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An Integrated Model of Eating Disorder Risk and Protective Factors: Implications for Research and Treatment

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An Integrated Model of Eating Disorder Risk and Protective Factors:

Implications for Research and Treatment

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A dissertation

presented to

the faculty of the Department of Psychology

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by

L. Alison Davis-Waddle

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ABSTRACT

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Implications for Research and Treatment

by

L. Alison Davis-Waddle

Body dissatisfaction and disordered eating behaviors are significant public health concerns,

especially among college-age women. Despite extensive research, the complex nature of

disordered eating and its etiology has prevented a satisfactory predictive model from being

developed and validated and has therefore hindered the development of effective prevention and

intervention strategies. This study aimed to integrate four of the most common etiological

theories into a model to predict disordered eating behaviors. Bivariate correlations and

moderation analyses were conducted to determine the strength of relationships between variables

and to determine whether a protective factor (i.e., self-compassion) moderates the effects of risk

factors (i.e., media exposure, thin-ideal internalization, negative affect) on body dissatisfaction,

drive for thinness, and bulimic behaviors. Results indicated that there were correlations between

negative affect, thin-ideal internalization, and disordered eating behaviors. Contrary to

hypotheses, media exposure had significant relationships with both bulimia and body

dissatisfaction but was not significantly associated with thin-ideal internalization. Broadly,

negative affect and thin-ideal internalization predicted disordered eating behaviors. Finally, self-

compassion did not emerge as a consistent moderator of the relationship between the three risk

factors and disordered eating behaviors – except with drive for thinness. Findings have potential

implications for mental and physical healthcare interventions to reduce symptom experiences

and increase well-being.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

The prevalence of eating disorders has been gradually increasing over the past several decades and now includes approximately 30 million individuals in the United States alone (National Eating Disorders Association [NEDA], 2016). This increase in eating disorders has been occurring alongside a consistent decrease in ideal body size since the 1950s (Stice, Schupak-Neuberg, Shaw, & Stein, 1994). Body dissatisfaction occurs at an even higher rate than eating disorders – endorsed by approximately 68% of the college-age female population examined in one study – and is a robust predictor of later disordered eating (Forney & Ward, 2013). College women appear to be more vulnerable to the effects of body dissatisfaction than the general population, due to their higher likelihood of engaging in social comparisons, and are therefore at the highest risk for disordered eating (Pinkasavage, Arigo, & Schumacher, 2015).

Research regarding the risk factors for eating disorders and body dissatisfaction has increased substantially since this type of research first began to flourish around 1980, particularly because of the high likelihood of negative health and mental health outcomes from disordered eating behaviors (Currin, Schmidt, Treasure, & Jick, 2005). Despite the plethora of research available regarding eating disorders, body dissatisfaction, and their risk factors, there is a lack of consistency regarding some important concepts in this field – specifically, the proposed relationship between media exposure and disordered eating symptomology. Some researchers find strong relationships between these variables (Grabe, Ward, & Hyde, 2008), others emphasize a mediational model between the two (Stice et al., 1994), and some find no relationship (Bell & Dittmar, 2011; Ferguson, Muñoz, Garza, & Galindo, 2014). Several explanations for these differences in findings are possible, with the two most likely being the

theoretical model utilized and the operational definitions of the variables used – as both influence the conceptualization of findings.

For example, many researchers emphasize the role of mass media in the development of eating disorders (Becker, Burwell, Navara, & Gilman, 2003; Stice et al., 1994); however, no formal scale of media exposure is published for use in research, meaning that each study has the potential to view media exposure differently (Ferguson et al., 2014). As media exposure is a common risk factor cited in the literature, many studies use theoretical models that emphasize the role of media in their own conceptualization of eating disorders (e.g., Tripartite Influence Model; van den Berg, Thompson, Obremski-Brandon, & Coovert, 2002). While this may be beneficial in some regards, other researchers note that such models may neglect many other important contributors to disordered eating symptomology, such as negative affect (Tylka and Kroon Van Diest, 2015).

Further, while risk factors for eating disorders are heavily researched, protective factors are addressed less often (Levine & Smolak, 2016). Piran (2015) states that the predictive value of risk factors alone is low; however, when viewed alongside potential protective factors, the predictive power of the model is increased substantially. To that end, self-compassion, or treating oneself like a loved one, has been consistently found to reduce functional impairment, various symptoms of psychopathology, and subjective distress (Neff, 2003b). Self-compassion has been researched in relation to eating disorders infrequently; however, initial findings suggest its effectiveness for treatment and prevention (Braun, Park, & Gorin, 2016). As treatment for eating disorders has, historically, produced only mild to moderate improvement in the short-term, further exploration of potential etiological models is essential.

The purposes of the proposed study are: 1) to integrate multiple theoretical models of disordered eating and psychopathology, 2) to establish a relatively comprehensive etiological model of risk and protective factors for disordered eating in college-age females, and 3) to improve current conceptualizations of eating disorders to inform prevention and treatment.

Eating Disorder Overview

The Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition (DSM-5) recognizes three primary diagnostic categories of eating disorders: anorexia nervosa (AN), bulimia nervosa (BN), and most recently, binge-eating disorder (BED; American Psychiatric Association [APA], 2013).

Anorexia nervosa. Anorexia nervosa (AN) is characterized by low body weight, intense fear of gaining weight, and a disturbance in the way one perceives his or her body (APA, 2013). Its lifetime prevalence rate ranges from 0.4% to 2.0%, with most of those suffering from AN being female (APA, 2013). AN has the highest mortality rate of any mental disorder, as well as numerous associated physical and mental health complications, including muscle loss, infertility, and cardiovascular damage (Crow et al., 2009). The DSM-5 lists the following potential risk factors for AN: childhood anxiety or anxiety disorder diagnoses; exposure to or immersion in cultures where thinness is valued; depression or depressive symptoms; and genetic or biological influences (APA, 2013).

Bulimia nervosa. Bulimia nervosa (BN) is characterized by recurrent episodes of binge eating, inappropriate compensatory behaviors (e.g., laxative use, self-induced vomiting), and self-evaluations that are influenced heavily by shape and weight (APA, 2013). The lifetime prevalence rates for BN range from 1.5% to 4.6% – again, with the majority being women. The DSM-5 notes the following risk factors for BN: weight concerns, low self-esteem, depression,

anxiety, and childhood obesity (APA, 2013). While BN does not have a mortality rate equal to that of AN, there are serious health complications that are generally the result of one's compensatory strategies (e.g., electrolyte imbalances, esophageal rupture; Crow et al., 2009)

Binge eating disorder. Binge Eating Disorder (BED) was not introduced as a formal diagnosis until the release of the DSM-5; however, it has been listed as a condition for further study for several years (APA, 2013). BED is characterized by recurrent and persistent episodes of binge eating, without the regular use of compensatory strategies (as in BN). A binging episode is associated with three or more of the following: eating more rapidly than normal; eating until uncomfortably full; eating without feeling hungry; eating alone because of the associated embarrassment; and feeling disgusted, depressed, or guilty after eating (APA, 2013). The lifetime prevalence rate for BED is estimated between 1.6% and 5.3%, making it potentially the most common eating disorder. Presently, the risk factors for BED are unclear, though the DSM-5 suggests that there may be genetic components of the disorder (APA, 2013). There appears to be considerable overlap in the etiological pathways of BN and BED; however, BED-specific research is limited and continues to be an area for additional study (Stice, Marti, Shaw, & Jaconis, 2009).

Subthreshold and partial diagnoses. Some researchers and clinicians believe that the criteria for eating disorder diagnoses are too stringent, leaving many individuals to fall in the "other" category (i.e., Other Specified/Unspecified Feeding or Eating Disorder) or avoid diagnosis altogether. Unfortunately, this can prevent individuals from receiving appropriate care (Hunt & Churchill, 2013; Olatunji, Cox, Ebesutani, & Wall, 2015). Further, examining the prevalence of only clinically-diagnosed eating disorders is a drastic underestimation of symptom experience and functional impairment. In the late 1990s, estimates for individuals suffering with

disordered eating symptoms reached approximately 32% (Mintz, O'Halloran, Mulhollan, & Schneider, 1997). More recent estimates suggest that over half of the general female population endorse at least partial eating disorder symptomology (Loth, MacLehose, Bucchianeri, Crow, & Neumark-Sztainer, 2014).

Body dissatisfaction. Body dissatisfaction, the negative evaluations of one's body size, shape, or weight, is common in college-age women (Cash & Pruzinsky, 2004; Yager & O'Dea, 2008). In fact, according to one meta-analysis, most individuals in college express a desire to lose weight (Yager & O'Dea, 2008). Body dissatisfaction is related to many posited risk factors for eating disorders, including media exposure, peer and familial influence, and body mass index (BMI; van den Berg et al., 2002). Body dissatisfaction predicts later severity of eating disorder symptomology, influences the course and chronicity of the disorder, and is an essential target for preventative and treatment efforts (Arendt, Peter, & Beck, 2016). Body dissatisfaction can be conceptualized from similar, but distinct, perspectives – as a precursor to eating disorders (Stice & Shaw, 2002), as an eating disorder symptom, and/or as an outcome in research on eating disorders (Forney & Ward, 2013; Piran, 2015). For this study, body dissatisfaction was used as an outcome variable because of its high prevalence in college-age women and ability to predict other eating disordered behaviors (Pinkasavage et al., 2015).

Theoretical Background

The development of eating disorder pathology can and has been conceptualized through multiple theoretical perspectives – most notably, the Tripartite Model (van den Berg et al., 2002). Other models and theories of interest include: Objectification Theory (Fredrickson & Roberts, 1997), Affect Regulation Theory (Gilbert, 2005), and Developmental Theory of Embodiment (Piran & Teall, 2012). Because of the complexity of eating disorder etiology, no single model

fully explains the developmental pathway; however, this study was the first to attempt to merge components of each of the above models to take a step toward a more comprehensive understanding of this intricate pathology.

