, 2010; Vartanian et al., 2007). As described by Contois (2015), the dichotomized moral language of "good" and "bad" foods culminates in the extension of moral judgments about the food consumer.

Moreover, because this moral language is most often used in discussions of dieting and weight loss, this moral dichotomization is also applied to thin and fat bodies (Contois, 2015). For example, the very premise of thin ideal internalization is that women strive for thinness because Westernized society sees this body type as ideal and superior to larger bodies (Thompson & Stice, 2001). Indeed, several scholars have identified

widespread beliefs that individuals with fat bodies are inherently lazy, ignorant, and *immoral* (Farrell, 2011; Gagliardi, 2018; Jutel, 2005; Oliver, 2006). There is increasing recognition that weight is often viewed as "…a barometer of a person's character" (Oliver, 2006, p. 7). According to health and sociology scholar, Annemarie Jutel (2005), "Today, 'looking healthy', 'a picture of health', 'a healthy glow' and, conversely, 'she doesn't look well' suggest that health is treated as a visual condition, one that is easily assessed by the size of the body…in contemporary society, a healthy appearance now testifies to internal goodness" (p. 119). Similar discourses can be traced back for decades. For example, in a popular magazine from the 1920s, *Beauty*, an article referring to obesity as "the eighth deadly sin," outlines how fatness is the result of a "serious moral failing" (Brintnall, 1924, as cited in Jutel, 2005).

*Subdimension 3: Believing that food choices, eating behaviors, and physical appearance dictate one's value and worth.*

It is not a novel finding that individuals' sense of value and self-worth are influenced by their physical appearance (Mendelson, White, & Mendelson, 1996). Research demonstrates that one's physical appearance is a significant predictor of their perceptions of social acceptance, more so than interpersonal characteristics, such as kindness and empathy (Anthony, Holmes, & Wood, 2007). In addition, because most individuals believe food choices are inextricably linked to physical appearance (Chung, Hoerr, Levine, & Coleman, 2006; Whitehead, Ozakinci, Stephen, & Perrett, 2012), feelings of value and self-worth may also be altered in response to one's food choices and eating behaviors (Counihan, 1992). These findings are not surprising, since individuals largely perceive eating behaviors and physical appearance as a matter of personal choice

(Bartky et al., 1988; Counihan, 1992). Thus, the cognitive association between one's sense of self-worth and their food choices, eating behaviors, or physical appearance may explain the considerable feelings of guilt and shame experienced by individuals who do not maintain cultural standards related to food and appearance (Bartky, 1997; Counihan, 1992).

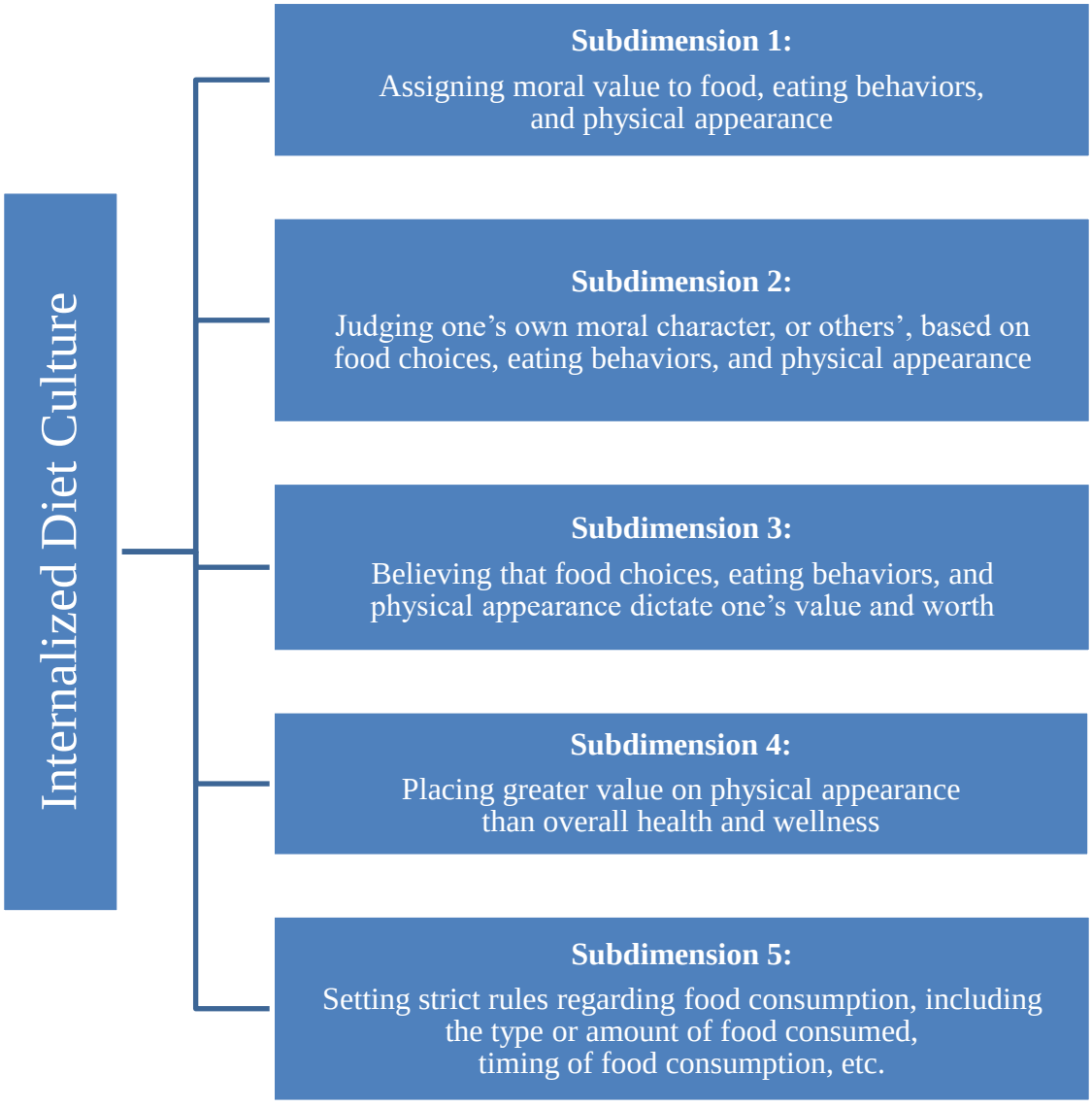


*Figure 1. Conceptualization of Internalized Diet Culture*

*Subdimension 4: Placing greater value on physical appearance than overall health and wellness.*

As previously noted, there is an established and pervasive preoccupation in modern American society with being thin or muscular, depending on one's gender identity (Damiano, Paxton, Wertheim, McLean, & Gregg, 2015; Daniel & Bridges, 2010; Kroon Van Diest, 2015; Labre, 2005; Leit et al., 2002; Rice, Prichard, Tiggemann, & Slater, 2016; Stice & Shaw, 1994). Indeed, the desire to obtain a socially favorable physical appearance has been shown to be a stronger motivator to engage in healthy eating behaviors than the desire to obtain optimal health (Hayes & Ross, 1987; Vartanian et al., 2007).

Despite the common misnomer that individuals should diet (i.e., restrict calories or food groups for the purpose of weight loss or control; Pereira & Alvarenga, 2007) to improve their health, dieting is actually shown to increase *negative* physical health outcomes (Harrison, 2019; Mann et al., 2007; Neumark-Sztainer et al., 2006; Oliver, 2006). Moreover, because dieting encourages individuals to ignore their bodies' biological hunger cues and other needs, many chronic dieters come to think of their body as their enemy (Bartky, 1997; Tribolc & Rcsch, 1995), further perpetuating the negative mental health outcomes associated with dieting (Barthels, Meyer, & Pietrowsky, 2018; Hibbeln, Northstone, Evans, & Golding, 2018; Patton, Selzer, Coffey, Carlin, & Wolfe, 1999). Furthermore, dieting behaviors are strongly associated with engagement in compulsive or excessive exercise (Goodwin et al., 2011; Homan, 2010). As seen in the "fitspiration" literature, there is substantial evidence to suggest that these health-endangering behaviors result from a desire to achieve a culturally-ideal body physique,

rather than a desire for holistic health (Boepple & Thompson, 2016; Fairburn, Cooper, & Shafran, 2003; Hechler, Beumont, Marks, & Touyz, 2005; Homan, 2010). Collectively, the popularity of these weight-control and body modification behaviors, despite their negative health impacts, suggest that individuals who internalize diet culture are likely to place greater value on their physical appearance than their overall health and wellness.

*Subdimension 5: Setting strict (i.e., extreme or inflexible) rules regarding food consumption, including the type or amount of food consumed, timing of food consumption, etc.*

Finally, adherence to strict and restrictive food rules has been documented in both clinical and community samples (Adams & Leary, 2007; Kennedy, Wick, & Keel, 2018). While some discourses erroneously restrict stringent food and eating rules to clinical eating disorder pathologies, food restriction and compulsive eating based on external cues (as opposed to internal, biological cues) are increasingly common (Pereira & Alvarenga, 2007; Tribolc & Rcsch, 1995). Extreme fad diets that promote the restriction of entire food groups, such as, “zero-carb Keto,” Atkins, and “zero-sugar Paleo” are increasing in popularity (Astrup, Larsen, & Harper, 2004; Kuchkuntla, Limketkai, Nanda, Hurt, & Mundi, 2018; Moyad, 2005). While these diet protocols are advertised as both health enhancing and for the purpose of accelerated weight loss, research shows that extreme food restriction actually leads to long-term reductions in health and increases in weight (Lyons, 2009; Pereira & Alvarenga, 2007; Tribole, 2012).

To address the rising frequency at which individuals established personal food and consumption rules, the Intuitive Eating movement was started in the 1990s to advocate for eating based on biological signals and cravings, as opposed to food rules

(Tribolc & Rcsch, 1995). This movement was guided by scientific evidence suggesting that food restriction and food rules have severe, long-term negative health consequences, despite their temporary, desirable impact on one's weight and physical appearance (Pereira & Alvarenga, 2007; Tribolc & Rcsch, 1995). Despite the promising research regarding intuitive eating's positive health outcomes, prevalence studies show that only a small percentage of Westernized populations have adopted an intuitive eating lifestyle (Denny, Loth, Eisenberg, & Neumark-Sztainer, 2013). Notably, research suggests that low rates of intuitive eating and the continued engagement in restrictive and often harmful eating behaviors is the result of macrosystem or societal influences, including messages from the mass media, marketing and advertisement campaigns, and the lack of weight-based anti-discrimination policies (Puhl et al., 2015; Story et al., 2002).

**Initial Formulation of the Nomological Network**

To fully specify a new construct conceptualization, a nomological network must be formulated. A nomological network describes how the construct of interest will manifest, as well as its theoretical relation to proximal antecedents, correlates, and outcomes (Cronbach & Meehl, 1955; Slaney, 2017). Critically, the nomological network establishes the criteria for evaluating construct validity (described in greater detail in Chapter 4), as it specifies falsifiable hypotheses regarding how internalized diet culture is conceptualized, and how it will correlate with (or be independent of) other variables of interest (Cronbach & Meehl, 1955; Slaney, 2017). The level of detail articulated in a nomological network is largely dependent on how much empirical research exists regarding the conceptualized construct. Considering the somewhat scattered and disparate state of the literature examining the history and impact of Westernized diet culture, and

the novel conceptualization of internalized diet culture, the nomological network described here is a nascent conceptualization. Thus, the conceptualization and nomological network are expected to undergo refinement as new empirical evidence becomes available. Nonetheless, the current nomological network focuses primarily on proximal behaviors and indicators of well-being (see Figure 2).

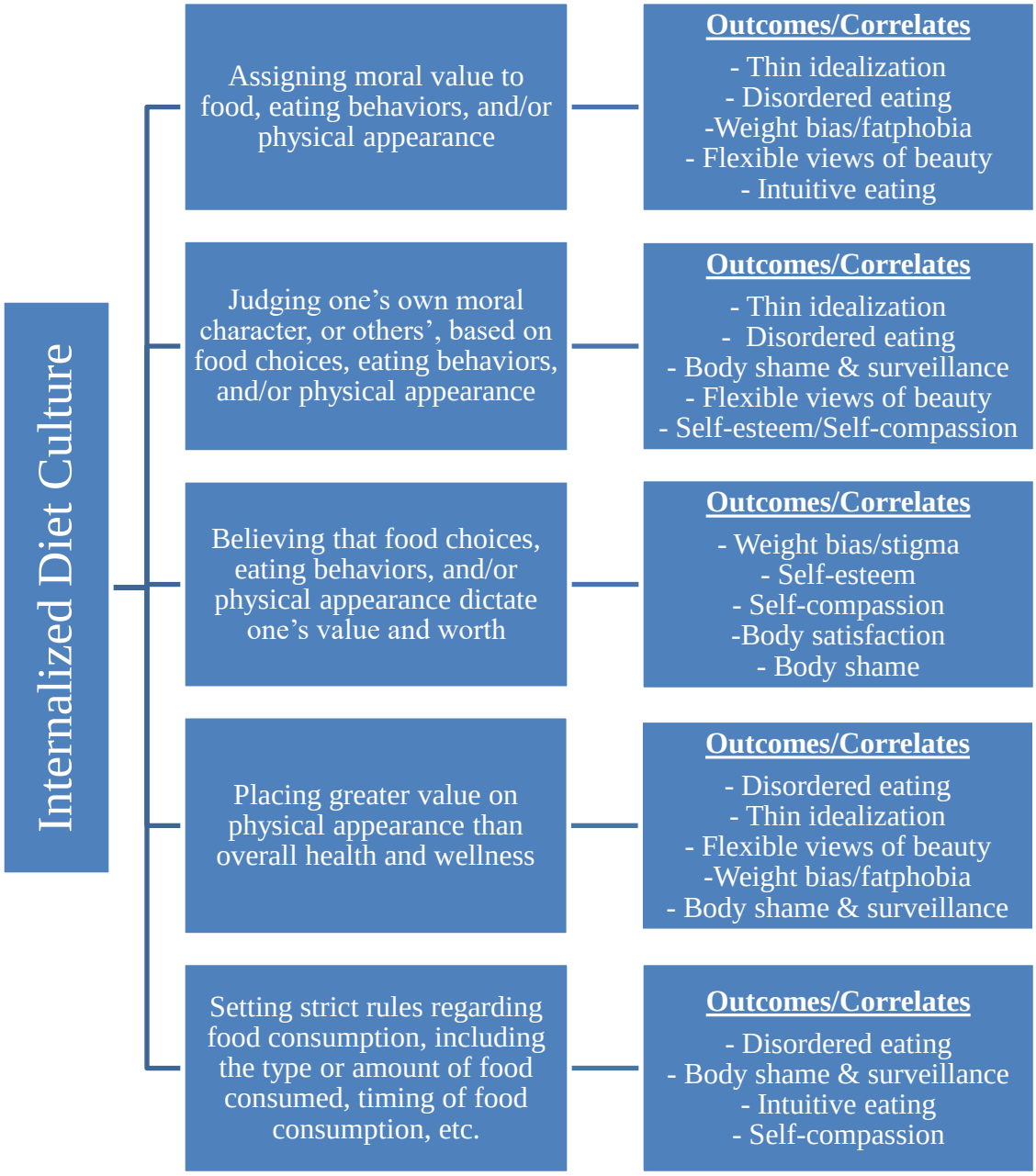


*Figure 2. Internalized Diet Culture's Initial Nomological Network*

Based on the theories outlined above and the extant empirical literature regarding other aspects of dieting, internalized diet culture was expected to predict feelings of shame regarding food choices, eating behaviors, and physical appearance, as well as an increased likelihood to experience body dissatisfaction, low self-esteem and self-compassion, and to engage in restrictive dietary behaviors or disordered eating (Ashmore et al., 2008; Bacon & Aphramor, 2011; Gagliardi, 2018; McPhail et al., 2011; Nichter & Vuckovic, 1994; Saguy & Gruys, 2010; Steptoe et al., 1995). Moreover, internalized diet culture was expected to positively correlate with fatphobia and internalized weight bias (Ashmore et al., 2008; Puhl, Moss-Racusin, & Schwartz, 2007), and engagement in self-surveillance of one's eating behaviors and physical appearance (Bartky, 1997; McKinley & Hyde, 1996). Further, internalized diet culture was anticipated to correlate negatively with flexible perceptions about what body types are attractive (Beuf, 1990; Moradi, Dirks, & Matteson, 2005; Tylka & Iannantuono, 2016).

Because internalized diet culture encompasses five dimensions, the nomological network of this construct explicitly postulates which dimensions should associate with specific outcomes and correlates. Based on currently available literature, the assignment of moral value to food, eating behaviors, and physical appearance was expected to correlate positively with disordered eating behaviors, thin idealization, fatphobia, and internalized weight bias; this subdimension was also expected to correlate negatively with intuitive eating and flexible views of beauty (Counihan, 1992; McPhail et al., 2011; Saguy & Gruys, 2010; Vartanian et al., 2007).

Assigning morality to oneself and others based on food choices, eating behaviors, and physical appearance was expected to relate negatively to flexible views of beauty,

body satisfaction, self-esteem, and self-compassion, and positively to disordered eating behaviors, body shame and surveillance (Contois, 2015; Counihan, 1992; McPhail et al., 2011; Saguy & Gruys, 2010; Vartanian et al., 2007). The belief that food choices, eating behaviors, and physical appearance dictate one's value and worth was expected to relate positively to weight bias, body shame and dissatisfaction, and negatively to self-esteem and self-compassion (Anthony et al., 2007; Bacon & Aphramor, 2011; Gagliardi, 2018; Lieberman, Gauvin, Bukowski, & White, 2001; Vartanian et al., 2007).

Believing that physical appearance is more important than overall health and wellness was expected to relate negatively to flexible views of beauty, as well as positively to disordered eating behaviors, thin idealization, weight bias, and body shame and surveillance (Bacon & Aphramor, 2011; Counihan, 1992; Gagliardi, 2018; Hayes & Ross, 1987; Lieberman et al., 2001; Saguy & Gruys, 2010; Vartanian et al., 2007). Finally, individuals who adhere to strict rules regarding food consumption were expected to report higher rates of disordered eating behaviors, body shame and surveillance, and lower rates of intuitive eating, self-compassion, and self-esteem (Abrams, Allen, & Gray, 1993; Kalb, 2000; Vartanian et al., 2007).

Notably, there is substantial research documenting differential food choices, eating behaviors, and body appearance preferences based on gender, socioeconomic status, race, level of acculturation, individualism, impulsivity, and food availability (Abrams et al., 1993; Bailey, 2006; Ball & Kenardy, 2002; Cavazza, Guidetti, & Butera, 2015; Counihan, 1992; Gagliardi, 2018; Hermans et al., 2013; Rothblum, 2011). Thus, these constructs are included in the nomological net as moderators, as they are likely to influence variance in individuals' degree and presentation of internalized diet culture.

# CHAPTER 3: MEASUREMENT DEVELOPMENT PROCESS

## Phase 1: Item Development and Content Validation

To develop a standardized system of measurement for internalized diet culture, potential items for each of the five dimensions were initially generated by using the rational-deductive approach. This approach involved writing items that logically reflect the construct based on its verbal conceptualization, as well as examining item content from highly related concepts (Hinkin, Tracey, & Enz, 1997; Ruscio, 2014; Schwab, 1980). As recommended by Clark and Watson (1995), items were generated until a comprehensive and exhaustive pool that assessed each subdomain of internalized diet culture was developed. Moreover, items were generated to avoid "double-barreling" and other complex structuring, while ensuring that simplified, comprehensive language was used to be accessible to a variety of demographic groups (Clark & Watson, 1995; Schaefer et al., 2015).