Tripartite influence model. The Tripartite Influence Model (van den Berg et al., 2002) states that the combined pressure from peers, family, and media to aspire to the thin-ideal is the primary mechanism driving the increase in disordered eating. These influences are proposed to work through two mediators – thin-ideal internalization and social comparison – to increase body dissatisfaction, which is then associated with increased risk for restriction and bulimic behaviors. The Sociocultural Attitudes Toward Appearance Questionnaire – Fourth Edition (SATAQ-4) has three subscales dedicated to the influences of peers, media, and family, along with two additional subscales dedicated to thin-ideal internalization (Schaefer et al., 2015). Tylka and Kroon Van Diest (2015) state that, while the Tripartite Model is a logical conceptualization of the etiology of disordered eating behaviors, it neglects to address the role of affect regulation, which has been identified by many researchers as essential to any model of eating disorders, primarily due to the consequences associated with experiencing negative affect (e.g., depression, shame; Goss & Allan, 2014; Kelly, Carter, & Borairi, 2014; Moulton, Newman, Power, Swanson, & Day, 2015; Musolino, Warin, Wade, & Gilchrist, 2016; Olatunji et al., 2015). It is important to note that some research has indicated that media exposure does not pose any risk for disordered eating and may, therefore, not serve as a meaningful predictor within the model proposed in the present study (Ferguson et al., 2014).

Objectification theory. Objectification Theory (Fredrickson & Roberts, 1997) was introduced to explain the consequences of a culture that sexually objectifies females and their bodies. One's physical body has come to have meaning shaped by cultural experiences, and the

currently prescribed meaning (i.e., females as sexual objects) has, in turn, negatively influenced

mental health outcomes for girls and women, regardless of age, race, or sexual orientation.

Fredrickson and Roberts (1997) emphasize the role of media in the objectification of women, as

the trend is toward women's bodies often being portrayed as sexual objects, particularly relative

to how men's bodies are portrayed. While the current portrayal of women in the media may be

harmful on a societal level, it can also negatively influence one's self-perception on an individual

level. This aspect of Objectification Theory is most often associated with eating disorders, as

women begin to internalize objectifying norms and then evaluate themselves based on these

norms (Fredrickson & Roberts, 1997).

In the United States, attractiveness is often associated with the amount of power an

individual has or has the potential to obtain (Fredrickson & Roberts, 1997). As such, physical

appearance becomes a bargaining chip that can be traded in for acceptance, with those deemed

"unattractive" struggling to achieve belonging, value, and status in society. The thin-ideal

presented by society elicits what Fredrickson and Roberts call "normative discontent" as the

ideal is near-impossible to achieve without consequences. Failure to abide by the appropriate

norms can result in individual feelings of shame, as one's appearance is perceived as a

shortcoming of sorts. The potential for negative other or self-evaluation motivates a desire for

change, or in the case of eating disorders – a desire for weight loss. Self-objectification, or the

internalization of the thin-ideal, can contribute to individual experiences of depression, anxiety,

and of course, eating disorders (Fredrickson & Roberts, 1997).

Affect regulation theory. Gilbert (2005) used research from evolutionary psychology

and neuroscience to propose Affection Regulation Theory, which posits that there are three types

of emotion regulation systems: threat and protection systems; drive, resource-seeking, and

excitement systems; and contentment, soothing, and safeness systems. The threat protection system strives to alert the body to a potential threat so that action can be taken to reduce the threat; however, this system operates from a "better safe than sorry" perspective, which often results in overactivation of this system and contributes to psychopathology (p. 200). The drive system is based on reward, which causes individuals to seek stimulation and pleasure, or even to avoid negative events/feelings (e.g., rejection, shame). If neither the threat nor drive systems are active, the contentment system is accessible, which is where one can experience peace and well-being (Gilbert, 2005). Compassion-Focused Therapy, which is based on the Affect Regulation Model, helps individuals to activate their contentment system more frequently (Gilbert, 2005; Kelly et al., 2014).

This theory proves especially helpful in the conceptualization of eating disorders, as criticism from others (e.g., teasing, "fat talk") can mistakenly activate the threat system and cause individuals to tap into the drive system to reduce the potential threat. Speaking more concretely, the drive for thinness, including weight management strategies, is a method of threat reduction, as well as affect regulation. The individual may engage in disordered eating behaviors to reduce the negative affect associated with the actual, or perceived, threats from others (e.g., media, peers, family). As disordered eating behaviors are often means to reduce negative affect, participants' experiences of negative affect will be measured as a predictor, rather than affect regulation ability.

Developmental theory of embodiment. The final theory of interest, the Developmental Theory of Embodiment (DTE; Piran & Teall, 2012), is less concerned with etiology than it is with prevention and treatment; however, its focus on positive psychology fits well with the idea that protective factors, in addition to risk factors, determine outcomes (Piran, 2015). The premise

of DTE is that societal norms can be shifted in a positive direction, despite their history or the current extent of their social permeation. There are three domains of the DTE model: physical freedom, mental freedom, and social power, with each having associated protective factors that can increase embodiment of healthy ideals and can empower individuals to overcome unhealthy or negative societal expectations. The physical freedom domain centers on care for the body, including self-care, engagement in physical activity, and connection to physical desire. The mental freedom domain relates to sociocultural constructs such as stereotypes and gender roles, where one must have the freedom to express oneself without constraints placed by gender or appearance norms. Finally, the social power domain is linked with access to resources and power, without discrimination based on status (e.g., race, sex; Piran & Teall, 2012).

Essentially, in relation to eating disorder development and treatment, the DTE emphasizes individuals' rights to thrive, regardless of appearance or weight, and encourages those who are struggling to speak out against the systemic barriers and remove them. This theory comes from a public health approach, where interventions on an individual level may not prove most effective for eating disorder patients; instead, system change may be required (Piran, 2015). Levine and Smolak (2016) suggest that a strengths-based approach, rather than a risk reduction approach, is better suited for eating disorder treatment; however, this approach must incorporate changes at each level within the ecological system (Bronfenbrenner, 1979). The DTE model suggests that models attempting to explain psychological phenomena should take into account any protective factors, such as self-compassion, which may promote personal growth and positive coping style in various domains rather than simply reducing symptoms in a particular area (Piran, 2015).

Core Psychopathology of Eating Disorders

While the DSM-5 classification system represents the currently-accepted conceptualization of these diagnoses, there appears to be substantial overlap in diagnostic categories and overlap in symptomology between eating disordered and non-eating disordered individuals. Hilbert and colleagues (2014) attempted to identify and differentiate the developmental pathways to AN, BN, and BED, with only mild success. They successfully identified distinctions between AN and BED; however, BN had significant symptom and risk factor overlap with both AN and BED. Another study found high rates of diagnostic crossover from BED to BN (42%), along with high crossover in the opposite direction as well (19%; Stice et al., 2009). It appears that, for now, distinct etiological pathways might not represent the most accurate perception of disordered eating.

Research is dominated by categorical eating disorder conceptualization, when the reality is that there are features that present across diagnoses (Wade, Bergin, Martin, Gillespie, & Fairburn, 2006). Wade and colleagues (2006) studied lifetime eating disorder behaviors (LEDBs), as opposed to using the DSM criteria for disorders, and found that, as number of LEDBs increased, so did functional impairment. LEDBs were defined as bingeing, inducing vomiting, laxative misuse, diuretic misuse, fasting, and self-reported low BMI. As few as three LEDBs were enough to have a noticeable influence on self-esteem, supporting the idea that disordered eating likely occurs on a spectrum (Wade et al., 2006). For this study, as opposed to using diagnoses as outcome variables, common symptoms of disordered eating were used instead (i.e., bulimic symptoms, body dissatisfaction, drive for thinness), allowing for a more dimensional approach to conceptualization.

Fairburn (2008) established a transdiagnostic approach to treatment for eating disorders, suggesting that the primary mechanism, or "core psychopathology," underlying all eating disorders is the tendency to overvalue shape and weight. As an individual begins to overvalue one aspect of the self, an imbalance occurs in the way that one perceives the self and determines self-worth, often leading to a decrease in self-esteem and an increase in body dissatisfaction (Boone & Soenens, 2015; Goldschmidt et al., 2010). Said differently, individuals who overvalue shape and weight are more likely to undervalue other important aspects of the self, with a hypersensitivity to shortcomings in areas associated with physical appearance, as well as increased attempts to control and change these aspects of the self. These individuals are then more likely to endorse self-blaming and self-shaming attitudes, rather than attitudes associated with self-kindness and self-compassion (Boone & Soenens, 2015; Goldschmidt et al., 2010).

Risk Factors

Media exposure. Often, the media is criticized for the role that it plays in the development and maintenance of disordered eating symptoms (Schaefer et al., 2015; Stice & Shaw, 2002; van den Berg et al., 2002). Boisvert and Harrell (2010) emphasize the unrealistic nature of the ideals represented in the media, and countless others have recommended media literacy interventions as the most relevant form of eating disorder prevention (Arendt et al., 2016; Stice & Shaw, 2002; Yager & O'Dea, 2008). Some researchers have questioned this role, however, and have posited other potential avenues by which individuals may develop these disordered eating behaviors and symptoms (Ferguson et al., 2014). Much of the research comes back to the influence of the thin ideal, whether promulgated by the media, by peers, or by family members, and which appears to be the underlying factor within much of the research conducted thus far (Schaefer et al., 2015).

In the United States, it is difficult to avoid being inundated with thin-ideal media, which, according to the literature, increases risk for internalization of this ideal, and ultimately, the risk for developing an eating disorder (Levine & Smolak, 1996; Stice et al., 1994). Despite frequent media exposure for most Americans, not all individuals develop eating disorders, as evidenced by the comparatively low prevalence rate for eating disorders. Further, previous research has suggested that only vulnerable individuals are likely to develop disordered eating from mere media exposure, where those at risk are women who have comparatively larger body sizes or those who already heavily endorse the thin-ideal (Clark & Tiggemann, 2007; Coker & Abraham, 2014; López-Guimerà, Levine, Sánchez-Carracedo, & Fauquet, 2010; Stice et al., 1994; Suisman et al., 2012; Vartanian, 2009). The endorsement of the thin-ideal appears to be the consistent link in research, where even studies that found a relationship between media and eating disorders noted that thin-ideal internalization was the primary mediator of this relationship (Levine & Smolak, 1996; Stice et al., 1994).