This process resulted in 125 initial items. To begin the evaluation of these items, content validity and clarity were assessed. Content validity refers to the extent to which the developed items are inferred by experts to be a representative sample of the universe of indicators of the intended, theorized construct (Hughes, 2018), in this case, internalized diet culture. The assessment of content validity is vital because a single standardized system of measurement cannot assess all potential manifestations of a construct. Thus, the items generated reflect a *sample* of possible manifestations. The adequacy of that sample, in terms of how well it represents the intended construct domain, must be evaluated in terms of relevancy, contamination, and deficiency (Hughes, 2018; Messick, 1989). To do so, subject matter experts (SMEs) assist in determining item

relevancy by systematically assessing the degree to which items are reflective of the entire construct conceptualization space. During this assessment, items that are related to a construct that is different from the intended, focal construct are flagged for contamination. Moreover, items are examined in aggregate to determine if elements of the construct domain are not captured, suggesting an issue of deficiency (Hughes, 2018; Messick, 1989).

Thus, to assess content validity, SMEs (i.e., six doctoral students with prior training and experience in measure development and validation) reviewed the pool of 125 items to evaluate their perceived relevancy to the construct (based on the definition provided) and potential contamination. SMEs were provided with a content evaluation form (see Appendix A), which delineated the purpose of the activity and provided instructions for completion. Prior to viewing any items, the participating SMEs were instructed to read a brief summary of the internalized diet culture construct including a formal definition and descriptions of each of its five dimensions. To assess the extent to which the item pool adequately sampled behaviors from each domain, SMEs were asked to rate each item's relevancy to the specified domain using a 3-point scale (0 = No; 1 = Maybe; 2 = Yes). Next, SMEs were asked to indicate if any items were difficult to read or understand. To retain an item, its average rating of relevancy had to be greater than 1.0 (out of 2.0). Four items with a relevancy rating of 0.5 or less were removed. Further, five items were reworded based on SMEs' feedback to enhance item clarity.

While this process allowed for the assessment of measurement relevancy and potential contamination, it did not allow for the examination of measurement deficiency. Thus, after removing the four items that failed to meet inclusion criteria, the remaining

items were resubmitted to the SMEs. This time the SMEs were asked to evaluate the items as a group, focusing on aspects of the construct definition that were not covered by the item pool (see Appendix B for content deficiency form). Collectively, the SMEs did not identify areas of construct deficiency; thus, the pilot version of the Internalized Diet Culture Scale included the 121 items that were retained following this content validation phase.

## Phase 2: Initial Item Testing

The aim of this phase of the study was to examine the functioning of the 121 items included in the pilot version of the Internalized Diet Culture Scale (IDCS). In line with standard procedures for evaluating the quality of items (Clark & Watson, 1995; Crocker & Algina, 2008; Hughes, 2018), items were evaluated in terms of their endorsement rate (i.e., mean), variability (i.e., standard deviation), item discrimination (i.e., corrected item-total correlations), and item-level internal consistency (i.e., item-corrected alphas). Collectively, the results from these analyses are used to establish a pattern of evidence as to which items should be removed from a future version of the IDCS.

The endorsement rate, sometimes referred to as the item difficulty, reflects the items' "extremity" and is examined by calculating the mean response value to that item (Clark & Watson, 1995; Crocker & Algina, 2008). Given a five-point Likert-type scale, a moderately endorsed item should have an approximate mean value of 3.0, suggesting that the item is reasonably relevant for most people (i.e., the statement is not so extreme that few are willing to endorse, or so common that everyone endorses). Items that are too extreme will show very low or very high mean values. Extreme endorsement rates can

also impact item variability (i.e., floor or ceiling effects cause restriction in range). Variability is assessed by calculating the standard deviation for each item, and standard deviations around 1.0 are ideal for items assessed on a five-point, Likert-type scale (Crocker & Algina, 2008; Whitley & Kite, 2013). Sufficient variability in item responses is essential because items with low variability convey very little information about differences among the respondents. Moreover, items with restricted variability are less able to correlate with other scale items, thus negatively impacting subsequent item and structural analyses (Clark & Watson, 1995).

Next, item discrimination was examined to determine how well each individual item discriminates between individuals with high versus low levels of the theorized construct. The item discrimination index is estimated by calculating the correlation between a specific item score and the aggregate score of the remaining items (i.e., excluding that specific item). In this way, the "total score" is used as a proxy for differences on the construct (the assumption being that as a group, the items have been deemed content valid). Thus, the magnitude of the correlation between the item and the total score provides an index of the strength of that item to discriminate between individuals at various levels on the construct.

Finally, an item level assessment of internal consistency was calculated to identify the degree to which the items on the scale are homogenous; that is, the degree to which the pool of items reflect the same source (or sources) of variance (Boateng, Neilands, Frongillo, Melgar-Quiñonez, & Young, 2018; Slaney, 2017). Item level internal consistency is determined by comparing the Cronbach's alpha (α) of the entire set of items to a "corrected" α that would result if the specific item in question was removed. If

the corrected α is substantially higher than the aggregate α, the item is likely measuring a different source of systematic variance than the remaining pool of items and should be removed.

After completing the initial item analyses, the factor structure of the remaining items is explored. Generally, factor analyses examine the variance structure underlying a set of items and empirically partitions that variance into common factors (DeVellis, 2003). Specifically, if a standardized system of measurement is assessing multiple common sources of systematic variance, a factor analysis will identify multiple factors and determine the degree to which each individual item is related to those various factors. In addition to item analyses, factor analyses enable information to be condensed so that variance on the intended construct can be sufficiently captured using less items. Thus, items that do not empirically explain additional construct variation can be removed to decrease the length of the measure (DeVellis, 2003). Moreover, results from exploratory factor analyses (EFA; i.e., factor analyses that do not have a predetermined number of factors) can be used to meaningfully define the underlying latent variable (DeVellis, 2003). Specifically, items that are grouped together in the EFA results can be reviewed to identify similar themes being captured by those items and generate factor labels.

## Method

### Participants

The pilot version of the IDCS was completed by 644 undergraduate students at the University of North Carolina at Charlotte (UNCC), exceeding the minimum requirement of 200 participants to conduct factor analyses (Yong & Pearce, 2013). Participants accessed the study through SONA, UNCC's online research recruitment

system. There were no exclusion criteria for this phase of the study and no demographic data were collected. Students enrolled in a general psychology course received 0.5 SONA credits for their participation.

### Procedure

The pilot version of the IDCS was presented using Qualtrics, an online data collection software. Students used their SONA account to access the Qualtrics link. Once participants accessed the study page within Qualtrics, they were provided with consent information and asked to electronically indicate their consent. Participants then completed the survey. Given the substantial length of this pilot measure, Qualtrics settings were adjusted to administer items in a random order.

## Results

Before beginning item analyses, data cleaning was conducted to ensure all responses were within a valid range (i.e., between 1-5, given the possible response range). Next, the variability in participants' responses was examined; six participants were removed for selecting the same response option for every item. Moreover, 39 participants had more than 3% missing data and were also removed (Van den Broeck, Cunningham, Eeckels, & Herbst, 2005). Subsequent analyses were completed with data from the 599 remaining participants.

### Item-level Analyses

As previously described, each item in the initial pool was evaluated in terms of its endorsement rate (i.e., mean), variability (i.e., standard deviation), item discrimination (corrected item-total correlations), and item level internal consistency (item-corrected alphas; see Table 1 in Appendix D for item-level descriptive statistics). Using somewhat

less conservative cutoffs (Glanz, Rimer, & Viswanath, 2015; Raykov & Marcoulides, 2011), any item with an endorsement rate outside of 2.0 – 4.0 was removed. Specifically, three items with an endorsement rate less than 2.0 and one item with an endorsement rate higher than 4.0 were removed. Next, six items with a standard deviation less than 0.9 were removed (Whitley & Kite, 2013).

Using SPSS's reliability analysis procedure to examine corrected item-total correlations, items with negative correlations and correlations less than 0.2 were removed (Clark & Watson, 1995). This criterion resulted in the removal of seven additional items. Finally, an item-level assessment of internal consistency was conducted. The overall Cronbach's alpha for the initial, 121-item version of the IDCS was 0.964. There were no items that substantially decreased Cronbach's alpha; thus, the remaining 104 items were retained for subsequent analyses.

**Exploratory Factor Analyses**

To examine the underlying factor structure of the remaining 104 items and to determine if additional item exclusion was warranted, a series of exploratory factor analyses (EFAs) were conducted using a maximum likelihood (ML) extraction technique. ML allows for the calculation of a wide array of goodness of fit indexes, confidence intervals, and significance testing of factor loadings and factor correlations; it is the generally preferred model-fitting procedure for social science data (Cudeck & O'Dell, 1994; Fabrigar, Wegener, MacCallum, & Strahan, 1999). Furthermore, given the construct conceptualization and the anticipated correlation between various dimensions of internalized diet culture, an oblique rotation method, which allows factors to correlate,

was selected (Fabrigar et al., 1999). SPSS version 26.0 (SPSS, Inc., Chicago, IL) was used to conduct the EFAs.

Multiple criteria were used to determine the appropriate number of scale factors. Starting with the most liberal criterion, eigenvalues were evaluated; eigenvalues represent how much information is captured by a single factor (DeVellis, 2003). According to the Kaiser-Guttman criteria, the upper bound of the number of factors is determined by the number of eigenvalues that are greater than or equal to 1.0 (DeVellis, 2003; Guttman, 1954; Kaiser, 1960). Thirteen eigenvalues above 1.0 emerged, suggesting a maximum of 13 possible factors. Notably, it is widely recognized that this criterion often over-estimates the number of factors.

Next, the scree plot was examined. Since each new factor in a factor analysis is extracted using the residual information that was not captured in the previous factor, a scree plot can be used to determine the amount of information captured by each successive factor (DeVellis, 2003; Floyd & Widaman, 1995). Using Cattell's (1966) scree test, the scree plot was examined to identify the "elbow" or inflexion point. Only factors to the left of the elbow are considered substantial in terms of the amount of information they contain. Two inflection points were identified at the third and sixth factor, suggesting a structure of 3-6 factors may be appropriate.

Given these criteria, as well as the conceptualization of internalized diet culture as a five-dimensional construct, four EFAs were conducted to identify the best fitting factor structure; specifically, a three-factor, four-factor, five-factor, and six-factor model were specified and compared. Within each model, individual items were assessed in terms of their factor loading. Factor loadings are values that reflect the relationship between each

item (i.e., observed variable or manifest indicator) and an underlying factor (i.e., unobserved construct) (Yong & Pearce, 2013). Poor items are identified as those with a primary factor loading lower than .30, suggesting that they are not substantially related to any of the identified factors (Tabachnick, Fidell, & Ullman, 2007; Yong & Pearce, 2013). Further, poor items may be cross-loaded (i.e., items with a secondary factor loading higher than .30, or with less than a .20 difference between their primary and secondary factor loadings, suggesting that they substantially load onto more than one factor) (Schaefer et al., 2015).

Based on these considerations, the six-factor model did not demonstrate an acceptable solution, as an insufficient number of items independently loaded onto the sixth factor. Both the three- and four-factor models were also rejected after failing to demonstrate reasonable solutions. Specifically, for both models there were a substantial number of items that did not demonstrate a salient loading on any of the factors, as well as a large number of items that cross-loaded. Further, even after removing items that failed to load or that were cross-loaded, the remaining items defining each factor did not align conceptually. Thus, the three-, four-, and six-factor models were rejected because they did not achieve a simple factor structure.

The five-factor model was accepted as the most empirically and conceptually sound. Of the 104 items retained after the initial item testing, 12 items were removed from the five-factor model for failing to load on a distinct factor; additionally, 30 items were removed due to cross-loading (see Table 1 in Appendix D for the factor loadings of the retained items). After identifying the final set of 62 items, corrected item-total correlations and item-level internal consistency were reassessed. Corrected item-total

correlations ranged from .22 to .62, exceeding the minimum .2 requirement (Clark & Watson, 1995). The overall Cronbach's alpha for the 62-item version of the IDCS was 0.946. There were no items that substantially decreased Cronbach's alpha; thus, all 62 items were retained for further analysis (see Table 1).

For each factor, the items that loaded onto that factor were then examined to identify a common theme and generate a factor label. Thirteen items loaded onto Factor 1 (items 24, 27, 28, 49, 56, 57, 58, 59, 60, 67, 69, 70). Collectively, these items were reflective of the tendency to judge one's own moral character based on one's diet, eating behaviors, or physical appearance; this factor was labeled *Judgment of Self.* Eleven items loaded onto Factor 2 (items 31, 32, 33, 41, 43, 53, 54, 55, 63, 64, 65). These items reflected the tendency to judge others' moral character based on diet, eating behaviors, or physical appearance; this factor was labeled *Judgment of Others*. Thirteen items loaded onto Factor 3 (items 80, 81, 83, 84, 86, 88, 89, 93, 94, 96, 97, 99, 102). These items were reflective of the tendency to place greater value or importance on physical appearance as compared to overall health and wellness; this factor was labeled *Overvaluing Physical Appearance*. Twelve items loaded onto Factor 4 (items 2, 3, 4, 5, 10, 14, 16, 21, 29, 34, 35, 46). These items reflected the tendency to espouse strict (i.e., extreme or inflexible) beliefs regarding acceptable food consumption, eating behaviors, and physical activity; this factor was labeled *Strictness of Beliefs.* Finally, 13 items loaded onto Factor 5 (items 25, 105, 106, 107, 108, 109, 110, 112, 113, 114, 117, 119, 121). Collectively, these items reflected the tendency to set strict rules regarding one's own food consumption and eating behaviors; this factor was labeled *Strictness of Behavior*.

## Discussion

The purpose of these first two phases of the study was to begin the process of developing a valid measure of internalized diet culture (IDC). This process began with the development of 125 items that represented five hypothesized dimensions of IDC. After the removal of poorly functioning items, five major themes emerged from the exploratory factor analyses (EFA): Judgment of Self, Judgment of Others, Overvaluing Physical Appearance, Strictness of Beliefs, and Strictness of Behaviors. The content of these themes is largely similar to the initially hypothesized dimensions; however, a few changes to the proposed model were empirically required. Figure 3 presents the revised model based on these empirical findings.

As expected, five factors did emerge, but the exact projection of those factors was slightly different than hypothesized. Two of the initially hypothesized dimensions did emerge as expected from the EFA. Specifically, the Overvaluing Physical Appearance factor reflects the hypothesized subdimension 4, which is defined *as placing greater value on physical appearance than overall health and wellness.* Further, the Strictness of Behavior factor largely reflects subdimension 5; the definition of this dimension was slightly altered to *setting strict (i.e., extreme or inflexible) rules regarding* "one's own" *food consumption*, to better reflect the nature of the items defining this factor (i.e., the strictness is directed at oneself; not others).

The three remaining factors identified through the EFA differed slightly from the hypothesized model. The factor labeled Strictness of Beliefs included aspects of hypothesized subdimensions 1 and 3, and is thus defined as *espousing strict (i.e., extreme or inflexible) beliefs about what constitutes acceptable eating and exercising behaviors*.

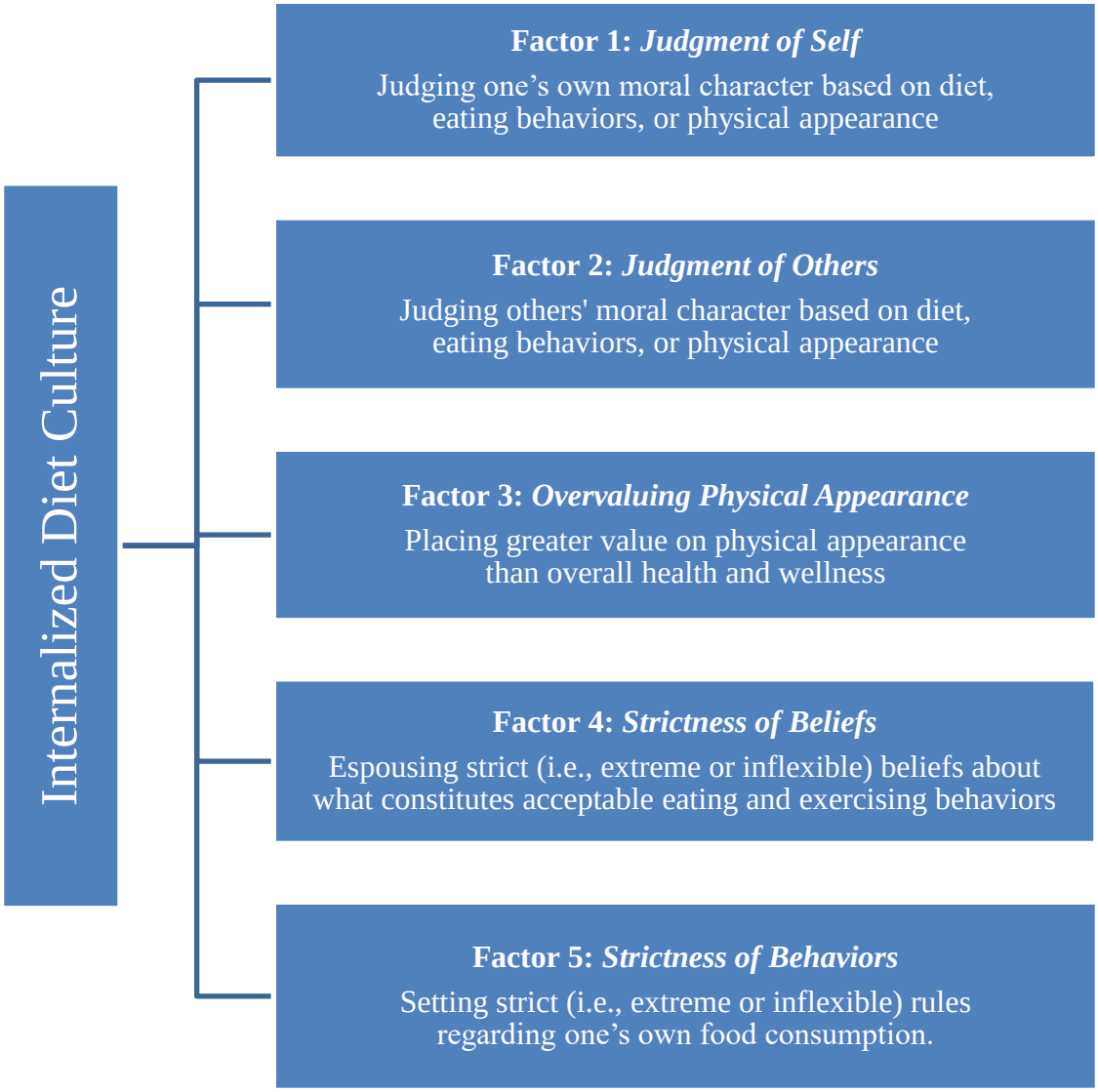


*Figure 3. Revised Model of Internalized Diet Culture*

Subdimension 2 split into two separate factors; one factor reflecting judgments made about the self, while the second factor reflects judgments made about other people. Thus, the Judgment of Self factor is defined as *judging one's own moral character based on diet, eating behaviors, or physical appearance*. The Judgment of Others factor is

defined as *judging others' moral character based on diet, eating behaviors, or physical appearance*.

The results of these first two phases provide a sound basis for further refinement of the item pool and validation of a standardized measure of IDC. The conceptual model was largely supported, with only minor revisions to the exact projection of the factors. However, as these initial studies are exploratory by nature, a second study was conducted to confirm the factor structure identified in this study and examine patterns of relations with external variables to evaluate validity inferences.

# CHAPTER 4: VALIDATION PROCESS

The aim of this study is to (a) replicate the results from the item analyses in the previous study, and (b) to examine how well the measurement device as a whole functions vis a vis its expected pattern of relations with other variables. Specifically, this study examines the measurement model underlying the pool of items on the beta version of the Internalized Diet Culture Scale (IDCS) and assesses initial construct validity inferences. Validation analyses allow one to determine if the specific sample of behaviors captured by the measurement device accurately portrays real differences in the theorized construct onto an appropriate numerical scale, rather than capturing irrelevant systematic variance (Messick, 1989, 1995). Said differently, the assessment of construct validity is a test of how confident one can be in the accuracy of our inferences that individuals with higher scores on the IDCS actually have higher levels of internalized diet culture, as compared to those with lower scores.

Because no single test can confirm what a measurement device actually measures, construct validity is determined based on a pattern of correlational evidence (Messick, 1989; Slaney, 2017). Thus, to accumulate evidence of construct validity, a series of analyses were completed using data from a new sample. In addition to the assessment of content validity (previously described in Chapter 3), the most common sources of construct validity evidence are ascertained via confirmatory factor analyses and the assessment of convergent and discriminant analyses (Campbell & Fiske, 1959; Slaney, 2017).

Like exploratory factor analyses (EFAs), the general purpose of confirmatory factor analyses (CFAs) is to determine the number of factors underlying a proposed

model, as well as the degree to which each item within the measurement device is related to the identified factors. However, whereas EFAs use data to generate a model, CFA involve fitting a predetermined model to new data. Therefore, unlike EFAs, a CFA should not be conducted unless a predetermined number of factors anticipated to underlie the model is established and there are a set of hypotheses regarding how each manifest indicator within the measurement model will relate to each latent variable (DeVellis, 2003). Establishing a theoretically driven model prior to conducting CFAs allows for formal hypothesis testing and reduces the likelihood of successfully identifying a model that fits the data due to chance (Reis & Judd, 2000). Further, CFAs provide several goodness-of-fit indices, which allow for a more objective determination regarding the appropriateness of the model. These goodness-of-fit indices can also be used to identify the final set of items that should be included in the model, as items can be evaluated in terms of their impact on the fit indices, as well as their factor loadings. Therefore, CFAs are considered stronger, more stringent, tests than EFAs. Thus, during this phase of the study, a CFA was conducted to confirm the theorized and empirically driven factor structure generated during the initial item testing and exploratory factor analysis phase.

In addition to the evidence obtained via the CFA, the relationships between scores on the IDCS and measures of external variables, which are theorized to relate to internalized diet culture, were assessed in order to further establish construct validity (Messick, 1995). To select these external variables, it is necessary to have a clear, precise, and thorough theory of the intended construct and its nomological network. Thus, in the current study, internalized diet culture's nomological network (as delineated in Chapter 2), was used to identify other constructs to assess in order to establish

evidence of validity. Specifically, measures of variables that are theorized to be proximal correlates and outcomes of internalized diet culture were included in Study 2. To the extent that scores on these measures correlate with scores on the IDCS in the expected direction and to the expected magnitude, evidence of convergent validity is established. Moreover, constructs that are theorized as being conceptually distinct and unrelated to internalized diet culture were also assessed. Evidence of discriminant validity is established if scores on the IDCS correlate weakly with measures of these theoretically divergent constructs (Messick, 1995). Collectively, results from these various analyses are combined to support claims of the validity of the IDCS.

Given extant literature, hypotheses regarding the relationships between scores on the nomological network measures and the IDCS total score were generated. Scores on the IDCS were hypothesized to exhibit medium to large positive associations with measures of disordered eating behaviors, thin idealization, and body surveillance. Small to medium positive associations were anticipated between scores on the IDCS and measures of weight bias internalization, fatphobia, and body shame. In addition, medium to large negative associations were hypothesized between scores on the IDCS and intuitive eating scores. Small to medium negative associations were expected between scores on the IDCS and measures of body satisfaction, flexible views of beauty, self-compassion, and self-esteem. Finally, scores on the IDCS were expected to exhibit a small association with a measure of social desirability, suggesting evidence of discriminant validity.

Hypotheses regarding the anticipated relationships with the IDCS facet scores were also assessed. The Judgment of Self subscale was expected to show medium to

large positive associations with measures of thin idealization and body surveillance; small to medium positive associations with measures of disordered eating behaviors, weight bias internalization, and body shame; medium to large negative associations with measures of intuitive eating and self-compassion; small to medium negative associations with measures of body satisfaction, flexible views of beauty, and self-esteem.

The Judgment of Others subscale was hypothesized to exhibit medium to large positive associations with measures of thin idealization and fatphobia, as well as a medium to large negative association with scores on the flexible views of beauty measure.

The Overvaluing Physical Appearance subscale was hypothesized to exhibit medium to large positive associations with measures of thin idealization and fatphobia; small to medium positive associations with measures of disordered eating behaviors, weight bias internalization, body shame, and body surveillance; medium to large negative associations with measures of intuitive eating and flexible views of beauty; small to medium negative associations with measures of body satisfaction and self-compassion.

The Strictness of Beliefs subscale was hypothesized to exhibit medium to large positive associations with measures of thin ideal internalization and fatphobia; small to medium positive associations with measures of disordered eating behaviors and body shame; medium to large negative associations with measures of intuitive eating and flexible views of beauty; and a small to medium association with scores on the measure of self-compassion.

Finally, the Strictness of Behaviors subscale were hypothesized to exhibit medium to large positive associations with measures of disordered eating and body

surveillance; a small to medium positive association with body shame scores; a medium to large negative association with intuitive eating scores; and a small to medium negative association with self-compassion scores. All IDCS subscale scores were expected to exhibit a small association with social desirability scores, suggesting evidence of discriminant validity.

## Method

### Participants

Two different recruitment methods were used to ascertain the sample for this study. First, participants were recruited through UNCC's online research recruitment system, SONA. Undergraduate students recruited through SONA received 1.0 research credit in their general psychology course for their participation.

A second group of participants were recruited through Amazon's Mechanical Turk (MTurk). MTurk is a crowdsourcing recruitment website that can be accessed by the U.S. national population (Buhrmester, Kwang, & Gosling, 2011). Crowdsourcing is becoming an increasingly popular trend within psychological research because it enables the recruitment of larger and more diverse samples through online data collection (Harms & DeSimone, 2015). Crowdsourcing systems, such as MTurk, facilitate the recruitment of members of the lay public to complete online research studies and receive monetary compensation. Research on crowdsourcing shows that this recruitment strategy increases researchers' access to more nationally diverse and representative samples (Buhrmester et al., 2011). Specific to MTurk, participants recruited through this system are typically shown to be more nationally representative than standard university samples or other samples obtained through online platforms (Buhrmester et al., 2011; Roulin, 2015).

A minimum of 200 participants needed to be recruited to ensure sufficient power for conducting a confirmatory factor analysis (Myers, Ahn, & Jin, 2011; Yong & Pearce, 2013). Participants were excluded from participation if they lived in North America for less than five years because existing research relevant to diet culture is largely limited to Westernized samples. In addition, participants needed to be at least 18 years old and English-speaking to be considered for participation.

**Measures**

**Internalized Diet Culture.** The 62-item version of the Internalized Diet Culture Scale (IDCS) developed in study 1 was used (see Appendix E). As a whole, the measurement device assesses the degree to which participants have accepted broader cultural beliefs regarding appropriate or morally ideal eating and exercising behaviors, and physical appearance standards, as their own personal beliefs and standards. Consistent with Study 1 EFA results, the IDCS contained 5 subscales: 1) Judgment of Self, 2) Judgment of Others, 3) Overvaluing Physical Appearance, 4) Strictness of Beliefs, and 5) Strictness of Behaviors. All items are assessed on a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Average subscale scores, as well as an average global score will be calculated, with higher scores indicating higher levels of internalization.

**Disordered Eating Behaviors.** The Eating Disorder Examination-Questionnaire (EDE-Q; Fairburn & Beglin, 1994) assesses participants' engagement in disordered eating behaviors over the previous 28 days. This 28-item measure includes four subscales: 1) Restraint; 2) Eating Concern; 3) Shape Concern; and 4) Weight Concern. All items are assessed using Likert-type response scales. Four subscales scores are

calculated, as well as a global score of disordered eating symptomology, with higher scores indicating higher symptomology and concern. The EDE-Q has been shown to have good psychometric properties, including internal consistency and predictive, concurrent, and criterion validity, across clinical and non-clinical samples, as well as male and female samples (Jennings & Phillips, 2017; Lavender, De Young, & Anderson, 2010; Mond, Hay, Rodgers, Owen, & Beumont, 2004; Reas, Øverås, & Rø, 2012).

**Intuitive Eating.** The Intuitive Eating Scale—2 (IES-2; Tylka & Kroon Van Diest, 2013) was used to assess participants' tendency to follow their body's natural hunger and satiety signals to guide their eating behaviors. This measure includes 23 items rated on a 5-point, Likert-type scale. Responses range from 1 (strongly disagree) to 5 (strongly agree). After reverse scoring 7 items, an average Intuitive Eating score is calculated, with higher scores indicating more frequent engagement in intuitive eating. The IES-2 has been shown to have good psychometric properties, including evidence of convergent, discriminant, and incremental validity, as well as strong internal consistency, in both male and female samples (Tylka & Kroon Van Diest, 2013).

**Thin Idealization.** Two subscales from the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-4; Schaefer et al., 2015) were included to assess the degree to which participants have internalized appearance-related cultural ideals. Specifically, the Thin/Low Body Fat Internalization and Muscular/Athletic Internalization subscales were used. These subscales include 10 items measured on a five-point, Likert-type scale. Responses range from 1 (definitely disagree) to 5 (definitely agree). An overall average score is calculated, with higher scores indicating a greater degree of internalized thin idealization. The SATAQ-4 has been shown to have

acceptable psychometric properties, including convergent validity and reliability, in both males and females samples from multiple Westernized countries (Rodgers et al., 2016; Schaefer et al., 2015; Yamamiya et al., 2016).

**Weight Bias Internalization.** The Modified Weight Bias Internalization Scale (MWBIS; Pearl & Puhl, 2014) was used to examine the degree to which individuals have internalized weight-based stereotypes and expectations, and judge themselves based on their body weight or size. The measure includes 11 items rated on a 7-point, Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). After reverse-scoring two items, a total score is calculated, with higher scores indicating a greater degree of internalized weight stigma. While the majority of measures assessing internalized weight stigma are only validated among individuals classified as overweight or obese using the Centers for Disease Control and Prevention's body mass index (BMI) criteria, or who perceive themselves to be overweight or obese, this modified version of the Weight Bias Internalization Scale (Durso & Latner, 2008) has been adapted to assess internalized weight stigma irrespective of one's weight status. The MWBIS has been shown to have good psychometric properties, including high internal consistency and construct validity, as well as good convergent and discriminant validity, across a range of body weights and with both male and female samples (Pearl & Puhl, 2014).

**Fatphobia.** The Anti-fat Attitudes Questionnaire (AFA; Crandall, 1994) was used to assess participants' fatphobia, or prejudice against fat people. This 13-item measure consists of three subscales: 1) Dislike (of fat people); 2) Fear of Fat (i.e., fear of becoming fat); and 3) Willpower (i.e., beliefs about the controllability of weight). Each item is measured on a nine-point Likert-type scale, ranging from 1 (very strongly

disagree) to 9 (very strongly agree). A total score and subscale scores are calculated, with higher scores indicating stronger anti-fat attitudes. The AFA has been shown to exhibit excellent internal consistency (Crandall, 1994; Himmelstein & Tomiyama, 2015; O'Brien, Hunter, Halberstadt, & Anderson, 2007), as well as good convergent and discriminant validity (Crandall, 1994).

**Body Shame.** The body shame subscale of the Objectified Body Consciousness Scale (OBC-Shame; McKinley & Hyde, 1996) was included to assess participants' experience of shame for believing they have failed to achieve cultural standards of beauty. This subscale includes eight items rated on a 7-point, Likert-type response scale ranging from 1 (strongly disagree) to 7 (strongly agree). An average score is calculated with higher scores indicating greater experience of body shame. The OBC-Shame subscale has been shown to have good psychometric properties, including moderate to high internal consistency across diverse demographic samples (Himmelstein & Tomiyama, 2015; McKinley & Hyde, 1996), as well as good test-retest reliability and construct validity (McKinley & Hyde, 1996).

**Body Surveillance.** Participants' tendency to engage in body surveillance (i.e., to view their body from an external standpoint) was measured using the body surveillance subscale of the Objectified Body Consciousness Scale (OBC-Surveillance; McKinley & Hyde, 1996). This subscale consists of eight items measured on a 7-point, Likert-type response scale. Response options range from 1 (strongly disagree) to 7 (strongly agree). An average score is calculated with higher scores indicating greater frequency of body surveillance. The OBC-Surveillance subscale has been shown to have excellent

psychometric properties, including high internal consistency, good test-retest reliability, and high convergent and discriminant validity (McKinley & Hyde, 1996).

**Body Satisfaction.** The Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation Subscale (MBSRQ-AE; Cash, 2000; 2016) was used to assess participants' level of satisfaction with their physical appearance. This seven-item scale is measured using a 5-point, Likert-type response scale ranging from 1 (strongly disagree) to 5 (strongly agree). After reverse-scoring two items, a total score is calculated, with higher scores indicating greater satisfaction with one's appearance. The MBSRQ-AE subscale is shown to exhibit good psychometric properties, including moderate to high internal consistency (Cash, 2000; O'Brien et al., 2007), good test-retest reliability and construct validity across diverse samples (Cash, 2000).

**Flexible View of Beauty.** A modified version of the Broad Conceptualization of Beauty Scale (BCBS; Tylka & Iannantuono, 2016) was used to assess flexibility in participants' definition of attractiveness. Beliefs about both internal attractiveness (e.g., confidence impacts attractiveness) and external beauty (e.g., variety of body shapes that are considered attractive) are assessed. To ensure that this measure was relevant for all members of the intended study population, items from the original BCBS were modified to remove words with specific gender connotations (e.g., she/her changed to they/their). This scale consists of nine items measured on a 7-point, Likert-type response scale. Response options range from 1 (strongly disagree) to 7 (strongly agree). After reverse scoring one item, an average score is calculated, with higher scores indicating greater flexibility in participants' definition of beauty. The BCBS has been shown to have

excellent internal consistency and good construct and discriminant validity (Tylka & Iannantuono, 2016; Webb, Wood-Barcalow, & Tylka, 2015).

**Self-Compassion.** Participants' tendency to practice self-compassion, or extend themselves warmth, kindness, concern, and connection during times of suffering, was measured using the short-form version of the Self-Compassion Scale (SCS; Raes, Pommier, Neff, & Van Gucht, 2011). The SCS consists of 12 items measured on a 5-point, Likert-type scale. Responses range from 1 (almost never) to 5 (almost always). After reverse scoring six items, a total self-compassion score is calculated, with higher scores indicating higher frequency of practicing self-compassion. The short form of the SCS has been shown to demonstrate psychometric properties comparable to the original SCS and is considered a valid and reliable alternative (Raes et al., 2011).

**Self-Esteem.** Participants' global self-esteem was assessed using the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). This scale consists of ten items; each item is measured on a 4-point, Likert-type scale, ranging from 1 (strongly disagree) to 4 (strongly agree). Five items are reversed for scoring; a total score is calculated with higher scores indicating higher global self-esteem. The RSES has been shown to have good psychometric properties, including strong convergent validity and test-re-test reliability (Robins, Hendin, & Trzesniewski, 2001).

**Social Desirability.** The Balanced Inventory of Desirable Responding Short Form (BIDR-16; Hart, Ritchie, Hepper, & Gebauer, 2015) was included to assess social desirability. This 16-item short form contains two subscales: 1) Self-Deceptive Enhancement (i.e., the tendency to provide honest, but overly positive responses), and 2) Impression Management (i.e., the tendency to respond in a way that is perceived to please

others). Participants respond on a 7-point, Likert-type scale, ranging from 1 (not true) to 7 (very true). Four items on each subscale are reversed for scoring and total scores for each subscale are calculated. For both subscales, higher scores indicate greater engagement in self-deceptive enhancement and impression management, respectively. This short form has been shown to retain the factor structure and strong validity and reliability properties of the full, 40-item measure (Hart et al., 2015; Paulhus, 1991).

**Demographics.** A demographics questionnaire was included to collect information about age, gender, race/ethnicity, number of years living in North America, frequency of media consumption, socioeconomic status, and educational attainment.

## Procedure

All study measures were compiled using Qualtrics (Appendix E). Participants could complete the online survey anywhere they had access to an electronic device with Internet connection. Participants recruited through UNCC and MTurk accessed the Qualtrics link through their SONA account or through the MTurk database system, respectively. Once participants accessed the study page within Qualtrics, they were provided with consent information and asked to electronically indicate their consent (separate consent forms were created for UNCC vs. MTurk participants, see Appendices F and G, respectively). Participants then completed the IDCS. Given the number of measures included in this study, Qualtrics settings were adjusted to administer the following measures in a random order: EDE-Q, IES-2, SATAQ-4, MWBIS, AFA, OBC-Shame, OBC-Surveillance, MBSRQ-AE, BCBS, SCS, RSES, and BIDR-16. Participants then provided demographic information, including age, gender, race/ethnicity, number of

years living in North America, frequency of media consumption, socioeconomic status, and educational attainment.

UNCC participants were awarded 1.0 SONA research credits for taking the survey. Students were informed that they could withdraw from participation at any time and still receive their SONA research credits. MTurk participants were paid $2.50 for completing the survey. MTurk participants were informed that they could withdraw from the study at any time, but per MTurk guidelines, withdrawing forfeited their fees.

# CHAPTER 5: VALIDATION RESULTS AND DISCUSSION

Data were collected from 361 participants. Before beginning item analyses, data cleaning was conducted to ensure that all responses were within a valid range, given the possible response range for each included measure. Next, participants' responses to the two quality check items (e.g., "If you are reading this item, select 'strongly disagree'") were examined. Forty-three participants did not select the instructed response to these items and were removed. Variability in participants' responses for each included measure was then examined; twenty-one participants were removed for insufficient variability in responses. Subsequent analyses were completed with data from the 297 remaining participants.

## Results

Participant demographics for the included sample are presented in Table 2 (Appendix H). Approximately half of the participants identified as male (55.6%)[1] and were between 18- to 24-years-old (42.1%). The sample was predominately white (74.4%) and not of Hispanic, Latino, or Spanish origin (87.5%). Over 85% of the sample had at least some college education and 71.3% indicated that they were at, or slightly above, their ideal body size.

### Item-level Analyses

In line with best practices for developing a new standardized system of measurement for a psychological construct, item analyses that were conducted with the beta version of the IDCS were replicated (Clark & Watson, 1995; DeVellis, 2003). As

[1] A broad spectrum of gender identities was available for participants to select; participants in this study only selected Male or Female.

previously described, items were assessed in terms of their endorsement rate (i.e., mean), variability (i.e., standard deviation; SD), item discrimination (item-total correlations), and item-level internal consistency.

All items displayed moderate endorsement rates (i.e., means between 2.0 and 4.0, given the 5-point response scale), suggesting that floor or ceiling effects were not a concern (Clark & Watson, 1995; Whitley & Kite, 2013). Further, an examination of standard deviation indicated sufficient variability in responses; only Item 20 failed to exceed the SD $\geq$ 0.9 cutoff (Whitley & Kite, 2013) and was excluded from further analyses (see Table 3 in Appendix H for item-level statistics). Similarly, only Item 50 displayed a corrected item-total correlation ($r_{it}$) below the $r_{it} \geq 0.2$ cutoff (Clark & Watson, 1995; Whitley & Kite, 2013) and was excluded from further analyses. Finally, an item-level assessment of internal consistency was conducted. The overall Cronbach's alpha for the 60-item version of the IDCS was 0.949. There were no items that substantially impacted Cronbach's alpha; thus, the remaining 60 items were retained for subsequent analyses.

**Factor Analyses**

A confirmatory factor analysis (CFA) was conducted in SPSS AMOS version 26.0 (SPSS, Inc., Chicago, IL) to confirm the underlying factor structure of the IDCS that was previously identified in Study 1. Only participants with complete data on the IDCS items were included in the CFA ($n$ = 282). In line with best practices for evaluating how well a predetermined factor model fits empirical data, the following fit indices were examined: the minimum discrepancy per degrees of freedom ($\chi^2$/df), the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI; also referred to as the Non-normed Fit Index),

and the Root Mean Square Error of Approximation (RMSEA) (Hooper, Coughlan, & Mullen, 2008; McDonald & Ho, 2002). Specifically, the following cutoffs were used to indicate a good fitting model: $\chi^2/df < 3.0$, CFI $\geq 0.9$, TLI $\geq 0.9$, and RMSEA $\leq 0.07$ (Hooper et al., 2008; Hu & Bentler, 1999; Kline, 1998; Steiger, 2007). Upon initially testing a five-factor model, the TLI and CFI indices were well below 0.9, and the RMSEA index was substantially above .06, indicating that this model fit the empirical data poorly.