Clay, Vignoles, and Dittmar (2005) outlined a hierarchy of how one processes media material, with exposure, awareness, and internalization of media messages occurring in that order. According to this model, the distinction between exposure and internalization is incredibly important, as the message does not take on significant meaning until after internalization. The influence of media exposure was examined to test the validity of the Tripartite Influence Model outlined above (van den Berg et al., 2002); however, it is expected that other variables, such as thin-ideal internalization, will prove stronger predictors of body dissatisfaction.

Thin-ideal internalization. The literature has consistently identified sociocultural risk factors for eating disorders, including but not limited to media exposure as discussed above (Stice & Shaw, 2002; van den Berg et al., 2002). Many researchers have intertwined thin-ideal

internalization and media exposure as a single concept; however, more recent research argues that these concepts are distinct and should be measured as such (Ferguson et al., 2014). Internalization is defined as the process of accepting cultural values, attitudes, or beliefs as one's own; therefore, thin-ideal internalization is the process of accepting thinness as valuable and attempting to align oneself with this value (van den Berg et al., 2002). Ferreira, Pinto-Goveia, and Duarte (2013) note that societies will often pass judgment on individuals who do not adhere to the expectations of the dominant culture, and the current sociocultural perspective toward eating disorders likely serves to maintain the nature of and stigma against those with eating disorders. Forney and Ward (2013) noted that, in societies where disordered eating behaviors are more accepted or even encouraged, the risk for eating disorders increases substantially. Goss and Allan (2014) found that individuals who had received treatment for their eating disorders had extreme difficulty re-acclimating to a culture obsessed with thinness, beauty, and dieting. The societal appreciation of thinness can, therefore, be contradictory and defeating for those who suffer from disordered eating and body dissatisfaction (Musolino et al., 2016).

Thin-ideal internalization has consistently been related to later body dissatisfaction in the eating disorder literature, though the pathway may be more complex and may be indirect (Yean et al., 2013). Internalization of the thin-ideal does not automatically guarantee body dissatisfaction; instead, one must develop a mechanism for comparing oneself to this ideal. Internalization and self-objectification have been used synonymously by some researchers (e.g., Boisvert & Harrell, 2010), with the assumption being that those who internalize norms also objectify themselves according to those norms. Women have been found to internalize ideals from society more often than men, which has potential links to Objectification Theory as described above (Fredrickson & Roberts, 1997; Yean et al., 2013). Once those negative self-

evaluations are made, the risk for body dissatisfaction increases and often perpetuates the occurrence of other forms of negative self-evaluations (Pinkasavage et al., 2015).

Perhaps the influence of the thin-ideal speaks toward a larger societal and cultural issue than the media can be responsible for creating, which is why Objectification Theory may provide additional insight to the Tripartite Influence Model. Though media is one avenue by which an individual receives negative body messages, these ideals are endorsed and enforced by other people that have the potential to influence one's self-assessment, even if the individual alone does not endorse the ideals. For example, a recent trend of "body shaming" has become prominent in some cultures – most notably, the United States – where individuals who attempt to challenge cultural norms are publicly criticized and judged for their appearance (McDonnell & Lin, 2016). While this could have been initiated by the media's promulgation of the thin-ideal, it has reached levels far beyond that which can be targeted by media literacy interventions alone.

Negative affect. Another potential pathway to body dissatisfaction and disordered eating is associated with negative affect (Pinkasavage et al., 2015). Negative affect is not necessarily only characterized by specific mood states or disorders (e.g., anxiety, depression), but instead may be characterized by overall experiences of negativity toward the self, others, and the world. While negative affect can be an outcome associated with disordered eating, it is also plausible as a risk factor for body dissatisfaction. The Affect Regulation Model proposes that the threat system can be activated by real or perceived threats which, in the case of eating disorders, can be initiated by not achieving the thin-ideal (Gilbert, 2005). Making upward comparisons with individuals who exemplify the ideal is likely to increase negative affect (e.g., shame, guilt), and negative social feedback from others can be responsible for this as well (Kelly et al., 2014; Pinkasavage et al., 2015; Schaefer et al., 2015; van den Berg et al., 2002). Shame is then an

underlying mechanism of eating disorder symptomology, and body shame, specifically, has been identified as a robust predictor of disordered eating (Boisvert & Harrell, 2010).

Individuals with a diagnosed eating disorder often report a history of and current self-harm behaviors, such as cutting or burning (Olatunji et al., 2015). Self-harm is generally utilized as a mechanism through which one can regulate his or her negative affect (via the drive system; Gilbert, 2005). A bidirectional relationship is noted in the literature between self-harm and negative affect, where the presence of one can perpetuate the existence of the other. Disordered eating and weight management strategies are similarly conceptualized as an emotion regulation strategy (Goss & Allan, 2014; Kelly et al., 2014; Moulton et al., 2015; Musolino et al., 2016). While these strategies are effective in the short-term and may provide immediate relief, this approach is not stable in the long-term, as the secretive nature of disordered eating behaviors often increases shame and may cause long-term health consequences (Kelly et al., 2014). The theoretical interaction between affect regulation and pressure from others provides a more concrete link between the sociocultural influence and disordered eating (Gilbert, 2005; van den Berg et al., 2002).

Protective Factors

Much of the eating disorder literature focuses on risk reduction rather than individual strengths and protective factors (Shisslak & Crago, 2001); however, Levine and Smolak (2016) suggest that the latter may prove to be a more effective approach. A focus on protective factors is also suggested by the Developmental Theory of Embodiment (Piran, 2015). It should be noted that protective factors are not simply the opposite of risk factors. O'Connell, Boat, and Warner (2009) define a protective factor as: "A characteristic at the biological, psychological, family, or community (including peers and culture) level that is associated with a lower likelihood of problem

outcomes or that reduces the negative impact of a risk factor on problem outcomes." One such protective factor for psychopathology is self-compassion (Neff, 2003a). Other suggested protective factors include living in a less Westernized culture, belonging to a family that does not emphasize weight, and media literacy (National Eating Disorders Collaboration [NEDC], 2018); however, these factors are either difficult to measure or difficult to manipulate, even if measurable. Braun and colleagues (2016) also recommend using either body appreciation or body image flexibility as protective factors; however, these constructs are thought to have significant overlap with body dissatisfaction, one of the outcome measures of this study; therefore, due to concerns regarding multicollinearity, these factors could not be used in the current study. Additionally, self-compassion presents itself as a more global protective factor, often being described as transdiagnostic and/or transtheoretical, which could have broader implications when applied in practice (Braun et al., 2016; Liss & Erchull, 2015). Finally, one of the primary tenets of objectification theory is that one is not good enough, which makes self-compassion, the act of being kind to oneself and understanding of one's shortcomings, ideal for the questions posed in this study. As such, self-compassion was chosen as the protective factor to be examined in the present study.

Self-compassion. Self-compassion was introduced in the early 2000s and is based on Buddhist principles (Neff, 2003a). Self-compassion is thought to be transdiagnostic in its approach and its theory, where self-compassion is a composite term for the following components: 1) common humanity, which states that suffering is inevitable and is encountered by everyone, 2) mindfulness, which encourages acceptance of rather than over-identification with suffering, and 3) self-kindness, which teaches an individual to contextualize his or her experiences and accept mistakes without self-criticism (Neff, 2003a; Neff, 2003b). Research

specific to the relationship between self-compassion and eating disorders is somewhat limited, but it may provide substantial theoretical and clinical benefit for treatment of eating disorder patients. Additionally, the self-compassion research in other areas of psychopathology (e.g., depression, anxiety) indicates that increasing one's capacity for self-compassion can influence disorder trajectories and moderate the exposure to general psychopathology risk factors, such as childhood trauma, negative affect, and sociocultural norms (Neff, 2003b).

Each of the three core components of self-compassion can also map onto eating disorder symptomology, as well as onto the risk factors noted above, with eating-disordered individuals exemplifying the opposite of each tenet. First, individuals with disordered eating symptoms and behaviors tend to be secretive and often isolate themselves, particularly where food consumption is concerned (Kelly et al., 2014). This maps onto the tenet of common humanity, as individuals with eating disorders often assume that no one else can understand their pain and experiences. Further, individuals with eating disorders are often shamed for their method of coping with negative experiences (e.g., maladaptive eating behaviors) and are encouraged by family, friends, and professionals to develop new, healthier coping mechanisms. Because of the associated shame in their behaviors, reaching out for social support, personal or professional, often becomes difficult (Goss & Allan, 2014). Individuals are then often forced to regulate their emotional experiences alone, potentially in harmful ways (Olatunji et al., 2015). Second, rumination regarding caloric intake and overvaluation of shape and weight are prominent features of AN and BN, with both being misguided attempts to manage threat and regulate negative affect. This is related to the second tenet, mindfulness, as individuals with eating disorders have a need to control and change their thoughts and experiences, rather than directly accepting their feelings as they are (Kelly et al., 2014). Finally, self-criticism, as opposed to self-kindness, is paramount in

the disordered eating experience (Boone & Soenens, 2015). In fact, those with eating disorders are often keenly aware of their shortcomings, which are not necessarily limited to food or eating and which may stem from frequent comparisons to others (Boone & Soenens, 2015).

Self-compassion is distinguished from self-esteem within the literature and has several important differences. Self-esteem is heavily encouraged on a societal level, with self-esteem often being increased by comparing oneself to others. Unfortunately, self-esteem sometimes operates under the assumption that one must somehow be "better than" others to be considered worthwhile or important (Goldschmidt et al., 2010; Neff, 2011). This culture of competition is one reason why social comparisons occur so often, not only in the context of appearance, but also in status, wealth, athletic ability, and many other personal, interpersonal, and social determinants of worth. Neff's conceptualization of self-compassion, alternatively, does not encourage comparison against others but instead assists individuals with accepting themselves as they are, even amidst their pain (2003). Self-compassion can be used as an emotion regulation strategy in place of the weight management strategies one may use presently, and can have beneficial effects of both physical and mental health and well-being, including reductions in thin-ideal internalization, drive for thinness, body dissatisfaction, and negative affect (Kelly et al., 2014; Neff, 2003b).

Statement of the Problem

Yean and colleagues (2013) state that eating disorders "continue to be an unresolved health problem" despite extensive research and attempts to treat these disorders (p. 1). Eating disorders are notoriously difficult to treat due to their multidimensionality and the lack of a comprehensive etiological model of eating disorder development (Allen & Dalton, 2011; Crow et al., 2013). In fact, the possibility that "recovery" exists for individuals with eating disorders is

heavily contested within the field (Musolino et al., 2016), as longitudinal research has shown a tendency toward relapse and symptom recurrence (Stice et al., 2009). Some have estimated that approximately half of individuals who had reached recovery status relapse within 7 years of treatment completion (Musolino et al., 2016; Stice et al., 2009).

Early intervention for disordered eating can prevent the development of a host of medical complications, and would, ideally, reduce the chronicity of eating disorders and improve recovery rates (Bauer et al., 2013; Stice & Shaw, 2002). Unfortunately, many individuals suffering from eating disorders do not present to their physician with these concerns and are not active in seeking out specialty mental health care (Bauer et al., 2013; Linville et al., 2015). Those with eating disorders appear to be even less likely than those with other mental health concerns to seek treatment, as almost 80% of individuals experiencing clinically-diagnosable symptoms do not receive appropriate care (Lipson et al., 2016). Potential reasons for this trend are: stigma against mental health disorders and treatment, shame associated with one's symptoms, and denial that problems exist (Bauer et al., 2013). Insurance coverage and access to specialty care can also act as external barriers to effective treatment, as insurance will generally only cover treatments that are "medically necessary," and subthreshold or NOS diagnoses typically do not qualify for care (Johnston, Fornai, Cabrini, & Kendrick, 2007; Newton, Bosanac, Mancuso, & Castle, 2013). Essentially, the system at present requires that individuals with disordered eating symptoms worsen before receiving mental health care. Therefore, there appears to be more value in exploring the existence of subclinical symptoms and early markers of psychopathology (e.g., body dissatisfaction, drive for thinness, bulimia behaviors) to aid in the development of early interventions.

To have effective interventions and prevention programs, a solid etiological model is necessary, and previous research has taken a piecemeal, rather than comprehensive, approach to the overall concern (Bauer et al., 2013; Tylka & Kroon Van Diest, 2015). Therefore, this study attempts to combine salient aspects of the most common theoretical explanations of eating disorder development, while also incorporating both risk and protective factors, with the overarching goal of reaching clarity in the often disparate eating disorder literature.

Hypotheses

Hypothesis 1: Negative affect and thin-ideal internalization will be significantly correlated with one another, as well as with body dissatisfaction, bulimia behaviors, and drive for thinness.

Hypothesis 2: General media exposure, as measured via a self-report rating scale of time spent engaging with media, will be significantly correlated with negative affect and thin-ideal internalization, but will not be significantly correlated with body dissatisfaction, bulimia behaviors, or drive for thinness.

Hypothesis 3: Negative affect and thin-ideal internalization will be significant predictors of body dissatisfaction, bulimia behaviors, and drive for thinness in their respective multiple regression models when all other covariates are considered.

Hypothesis 4: Self-compassion will significantly moderate the association between negative affect and thin-ideal internalization (i.e., predictor variables), and body dissatisfaction, drive for thinness, and bulimia behaviors (i.e., outcome variables) in their respective multiple regression models. Specifically, I predict that individuals with higher self-compassion will exhibit a weaker relationship between negative affect and body dissatisfaction, bulimia behaviors, and drive for thinness as well as a weaker relationship between thin-ideal internalization and body dissatisfaction, bulimia behaviors, and drive for thinness.

CHAPTER 2

METHOD

Participants

Participants were female undergraduate students (N = 327) from a Southeastern university. Participants were recruited via an online participant management system through a Southeastern university (i.e., SONA Systems) and completed the survey via Research Electronic Data Capture (REDCap; Harris et al., 2009). Participants were offered research credits to apply toward their research participation course requirements and/or for extra credit. Participants were presented with an informed consent statement prior to beginning the survey. Institutional Review Board (IRB) approval was obtained prior to data collection.

Measures

Davis Assessment of Media Consumption (DAMC). As there was no general media exposure measure within the literature to use for this study, one was created by the author for previous research and it has been used consistently in subsequent projects regarding media exposure. Of the measures used in the research to examine media exposure, the Multidimensional Media Influence Scale (MMIS) and the Media Pressures subscale of the Sociocultural Attitudes toward Appearance Questionnaire (SATAQ) are the most commonly cited (Harrison, 2009; Schaefer et al., 2015); however, these scales measure the impact of media exposure rather than exposure to media itself. As previous researchers have noted (e.g., Clay et al., 2005; Ferguson et al., 2014), there is an important distinction between exposure and internalization of ideals. As such, a measure examining only media exposure was necessary to firmly establish this distinction in research as well.

The DAMC (Davis & Dula, 2013; see Appendix for a complete list of measures) is an

unpublished 48-item measure that consists of two subscales addressing one's exposure to type of media (e.g., television, magazines) and media topics (e.g., reality, fashion). The DAMC Topics subscale is a 41-item measure assessing general media exposure to specific media topics, and is more relevant to the current question than types of media outlets through which media is consumed (i.e., Types subscale). Example items include: "Sports/Athletics," "Style/Fashion," "Home/Garden," and "General News/Current Affairs." Participants estimated how often they are exposed to media per day by topic, based on a 5-point Likert-type scale for each item ranging from 0 "Never" to 4 "As Frequently As Possible." The Cronbach's alpha for the Topics subscale in previous research has ranged from .88 to .91. In the present study, the internal consistency of this subscale was .91.

Eating Disorder Inventory – 2 (EDI-2). The Eating Disorder Inventory-2 (Garner, 1991; see Appendix) is a 91-item measure designed to assess the presence or absence of disordered eating symptoms; however, only 23 items were used for this study. The Body Dissatisfaction, Drive for Thinness, and Bulimia subscales were chosen for special consideration in this study, as they are identified by previous studies (e.g., Ferreira et al., 2013; Garner, 1991) as the subscales that best measure symptoms occurring frequently in non-clinical populations. Evaluation of these subclinical symptom experiences is valuable for early intervention and treatment models. Responses are rated on a scale from 0 "Never" to 3 "Always." Zero indicates that clinically significant diagnostic criteria are absent, and scores of 1, 2, and 3 represent increasing presence and severity of symptoms. Items are summed to establish subscale scores. Subscale scores range from 0 to 27 for Body Dissatisfaction (9 items total) and 0 to 21 for Bulimia and Drive for Thinness (7 items each). Example items from each subscale include: "I think that my stomach is too big;" "I eat when I am upset;" and

"I am terrified of gaining weight" respectively. Cronbach's alphas for the Body

Dissatisfaction, Bulimia, and Drive for Thinness subscales within the current study were .89,

.83, and .91, respectively, which is similar to internal consistencies seen within the literature

(see Garner, 1991 for a review).

Sociocultural Attitudes Toward Appearance Questionnaire – 4 (SATAQ-4). The

Sociocultural Attitudes Toward Appearance Questionnaire – 4 (Schaefer et al., 2015; see

Appendix) is a 22-item measure designed to assess various sociocultural influences on

appearance beliefs and self-perceptions. It has five subscales: Internalization – Thin;

Internalization – Muscular; Family Pressures; Peer Pressures; and Media Pressures. Example

items include: "I want my body to look very thin;" "It is important for me to look athletic;" "I

feel pressure from family members to look thinner;" "I feel pressure from my peers to look in

better shape;" and "I feel pressure from the media to improve my appearance," respectively.

Subscale scores are computed by calculating the mean of contributing item responses for that

scale. An overall scale score for the SATAQ-4 is typically not used; instead, individual subscales

are used in calculations. For this study, specifically, the Internalization – Thin subscale was the

primary areas of focus, though all scales were administered to facilitate additional research in the

future. Items are rated on a scale from 1 "Definitely Disagree" to 5 "Definitely Agree." Higher

scores indicate higher endorsement of items. Cronbach's alphas in previous studies for each

subscale were at or above .84 for women (Schaefer et al., 2015). In the current study, the

Internalization – Thin subscale had an internal consistency of .83.

Positive and Negative Affect Schedule – Extended Version (PANAS-X). The Positive

and Negative Affect Schedule – Extended Version (Watson & Clark, 1999; see Appendix) is a

60-item measure designed to assess the experience of certain emotional states within the past few

weeks. For this study, only the items measuring negative affect were used in analyses; however, all items were administered to avoid biases in responding. Example emotion items include "cheerful," "irritable," "lonely," and "at ease." Various subscale scores can be calculated, depending on research focus. For example, an overall Negative Affect scale exists that includes 10 of the highest loading emotions for that scale.

Items are rated on a scale from 1 "very slightly or not at all" to 5 "extremely." Subscale scores are established by calculating the mean of the items contributing to the scale. Higher scores equal greater negative affect experiences. The PANAS-X has been used with varying temporal instructions as well, ranging from "right now" to "during the past year;" however, a general option identifying the average emotional state is also available. As we have no theory suggesting a specific temporal relationship with our variables, we utilized the general option for this study. Previous Cronbach's alphas for both the Positive Affect and Negative Affect scales were .79 or higher, depending on the timeframe measured and sample used for the study (Watson & Clark, 1999). In the current study, the internal consistency for the Negative Affect scale was .94.

Self-Compassion Scale (SCS). The Self-Compassion Scale (Neff, 2003a; see Appendix) is a 26-item measure used to assess the three components of self-compassion (i.e., self-kindness, common humanity, and mindfulness), as they relate to how one treats oneself in times of distress. The measure includes six subscales: Self-Kindness, Self-Judgment, Common Humanity, Isolation, Mindfulness, and Over-Identified. Example items from each scale are as follows, respectively: "I try to be loving towards myself when I'm feeling emotional pain;" "I'm disapproving and judgmental about my own flaws and inadequacies;" "When things are going badly for me, I see the difficulties as part of life that everyone goes through;" "When I'm feeling

down, I tend to feel like more other people are probably happier than I am;" "When something upsets me I try to keep my emotions in balance;" and "When something upsets me I get carried away with my feelings."