Thus, the data was examined using an exploratory factor analysis (EFA) with a five-factor model specified. Results from this EFA indicated a five-factor model that differed slightly from the model discovered in study 1. First, a "method" factor was identified. Method factors refer to items that are empirically grouped into a common factor due to methodological, as opposed to conceptual or theoretical, reasons. In the present study, all IDCS items that included the word "respect" (e.g., "I respect people who are physically fit" or "Certain food choices are more respectable than others") were grouped into a common factor. Given the lack of conceptual justification for the grouping of these six items, they were removed from further analyses.

After the removal of the "respect" items, four factors emerged from the EFA results. As previously hypothesized, the *Judgment of Self, Judgment of Others, Overvaluing Physical Appearance*, and *Strictness of Behaviors* factors emerged clearly. However, the *Strictness of Beliefs* factor did not emerge as a distinct factor. Instead, several of the items previously hypothesized to reflect *Strictness of Beliefs* loaded onto the other factors, most frequently, the *Overvaluing Physical Appearance* (OPA) factor. In evaluating the pattern of item loadings, it appears that rather than forming a *Strictness of*

*Beliefs* factor, strict beliefs may fall on multiple factors where the *content* of the belief is the critical feature. Thus, items regarding the overall importance of physical appearance loaded on the OPA factor, items regarding strict beliefs about ones' own, or others' behaviors and physical appearance loaded on Judgement of Self and Judgment of Others, respectively.

Collectively, these findings suggested that a four-factor model may better fit the empirical data. Therefore, the data were re-examined in a CFA with a four-factor model specified. With the goal of reducing the length of the measure to be less taxing for future participants, only the five items with the highest factor loadings on each of the four subscales from the EFA were included in the CFA. Specifically, the following items were included: *Judgment of Self* (items 5, 6, 10, 11, 12), *Judgment of Others* (items 17, 19, 21, 22, 23), *Overvaluing Physical Appearance* (items 25, 29, 32, 53, 55), and *Strictness* (items 39, 40, 41, 42, 48) (see Table 3 in Appendix H for factor loadings for retained items). Given the hypothesized associations between the subdimensions of IDC, the latent factors in the model were allowed to correlate (see Table 4 in Appendix H for correlations between IDCS subfactors). Because of the correlated factors, a higher order *Global Internalized Diet Culture* factor was also specified (see Figure 4). Model fit statistics confirmed that this model had acceptable fit based on the previously noted indices cutoffs ($\chi 2 = 395.22$, $\chi 2/df = 2.38$, CFI = .92, TLI = .90, RMSEA = .06).

Once the final 20 items were identified, corrected item-total correlations and internal consistency were recalculated. The $r_{it}$ results indicated adequate discrimination, with values ranging from .31 to .66 (Clark & Watson, 1995; Whitley & Kite, 2013). Cronbach's alpha was used to assess the internal consistency for each of the IDCS

subdomains. A minimum alpha of .70 was necessary to show acceptable internal consistency (Mallery & George, 2003). The overall IDCS had a Cronbach's alpha of .89, indicating good internal consistency; all subdomains also displayed good internal consistency (α's ≥ .80; see Table 5 in Appendix H).

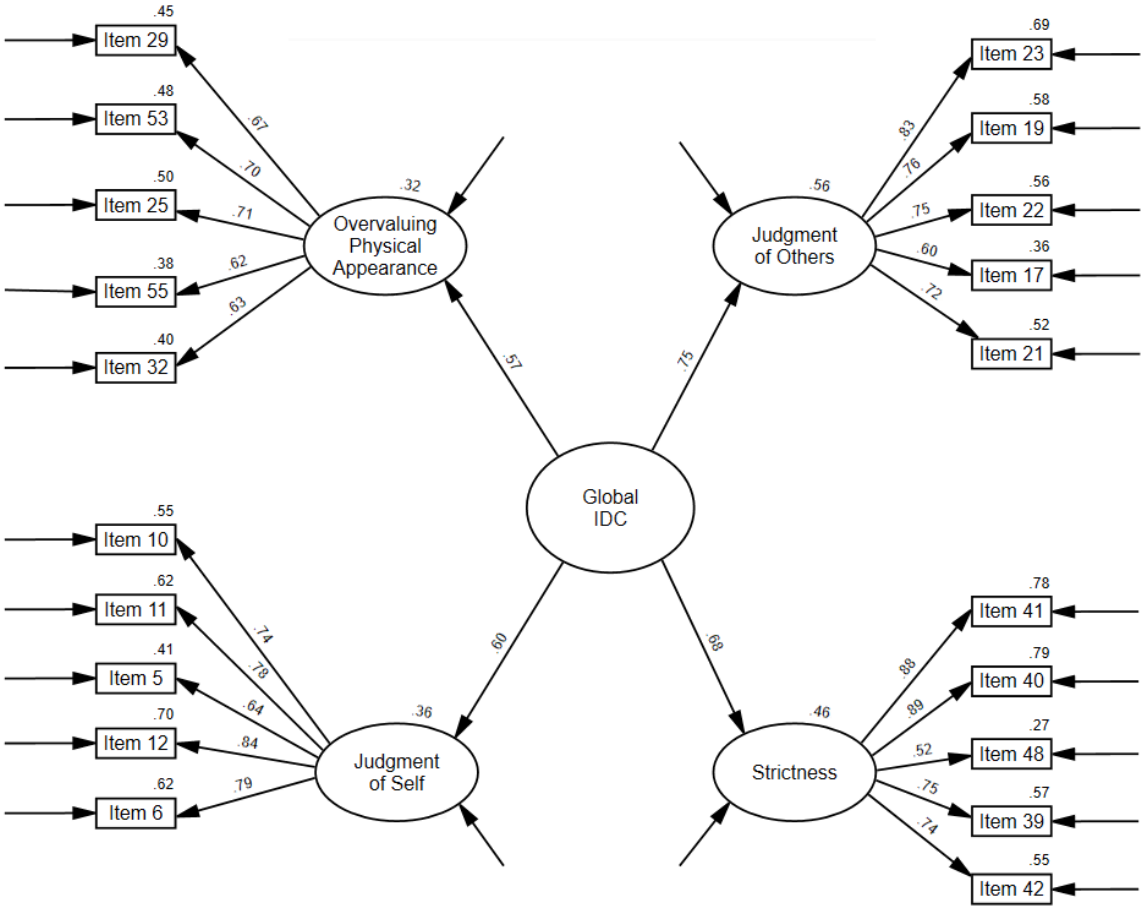


*Figure 4. Specified Confirmatory Factor Analysis Model*

**Validity Analyses**

Pearson product-moment correlation coefficients (*r*) were used to assess convergent and discriminant validity. For a full matrix of correlations between

Internalized Diet Culture subscale scores and scores on nomological network measures, see Table 5 in Appendix H.

Consistent with hypotheses, global IDCS scores exhibited medium to large positive associations with measures of disordered eating behaviors and thin idealization, as well as measures of fatphobia, weight bias internalization, and body shame (*r*'s: .38 to .64). Similarly, global IDCS scores exhibited a medium, negative correlation with intuitive eating scores ($r$ = -.38), as well as small to medium negative associations with measures of body satisfaction, flexible views of beauty, self-compassion, and self-esteem (*r*'s: -.13 to -.21).

As hypothesized, scores on the Judgment of Self subscale exhibited medium to large positive associations with measures of thin idealization and body surveillance, as well as measures of disordered eating behaviors, weight bias internalization, and body shame (*r*'s: .41 to .74). Further, medium to large negative associations were confirmed with measures of intuitive eating and self-compassion, as well as measures of body satisfaction, flexible views of beauty, and self-esteem (*r*'s: -.40 to -.59).

Consistent with hypotheses, scores on the Judgment of Others subscale displayed medium to large positive associations with measures of thin idealization and fatphobia (*r*'s: .40 and .60, respectively), as well as a small, negative association with flexible views of beauty scores ($r$ = -.20). Similarly, scores on the Overvaluing Physical Appearance (OPA) subscale exhibited medium to large positive associations with measures of thin idealization, body shame, and fatphobia (*r*'s: .36 to .48). OPA scores also displayed small to medium positive associations with measures of disordered eating behaviors, weight bias internalization, and body surveillance (*r*'s: .14 to .27), as well as

small to medium negative associations with measures of flexible views of beauty, body satisfaction, and self-compassion (*r*'s: -.11 to -.22).

Finally, scores on the Strictness subscale (previously labeled Strictness of Behaviors), exhibited medium to large positive associations with measures of disordered eating behaviors, thin ideal internalization, and fatphobia (*r*'s: .34 to .44). Strictness scores also displayed a small, positive association with body shame scores ($r = .26$) and a small, negative association with intuitive eating scores ($r = -.20$).

With the exception of the Judgment of Self subscale, the global IDCS and its subscales exhibited negligible associations with social desirability scores, providing evidence of discriminant validity.

## Discussion

The purpose of the validation phase of this dissertation was to determine the appropriate number of factors underlying the proposed model of internalized diet culture (IDC) and to provide evidence of the validity of the Internalized Diet Culture Scale (IDCS) through a series of convergent and discriminate analyses. Descriptive statistics revealed that 60 of the 62 items included in the initial IDCS had appropriate endorsement rates, variability, and item-total correlations. Collectively, these findings suggest that the items included in the IDCS are not too extreme and are reasonably relevant for most people; they show sufficient variability and can acceptably discriminate between individuals with higher versus lower levels of IDC.

The remaining 60 items were used in subsequent factor analyses, where a four-factor model was shown to best fit the data. The four factors that emerged during the factor analyses include: Judgment of Self, Judgment of Others, Overvaluing Physical

Appearance, and Strictness. Each of these factors will be discussed in greater detail in Chapter 6. Contrary to expectations, results from the CFA did not support the existence of a distinct Strictness of Beliefs factor. Notably, the Strictness of Beliefs factor was not a part of the initial conceptualization of IDC, but was added to the conceptualization following results from the exploratory factor analyses (EFAs). As previously mentioned, when compared to CFAs, EFAs are considered statistically weaker tests because there is a greater likelihood of identifying a factor structure due to chance. Thus, the model of IDC was updated to remove the Strictness of Beliefs subdimension (see Figure 5 for a revised model of IDC).

To increase usability of the IDCS and reduce the time burden on future participants, the five strongest items within each of the four identified subdimensions were entered into the CFA. The resulting 20-item measure displayed acceptable fit indices, suggesting that this model of IDC reasonably fits the data. Internal consistency values for the 20-item global IDCS and each of the four subscales were acceptable, suggesting that items included in this scale and its subscales are measuring the same sources of systematic variance (Boateng et al., 2018; Slaney, 2017).

Finally, results from correlational analyses indicated that scores on the final 20-item IDCS and its subscales displayed expected associations with measures of disordered eating, intuitive eating, thin idealization, internalized weight bias, fatphobia, body satisfaction, body shame and surveillance, self-esteem, self-compassion, flexible views of beauty, and social desirability. Collectively, the associations identified through these analyses are consistent with the proposed nomological network of IDC, providing evidence of convergent and discriminant validity.

One notable exception is the significant relationship that was identified between participants' Judgement of Self subscale scores and their social desirability scores. This finding suggests that some individuals may be susceptible to providing overly positive responses, or responses that they perceive as being pleasing to others, as a way of enhancing their own sense of social desirability. Although a nonsignificant relationship between Judgment of Self scores and social desirability scores was initially hypothesized, in hindsight this finding is not surprising given that the Judgment of Self dimension is reflective of people's tendency to judge themselves in a manner that results in feelings of guilt and shame. As guilt and shame are emotions that most individuals in Westernized populations attempt to avoid, hide, or downplay (Fisher & Exline, 2010; Fuchs, 2002; Sznycer et al., 2018), the identified relation between scores on this subdimension and social desirability scores are quite logical. Moreover, convergent and discriminant validity are established by examining a *pattern* of correlational evidence; thus, a single discrepancy among the hypothesized and actual association between Judgment of Self scores and social desirability scores does not negate the substantial evidence of the validity of the IDCS presented through these results.

# CHAPTER 6: GENERAL DISCUSSION

This dissertation documents the conceptualization and initial attempt to measure internalized diet culture (IDC). Westernized diet culture is widely discussed in mainstream media, therapeutic and clinical work, and non-academic texts, but has received little rigorous theoretical and empirical attention. The development of a theoretical model of IDC marks a substantial contribution to the literature showing that many individuals in Westernized countries are engaging in harmful eating and exercising behaviors (Adams & Leary, 2007; Goodwin et al., 2011; Homan, 2010; Loprinzi et al., 2016; McGuire, 2011; Pereira & Alvarenga, 2007), and are experiencing negative thoughts and emotions surrounding food, physical activity, and their bodies (Bartky, 1997; Brennan et al., 2010; Funk & Kennedy, 2016; Taparia & Koch, 2015; Tribolc & Rcsch, 1995).

More importantly, the focus on IDC, rather than on diet culture itself, provides a psychological explanation for how an external cultural meme can influence one's own intrapsychic thoughts, feelings and self-directed behaviors. That is, the "culture" in which humans exist must somehow "get into" the person's self-concept (Zittoun & Gillespie, 2015). Thus, the putative variable of interest to health psychologists is not diet culture itself, but the degree to which individuals internalize and identify with the ideals espoused by Western diet culture.

This is the first known study to develop a conceptualization of IDC and to delineate its nomological network. Initial evaluation of common themes in the extant literature regarding diet culture suggested a potential for five dimensions, including tendencies to: 1) attach morality to food choices, eating behaviors, and physical

appearance; 2) judge one's own, or others', moral character based on food choices, eating behaviors, and physical appearance; 3) believe that food choices, eating behaviors, or physical appearance dictate one's value or self-worth; 4) overvalue physical appearance at the expense of overall health and wellness; and 5) set strict rules regarding their food consumption. Findings from a series of factor analyses across two unique samples supported the overall substantive content of IDC's conceptualization, although refinements were made to the specific psychometric structure of these subdimensions. Specifically, the finalized model of IDC was restructured to include four subdimensions (rather than five) reflecting individual differences in: 1) judgments about one's own moral character based on diet, eating behaviors, or physical appearance, resulting in feelings of guilt or shame (*Judgment of Self*); 2) judgments about others' moral character or worthiness based on diet, eating behaviors, or physical appearance (*Judgment of Others*); 3) overemphasizing the importance of physical appearnace as an indicator of overall health and wellness (*Overvaluing Physical Appearance*); and 4) setting or following strict (i.e., extreme or inflexible) rules regarding one's own food consumption (*Strictness*). See Figure 5.

As part of the process of developing and validating an initial model of IDC, a standardized system of measurement was created to assess the degree to which individuals have internalized diet culture. Across two studies, data from subject matter experts, undergraduate students, and members of the general public were used to conduct content validity analyses, item-level analyses, and a series of factor analyses. Collectively, these analyses resulted in the 20-item Internalized Diet Culture Scale (IDCS) that assesses the overall construct space of IDC, including its four subdimensions.

A final version of the IDCS can be found in Appendix I. The IDCS demonstrated good internal consistency; both overall and within each subdimension. This finding suggests that the items included in this scale are assessing the same sources of systemic variance, which is a critical requirement of developing a standardized system of measurement (Boateng et al., 2018; Slaney, 2017).

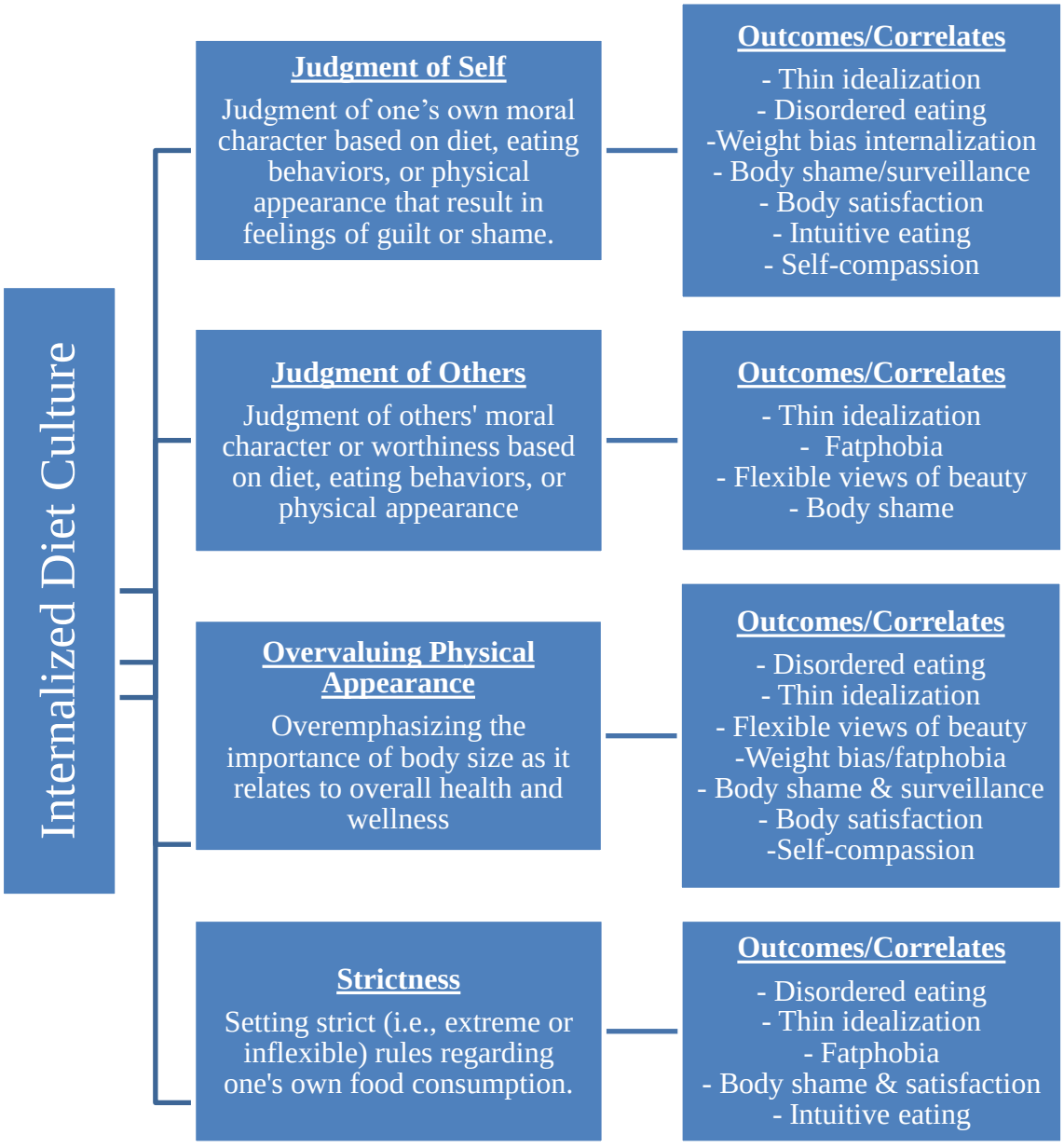


*Figure 5. Internalized Diet Culture's Revised Nomological Network*

Results from a series of convergent and discriminant validity analyses provided strong evidence to support construct validity inferences. Overall scores from the IDCS were significantly and positively correlated with measures of disordered eating behaviors, thin idealization, weight bias internalization, fatphobia, and body shame and surveillance, as well as negatively correlated with measures of intuitive eating, body satisfaction, flexible views of beauty, self-esteem, and self-compassion. Further, scores on each of the IDCS's subscales displayed the anticipated associations with these same measures. The results from these convergent and discriminant analyses empirically support the conclusion that the developed measure reliably assesses a coherent source of systematic variance with a structure highly consistent with the conceptualization of the IDC construct. As such, the current 20-item version of the IDCS reported here can and should be used in future research on the effects of exposure to western diet culture.