Items are rated on a scale from 1 "Almost never" to 5 "Almost always." Subscale scores are the means of all items contributing to each scale. The overall self-compassion score is calculated by first reverse-scoring the negative items and then identifying the mean of all six subscale scores. Higher scores indicate higher presence of self-compassion. The measure can be used by separating out individual subscale scores or analyzing the total score. For this study, only the total scale score was used for analyses. Cronbach's alphas from previous studies were approximately 0.85 (Kelly et al., 2014; Neff, 2003a). For the current study, the internal consistency was .93.

Covariates. Several individual differences have possible relationships with disordered eating and body dissatisfaction and were identified as covariates in the multivariate analyses described below. One of the most robust predictors of disordered eating behaviors or symptoms, especially body dissatisfaction, is body size, which was measured by self-reported height and weight. Other potentially relevant factors included race, sexual orientation, socioeconomic status, and aspects of mental health history (e.g., diagnosis history) and were assessed via a demographic questionnaire (Boisvert & Harrell, 2010; Olatunji et al., 2015; Yager & O'Dea, 2008).

Validity checks. Three validity check questions were added throughout the questionnaire (e.g., "Please choose Never") and a visual scan of the data was also completed by undergraduate lab members to identify response patterns and inaccurate responding.

Statistical Analyses

      Bivariate analyses. Hypothesis 1 concerns the bivariate relationships between two predictor variables (i.e., negative affect and thin-ideal internalization) and all of the outcome variables, which are hypothesized to be positive in nature. These relationships were tested via Pearson's product-moment correlations and an examination of their significance.

      Hypothesis 2 concerns the bivariate relationships between the remaining predictor variable (i.e., media exposure) and all other study variables (e.g., predictors, outcomes). Relationships among predictor variables are all hypothesized to be positive and statistically significant; however, relationships between media exposure and all outcome variables are hypothesized to be positive but non-significant. These relationships were tested via Pearson's product-moment correlations as well.

      To prevent multicollinearity concerns, the recommended cutoff ($r > .80$) was used for this study (Katz, 2006).

      Multivariate analyses. Nine simple moderation analyses were conducted via PROCESS Model 1 (Hayes, 2013; see Figure 1 for conceptual model). Hypotheses 3 and 4 concern the multivariate relationships between thin-ideal internalization, negative affect, self-compassion (i.e., the moderator), and all outcome variables. Hypothesis 3 was tested by examining the significance of each predictor variable within their respective moderation models. Hypothesis 4 was tested by examining the significance of the interaction effect in the moderation model, where a significant effect would indicate that self-compassion moderates the relationship between the specified predictor (i.e., thin-ideal internalization, negative affect) and the outcome (i.e., body dissatisfaction, bulimia, drive for thinness). Significant interaction effects will be explored to interpret at what levels self-compassion influences the proposed relationships, as

well as the value and direction of the effect, with the expectation that higher levels of self-compassion will reduce the effect of the predictor variables on the outcome variables. The relationships are still expected to remain positive; however, self-compassion will act as a buffer between the predictors and outcome variables. For more specific information about where and how self-compassion operates, the Johnson-Neyman method will be used to identify the 'zone of significance' of the moderator (Field, 2009).
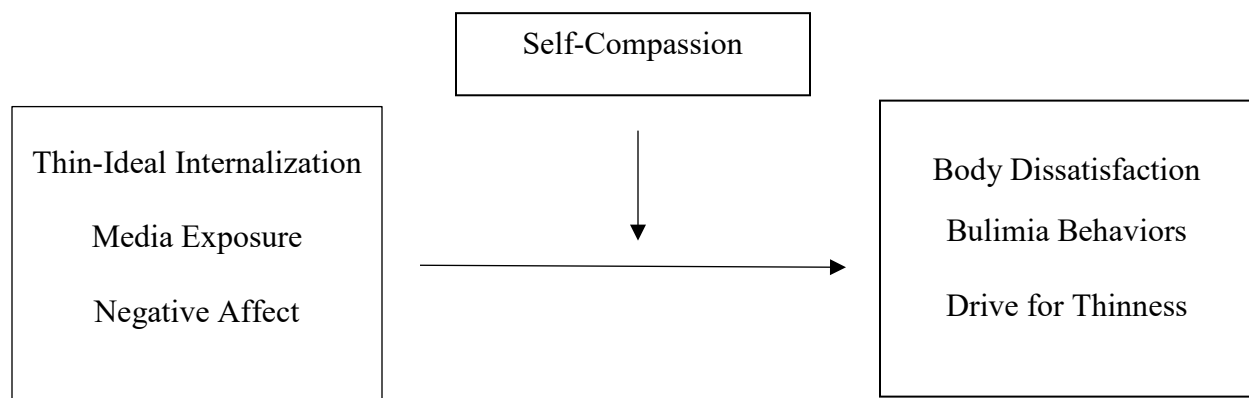
Figure 1. Conceptual Moderation Model

CHAPTER 3

RESULTS

Sample Characteristics

A total of 455 participants initiated the survey; however, 128 were removed for various

reasons, including: 1) criteria for participation were not met (e.g., male, outside of age range); 2)

a visual scan of the data indicated that a response pattern was utilized (e.g., all "2"s); 3) duplicate

surveys were completed by the same participant; 4) participants did not accurately respond to

validity check questions; or 5) did not complete measures in their entirety. Descriptive statistics

of measure completion are included in Table 1.

The present study included data from 327 females with a mean age of 19.17 (SD = 1.52).

Two hundred sixty-one participants (79.8%) reported being White/Caucasian, 33 (10.1%) were

African American/Black, 11 (3.4%) were Asian American, 9 (2.8%) were Hispanic/Latino, 10

(3.1%) were Multiracial, and 3 (0.9%) identified as Other. Regarding reported sexual orientation,

two hundred seventy-two individuals (83.2%) were Heterosexual, 11 (3.4%) were Lesbian, 17

(5.2%) were Bisexual, 8 (2.4%) were Pansexual, 1 (0.3%) was Demisexual, 6 (1.8%) were

Asexual, 7 (2.1%) were Questioning, 3 (0.9%) identified as Other, and 2 (0.6%) declined to

answer.

Participants' body mass indices (BMIs) were calculated, with values ranging from 16.24-

59.29 (*M* = 27.12, *SD* = 8.45). The average BMI from this study is comparable to the average

BMI for women between the ages of 20-39 (*M* = 28.70), per the most recent National Health and

Nutrition Examination Survey (Fryar, Kruszan-Moran, Gu, & Ogden; 2018). BMIs fall into four

broad categories: Underweight (<18.5), Normal Weight (18.5-24.99), Overweight (25-29.99),

and Obese (>30; World Health Organization [WHO], 2006). In this sample, 17 (5.2%) were

Underweight, 153 (46.8%) were Normal Weight, 79 (24.2%) were Overweight, and 78 (23.9%) were Obese. With regard to mental health status and history, sixty-six individuals (20.2%) reported a history of a formal mental health diagnosis, with only two individuals having a diagnosed eating disorder (i.e., anorexia nervosa). When asked if participants thought they had ever met criteria for an eating disorder, even if not formally diagnosed, sixty-two individuals (19.0% of total sample) endorsed "Yes," with 43 (13.1% of subcategory) endorsing anorexia nervosa, 14 (4.3%) endorsing bulimia nervosa, 22 (6.7%) endorsing binge-eating disorder, and 2 (0.6%) endorsing Other.

Table 1

Descriptive Statistics

	M	*SD*	Range
Media Consumption	75.07	21.50	0-164
Thin Ideal Internalization	3.41	0.95	1-5
Negative Affect	2.43	0.90	1-5
Self-Compassion	2.75	0.71	1-5
Bulimia	2.72	4.11	0-21
Drive for Thinness	5.86	6.23	0-21
Body Dissatisfaction	10.46	7.24	0-27
Body Mass Index	27.12	8.45	16.31-72.33

Note. M = Mean; SD = Standard Deviation.

Bivariate Correlations

The relationships between study variables were examined via bivariate correlations (see Table 2). There were no issues of multicollinearity. Significant relationships are defined as $p <$ .05, with more specific information on significance level found in Table 2. Self-compassion was negatively associated with all study variables, and all relationships were significant except with media exposure ($r = -.01$). Media exposure was also not significantly correlated with thin-ideal

internalization (r = -.04) or drive for thinness (r = .06). Thin-ideal internalization was

significantly and positively associated with all study variables, aside from media exposure.

Negative affect, body dissatisfaction, bulimia, and drive for thinness all had significant and

positive relationships with one another. Significant correlation coefficients ranged between .13

and .56, indicating weak to moderate relationships.

Table 2

Bivariate Correlations

	Bulimia	Media Exposure	Body Dissatisfaction	Self-Compassion	Thin-Ideal Internalization	Negative Affect
Drive for Thinness	.50***	.06	.71***	-.48***	.56***	.46***
Bulimia	-	.19***	.40***	-.36***	.21***	.47***
Media Exposure	-	-	.12*	-.01	-.04	.13*
Body Dissatisfaction	-	-	-	-.50***	.50***	.40***
Self-Compassion	-	-	-	-	-.34***	-.56***
Thin-Ideal Internalization	-	-	-	-	-	.22***

*** Correlation is significant at the 0.001 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Multivariate Analyses

To test whether the relationships between the predictor variables (i.e., media exposure,

negative affect, thin-ideal internalization) and outcome variables (i.e., body dissatisfaction,

bulimia, drive for thinness) depended on the level of self-compassion, nine moderation analyses

were completed.

Body dissatisfaction. Three moderation models were conducted with body dissatisfaction as the outcome variable. Additional information regarding these moderations is reported in Table 3.

In the first moderation model, self-compassion was examined as a moderator of the relationship between media exposure and body dissatisfaction. The overall model was significant, $F(8, 291) = 19.64$, $p < .001$), and explained approximately 35% of the variance in body dissatisfaction scores. Media exposure ($p = .015$) and self-compassion ($p < .001$) had a significant effect on body dissatisfaction. When the interaction term between media exposure and self-compassion was examined, there was not a significant increase in the variance explained in body dissatisfaction, $\Delta R^2 = .001$, $F(1, 291) = .31$, $p = .578$. Thus, self-compassion was not a significant moderator of the relationship between media exposure and body dissatisfaction.