## Limitations and Future Directions

There are several important limitations to be acknowledged, as well as avenues for further empirical investigation. First, the validation analyses completed in this study were conducted with data from a single sample. As reliability and validity estimates are ultimately properties of the specific sample obtained (Messick, 1995), additional reliability and validity analyses with new samples are needed to provide further evidence of the generalizability of the psychometric properties of the IDCS. Other assessments of reliability and validity will also be useful in evaluating the IDCS, including test-retest analyses, and assessments of concurrent or predictive validity. Such analyses will help further elucidate the full nomological network of IDC as well as help advance our understanding of how culture comes to be embedded in our self-concepts.

Additional validation analyses may also help to address any biases that could have influenced the primary researcher's development of the model of IDC. Given that the conceptualization of internalized diet culture is completely novel, it is possible that the researcher's preconceptions regarding the structure of the model may have influenced item generation and data analyses decisions, particularly during the exploratory factor analyses (EFAs). Specifically, because the initial conceptualization of IDC included five-subdimensions, this may have unintentionally influenced the researcher's decision to accept the five-factor model during the EFAs conducted in the first study, partially providing a potential explanation as to why a four-factor model was found to better fit the data during the second study. Additional confirmation of the precise projection of the factors through this space will be required in future research.

In addition, although MTurk was used in the recruitment of the validation sample in the hopes of obtaining a more demographically diverse sample (Buhrmester et al., 2011), white, college-educated, high SES individuals were overrepresented in this study (relative to the general population). Future research involving more racially and economically diverse samples is needed to confirm the IDCS exhibits measurement invariance, or to examine possible differential manifestations of IDC in other populations.

The current study does not include an examination of differential manifestations of IDC based on individuals' gender identity. It is well-established that societal expectations regarding body ideals, as well as idealized eating and exercising behaviors, differs based on one's gender (Brennan et al., 2010; Cavazza et al., 2015; Firth, 2012; Labre, 2005). Therefore, additional measurement invariant analyses (MIAs), which are

used to determine if a measurement device functions differently depending on participants' group membership (Mellenbergh, 1989; Van De Schoot, Schmidt, De Beuckelaer, Lek, & Zondervan-Zwijnenburg, 2015), are warranted. However, as conceptualized, IDC itself should be independent of gender identity. That is, while average levels of IDC may differ across various demographic factors, there is no theoretical reason to suggests that the nature (i.e., structure) of IDC is different across these group.

Finally, both studies in this dissertation were cross-sectional. Although this design style is sufficient for developing an initial measure of a novel construct like IDC, additional longitudinal research will allow for stronger testing of the hypothesized nomological network. For example, the current study findings confirm the inclusion of disordered and intuitive eating, weight bias and thin idealization, fatphobia, body shame and body surveillance, among other constructs, as proximal correlates within IDC's nomological network. However, to develop a better understanding of more distal antecedents and outcomes associated with IDC, longitudinal research is necessary. Such research could improve our understanding of the factors that engender, or protect from, the internalization of diet culture and its negative effects on physical and mental health. Further, longitudinal studies would enable researchers to examine the validity or utility of interventions designed to intervene in the internalization process. For example, the IDCS can be used to evaluate interventions intended to alter participants' degree of internalized diet culture and result in subsequent changes in their engagement in harmful eating and exercising behaviors, as well as their feelings about their body, self-worth, or moral character.

## Implications and Conclusion

The model of IDC developed through this dissertation has implications for both theory and practice. The proposed model provides a strong theoretically and empirically supported framework, which can be used in conjunction with the developed IDCS to conduct future research. Further, as the IDC model continues to be refined, researchers will be better able to cohesively examine the seemingly disparate areas of research related to beliefs about idealized bodies (e.g., thin ideal internalization, weight bias internalization, drive for muscularity, etc.) (Dakanalis et al., 2015; Daniel & Bridges, 2010; Thompson & Stice, 2001), as well as idealized and potentially harmful eating and exercising behaviors (e.g., disordered eating behaviors, extreme food restriction, compulsive exercising behaviors, "fitspo", etc.) (Boepple & Thompson, 2016; Goodwin et al., 2011; Homan, 2010; Ortega-Luyando et al., 2015; Pereira & Alvarenga, 2007). Indeed, this model of IDC provides a theoretical and empirical method for better examining and understanding the causes of these trends, as well as identifying the factors across the bioecological model that may protect against, or perpetuate, these worrying social phenomena.

While diet culture itself has been discussed as a partial explanation for the rise in these trends that inhibit health and wellness (Bacon & Aphramor, 2014; Harrison, 2019; Metzl, Kirkland, & Kirkland, 2010; Sole-Smith, 2018; Tandoh, 2018; Taylor, 2018; Tovar, 2018), it is vital that health psychologists examine individuals' internalization of these cultural attitudes and ideologies, rather than focusing exclusively on the culture itself. Across theories of internalized social phenomena, it is well-established that cultural attitudes and ideologies do not have a homogenous impact on all people within the

cultural environment, and that these differences are due to more than differential rates of exposure (Losier, Perreault, Koestner, & Vallerand, 2001; Moradi et al., 2010; Ryan & Connell, 1989; Vartanian, Herman, & Polivy, 2005). Therefore, by developing a more thorough understanding of individual differences in how and why people evaluate, react to, and internalize diet culture, as well as the subsequent impact on health outcomes, more avenues for interventions arise. Namely, by focusing on the process through which the idealization of various body types and eating and exercising behaviors becomes engrained as part of one's intrapersonal identity, more precise and effective interventions can be developed to intercede in this process and improve health and wellness outcomes.

Further, the IDCS has numerous implications for applied work. Given the degree to which diet culture is embedded in Western culture, often masquerading as "wellness culture" (Harrison, 2019), a comprehensive and well-validated measure for assessing internalized diet culture can bring more widespread awareness to the negative consequences associated with attaching moral value or superiority to different body types and eating and exercising behaviors. For example, extensive research shows that the attachment of morality to body size produces exclusion and stigmatization (Evans, 2006; Puhl & Liu, 2015), which in turn significantly impairs individuals' physical and mental health-quality of life (Latner, Durso, & Mond, 2013; Phelan et al., 2015).

However, the effects of diet culture messages do not appear to impact all individuals equally; thus, understanding differences in the degree to which individuals have internalized these messages provides important information for the development of interventions that address the consequences of diet culture. For example, research shows that the use of moral language in association with body size and weight encourages

individuals who do not possess the culturally-defined ideal body size to engage in dieting and other weight-management behaviors (Campos, 2004; Jutel, 2005; Oliver, 2006). Specifically, individuals who internalize messages that associate weight size with morality are more likely to engage in yo-yo dieting, disordered eating behaviors, use diet pills, and undergo gastric-bypass surgery, all of which can have severe health implications and impair individuals' quality of life (Oliver, 2006). Thus, interventions that are designed to address individuals' body size through "less harmful" weight control strategies, as opposed to addressing the individual's beliefs and behaviors resulting from internalized diet culture, are unlikely to lessen these negative health outcomes. Indeed, this model of IDC will hopefully bring light to the negative consequences of focusing on "weight loss" as a strategy for enhancing individuals' well-being. As noted by Campos (2004), "…the efforts of Americans to make themselves thin through dieting and drugs are a major cause of both 'overweight' and the ill health that is wrongly ascribed to it. In other words, America's war on fat is actually helping cause the very disease it is supposed to cure" (p. xxi).

Overall, the IDCS developed in this dissertation contributes to existing literature by creating a conceptualization, as well as a reliable and valid measure, of IDC. Diet culture is widely discussed in popular media and everyday dialogues; there are numerous writings that discuss the history of diet culture, the societal factors contributing to its perpetuation, and the negative implications that it has on individuals' physical and mental health and well-being (e.g., Bacon & Aphramor, 2014; Harrison, 2019; Metzl et al., 2010; Sole-Smith, 2018; Tandoh, 2018; Taylor, 2018; Tovar, 2018). Prior to this project, there was no empirically supported definition of diet culture or internalized diet culture, nor

was there a known standardized system of measurement that existed to assess the degree to which individuals internalize diet culture. By filling these gaps and creating such a scale, this dissertation allows for future empirical examinations of internalized diet culture, its antecedents and its outcomes; the resulting information will be invaluable to the development of applied methods for addressing diet culture and its harmful consequences.

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# APPENDIX A:

## Content Evaluation Form

***INSTRUCTIONS***

The purpose of this exercise is to help develop a measure of *Internalized diet culture*. We are asking you to evaluate the degree to which the content of each item aligns with the definition of this construct. Below is brief description and definition of the construct. Please read and familiarize yourself with the definition before starting the tasks.

***Internalized Diet Culture***

While several variants exist, diet culture can be defined as a system of knowledge, values, and meanings that supports interpretations of health choices as moral character, by attaching moral value or judgements to food choices, eating behaviors, and physical appearance.

Thusly, *Internalized diet culture* can be defined as the degree to which an individual has accepted broader cultural beliefs regarding eating practices and physical appearance standards as their own personal beliefs and standards. In particular, "diet culture" concerns the *attachment of moral value or judgements* to food choices, eating behaviors, and physical appearance.

More specifically, internalized diet culture can be conceptualized as multi-dimensional model comprised of five sub-domains, including: 1) assigning moral value to food, eating behaviors, and/or physical appearance, 2) judging one's own morality, or others', based on food choices, eating behaviors, and/or physical appearance, 3) believing that food choices, eating behaviors, and/or physical appearance dictate one's value and worth, 4) placing greater value on physical appearance than overall health and wellness, and 5) setting strict (i.e., extreme or inflexible) rules regarding food consumption, including the type or amount of food consumed, timing of food consumption, etc.

***The Task: Are the items related to the definition?***

Below are 123 items written to assess the construct of *Internalized diet culture*. We are asking you to evaluate the degree to which the content of each item aligns with the definition provided above. The items are presented in five groups corresponding to the five domains.

**For each item …**

1. **Please indicate whether you believe it reflects the specific construct dimension.**
2. **Please circle or otherwise mark items that are difficult to read or comprehend.**

**Dimension 1: Assignment of moral value to food, behaviors, or physical appearance**

| Items | NO | Maybe | YES |
|---|---|---|---|
| 1. I'm more likely to choose a food option that is guilt-free. | 0 | 1 | 2 |
| 2. It is bad to be overweight. | 0 | 1 | 2 |
| 3. Individuals should strive to be physically fit. | 0 | 1 | 2 |
| 4. Individuals should only eat nutrient-dense foods. | 0 | 1 | 2 |
| 5. In general, individuals should avoid indulging in guilty pleasure foods. | 0 | 1 | 2 |
| 6. Pleasurable foods are usually unhealthy. | 0 | 1 | 2 |
| 7. It is bad to eat after a certain time of day. | 0 | 1 | 2 |
| 8. It is bad to eat before a certain time of day. | 0 | 1 | 2 |
| 9. Most foods can be classified as either "good" or "bad". | 0 | 1 | 2 |
| 10. People should avoid eating junk food. | 0 | 1 | 2 |
| 11. Some foods should be labeled as guilty. | 0 | 1 | 2 |
| 12. Some foods should be labeled as naughty. | 0 | 1 | 2 |
| 13. Some foods should be labeled as sinful. | 0 | 1 | 2 |
| 14. There is virtue in restricting certain foods from your diet. | 0 | 1 | 2 |
| 15. Any food labeled as "sinfully delicious" probably should not be eaten. | 0 | 1 | 2 |
| 16. It is wrong to overeat. | 0 | 1 | 2 |
| 17. It is bad to eat unless you're hungry. | 0 | 1 | 2 |
| 18. It is possible to be overweight and healthy at the same time. (R) | 0 | 1 | 2 |
| 19. It is good to be flexible with the types of food they eat. (R) | 0 | 1 | 2 |
| 20. It is good to be flexible with the number of calories they consume each day. (R) | 0 | 1 | 2 |
| 21. There are some foods that people should never eat. | 0 | 1 | 2 |
| 22. Overeating on purpose is morally wrong. | 0 | 1 | 2 |
| 23. There are certain foods for which it is immoral to eat. | 0 | 1 | 2 |

**Dimension 2: Moral judgement of self or others based on choices, behaviors, or appearance**

| | No | Maybe | Yes |
|---|---|---|---|
| 1. I feel ashamed of myself when I am above a certain body weight. | | | |
| 2. I avoid eating guilty pleasure foods unless I deserve it. | 0 | 1 | 2 |
| 3. I know I'm being good when I eat healthy foods. | 0 | 1 | 2 |
| 4. When I am above my ideal body weight, it is a personal failing. | 0 | 1 | 2 |
| 5. I'm ashamed of myself when I eat certain foods. | 0 | 1 | 2 |
| 6. I think less of parents who feed their children junk food. | 0 | 1 | 2 |
| 7. I think less of people when I see them eating unhealthy foods. | 0 | 1 | 2 |
| 8. I think less of people I see overeating. | 0 | 1 | 2 |
| 9. Individuals who are physically fit tend to be better people all around. | 0 | 1 | 2 |
| 10. Individuals who eat healthy have better strength of character. | 0 | 1 | 2 |
| 11. Overweight individuals need to be educated about healthy eating behaviors. | 0 | 1 | 2 |
| 12. Overweight individuals need to be educated about healthy food choices. | 0 | 1 | 2 |
| 13. I feel better about myself when I make good food choices. | 0 | 1 | 2 |
| 14. In general, people who are overweight are lazy. | 0 | 1 | 2 |
| 15. In general, people who are overweight are unhealthy. | 0 | 1 | 2 |
| 16. In general, slender individuals are often healthy. | 0 | 1 | 2 |
| 17. Individuals who are slender have better self-discipline. | 0 | 1 | 2 |
| 18. An individuals' character is reflected in their food choices. | 0 | 1 | 2 |
| 19. An individuals' food choices say a lot about their character. | 0 | 1 | 2 |
| 20. An individuals' physical appearance says a lot about their character. | 0 | 1 | 2 |
| 21. I praise individuals who eat a healthy diet. | 0 | 1 | 2 |
| 22. I praise individuals who are physically fit. | 0 | 1 | 2 |
| 23. I praise individuals who engage in healthy eating behaviors. | 0 | 1 | 2 |
| 24. I feel bad about myself when I eat unhealthy foods. | 0 | 1 | 2 |
| 25. People who remove unhealthy foods from their diet have strong character. | 0 | 1 | 2 |
| 26. I feel guilty when I eat more than I intended. | 0 | 1 | 2 |
| 27. It is wrong for people to eat unless they're hungry. | 0 | 1 | 2 |
| 28. I can indulge in guilty pleasure foods without feeling bad about myself. (R) | 0 | 1 | 2 |
| 29. I feel good about myself even if I'm not my ideal body size. (R) | 0 | 1 | 2 |
| 30. You can tell a lot about a person's morality by their appearance | 0 | 1 | 2 |
| 31. A person's eating behavior says a lot about their character. | 0 | 1 | 2 |

**Dimension 3: Assignment of personal value and self-worth**

| | NO | Maybe | YES |
|---|---|---|---|
| 1. Physically fit individuals are worthier of respect. | 0 | 1 | 2 |
| 2. I feel the need to apologize when I eat something unhealthy. | 0 | 1 | 2 |
| 3. I feel the need to apologize when I eat a second helping. | 0 | 1 | 2 |
| 4. I feel like a lesser person when I eat unhealthy food. | 0 | 1 | 2 |
| 5. I feel like a lesser person when I see people who are more physically fit than me. | 0 | 1 | 2 |
| 6. I feel less than others who engage in healthy eating behaviors. | 0 | 1 | 2 |
| 7. My self-worth is not influenced by my physical appearance. (R) | 0 | 1 | 2 |
| 8. My food choices don't change how I feel about myself as a person. (R) | 0 | 1 | 2 |
| 9. I respect people who are physically fit. | 0 | 1 | 2 |
| 10. I respect people who I see eating healthy foods. | 0 | 1 | 2 |
| 11. I respect people who engage in healthy eating behaviors. | 0 | 1 | 2 |
| 12. Certain body types are more respectable than others. | 0 | 1 | 2 |
| 13. Certain eating behaviors are more respectable than others. | 0 | 1 | 2 |
| 14. Certain food choices are more respectable than others. | 0 | 1 | 2 |
| 15. People are more likely to think I'm a good person if I am physically fit. | 0 | 1 | 2 |
| 16. People are more likely to think I'm a good person if I am eating healthy foods. | 0 | 1 | 2 |
| 17. People are more likely to think I'm a good person if I am engaging in healthy eating behaviors. | 0 | 1 | 2 |
| 18. I would feel better about myself if I was my ideal body size. | 0 | 1 | 2 |
| 19. I would have a higher social status if I made better food choices. | 0 | 1 | 2 |
| 20. I would have a higher social status if I improved my physical appearance. | 0 | 1 | 2 |

**Dimension 4: Valuation of physical appearance over health and wellness**

| | NO | Maybe | YES |
|---|---|---|---|
| 1. A person's physical appearance is more important than their overall health | 0 | 1 | 2 |
| 2. The effect on my physical appearance determines most of my eating behaviors. | 0 | 1 | 2 |
| 3. I avoid eating foods I enjoy so I can achieve a certain body shape. | 0 | 1 | 2 |
| 4. I eat foods I do not like so I can achieve a certain body shape. | 0 | 1 | 2 |
| 5. It's healthy for individuals to follow a detox diet in order to obtain their ideal body size. | 0 | 1 | 2 |
| 6. Losing weight is an important part of becoming healthy. | 0 | 1 | 2 |
| 7. Feeling hungry is a normal part of obtaining an ideal body size. | 0 | 1 | 2 |
| 8. It is more important to choose food based on its taste than on how many calories it contains. (R) | 0 | 1 | 2 |
| 9. Individuals should follow a restrictive diet if they need to lose weight. | 0 | 1 | 2 |
| 10. Engaging in extreme exercise is an acceptable way to shape one's body. | 0 | 1 | 2 |
| 11. Engaging in extreme dieting is an acceptable way to shape one's body. | 0 | 1 | 2 |
| 12. Individuals should exercise to compensate for eating too much. | 0 | 1 | 2 |
| 13. Individuals cannot be healthy if they are overweight. | 0 | 1 | 2 |
| 14. Individuals should strive to obtain an ideal body size. | 0 | 1 | 2 |
| 15. Obtaining an ideal body size will improve an individual's quality of life. | 0 | 1 | 2 |
| 16. Physically fit individuals can get away with indulging in unhealthy foods. | 0 | 1 | 2 |
| 17. It is okay for individuals who are not physically fit to indulge in unhealthy foods. (R) | 0 | 1 | 2 |
| 18. I can be healthy without reaching my ideal body size. (R) | 0 | 1 | 2 |
| 19. Even if I am sore, it is important that I push myself when exercising so I can achieve a certain body shape. | 0 | 1 | 2 |
| 20. I praise individuals who obtain their ideal body size, regardless of how they did it. | 0 | 1 | 2 |
| 21. It's okay to eat unhealthy foods as long as I exercise to work it off. | 0 | 1 | 2 |
| 22. Before a big event, following a short-term, restrictive diet is an acceptable way to obtain an ideal body shape. | 0 | 1 | 2 |
| 23. Exercising is one way to earn your calories. | 0 | 1 | 2 |
| 24. Obtaining my ideal body shape is my top motivation for exercising. | 0 | 1 | 2 |
| 25. Becoming physically fit is the most important step to being healthy. | 0 | 1 | 2 |

| | | | |
|---|---|---|---|
| 26. Individuals should never use supplements to obtain their ideal body shape. (R) | 0 | 1 | 2 |
| 27. I would rather be overweight and healthy than be my ideal weight and unhealthy. (R) | 0 | 1 | 2 |
| 28. If I am my ideal body size, I know I will be healthy. | 0 | 1 | 2 |
| 29. I care more about my physical appearance than my mental health. | 0 | 1 | 2 |

**Dimension 5: Adopting strict rules regarding food consumption (e.g., type, amount, timing, etc.)**

| | **NO** | **Maybe** | **YES** |
|---|---|---|---|
| 1. I am flexible with the types of food I eat (for example, carbohydrates, proteins, fat). (R) | | | |
| 2. I have a strict schedule for when I will eat each day. | 0 | 1 | 2 |
| 3. I have a specific calorie goal that I always adhere to. | 0 | 1 | 2 |
| 4. I have specific rules regarding the amount of carbohydrates, proteins, and fats I eat. | 0 | 1 | 2 |
| 5. I do not count calories or track my food intake in any way. (R) | 0 | 1 | 2 |
| 6. I try to only eat a specific amount of carbohydrates each day. | 0 | 1 | 2 |
| 7. I try to only eat a specific amount of protein each day. | 0 | 1 | 2 |
| 8. I don’t pay attention to amount of fat I eat. (R) | 0 | 1 | 2 |
| 9. I don’t eat foods that I consider bad. | 0 | 1 | 2 |
| 10. I never eat after a certain time of day. | 0 | 1 | 2 |
| 11. I never eat before a certain time of day. | 0 | 1 | 2 |
| 12. It does not matter what time it is, I eat if I am hungry. (R) | 0 | 1 | 2 |
| 13. I completely remove some unhealthy foods from my diet. | 0 | 1 | 2 |
| 14. I avoid eating certain foods even if I am craving them. | 0 | 1 | 2 |
| 15. There are certain foods that I refuse to eat based on principle. | 0 | 1 | 2 |
| 16. The best way to eat is to follow a strict set of rules. | 0 | 1 | 2 |
| 17. I have strict standards for how much I eat. | 0 | 1 | 2 |
| 18. I'm pretty flexible when it comes to deciding what to eat. (R) | 0 | 1 | 2 |
| 19. I'm pretty flexible when it comes to deciding how much to eat. (R) | 0 | 1 | 2 |

# APPENDIX B:

## Content Deficiency Form

***INSTRUCTIONS***

The purpose of this exercise is to help develop a measure of *Internalized Diet Culture*. The items below have been generated and empirically tested through an initial measurement development process. We are asking you to evaluate the degree to which the measure below *fails to sample from relevant content domains.* Below is a brief description and definition of the construct and each sub-domain. Please read and familiarize yourself with these definitions before starting the task.