In the second model, self-compassion was examined as a moderator of the relationship between thin-ideal internalization and body dissatisfaction. The overall model was significant, $F(8, 291) = 31.31$, $p < .001$), and explained approximately 46% of the variance in body dissatisfaction scores. Both thin-ideal internalization ($p < .001$) and self-compassion ($p < .001$) had a significant effect on body dissatisfaction. When the interaction term between thin-ideal internalization and self-compassion was examined, there was not a significant increase in the variance explained in body dissatisfaction, $\Delta R^2 = .002$, $F(1, 291) = 1.03$, $p = .311$. Thus, self-compassion was not a significant moderator of the relationship between thin-ideal internalization and body dissatisfaction.

In the third model, self-compassion was examined as a moderator of the relationship between negative affect and body dissatisfaction. The overall model was significant, $F(8, 293) = 20.38$, $p < .001$), and explained approximately 36% of the variance in body dissatisfaction

scores. Both negative affect ($p = .022$) and self-compassion ($p < .001$) had a significant effect on

body dissatisfaction. When the interaction term between negative affect and self-compassion was

added, there was not a significant increase in the variance explained in body dissatisfaction, ΔR^2

$= .001$, $F(1, 293) = .34$, $p = .562$. Thus, self-compassion was not a significant moderator of the

relationship between negative affect and body dissatisfaction.

Table 3

Results of Moderation Analysis for Body Dissatisfaction

	Predictor	β	p	95% CI	
1	Constant*	--	<.001	2.032,	6.794
	Media Exposure*	.117	.015	.008,	.071
	Self-Compassion*	-.424	<.001	-5.350,	-3.307
	$R^2 = .350$				
	Media Exposure x Self-Compassion	-.027	.578	-.062,	.035
	$\Delta R^2 = .001$				
2	Constant*	--	.004	1.016,	5.327
	Thin-Ideal Internalization*	.398	<.001	2.303,	3.688
	Self-Compassion*	-.288	<.001	-3.889,	-1.950
	$R^2 = .461$				
	Thin-Ideal Internalization x Self-Compassion	-.045	.311	-1.421,	.454
	$\Delta R^2 = .002$				
3	Constant*	--	<.001	2.146,	6.850
	Negative Affect*	.131	.022	.155,	1.942
	Self-Compassion*	-.365	<.001	-4.883,	-2.539
	$R^2 = .357$				
	Negative Affect x Self-Compassion	-.029	.562	-1.308,	.712
	$\Delta R^2 = .001$				

Note. Table represents three separate regression models. Betas for predictor variables are from Step 1 of each regression and betas for interaction terms are from Step 2. *$p \leq .05$

Bulimia behaviors. Three moderation analyses were conducted with bulimia behaviors

as the outcome variable. Additional information regarding these moderations is reported in Table

4.

In the first model, self-compassion was examined as a moderator of the relation between

media exposure and bulimia behaviors. The overall model was significant, $F(8, 293) = 13.12$, $p <$

.001), and explained approximately 26% of the variance in bulimia scores. Both media exposure ($p < .001$) and self-compassion ($p < .001$) had a significant effect on bulimia. When the interaction term between media exposure and self-compassion was added, there was not a significant increase in the variance explained in bulimia, $\Delta R^2 = .009$, $F(1, 293) = 3.75$, $p = .054$. Thus, self-compassion was not a significant moderator of the relationship between media exposure and bulimia.

In the second model, self-compassion was examined as a moderator of the relation between thin-ideal internalization and bulimia. The overall model was significant, $F(8, 293) = 10.48$, $p < .001$), and explained approximately 22% of the variance in bulimia scores. Self-compassion ($p < .001$) but not thin-ideal internalization ($p = .150$) had a significant effect on bulimia. When the interaction term between thin-ideal internalization and self-compassion was added, there was not a significant increase in the variance explained in bulimia, $\Delta R^2 = .004$, $F(1, 293) = 1.60$, $p = .207$. Thus, self-compassion was not a significant moderator of the relationship between thin-ideal internalization and bulimia.

In the third model, self-compassion was examined as a moderator of the relation between negative affect and bulimia. The overall model was significant, $F(8, 295) = 17.18$, $p < .001$), and explained approximately 32% of the variance in bulimia scores. Negative affect ($p < .001$) but not self-compassion ($p = .061$) had a significant effect on bulimia. When the interaction term between negative affect and self-compassion was added, there was not a significant increase in the variance explained in bulimia, $\Delta R^2 = .002$, $F(1, 295) = .68$, $p = .409$. Thus, self-compassion was not a significant moderator of the relationship between negative affect and bulimia.

Table 4

Results of Moderation Analysis for Bulimia

	Predictor	β	*p*	95% CI	
1	Constant	--	.528	-.981,	1.909
	Media Exposure*	.174	< .001	.014,	.053
	Self-Compassion*	-.291	< .001	-2.314,	-1.074
	$R^2 = .254$				
	Media Exposure x Self-Compassion	-.098	.054	-.058,	.000
	$\Delta R^2 = .009$				
2	Constant	--	.584	-1.051,	1.862
	Thin-Ideal Internalization	.081	.150	-.125,	.811
	Self-Compassion*	-.273	< .001	-2.214,	-.904
	$R^2 = .218$				
	Thin-Ideal Internalization x Self-Compassion	-.067	.207	-1.039,	.226
	$\Delta R^2 = .004$				
3	Constant	--	.450	-.845,	1.898
	Negative Affect*	.356	< .001	1.102,	2.145
	Self-Compassion*	-.113	.047	-1.338,	.031
	$R^2 = .316$				
	Negative Affect x Self-Compassion	-.042	.409	-.837,	.342
	$\Delta R^2 = .002$				

Note. Table represents three separate regression models. Betas for predictor variables are from Step 1 of each regression and betas for interaction terms are from Step 2. *$p \leq .05$

Drive for thinness. Three moderation analyses were conducted with drive for thinness as the outcome variable. Additional information regarding these moderations is reported in Table 5.

In the first model, self-compassion was examined as a moderator of the relation between media exposure and drive for thinness. The overall model was significant, $F(8, 292) = 18.21$, $p < .001$), and explained approximately 33% of the variance in drive for thinness scores. Self-compassion ($p < .001$), but not media exposure ($p = .268$), had a significant effect on drive for thinness. When the interaction term between media exposure and self-compassion was added, there was not a significant increase in the variance explained in drive for thinness, $\Delta R^2 = .002$, $F(1, 292) = .97$, $p = .325$. Thus, self-compassion was not a significant moderator of the relationship between media exposure and drive for thinness.

Self-compassion was examined as a moderator of the relation between thin-ideal internalization and drive for thinness. The overall model was significant, $F(8, 293) = 36.93$, $p < .001$), and explained approximately 50% of the variance in drive for thinness scores. Both thin-ideal internalization ($p < .001$) and self-compassion ($p < .001$) had a significant effect on drive for thinness. When the interaction term between thin-ideal internalization and self-compassion was added, there was a significant increase in the variance explained in drive for thinness, $\Delta R^2 = .031$, $F(1, 293) = 18.03$, $p < .001$. Thus, self-compassion was a significant moderator of the relationship between thin-ideal internalization and drive for thinness.

Self-compassion was examined as a moderator of the relation between negative affect and drive for thinness. The overall model was significant, $F(8, 294) = 23.68$, $p < .001$), and explained approximately 39% of the variance in bulimia scores. Both negative affect ($p < .001$) and self-compassion ($p < .001$) had a significant effect on drive for thinness. When the interaction term between negative affect and self-compassion was added, there was a significant increase in the variance explained in drive for thinness, $\Delta R^2 = .010$, $F(1, 294) = 4.61$, $p = .033$. Thus, self-compassion was a significant moderator of the relationship between negative affect and drive for thinness.

Table 5

Results of Moderation Analysis for Drive for Thinness

	Predictor	β	p	95% CI	
1	Constant*	--	.001	1.435,	5.582
	Media Exposure	.054	.268	-.012,	.043
	Self-Compassion*	-.401	< .001	-4.416,	-2.638
	$R^2 = .331$				
	Media Exposure x Self-Compassion	-.048	.325	-.063,	.021
	$\Delta R^2 = .002$				
2	Constant*	--	.008	.644,	4.297
	Thin-Ideal Internalization*	.436	< .001	2.240,	3.416
	Self-Compassion*	-.254	< .001	-3.035,	-1.393
	$R^2 = .471$				
	Thin-Ideal Internalization x Self-Compassion*	-.181	< .001	-2.441,	-.895
	$\Delta R^2 = .031$				
3	Constant*	--	< .001	1.746,	5.711
	Negative Affect*	.241	< .001	.910,	2.424
	Self-Compassion*	-.282	< .001	-3.473,	-1.492
	$R^2 = .382$				
	Negative Affect x Self-Compassion*	-.102	.033	-1.770,	-.076
	$\Delta R^2 = .010$				

Note. Table represents three separate regression models. Betas for predictor variables are from Step 1 of each regression and betas for interaction terms are from Step 2. *$p \leq .05$