***Internalized Diet Culture***

While several variants exist, diet culture can be defined as a system of knowledge, values, and meanings that supports interpretations of health choices as moral character, by attaching moral value or judgements to food choices, eating behaviors, and physical appearance.

Thus, *Internalized Diet Culture* can be defined as the degree to which an individual has accepted broader cultural beliefs regarding eating practices and physical appearance standards as their own personal beliefs and standards. In particular, "diet culture" concerns the *attachment of moral value or judgements* to food choices, eating behaviors, and physical appearance.

More specifically, internalized diet culture can be conceptualized as a multi-dimensional model comprised of five sub-domains, including: 1) judging one's own moral character based on diet, eating behaviors, or physical appearance, 2) judging others' moral character based on diet, eating behaviors, or physical appearance, 3) placing greater value on physical appearance than overall health and wellness, 4) espousing beliefs in strict rules about fitness and diet, and 5) setting strict (i.e., extreme or inflexible) rules regarding food consumption, including the type or amount of food consumed, timing of food consumption, etc.

***The Task: Are there facets of Internalized Diet Culture that are NOT captured by these items?***

Below are 62 items written to assess the construct of *Internalized Diet Culture*. We are asking you to evaluate the degree to which these items fail to capture content that is relevant to the definitions provided. The items are presented in five groups corresponding to the five domains.

**For each domain…**

3. **Please review the domain description and associated items. In the space provided, describe any relevant content (i.e., behaviors, cognitions, beliefs, etc.) that you believe is NOT captured within the items for that dimension. If applicable, you may simply describe the missing content OR recommend a potential item to capture the missing content.**

**For the measure, overall…**

1. **Once you have reviewed each domain, consider the overall definition of Internalized Diet Culture. In the space provided, describe any relevant content (i.e., behaviors, cognitions, beliefs, etc.) that you believe is NOT captured within the measure, overall. If applicable, you may simply describe the missing content OR recommend a potential item to capture the missing content.**

**Dimension 1: <u>Judgment of Self</u>**

*Definition*: Judging one's own moral character based on diet, eating behaviors, or physical appearance

**Items:**

1. People are more likely to think I'm a good person if I am eating healthy foods
2. I feel less than others who engage in healthy eating behaviors.
3. Certain food choices are more respectable than others.
4. People are more likely to think I'm a good person if I am physically fit.
5. I feel like a lesser person when I see people who are more physically fit than me.
6. I feel like a lesser person when I eat unhealthy food.
7. I feel the need to apologize when I eat something unhealthy.
8. Certain eating behaviors are more respectable than others.
9. I feel the need to apologize when I eat a second helping.
10. I feel ashamed of myself when I am above a certain body weight.
11. I feel guilty when I eat more than I intended.
12. I am ashamed of myself when I eat certain foods.
13. When I am above my ideal body weight, it is a personal failing

**In the space below, please describe any relevant content (i.e., behaviors, cognitions, beliefs, etc.) that you believe is NOT captured within the items for this dimension.** If applicable, please describe the missing content OR recommend a potential item(s) to capture the missing content. If not applicable, please indicate "N/A".

**Respond here:**

**Dimension 2: <u>Judgment of Others</u>**

*Definition*: Judging others' moral character based on diet, eating behaviors, or physical appearance

**Items:**

1. I respect people who I see eating healthy foods.
2. I respect people who are physically fit.
3. A person's eating behavior says a lot about their character.
4. You can tell a lot about a person's morality by their appearance.
5. An individual's physical appearance says a lot about their character.
6. An individual's character is reflected in their food choices.
7. I respect people who engage in healthy eating behaviors.
8. Physically fit individuals are worthier of respect.
9. Individuals who are physically fit tend to be better people all around.
10. Individuals who eat healthy have better strength of character.
11. I think less of people I see overeating.

**In the space below, please describe any relevant content (i.e., behaviors, cognitions, beliefs, etc.) that you believe is NOT captured within the items for this dimension.** If applicable, please describe the missing content OR recommend a potential item(s) to capture the missing content. If not applicable, please indicate "N/A".

**Respond here:**

**Dimension 3: <u>Overvaluing Physical Appearance</u>**

*Definition*: Placing greater value on physical appearance than overall health and wellness

**Items:**

1. Individuals should strive to obtain an ideal body size.
2. Engaging in extreme exercise is an acceptable way to shape one's body.
3. Individuals should exercise to compensate for eating too much.
4. Becoming physically fit is the most important step to being healthy.
5. Obtaining an ideal body size will improve an individual's quality of life.
6. I praise individuals who obtain their ideal body size, regardless of how they did it.
7. Even if I am sore, it is important that I push myself when exercising so I can achieve a certain body shape.
8. Losing weight is an important part of becoming healthy.
9. Individuals should follow a restrictive diet if they need to lose weight.
10. Feeling hungry is a normal part of obtaining an ideal body size.
11. Before a big event, adhering to a short-term, restrictive diet is an acceptable way to obtain an ideal body shape.
12. If I am my ideal body size, I know I will be healthy.
13. Exercising is one way to earn your calories.

**In the space below, please describe any relevant content (i.e., behaviors, cognitions, beliefs, etc.) that you believe is NOT captured within the items for this dimension.** If applicable, please describe the missing content OR recommend a potential item(s) to capture the missing content. If not applicable, please indicate "N/A".

**Respond here:**

**Dimension 4: <u>Strictness of Beliefs</u>**

*Definition*: Espousing beliefs in strict rules about fitness and diet

**Items:**

1. People should avoid eating junk food.
2. Overweight individuals need to be educated about healthy food choices.
3. Individuals should strive to be physically fit.
4. Overweight individuals need to be educated about healthy eating behaviors.
5. It is bad to be overweight.
6. In general, individuals should avoid indulging in guilty pleasure foods.
7. I think less of parents who feed their children junk food.
8. Individuals should only eat nutrient-dense foods.
9. It is wrong to overeat.
10. There are some foods that people should never eat.
11. I praise individuals who engage in healthy eating behaviors.
12. There is virtue in restricting certain foods from your diet.

**In the space below, please describe any relevant content (i.e., behaviors, cognitions, beliefs, etc.) that you believe is NOT captured within the items for this dimension.** If applicable, please describe the missing content OR recommend a potential item(s) to capture the missing content. If not applicable, please indicate "N/A".

**Respond here:**

**Dimension 5: <u>Strictness of Behaviors</u>**

*Definition*: Setting strict (i.e., extreme or inflexible) rules regarding one's own food consumption

**Items:**

1. I have specific rules regarding the amount of carbohydrates, proteins, and fats I eat.
2. I try to only eat a specific amount of carbohydrates each day.
3. I have a specific calorie goal that I always adhere to.
4. I have strict standards for how much I eat.
5. I try to only eat a specific amount of protein each day.
6. I have a strict schedule for when I will eat each day.
7. I never eat after a certain time of day.
8. I avoid eating certain foods even if I am craving them.
9. I avoid eating guilty pleasure foods unless I deserve it.
10. I never eat before a certain time of day.
11. I do not count calories or track my food intake in any way.
12. I don't eat foods that I consider bad.
13. I am pretty flexible when it comes to deciding how much to eat.

**In the space below, please describe any relevant content (i.e., behaviors, cognitions, beliefs, etc.) that you believe is NOT captured within the items for this dimension.** If applicable, please describe the missing content OR recommend a potential item(s) to capture the missing content. If not applicable, please indicate "N/A".

**Respond here:**

**For the <u>measure</u>, overall…**

**Now that you have reviewed each domain, please reread the definition of Internalized Diet Culture. In the space below, please describe any relevant content (i.e., behaviors, cognitions, beliefs, etc.) that you believe is NOT captured within the overall measure (i.e., across all the items).** If applicable, please describe the missing content OR recommend a potential item(s) to capture the missing content. If not applicable, please indicate "N/A".

*<u>Internalized Diet Culture definition</u>*: The degree to which an individual has accepted broader cultural beliefs regarding eating practices and physical appearance standards as their own personal beliefs and standards. In particular, "diet culture" concerns the *attachment of moral value or judgements* to food choices, eating behaviors, and physical appearance.

**Respond here:**

## APPENDIX C:

## Study 1 Consent Form


Department of Psychological Science
9201 University City Boulevard, Charlotte, NC 28223-0001

### Consent to be Part of a Research Study

Title of the Project: Beliefs and standards regarding eating practices and physical appearance
Principal Investigator: Victoria Galica, M.A., University of North Carolina – Charlotte
Faculty Advisor: Charlie Reeve, Ph.D., University of North Carolina – Charlotte

You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to help you decide whether or not to participate.

**Important Information You Need to Know**

- The purpose of this study is to better understand individuals' personal views regarding eating practices and physical appearance.
- You will be asked to complete an online survey.
- If you choose to participate it will require about 20 minutes of your time.
- There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.
- You will receive no direct benefits from participating in this research study. However, you can earn 0.5 SONA research credits for completing this study.
- Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time.

Please read this form before you decide whether to participate in this research study. If you have any questions, please contact the principal investigator.

**Why are we doing this study?**

The purpose of this study is to better understand individuals' personal views regarding eating practices and physical appearance. Responses to this survey will be used to develop a new measure that assesses the degree to which individuals' personal eating practices and physical appearance beliefs and standards match broader cultural messages.

**What will happen if I take part in this study?**
If you choose to participate in this study, you will be asked to complete an online survey. Your time commitment will be about 20 minutes.

**What benefits or risks might I experience?**
You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about individuals' personal standards and beliefs regarding eating behaviors and physical appearance. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

**How will my information be protected?**
Your responses to this survey will be confidential. We will not ask any questions that can be used to identify you. All study data will be stored electronically in password-protected files by trained staff; only the research team will have access to the data. In any publications of this study, we will not include any information that will make it possible to identify you.

**Will I be paid for taking part in this study?**
You will earn 0.5 SONA research credits at the completion of this study.

**What are my rights if I take part in this study?**
It is up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to answer any questions you do not want to answer. If you decide to withdraw from this study, your responses will not be retained.

**Who can answer my questions about this study and my rights as a participant?**
For questions about this research, contact the principal investigator: Victoria Galica, at 860-803-2722 or by email at vgalica@uncc.edu, or contact my Faculty Advisor, Dr. Charlie Reeve, at 704-687-1356 or by email at clreeve@uncc.edu.

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researchers, please contact the Office of Research Compliance at 704-687-1871 or uncc-irb@uncc.edu.

**Consent to Participate**
Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that:

- You have read the above information and understand what the study is about
- You voluntarily agree to participate
- You are 18 years of age or older

☐ Agree
☐ Disagree

## APPENDIX D:

## Study 1 Results Tables

**Table 1**

Study 1 results: Exploratory factor analysis and descriptive statistics for retained items

| | Factors | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Items | Judgment of Self | Judgment of Others | Overvaluing Phys. App. | Strictness of Beliefs | Strictness of Behaviors | *M* | *SD* | $r_{it}$ |
| 70 | .78 | | | | | 2.53 | 1.12 | .57 |
| 60 | .78 | | | | | 2.63 | 1.10 | .52 |
| 68 | .77 | | | | | 2.45 | 1.13 | .62 |
| 69 | .77 | | | | | 2.74 | 1.20 | .53 |
| 59 | .75 | | | | | 2.84 | 1.19 | .47 |
| 58 | .73 | | | | | 2.45 | 1.13 | .58 |
| 56 | .69 | | | | | 2.06 | 1.00 | .60 |
| 67 | .65 | | | | | 2.05 | 1.01 | .58 |
| 57 | .64 | | | | | 2.12 | 1.05 | .55 |
| 24 | .60 | | | | | 3.15 | 1.25 | .44 |
| 49 | .59 | | | | | 3.20 | 1.16 | .49 |
| 28 | .59 | | | | | 2.86 | 1.23 | .48 |
| 27 | .54 | | | | | 3.03 | 1.23 | .47 |
| 64 | | .80 | | | | 2.19 | 1.01 | .54 |
| 63 | | .80 | | | | 2.09 | 1.00 | .51 |
| 54 | | .75 | | | | 2.31 | 1.06 | .58 |
| 53 | | .75 | | | | 2.10 | 1.02 | .51 |
| 43 | | .69 | | | | 2.42 | 1.15 | .49 |
| 41 | | .66 | | | | 2.28 | 0.99 | .53 |
| 65 | | .64 | | | | 2.04 | 1.03 | .57 |
| 55 | | .63 | | | | 2.07 | 1.03 | .53 |
| 32 | | .59 | | | | 2.19 | 1.05 | .50 |
| 33 | | .47 | | | | 2.60 | 1.06 | .45 |
| 31 | | .44 | | | | 2.11 | 0.96 | .50 |
| 88 | | | .58 | | | 3.10 | 1.06 | .51 |
| 84 | | | .53 | | | 2.88 | 1.18 | .42 |
| 86 | | | .52 | | | 3.28 | 1.04 | .41 |
| 99 | | | .51 | | | 2.93 | 1.02 | .47 |
| 89 | | | .48 | | | 3.24 | 1.04 | .41 |
| 94 | | | .45 | | | 2.68 | 1.13 | .37 |
| 93 | | | .45 | | | 3.13 | 1.11 | .42 |
| 80 | | | .45 | | | 2.95 | 1.12 | .45 |
| 83 | | | .43 | | | 3.07 | 1.07 | .41 |
| 96 | | | .40 | | | 2.81 | 1.06 | .41 |
| 81 | | | .40 | | | 2.67 | 1.14 | .40 |
| 102 | | | .39 | | | 2.92 | 1.07 | .46 |

(*Continued*)

**Table 1** (*Cont.*)

| | Factors | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Items | Judgment of Self | Judgment of Others | Overvaluing Phys. App. | Strictness of Beliefs | Strictness of Behaviors | *M* | *SD* | $r_{it}$ |
| 97 | | | .35 | | | 3.20 | 1.03 | .32 |
| 10 | | | | .57 | | 3.29 | 1.07 | .40 |
| 35 | | | | .52 | | 3.37 | 0.99 | .40 |
| 3 | | | | .51 | | 3.97 | 0.81 | .32 |
| 2 | | | | .51 | | 3.52 | 1.08 | .39 |
| 34 | | | | .49 | | 3.36 | 0.98 | .40 |
| 5 | | | | .47 | | 2.92 | 1.07 | .40 |
| 29 | | | | .43 | | 2.50 | 1.08 | .45 |
| 4 | | | | .43 | | 2.79 | 0.99 | .41 |
| 16 | | | | .38 | | 3.23 | 1.02 | .29 |
| 21 | | | | .36 | | 2.80 | 1.23 | .37 |
| 46 | | | | .36 | | 3.49 | 1.01 | .40 |
| 14 | | | | .32 | | 3.45 | 0.93 | .28 |
| 107 | | | | | .74 | 2.26 | 1.07 | .58 |
| 109 | | | | | .72 | 2.35 | 1.13 | .56 |
| 106 | | | | | .71 | 2.24 | 1.07 | .53 |
| 119 | | | | | .64 | 2.39 | 1.04 | .56 |
| 110 | | | | | .64 | 2.31 | 1.04 | .49 |
| 105 | | | | | .62 | 2.12 | 0.98 | .50 |
| 113 | | | | | .49 | 2.39 | 1.08 | .38 |
| 117 | | | | | .49 | 2.77 | 1.12 | .46 |
| 25 | | | | | .44 | 2.60 | 1.08 | .52 |
| 114 | | | | | .44 | 2.25 | 1.02 | .36 |
| 108 | | | | | .43 | 2.62 | 1.24 | .27 |
| 112 | | | | | .41 | 2.55 | 1.08 | .41 |
| 121 | | | | | .33 | 2.37 | 0.92 | .22 |

*Notes.* $N$ = 599. Rotated factor loadings shown. Overvaluing Phys. App. = Overvaluing Physical Appearance; $r_{it}$ = corrected item total correlation; computed using only items within factor.

## APPENDIX E:

## Study 2 Measures

### Part I: IDCS

**Directions**: Please indicate how strongly you agree or disagree with each statement.

| | Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. People are more likely to think I'm a good person if I am eating healthy foods | **1** | **2** | **3** | **4** | **5** |
| 2. I feel less than others who engage in healthy eating behaviors. | **1** | **2** | **3** | **4** | **5** |
| 3. Certain food choices are more respectable than others. | **1** | **2** | **3** | **4** | **5** |
| 4. People are more likely to think I'm a good person if I appear physically fit. | **1** | **2** | **3** | **4** | **5** |
| 5. I feel like a lesser person when I see people who appear more physically fit than me. | **1** | **2** | **3** | **4** | **5** |
| 6. I feel like a lesser person when I eat unhealthy food. | **1** | **2** | **3** | **4** | **5** |
| 7. I feel the need to apologize when I eat something unhealthy. | **1** | **2** | **3** | **4** | **5** |
| 8. Certain eating behaviors are more respectable than others. | **1** | **2** | **3** | **4** | **5** |
| 9. I feel the need to apologize when I eat a second helping. | **1** | **2** | **3** | **4** | **5** |
| 10. I feel ashamed of myself when I am above a certain body weight. | **1** | **2** | **3** | **4** | **5** |
| 11. I feel guilty when I eat more than I intended. | **1** | **2** | **3** | **4** | **5** |
| 12. I'm ashamed of myself when I eat certain foods. | **1** | **2** | **3** | **4** | **5** |
| 13. When I am above my ideal body weight, it is a personal failing | **1** | **2** | **3** | **4** | **5** |
| 14. I respect people who I see eating healthy foods. | **1** | **2** | **3** | **4** | **5** |
| 15. I respect people who appear physically fit. | **1** | **2** | **3** | **4** | **5** |
| 16. A person's eating behavior says a lot about their character. | **1** | **2** | **3** | **4** | **5** |
| 17. You can tell a lot about a person's morality by their appearance | **1** | **2** | **3** | **4** | **5** |
| 18. An individuals' physical appearance says a lot about their character. | **1** | **2** | **3** | **4** | **5** |

| | | | | | |
|---|---|---|---|---|---|
| 19. An individuals' character is reflected in their food choices. | **1** | **2** | **3** | **4** | **5** |
| 20. I respect people who engage in healthy eating behaviors. | **1** | **2** | **3** | **4** | **5** |
| 21. Physically fit individuals are worthier of respect. | **1** | **2** | **3** | **4** | **5** |
| 22. Individuals who are physically fit tend to be better people all around. | **1** | **2** | **3** | **4** | **5** |
| 23. Individuals who eat healthy have better strength of character. | **1** | **2** | **3** | **4** | **5** |
| 24. I think less of people I see overeating. | **1** | **2** | **3** | **4** | **5** |
| 25. Individuals should strive to obtain an ideal body size. | **1** | **2** | **3** | **4** | **5** |
| 26. Engaging in extreme exercise is an acceptable way to shape one's body. | **1** | **2** | **3** | **4** | **5** |
| 27. Individuals should exercise to compensate for eating too much. | **1** | **2** | **3** | **4** | **5** |
| 28. Becoming physically fit is the most important step to being healthy. | **1** | **2** | **3** | **4** | **5** |
| 29. Obtaining an ideal body size will improve an individual's quality of life. | **1** | **2** | **3** | **4** | **5** |
| 30. I praise individuals who obtain their ideal body size, regardless of how they did it. | **1** | **2** | **3** | **4** | **5** |
| 31. Even if I am sore, it is important that I push myself when exercising so I can achieve a certain body shape. | **1** | **2** | **3** | **4** | **5** |
| 32. Losing weight is an important part of becoming healthy. | **1** | **2** | **3** | **4** | **5** |
| 33. Individuals should follow a restrictive diet if they need to lose weight. | **1** | **2** | **3** | **4** | **5** |
| 34. Feeling hungry is a normal part of obtaining an ideal body size. | **1** | **2** | **3** | **4** | **5** |
| 35. Before a big event, following a short-term, restrictive diet is an acceptable way to obtain an ideal body shape. | **1** | **2** | **3** | **4** | **5** |
| 36. If I am my ideal body size, I know I will be healthy. | **1** | **2** | **3** | **4** | **5** |
| 37. Exercising is one way to earn your calories. | **1** | **2** | **3** | **4** | **5** |
| 38. I have specific rules regarding the amount of carbohydrates, proteins, and fats I eat. | **1** | **2** | **3** | **4** | **5** |
| 39. I try to only eat a specific amount of carbohydrates each day. | **1** | **2** | **3** | **4** | **5** |
| 40. I have a specific calorie goal that I always adhere to. | **1** | **2** | **3** | **4** | **5** |
| 41. I have strict standards for how much I eat. | **1** | **2** | **3** | **4** | **5** |
| 42. I try to only eat a specific amount of protein each day. | **1** | **2** | **3** | **4** | **5** |

| | | | | | |
|---|---|---|---|---|---|
| 43. I have a strict schedule for when I will eat each day. | **1** | **2** | **3** | **4** | **5** |
| 44. I never eat after a certain time of day. | **1** | **2** | **3** | **4** | **5** |
| 45. I avoid eating certain foods even if I am craving them. | **1** | **2** | **3** | **4** | **5** |
| 46. I avoid eating guilty pleasure foods unless I deserve it. | **1** | **2** | **3** | **4** | **5** |
| 47. I never eat before a certain time of day. | **1** | **2** | **3** | **4** | **5** |
| 48. I do not count calories or track my food intake in any way. | **1** | **2** | **3** | **4** | **5** |
| 49. I don't eat foods that I consider bad. | **1** | **2** | **3** | **4** | **5** |
| 50. I am pretty flexible when it comes to deciding how much to eat. | **1** | **2** | **3** | **4** | **5** |
| 51. People should avoid eating junk food. | **1** | **2** | **3** | **4** | **5** |
| 52. Overweight individuals need to be educated about healthy food choices. | **1** | **2** | **3** | **4** | **5** |
| 53. Individuals should strive to be physically fit. | **1** | **2** | **3** | **4** | **5** |
| 54. Overweight individuals need to be educated about healthy eating behaviors. | **1** | **2** | **3** | **4** | **5** |
| 55. It is bad to be overweight. | **1** | **2** | **3** | **4** | **5** |
| 56. In general, individuals should avoid indulging in guilty pleasure foods. | **1** | **2** | **3** | **4** | **5** |
| 57. I think less of parents who feed their children junk food. | **1** | **2** | **3** | **4** | **5** |
| 58. Individuals should only eat nutrient-dense foods. | **1** | **2** | **3** | **4** | **5** |
| 59. It is wrong to overeat. | **1** | **2** | **3** | **4** | **5** |
| 60. There are some foods that people should never eat. | **1** | **2** | **3** | **4** | **5** |
| 61. I praise individuals who engage in healthy eating behaviors. | **1** | **2** | **3** | **4** | **5** |
| 62. There is virtue in restricting certain foods from your diet. | **1** | **2** | **3** | **4** | **5** |

## Part II: EDE-Q

**Directions**: The following questions are concerned with the past four weeks (28 days) only. Please circle the appropriate number for each question.

| **On how many of the past 28 days…** | **No days** | **1-5 days** | **6-12 days** | **13-15 days** | **16-22 days** | **23-27 days** | **Every day** |
|---|---|---|---|---|---|---|---|
| 1. 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)? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2. Have you gone for long periods of time without eating anything in order to influence your shape or weight? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 3. 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)? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 4. 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)? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 5. Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 6. Have you had a definite desire to have a totally flat stomach? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 7. 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)? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 8. 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)? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 9. Have you had a definite fear of losing control over eating? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 10. Have you had a definite fear that you might gain weight? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 11. Have you felt fat? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 12. Have you had a strong desire to lose weight? | **0** | **1** | **2** | **3** | **4** | **5** | **6** |

**Directions**: The following questions are concerned with the past four weeks (28 days) only. Please fill in the appropriate number in the box to the right.

| **Over the past four weeks (28 days) …** | **#** |
|---|---|
| 1. Over the past 28 days, how many times have you eaten what other people would regard as an unusually large amount of food (given the circumstances)? | |
| 2. On how many of these times did you have a sense of having lost control over your eating (at the time that you were eating)? | |
| 3. Over the past 28 days, on how many DAYS have such episodes of overeating occurred (i.e. you have eaten an unusually large amount of food and have had a sense of loss of control at the time)? | |
| 4. Over the past 28 days, how many **times** have you made yourself sick (vomit) as a means of controlling your shape or weight? | |
| 5. Over the past 28 days, how many **times** have you taken laxatives as a means of controlling your shape or weight? | |

| | |
|---|---|
| 6. Over the past 28 days, how many **times** have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat or to burn off calories? | |

**Directions**: Please circle the appropriate number for each question. **For these questions, please do not count episodes of binge eating** (means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. Over the past 28 days, on how many days have you eaten in secret (i.e., furtively)? | **No days** | **1-5 days** | **6-12 days** | **13-15 days** | **16-22 days** | **23-27 days** | **Every day** |
| 2. 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? | **None of the times** | **A few of the times** | **Less than half** | **Half of the times** | **More than half** | **Most of the time** | **Every time** |

**Directions**: The following questions are concerned with the past four weeks (28 days) only. Please circle the appropriate number for each question.

| **On how many of the past 28 days…** | **Not at all** | **Slightly** | **Moderately** | **Markedly** |
|---|---|---|---|---|
| 1. Over the past 28 days, how concerned have you been about other people seeing you eat? | **1** | **2** | **3** | **4** |
| 2. Has your **weight** influenced how you think about (judge) yourself as a person? | **1** | **2** | **3** | **4** |
| 3. Has your **shape** influenced how you think about (judge) yourself as a person? | **1** | **2** | **3** | **4** |
| 4. 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? | **1** | **2** | **3** | **4** |
| 5. How dissatisfied have you been with your **weight**? | **1** | **2** | **3** | **4** |
| 6. How dissatisfied have you been with your **shape**? | **1** | **2** | **3** | **4** |
| 7. 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)? | **1** | **2** | **3** | **4** |
| 8. How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)? | **1** | **2** | **3** | **4** |

## Part III: IES

**Directions:** For each item, please indicate the answer that best characterizes your attitudes or behaviors.

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| 1. I try to avoid certain foods high in fat, carbohydrates, or calories. | **1** | **2** | **3** | **4** | **5** |
| 2. I find myself eating when I'm feeling emotional (e.g., anxious, depressed, sad), even when I'm not physically hungry. | **1** | **2** | **3** | **4** | **5** |
| 3. If I am craving a certain food, I allow myself to have it. | **1** | **2** | **3** | **4** | **5** |
| 4. I get mad at myself for eating something unhealthy. | **1** | **2** | **3** | **4** | **5** |
| 5. I find myself eating when I am lonely, even when I'm not physically hungry. | **1** | **2** | **3** | **4** | **5** |
| 6. I trust my body to tell me when to eat. | **1** | **2** | **3** | **4** | **5** |
| 7. I trust my body to tell me what to eat. | **1** | **2** | **3** | **4** | **5** |
| 8. I trust my body to tell me how much to eat. | **1** | **2** | **3** | **4** | **5** |
| 9. I have forbidden foods that I don't allow myself to eat. | **1** | **2** | **3** | **4** | **5** |
| 10. I use food to help me soothe my negative emotions. | **1** | **2** | **3** | **4** | **5** |
| 11. I find myself eating when I am stressed out, even when I'm not physically hungry. | **1** | **2** | **3** | **4** | **5** |
| 12. I am able to cope with my negative emotions (e.g., anxiety, sadness) without turning to food for comfort. | **1** | **2** | **3** | **4** | **5** |
| 13. When I am bored, I do NOT eat just for something to do. | **1** | **2** | **3** | **4** | **5** |
| 14. When I am lonely, I do NOT turn to food for comfort. | **1** | **2** | **3** | **4** | **5** |
| 15. I find ways to cope with stress and anxiety other than by eating. | **1** | **2** | **3** | **4** | **5** |
| 16. I allow myself to eat what food I desire at the moment. | **1** | **2** | **3** | **4** | **5** |
| 17. I do NOT follow eating rules or dieting plans that dictate what, when, and/or how much to eat. | **1** | **2** | **3** | **4** | **5** |
| 18. Most of the time, I desire to eat nutritious foods. | **1** | **2** | **3** | **4** | **5** |
| 19. I mostly eat foods that make my body perform efficiently (well). | **1** | **2** | **3** | **4** | **5** |
| 20. I mostly eat foods that give my body energy and stamina. | **1** | **2** | **3** | **4** | **5** |
| 21. I rely on my hunger signals to tell me when to eat. | **1** | **2** | **3** | **4** | **5** |
| 22. I rely on my fullness (satiety) signals to tell me when to stop eating. | **1** | **2** | **3** | **4** | **5** |
| 23. I trust my body to tell me when to stop eating. | **1** | **2** | **3** | **4** | **5** |

## Part IV: SATAQ-4

**Directions:** Please indicate how strongly you agree or disagree with each statement.

| | **Definitely disagree** | **Mostly Disagree** | **Undecided** | **Mostly agree** | **Definitely agree** |
|---|---|---|---|---|---|
| 1. It is important for me to look athletic | **1** | **2** | **3** | **4** | **5** |
| 2. I think a lot about looking muscular | **1** | **2** | **3** | **4** | **5** |
| 3. I want my body to look very thin | **1** | **2** | **3** | **4** | **5** |
| 4. I want my body to look like it has little fat | **1** | **2** | **3** | **4** | **5** |
| 5. I think a lot about looking thin | **1** | **2** | **3** | **4** | **5** |
| 6. I spend a lot of time doing things to look more athletic | **1** | **2** | **3** | **4** | **5** |
| 7. I think a lot about looking athletic | **1** | **2** | **3** | **4** | **5** |
| 8. I want my body to look very lean | **1** | **2** | **3** | **4** | **5** |
| 9. I think a lot about having very little body fat | **1** | **2** | **3** | **4** | **5** |
| 10. I spend a lot of time doing things to look more muscular | **1** | **2** | **3** | **4** | **5** |

## Part V: MWBIS

**Directions:** Please indicate how strongly you agree or disagree with each statement.

| | **Strongly disagree** | **Moderately disagree** | **Slightly disagree** | **Neutral** | **Slightly agree** | **Moderately agree** | **Strongly agree** |
|---|---|---|---|---|---|---|---|
| 1. Because of my weight, I feel that I am just as competent as anyone | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 2. I am less attractive than most other people because of my weight | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 3. I feel anxious about my weight because of what people might think of me | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 4. I wish I could change my weight | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 5. Whenever I think a lot about my weight, I feel depressed | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 6. I hate myself for my weight | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 7. My weight is a major way that I judge my values as a person | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8. I don't feel that I deserve to have a really fulfilling social life, because of my weight | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 9. I am OK being the weight that I am | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 10. Because of my weight, I don't feel like my true self | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 11. Because of my weight, I don't understand how anyone attractive would want to date me | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

## Part VI: AFA

**Directions:** Please indicate how strongly you agree or disagree with each statement.

| | **Strongly disagree** | **Moderately disagree** | **Slightly disagree** | **Neutral** | **Slightly agree** | **Moderately agree** | **Strongly agree** |
|---|---|---|---|---|---|---|---|
| 1. I really don't like fat people much | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 2. I don't have many friends that are fat | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 3. I tend to think that people who are overweight are a little untrustworthy | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 4. Although some fat people are surely smart, in general, I think they tend not to be quite as bright as normal weight people | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 5. I have a hard time taking fat people too seriously | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 6. Fat people make me somewhat uncomfortable | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 7. If I were an employer looking to hire, I might avoid hiring a fat person | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 8. I feel disgusted with myself when I gain weight | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 9. One of the worst things that could happen to me would be if I gained 25 pounds | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 10. I worry about becoming fat | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11. People who weigh too much could lose at least some part of their weight through a little exercise | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 12. Some people are fat because they have no willpower | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 13. Fat people tend to be fat pretty much through their own fault | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

## Part VII: OBC-Shame

**Directions:** Please indicate how strongly you agree or disagree with each statement.

| | **Strongly disagree** | **Moderately disagree** | **Slightly disagree** | **Neutral** | **Slightly agree** | **Moderately agree** | **Strongly agree** |
|---|---|---|---|---|---|---|---|
| 1. When I can't control my weight, I feel like something must be wrong with me | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 2. I feel ashamed of myself when I haven't made the effort to look my best | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 3. I feel like I must be a bad person when I don't look as good as I could | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 4. I would be ashamed for people to know what I really weigh | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 5. I never worry that something is wrong with me when I am not exercising as much as I should | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 6. When I'm not exercising enough, I question whether I am a good enough person | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 7. Even when I can't control my weight, I think I'm an okay person | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 8. When I'm not the size I think I should be, I feel ashamed | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

## Part VIII: OBC-Survelliance

**Directions:** Please indicate how strongly you agree or disagree with each statement.

| | Strongly disagree | Moderately disagree | Slightly disagree | Neutral | Slightly agree | Moderately agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| 1. I rarely think about how I look | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 2. I think it is more important that my clothes are comfortable than whether they look good on me | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 3. I think more about how my body feels than how my body looks | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 4. I rarely compare how I look with how other people look | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 5. During the day, I think about how I look many times | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 6. I often worry about whether the clothes I am wearing make me look good | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 7. I rarely worry about how I look to other people | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 8. I am more concerned with what my body can do than how it looks | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

## Part IX: MSBRQ-AE

**Directions:** Please indicate how strongly you agree or disagree with each statement.

| | Definitely disagree | Mostly Disagree | Undecided | Mostly agree | Definitely agree |
|---|---|---|---|---|---|
| 1. My body is sexually appealing | **1** | **2** | **3** | **4** | **5** |
| 2. I like my looks just the way they are | **1** | **2** | **3** | **4** | **5** |
| 3. Most people would consider me good looking | **1** | **2** | **3** | **4** | **5** |
| 4. I like the way I look without my clothes on | **1** | **2** | **3** | **4** | **5** |
| 5. I like the way my clothes fit me | **1** | **2** | **3** | **4** | **5** |
| 6. I dislike my physique | **1** | **2** | **3** | **4** | **5** |
| 7. I am physically unattractive | **1** | **2** | **3** | **4** | **5** |

## Part X: BCBS

**Directions**: Please indicate how strongly you agree or disagree with each statement. **We are only interested in YOUR beliefs, which may or may not be reflected by others or society.**

| | **Strongly disagree** | **Moderately disagree** | **Slightly disagree** | **Neutral** | **Slightly agree** | **Moderately agree** | **Strongly agree** |
|---|---|---|---|---|---|---|---|
| 1. Even if a physical feature is not considered attractive by others or by society, I think that it can be attractive | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 2. A person's confidence level can change my perception of their physical attractiveness | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 3. I think that a wide variety of body shapes are attractive | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 4. I think that thin or muscular individuals are more attractive than other body types | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 5. A person's soul or inner spirit can change my perception of their physical attractiveness | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 6. I define a person's attractiveness differently than how it is portrayed in the media | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 7. A person's acceptance of themselves can change my perception of their physical attractiveness | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 8. I appreciate a wide range of different looks as attractive | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| 9. I think that individuals of all body sizes can be attractive | **1** | **2** | **3** | **4** | **5** | **6** | **7** |

## Part XI: RSES

**Directions**: Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

| | Strongly Disagree | Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| 1. On the whole, I am satisfied with myself | **0** | **1** | **2** | **3** |
| 2. At times I think I am no good at all | **0** | **1** | **2** | **3** |
| 3. I feel that I have a number of good qualities | **0** | **1** | **2** | **3** |
| 4. I am able to do things as well as most people | **0** | **1** | **2** | **3** |
| 5. I feel I do not have much to be proud of | **0** | **1** | **2** | **3** |
| 6. I certainly feel useless at times | **0** | **1** | **2** | **3** |
| 7. I feel that I'm a person of worth, at least on an equal plane with others | **0** | **1** | **2** | **3** |
| 8. I wish I could have more respect for myself | **0** | **1** | **2** | **3** |
| 9. All in all, I am inclined to feel that I am a failure | **0** | **1** | **2** | **3** |
| 10. I take a positive attitude toward myself | **0** | **1** | **2** | **3** |

## Part XII: SCS

**Directions**: Please read each statement and indicate how often you behave in the stated manner.

| | Almost never | Sometimes | About half of the time | Most of the time | Almost always |
|---|---|---|---|---|---|
| 1. When I fail at something important to me, I become consumed by feelings of inadequacy. | **1** | **2** | **3** | **4** | **5** |
| 2. I try to be understanding and patient towards those aspects of my personality I don't like. | **1** | **2** | **3** | **4** | **5** |
| 3. When something painful happens, I try to take a balanced view of the situation. | **1** | **2** | **3** | **4** | **5** |
| 4. When I'm feeling down, I tend to feel like most other people are probably happier than I am. | **1** | **2** | **3** | **4** | **5** |
| 5. I try to see my failings as part of the human condition. | **1** | **2** | **3** | **4** | **5** |
| 6. When I'm going through a very hard time, I give myself the caring and tenderness I need. | **1** | **2** | **3** | **4** | **5** |
| 7. When something upsets me, I try to keep my emotions in balance. | **1** | **2** | **3** | **4** | **5** |

| | | | | | |
|---|---|---|---|---|---|
| 8. When I fail at something that's important to me, I tend to feel alone in my failure. | **1** | **2** | **3** | **4** | **5** |
| 9. When I'm feeling down, I tend to obsess and fixate on everything that's wrong. | **1** | **2** | **3** | **4** | **5** |
| 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people. | **1** | **2** | **3** | **4** | **5** |
| 11. I'm disapproving and judgmental about my own flaws and inadequacies. | **1** | **2** | **3** | **4** | **5** |
| 12. I'm intolerant and impatient towards those aspects of my personality I don't like. | **1** | **2** | **3** | **4** | **5** |