As shown in Table 5, thin-ideal internalization was significantly related to drive for thinness, and self-compassion significantly moderated that relationship. This interaction is illustrated in Figures 2 and 3. The interaction was probed by testing the conditional effects of thin-ideal internalization at three levels of self-compassion – one standard deviation below the mean, at the mean, and one standard deviation above the mean. As shown in Table 6, thin-ideal internalization was significantly related to drive for thinness at all three levels of self-compassion ($p < .01$). The Johnson-Neyman technique showed that the relationship between thin-ideal internalization and drive for thinness was significant when self-compassion was less than .994 standard deviations above the mean but not significant with higher values of self-compassion.
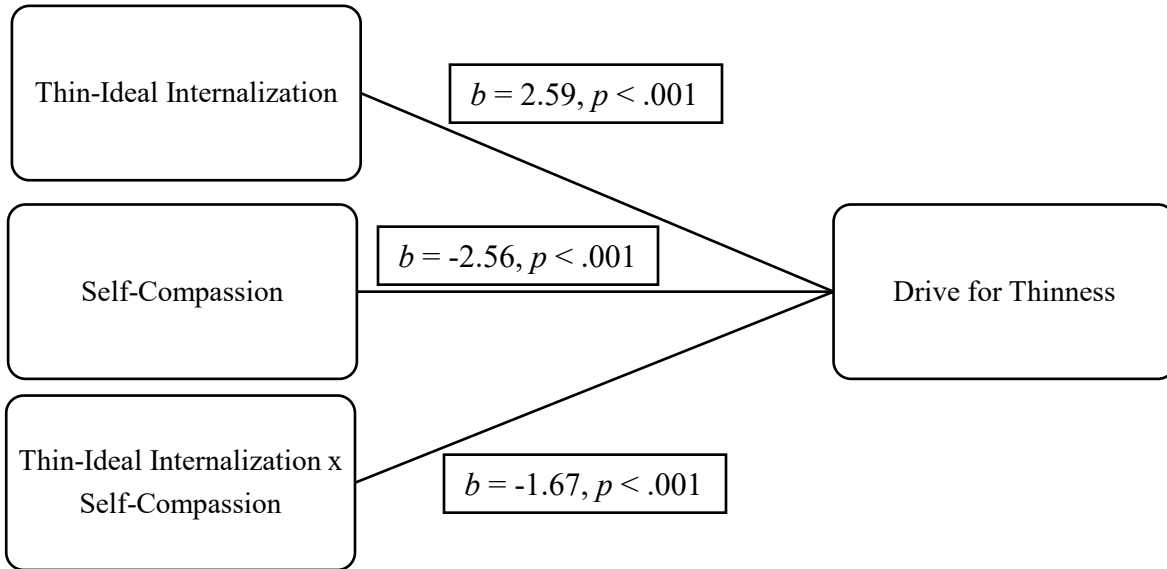
Figure 2. Statistical Model of Moderation between Thin-Ideal Internalization and Drive for
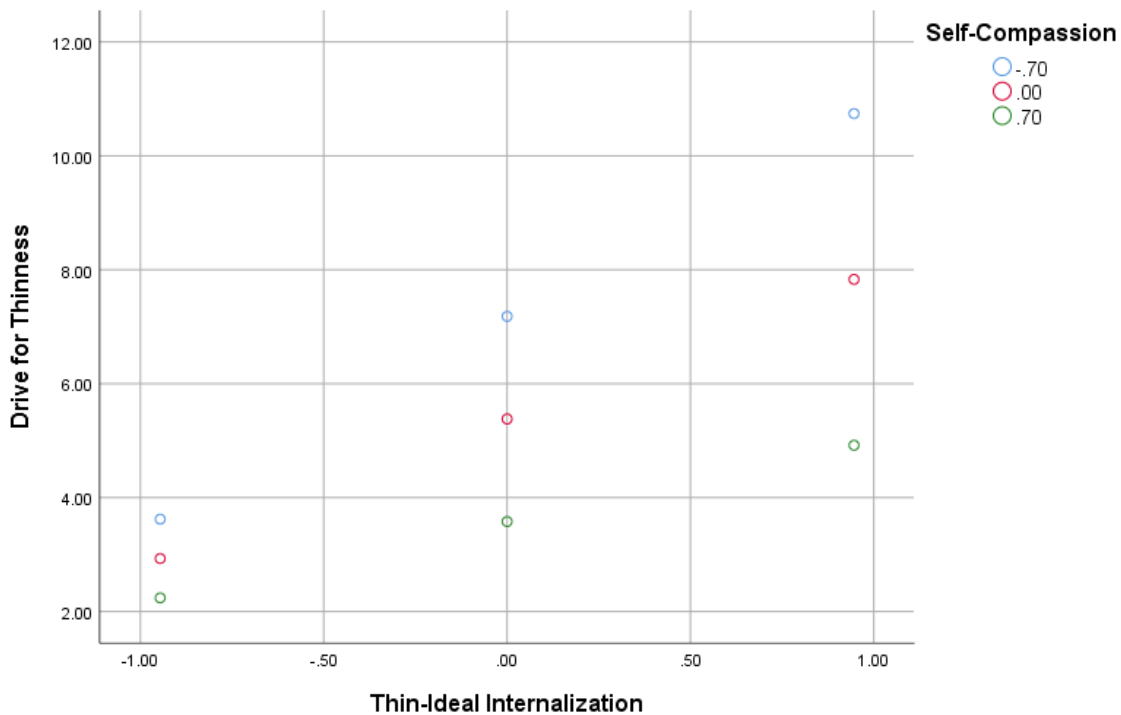
Thinness

Figure 3. Interaction Effect between Thin-Ideal Internalization and Self-Compassion

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Table 6

Conditional Effects of Thin-Ideal Internalization on Drive for Thinness

Self-Compassion	b	*p*	95% CI	
One *SD* below mean*	3.764	< .001	3.046,	4.481
At the mean*	2.590	< .001	2.008,	3.172
One *SD* above mean*	1.417	.002	.548,	2.285

*Note. *p ≤ .05*

Also as shown in Table 5 (above), negative affect was significantly related to drive for thinness, and self-compassion significantly moderated that relationship. This interaction is illustrated in Figures 4 and 5. The interaction was probed by testing the conditional effects of negative affect at three levels of self-compassion – one standard deviation below the mean, at the mean, and one standard deviation above the mean. As shown in Table 7, negative affect was significantly related to drive for thinness when self-compassion was one standard deviation below the mean and when at the mean ($p < .001$), but not when self-compassion was one standard deviation above the mean ($p = .164$). The Johnson-Neyman technique showed that the relationship between negative affect and drive for thinness was significant when self-compassion was less than .497 standard deviations above the mean but not significant with higher values of self-compassion.
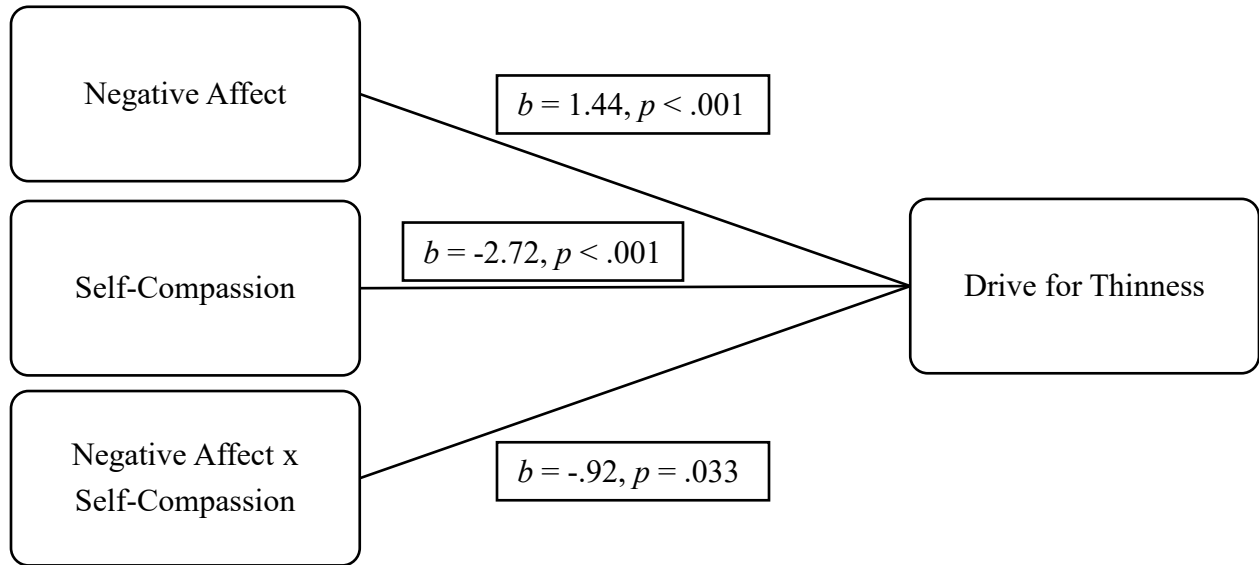
Figure 4. Statistical Model of Moderation between Negative Affect and Drive for Thinness
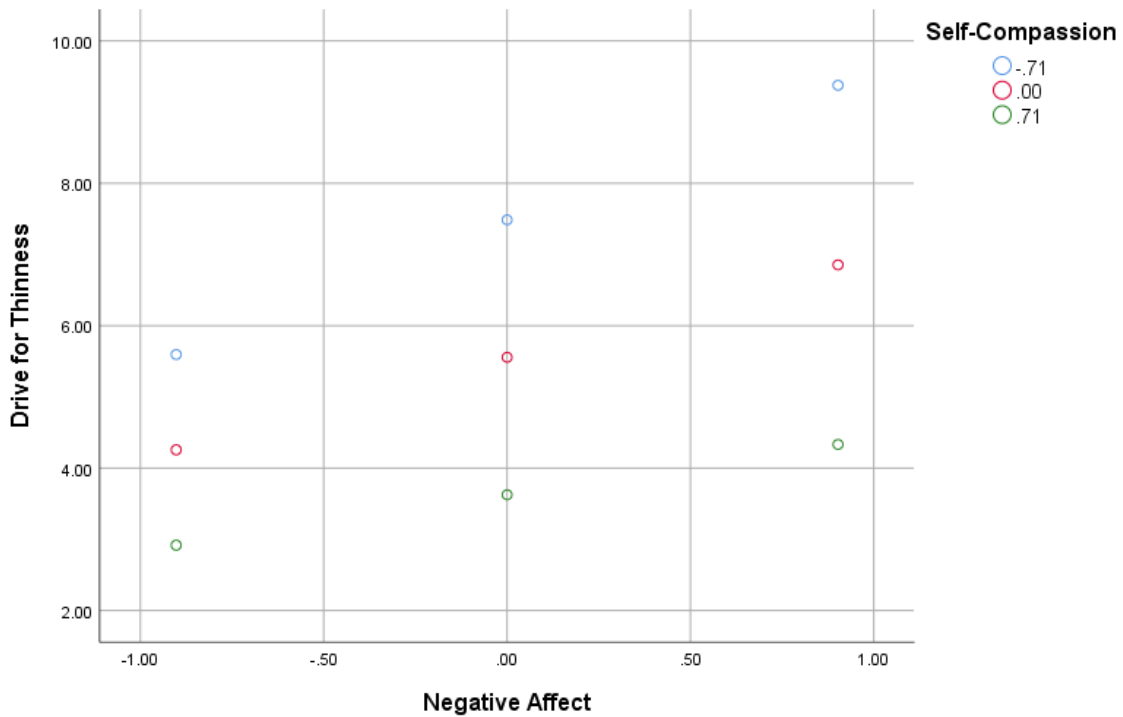
Figure 5. Interaction Effect between Negative Affect and Self-Compassion

Table 7

Conditional Effects of Negative Affect on Drive for Thinness

Self-Compassion	b	*p*	95% CI	
One *SD* below mean*	2.095	< .001	1.247,	2.944
At the mean*	1.440	< .001	.659,	2.220
One *SD* above mean	.784	.164	-.321,	1.889

Note. *$p \leq .05$

CHAPTER 4

DISCUSSION

The results of the present study indicate that self-compassion does have a relationship with disordered eating behaviors but may operate differently than initially hypothesized. Despite intentionality in integrating several theoretical models into this study, it is likely that simple moderation relationships are not sufficient to accurately describe the complex interactions of these variables. It does, however, appear that trends in specific domains emerged that could inform future analyses and literature, as many gaps in knowledge about disordered eating remain.