## Part XIII: BIDR-16

**Directions:** Please indicate how true each statement is.

| | **Not true** | | **Somewhat true** | | **Very true** |
|---|---|---|---|---|---|
| 1. I have not always been honest with myself | **1** | **2** | **3** | **4** | **5** |
| 2. I always know why I like things | **1** | **2** | **3** | **4** | **5** |
| 3. It's hard for me to shut off disturbing thoughts | **1** | **2** | **3** | **4** | **5** |
| 4. I never regret my decisions | **1** | **2** | **3** | **4** | **5** |
| 5. I sometimes lose out on things because I can't make up my mind soon enough | **1** | **2** | **3** | **4** | **5** |
| 6. I am a completely rational person | **1** | **2** | **3** | **4** | **5** |
| 7. I am very confident of my judgments | **1** | **2** | **3** | **4** | **5** |
| 8. I have sometimes doubted my ability as a lover | **1** | **2** | **3** | **4** | **5** |
| 9. I sometimes tell lies if I have to | **1** | **2** | **3** | **4** | **5** |
| 10. I never cover up my mistakes | **1** | **2** | **3** | **4** | **5** |
| 11. There have been occasions when I have taken advantage of someone | **1** | **2** | **3** | **4** | **5** |
| 12. I sometimes try to get even rather than forgive and forget | **1** | **2** | **3** | **4** | **5** |
| 13. I have said something bad about a friend behind their back | **1** | **2** | **3** | **4** | **5** |
| 14. When I hear people talking privately, I avoid listening | **1** | **2** | **3** | **4** | **5** |
| 15. I never taking things that don't belong to me | **1** | **2** | **3** | **4** | **5** |
| 16. I don't gossip about other people's business | **1** | **2** | **3** | **4** | **5** |

## Part XII: Demographics

**Responses to the following questions will be used for research purposes only.**

1. Please indicate your age: _____

2. How many years have you lived in North America? (Canada, United States, Central America countries) _____

3. Please select the gender identity that you most identify with:
    a. Female
    b. Male
    c. Transgender Female
    d. Transgender Male
    e. Gender Variant/Non-Conforming
    f. Not Listed: _____
    g. Prefer Not to Answer

4. Please indicate the racial category you identify with:
    a. American Indian or Alaska Native
    b. Asian
    c. Black or African American
    d. Native Hawaiian or Other Pacific Islander
    e. White
    f. Two or more races

5. Please indicate the ethnic category you identify with:
    a. Hispanic or Latino or Spanish origin
    b. NOT Hispanic or Latino or Spanish origin

6. Please indicate your highest level of educational attainment:
    a. Less than 8th grade
    b. Some high school (9-12th grade, no degree)
    c. High school graduate (or equivalent)
    d. Some college (no degree)
    e. Trade or vocational certificate/degree
    f. Associate's degree
    g. Bachelor's degree
    h. Master's degree
    i. Doctorate degree

7. Please indicate your gross (after taxes) annual household income:
    a. Less than $15,000
    b. $15,001 - $29,999

c. $30,000 - $44,999
d. $45,000 - $59,999
e. $60,000 - $74,999
f. $75,000 - $89,999
g. $90,000 - $104,999
More than $105,000

8. Please indicate how many times **in a typical week** you:

| | **Never** | **Once per week** | **A few times per week (2-3)** | **Multiple times per week (4-6)** | **At least once per day** | **Several times per day** | **Most of my waking hours** |
|---|---|---|---|---|---|---|---|
| 1. Use social media (e.g., Facebook, Instagram, Snapchat, etc.) | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 2. Watch television using a streaming service (e.g., Hulu, Netflix, Prime Video, etc.) | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 3. Watch television <u>without</u> using a streaming service | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 4. Listen to the radio or other music streaming services <u>that contain ads or commercials</u> | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 5. Access internet sites <u>that contain ads or commercials</u> (e.g., YouTube, etc.) | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 6. Read magazines | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
| 7. Read newspapers or other news sources (e.g., mobile news apps, etc.) | **0** | **1** | **2** | **3** | **4** | **5** | **6** |

9. Which of the following describes your current body size/weight:
a. Significantly below my ideal size/weight
b. Slightly below my ideal size/weight
c. At my ideal size/weight
d. Slightly above my ideal size/weight
e. Significantly above my ideal size/weight

10. Do you have a food allergy or a diagnosed chronic illness or chronic disease that restricts your dietary intake (the foods you can eat)?
a. No
b. Yes

i. If yes, please list the allergy, illness, or disease:
_____

11. Have you ever had an elective cosmetic surgery or procedure (e.g., liposuction, tummy tuck, plastic surgery, etc.)

a. Yes
b. No

## APPENDIX F:

## Study 2, Consent Form A – UNCC Sample


Department of Psychological Science
9201 University City Boulevard, Charlotte, NC 28223-0001

### Consent to be Part of a Research Study

Title of the Project: Beliefs and standards regarding eating practices and physical appearance
Principal Investigator: Victoria Galica, M.A., University of North Carolina – Charlotte
Faculty Advisor: Charlie Reeve, Ph.D., University of North Carolina – Charlotte

You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to help you decide whether or not to participate.

**Important Information You Need to Know**

- The purpose of this study is to better understand individuals' personal views regarding eating practices and physical appearance.
- You will be asked to complete an online survey.
- If you choose to participate it will require about 30 minutes of your time.
- There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.
- You will receive no direct benefits from participating in this research study. However, you can earn 1 SONA research credit for completing this study.
- Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time.

Please read this form before you decide whether to participate in this research study. If you have any questions, please contact the principal investigator.

**Why are we doing this study?**

The purpose of this study is to better understand individuals' personal views regarding eating practices and physical appearance. Responses to this survey will be used to develop a new measure that assesses the degree to which individuals' personal eating practices and physical appearance beliefs and standards match broader cultural messages.

**What will happen if I take part in this study?**
If you choose to participate in this study, you will be asked to complete an online survey. Your time commitment will be about 30 minutes.

**What benefits or risks might I experience?**
You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about individuals' personal standards and beliefs regarding eating behaviors and physical appearance. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

**Will I be paid for taking part in this study?**
You will earn 1 SONA research credit at the completion of this study.

**How will my information be protected?**
Your responses to this survey will be confidential. We will not ask any questions that can be used to identify you. All study data will be stored electronically in password-protected files by trained staff; only the research team will have access to the data. In any publications of this study, we will not include any information that will make it possible to identify you.

**What are my rights if I take part in this study?**
It is up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to answer any questions you do not want to answer. If you decide to withdraw from this study, your responses will not be retained.

**Who can answer my questions about this study and my rights as a participant?**
For questions about this research, contact the principal investigator: Victoria Galica, at 860-803-2722 or by email at vgalica@uncc.edu, or contact my Faculty Advisor, Dr. Charlie Reeve, at 704-687-1356 or by email at clreeve@uncc.edu.

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researchers, please contact the Office of Research Compliance at 704-687-1871 or uncc-irb@uncc.edu.

**Consent to Participate**
Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that:

- You have read the above information and understand what the study is about
- You voluntarily agree to participate
- You are 18 years of age or older

☐ Agree
☐ Disagree

## APPENDIX G:

## Study 2, Consent Form B – MTurk Sample


Department of Psychological Science
9201 University City Boulevard, Charlotte, NC 28223-0001

### Consent to be Part of a Research Study

Title of the Project: Beliefs and standards regarding eating practices and physical appearance
Principal Investigator: Victoria Galica, M.A., University of North Carolina – Charlotte
Faculty Advisor: Charlie Reeve, Ph.D., University of North Carolina – Charlotte

You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to help you decide whether or not to participate.

**Important Information You Need to Know**

- The purpose of this study is to better understand individuals' personal views regarding eating practices and physical appearance.
- You will be asked to complete an online survey.
- If you choose to participate it will require about 30 minutes of your time.
- There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.
- You will receive no direct benefits from participating in this research study. However, you can have $2.50 credited to your MTurk account.
- Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. However, per MTurk guidelines, if you withdraw from this study before completing the survey, you will forfeit the $2.50 compensation. In addition, several attention checks are included in the survey; if you fail these attention checks, you will forfeit the $2.50 compensation.

Please read this form before you decide whether to participate in this research study. If you have any questions, please contact the principal investigator.

**Why are we doing this study?**

The purpose of this study is to better understand individuals' personal views regarding eating practices and physical appearance. Responses to this survey will be used to

develop a new measure that assesses the degree to which individuals' personal eating practices and physical appearance beliefs and standards match broader cultural messages.

**What will happen if I take part in this study?**
If you choose to participate in this study, you will be asked to complete an online survey. Your time commitment will be about 30 minutes.

**What benefits or risks might I experience?**
You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about individuals' personal standards and beliefs regarding eating behaviors and physical appearance. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life.

**Will I be paid for taking part in this study?**
You will have $2.50 credited to your MTurk account at the completion of this study. However, per MTurk guidelines, if you withdraw from this study before completing the survey, you will forfeit the $2.50 compensation. In addition, several attention checks are included in the survey; if you fail these attention checks, you will forfeit the $2.50 compensation.

**How will my information be protected?**
Your responses to this survey will be confidential. We will not ask any questions that can be used to identify you. All study data will be stored electronically in password-protected files by trained staff; only the research team will have access to the data. In any publications of this study, we will not include any information that will make it possible to identify you.

**What are my rights if I take part in this study?**
It is up to you to decide to be in this research study. Participating in this study is voluntary. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to answer any questions you do not want to answer. If you decide to withdraw from this study, your responses will not be retained.

**Who can answer my questions about this study and my rights as a participant?**
For questions about this research, contact the principal investigator: Victoria Galica, at 860-803-2722 or by email at vgalica@uncc.edu, or contact my Faculty Advisor, Dr. Charlie Reeve, at 704-687-1356 or by email at clreeve@uncc.edu.

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researchers, please contact the Office of Research Compliance at 704-687-1871 or uncc-irb@uncc.edu.

**Consent to Participate**

Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that:

- You have read the above information and understand what the study is about
- You voluntarily agree to participate
- You are 18 years of age or older

☐ Agree
☐ Disagree

## APPENDIX H:

## Study 2 Results Tables

**Table 2**

Study 2 results: Participant demographic information.

| | |
|---|---|
| Male (%)[a] | 55.6 |
| Age: *M* (*SD*) | 29.54 (10.92) |
| Age (%) | |
| 18-24 | 42.1 |
| 25-34 | 29.0 |
| 35-44 | 18.2 |
| 45-54 | 7.1 |
| 55+ | 3.7 |
| Race (%) | |
| White | 74.4 |
| Black/African American | 12.5 |
| Asian | 5.7 |
| Multiracial | 4.4 |
| Other | 3.1 |
| Ethnicity (%) | |
| Hispanic/Latino/Spanish origin | 12.5 |
| Education (%) | |
| High school or GED | 14.5 |
| Some college | 41.8 |
| Trade/vocational degree | 1.3 |
| Associate degree | 7.4 |
| Bachelor's degree | 26.6 |
| Master's degree | 7.4 |
| Doctorate degree | 1.0 |
| Income (%) | |
| < $15,000 | 18.8 |
| $15,000 - $29,999 | 36.1 |
| $30,000 - $44,999 | 14.4 |
| $45,000 - $59,999 | 0.0 |
| $60,000 - $74,999 | 11.9 |
| $75,000 - $89,999 | 0.0 |
| $90,000 - $104,999 | 4.7 |
| > $105,000 | 14.1 |
| Years in North America | |
| < 10 years | 0.7 |
| 10-19 years | 23.9 |
| 20-29 years | 31.6 |
| 30-39 years | 29.3 |
| 40-49 years | 9.4 |

(*Continued*)

**Table 2** (*Cont.*)

| | |
|---|---|
| 50-59 years | 4.0 |
| 60-69 years | 2.0 |
| Ideal Body Size (%) | |
| Slightly below ideal size | 14.5 |
| At ideal size | 32.2 |
| Slightly above ideal size | 39.1 |
| Significantly above ideal size | 14.2 |
| Weekly Media Use:[b] *M* (*SD*) | |
| Average Media Use | 2.61 (0.86) |
| Social Media | 4.12 (1.51) |
| Standard Television (TV) | 1.53 (1.73) |
| Streaming TV Service | 3.19 (1.52) |
| Radio/Music Streaming | 2.16 (1.89) |
| Internet Sites with Ads/Commercials | 4.02 (1.46) |
| Magazines | 0.78 (1.30) |
| Newspaper/Electronic News | 2.00 (1.81) |
| Elective Plastic Surgery (%) | 2.4 |
| Medical Food Restriction (%) | 7.4 |

[a]A broad spectrum of gender identities was available for participants to select; participants in this study only selected Male or Female.

**Table 3**

Study 2 results: Confirmatory factor analysis and descriptive statistics for retained items

| | Factors | | | | | | |
|---|---|---|---|---|---|---|---|
| Items | Judgment of Self | Judgment of Others | Overvaluing Phys. App. | Strictness | *M* | *SD* | $r_{it}$ |
| 12 | .84 | | | | 2.91 | 1.30 | .58 |
| 6 | .79 | | | | 3.13 | 1.29 | .56 |
| 11 | .78 | | | | 3.09 | 1.33 | .54 |
| 10 | .74 | | | | 3.20 | 1.41 | .50 |
| 5 | .64 | | | | 3.20 | 1.28 | .41 |
| 23 | | .83 | | | 2.87 | 1.19 | .60 |
| 19 | | .76 | | | 2.64 | 1.19 | .61 |
| 22 | | .75 | | | 2.43 | 1.18 | .53 |
| 21 | | .72 | | | 2.52 | 1.24 | .53 |
| 17 | | .60 | | | 2.43 | 1.21 | .47 |
| 25 | | | .71 | | 3.34 | 1.01 | .47 |
| 53 | | | .70 | | 3.90 | 0.94 | .37 |
| 29 | | | .67 | | 3.74 | 1.04 | .35 |
| 32 | | | .63 | | 3.56 | 1.11 | .44 |
| 55 | | | .62 | | 3.58 | 1.16 | .45 |
| 40 | | | | .89 | 2.38 | 1.28 | .63 |
| 41 | | | | .88 | 2.45 | 1.32 | .66 |
| 39 | | | | .75 | 2.42 | 1.31 | .55 |
| 42 | | | | .74 | 2.23 | 1.26 | .52 |
| 48 | | | | .52 | 2.74 | 1.43 | .31 |
| Global IDC[†] | .60 | .75 | .57 | .60 | - | - | - |

*Notes.* $N$ = 282; statistics calculated using complete data only. Overvaluing Phys. App. = Overvaluing Physical Appearance; IDC = Internalized Diet Culture; $r_{it}$ = corrected item total correlation; computed using only items within factor.

[†]Values in this row reflect factor loadings for the indicated subdimension onto the Global IDC dimension.

**Table 4**

Correlations between factors of the Internalized Diet Culture Scale

| | M | SD | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|
| IDC Global | 2.94 | 0.70 | – | | | | |
| Judgment of Self | 3.10 | 1.08 | .72 | – | | | |
| Judgment of Others | 2.58 | 0.96 | .76 | .36 | – | | |
| OPA | 3.62 | 0.79 | .63 | .29 | .40 | – | |
| Strictness | 2.44 | 1.06 | .74 | .34 | .44 | .27 | – |

*Notes.* $N$ = 297. IDC = Internalized Diet Culture; OPA = Overvaluing Physical Appearance. All correlations are significant at $p$ = .000.

**Table 5**

Correlations between Internalized Diet Culture subscales and nomological network measures

| | IDC Global α = .89 | Judgment of Self α = .88 | Judgment of Others α = .85 | OPA α = .80 | Strict α = .86 |
|---|---|---|---|---|---|
| EDE-Q (α = .92) | .56[a] | .60[a] | .28[a] | .27[a] | .41[a] |
| IES-2 (α = .87) | -.38[a] | -.59[a] | -.13[c] | -.08 | -.20[a] |
| SATAQ (α = .89) | .56[a] | .41[a] | .40[a] | .36[a] | .44[a] |
| MWBIS (α = .94) | .38[a] | .59[a] | .19[b] | .19[b] | .09 |
| AFA (α = .90) | .64[a] | .43[a] | .60[a] | .48[a] | .34[a] |
| OBC-Shame (α = .87) | .63[a] | .74[a] | .40[a] | .37[a] | .26[a] |
| OBC-Surveillance (α = .88) | .28[a] | .48[a] | .07 | .14[c] | .07 |
| MBSRQ (α = .94) | -.13[c] | -.40[a] | .01 | -.11[t] | .13[c] |
| BCBS (α = .90) | -.21[a] | -.10 | -.20[a] | -.22[a] | -.10 |
| SCS (α = .89) | -.19[b] | -.44[a] | .00 | -.16[b] | .07 |
| RSES (α = .93) | -.20[b] | -.45[a] | -.09 | -.06 | .07 |
| BIDR-16 (α = .75) | -.10 | -.36[a] | .01 | .07 | .08 |

*Notes.* $N$ = 297. IDC = Internalized Diet Culture; OPA. = Overvaluing Physical Appearance; Strict = Strictness; EDE-Q = Eating Disorder Examination Questionnaire; IES = Intuitive Eating Scale; SATAQ = Sociocultural Attitudes Toward Appearance Questionnaire; MWBIS = Modified Weight Bias Internalization Scale; AFA = Anti-fat Attitudes; OBC = Objectified Body Consciousness; MBSRQ = Multidimensional Body-Self Relations Questionnaire; BCBS = the Broad Conceptualization of Beauty Scale; SCS = Self-Compassion Scale; RSES = Rosenberg Self-Esteem Scale; BIDR-16 = Balanced Inventory of Desirable Responding. [a]$p < .001$; [b]$p < .01$; [c]$p < .05$; [t]$p = .051$.

## APPENDIX I:

### Finalized Version of the Internalized Diet Culture Scale

*Instructions*: Please indicate how strongly you agree or disagree with each statement.

| Items | **Strongly Disagree** | **Disagree** | **Undecided** | **Agree** | **Strongly Agree** |
|---|---|---|---|---|---|
| 1. I feel like a lesser person when I see people who appear more physically fit than me. | 1 | 2 | 3 | 4 | 5 |
| 2. I feel like a lesser person when I eat unhealthy food. | 1 | 2 | 3 | 4 | 5 |
| 3. I feel ashamed of myself when I am above a certain body weight. | 1 | 2 | 3 | 4 | 5 |
| 4. I feel guilty when I eat more than I intended. | 1 | 2 | 3 | 4 | 5 |
| 5. I'm ashamed of myself when I eat certain foods. | 1 | 2 | 3 | 4 | 5 |
| 6. You can tell a lot about a person's morality by their appearance | 1 | 2 | 3 | 4 | 5 |
| 7. An individuals' character is reflected in their food choices. | 1 | 2 | 3 | 4 | 5 |
| 8. Physically fit individuals are worthier of respect. | 1 | 2 | 3 | 4 | 5 |
| 9. Individuals who are physically fit tend to be better people all around. | 1 | 2 | 3 | 4 | 5 |
| 10. Individuals who eat healthy have better strength of character. | 1 | 2 | 3 | 4 | 5 |
| 11. I try to only eat a specific amount of carbohydrates each day. | 1 | 2 | 3 | 4 | 5 |
| 12. I have a specific calorie goal that I always adhere to. | 1 | 2 | 3 | 4 | 5 |
| 13. I have strict standards for how much I eat. | 1 | 2 | 3 | 4 | 5 |
| 14. I try to only eat a specific amount of protein each day. | 1 | 2 | 3 | 4 | 5 |
| 15. I do not count calories or track my food intake in any way. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 16. Individuals should strive to obtain an ideal body size. | 1 | 2 | 3 | 4 | 5 |
| 17. Individuals should strive to be physically fit. | 1 | 2 | 3 | 4 | 5 |
| 18. Losing weight is an important part of becoming healthy. | 1 | 2 | 3 | 4 | 5 |
| 19. It is bad to be overweight. | 1 | 2 | 3 | 4 | 5 |
| 20. Obtaining an ideal body size will improve an individual's quality of life. | 1 | 2 | 3 | 4 | 5 |