Evaluation of Hypotheses

Hypothesis 1, regarding the bivariate relationships between thin-ideal internalization and negative affect, and with disordered eating behaviors, was fully supported. All of these variables were significantly and positively correlated with one another, ranging in strength from weak (r = .21) to moderate (r = .56). These relationships are supported by previous literature and will be outlined in more detail.

Hypothesis 2, regarding the bivariate relationships that media exposure has with negative affect, thin-ideal internalization, and disordered eating behaviors was only partially supported. Specifically, it was hypothesized that no statistically significant relationships with disordered eating behaviors would exist; however, there were positive and significant relationships with both bulimia and body dissatisfaction. These relationships have been discussed in previous literature (Schaefer et al., 2015; Stice & Shaw, 2002; van den Berg et al., 2002); however, media exposure without the interference of thin-ideal internalization has not previously been examined (Davis & Dula, 2013). Additionally, media exposure was neither significantly nor positively

associated with thin-ideal internalization, which contradicts previous literature and warrants additional exploration.

Hypothesis 3, which postulated that negative affect and thin-ideal internalization would significantly predict disordered eating behaviors, was mostly supported. Thin-ideal internalization was not a significant predictor of bulimia behaviors, when self-compassion and covariates (e.g., sexual orientation, mental health status) were considered. Negative affect and thin-ideal internalization were significant in all other regression models.

Finally, Hypothesis 4, indicating that self-compassion would moderate the relationships that negative affect and thin-ideal internalization have with disordered eating behaviors was only slightly supported. Out of nine moderation models, self-compassion was only a significant moderator in two relationships – the relationships that thin-ideal internalization and negative affect had with drive for thinness. In both relationships, only low to average self-compassion was significant, not high self-compassion. Potential hypotheses for why drive for thinness may interact differently with negative affect, thin-ideal internalization, and self-compassion is explored below.

Current Findings and Connections with Previous Literature

While not all relationships were as expected, there are possible explanations for why the relationships occurred as they did in this study. First, due to the significant relationships between self-compassion and disordered eating variables, it is likely that self-compassion does influence one's risk for developing disordered eating symptoms; however, moderation may not be the way in which self-compassion operates – at least not in a simple moderation model. Braun, Park, and Gorin (2016) postulate that self-compassion could be a moderator but could also: operate directly on disordered eating outcomes; serve as a mediator in relationships with disordered eating; or

play a role in a mediated moderation model. The first alternative to moderation – direct relationships – was briefly examined via bivariate correlations between self-compassion and disordered eating outcomes. Self-compassion had moderate, negative, and significant relationships with all three outcomes, meaning that self-compassion is directly related to these symptoms. These findings support previous studies with similar structures (Kelly, Vimalakanthan, & Miller, 2014; Taylor, Daiss, & Krietsch, 2015; Tylka & Kroon Van Diest, 2015).

The other two alternatives to moderation asserted by Braun and colleagues (2016) were beyond the scope of the present study but warrant further exploration. Self-compassion was moderately, significantly, and negatively correlated with both thin-ideal internalization and negative affect but not media exposure. This provides preliminary support that mediation might be possible within the first two relationships. Ferreira and colleagues (2013) and Pinto-Gouveia, Ferreira, and Duarte (2014) both found that self-compassion mediated the relationship between shame, a form of negative affect, and drive for thinness – a relationship that was moderated within the present study. This finding could be presenting as moderation when, in reality, low self-compassion is partially mediating this relationship instead. MacBeth and Gumley (2012) found that those with higher self-compassion also presented with lower levels of depression (another form of negative affect) at baseline. Therefore, it could be that those who have higher levels of self-compassion also have inherently lower levels of negative affect in the present study, causing a false moderation effect. The interaction between self-compassion and negative affect in the present study becomes non-significant at higher levels of self-compassion, indicating that low self-compassion, specifically, influences the relationship. The final path that Braun and colleagues (2016) suggest – mediated moderation – has only been examined in one

correlational study (i.e., Liss & Erchull, 2015). This study provided preliminary support for this path, as women who were low in self-compassion showed stronger relationships between body surveillance and body shame and between body surveillance and negative eating (Liss & Erchull, 2015). Both possibilities suggested by Braun and colleagues (2016) should be examined more closely before drawing concrete conclusions regarding the nature of self-compassion.

The fourth possible path suggested by Braun and colleagues (2016) is moderation, which was tested in the present study; however, self-compassion only moderated two of nine relationships. It could be that self-compassion moderates some, but not all, relationships with disordered eating, depending on the presentation of concerns or tone of the measure. For example, there were themes in the domains represented by the variables that were observed (e.g., behavior, cognition, affect), and the results appear to hang together based on these domains. Specifically, both media exposure and bulimia represent specific behaviors that an individual engages in (e.g. "I seek out Style/Fashion media" and "I stuff myself with food"); thin-ideal internalization and body dissatisfaction present as cognitions that an individual may have (e.g., "I want my body to look very thin" and "I think my stomach is too big"); and negative affect and drive for thinness are variables that are categorized as affective (e.g., "I have felt disgusted with myself during the past few weeks" and "I am terrified of losing weight"). Self-compassion appears to be primarily affective as well (e.g., "When I'm going through a very hard time, I give myself the caring and tenderness I need"), though it also has cognitive components (e.g., "When something painful happens I try to take a balanced view of the situation").

The following findings from the present study support organization of variables into the above domains: 1) self-compassion (i.e., affective, cognitive) moderates the relationship between two affective variables (i.e., negative affect, drive for thinness); 2) self-compassion moderates

the relationship between a cognitive (i.e., thin-ideal internalization) and an affective variable (i.e., drive for thinness); and 3) self-compassion does *not* moderate the relationship between two behavioral variables (i.e., bulimia, media) or when mixing cognitive and behavioral variables (i.e., thin-ideal internalization and bulimia, media and body dissatisfaction) or affective and behavioral variables (i.e., media and drive for thinness, negative affect and bulimia). Tylka and Kroon Van Diest (2015) found that self-compassion moderated the relationship between media and disordered eating behaviors. However, the outcome measure used for disordered eating was the Eating Attitudes Test (EAT-26), which is a primarily behavior-based measure (e.g., "I have gone on eating binges where I feel that I may not be able to stop"; Garner, Olmsted, Bohr, & Garfinkel, 1982). This fits well with the present study's assertion that domain-specific relationships may exist as well.

If the distinctions based on domain are accurate, why does self-compassion (i.e., affective, cognitive) not moderate the relationships that negative affect (i.e., affective) and thin-ideal internalization (i.e., cognitive) have with body dissatisfaction (i.e., cognitive)? There are two primary hypotheses for why these relationships were not found in the present study. First, body dissatisfaction was endorsed to a much higher extent than the other disordered eating outcomes ($M = 10.46$ for body dissatisfaction versus $M = 2.72$ for bulimia and $M = 5.86$ for drive for thinness). Thus, body dissatisfaction may be too "normal" to notice distinct differences in experiences. Second, previous studies suggest that, though self-compassion is an appealing and theoretically-indicated moderator in various relationships with disordered eating, the affective component of self-compassion appears to be the determining factor of relationships (Braun et al., 2016; Daye, Webb, & Jafari, 2014). In order to influence an outcome, then, that outcome variable may also need to be an affective variable (i.e., drive for thinness). Drive for thinness is

conceptualized as an attempt at affect regulation, as is self-compassion, and the measures used in this study reflect the affect-regulation role of each construct (Gilbert, 2005). An underlying affective factor that may be linking negative affect, drive for thinness, thin-ideal internalization, and self-compassion is shame (Ferreira et al., 2013). While shame may be present, and often is present, in one's self-assessment of their body (i.e., body dissatisfaction), this shame would not be explicitly captured by the cognitively-based content of the Body Dissatisfaction subscale itself. As such, the reality could be that self-compassion buffers the relationships that negative affect and thin-ideal internalization have with body dissatisfaction but the nature of the subscale does not accurately capture this effect. If one were to use a more affectively-laden assessment of body dissatisfaction, this relationship may become evident. In sum, these relationships (i.e., negative affect and body dissatisfaction, thin-ideal internalization and body dissatisfaction) may exist, despite non-significant findings in the current study.

Implications

Media exposure, negative affect, and thin-ideal internalization each have significant relationships with and are significant predictors of disordered eating behaviors. Focusing interventions on these risk factors will likely yield positive results in the management of disordered eating. At present, conceptualization of disordered eating and eating disorders is quite complex, with many clinicians perceiving themselves as lacking competence in the treatment of these concerns. However, as is shown with the results of this study, targeting factors such as negative affect (a more generalized mental health concern) can be effective as well. Research indicates that disordered eating is often a symptom of other mental health concerns (e.g., depression, trauma) or at minimum, has significant overlap with these concerns (Fairburn, 2008). Supporting this conceptualization is Fairburn's classification of eating disorders as "cognitive

disorders" (2008). Therefore, targeting the core symptomology (e.g., negative affect), rather than disordered eating specifically can result in therapeutic change, while also allowing clinicians to feel more competent in their treatment of eating concerns.

If implementing eating-specific interventions, assessment of clients' specific disordered eating symptoms may provide additional guidance as to what interventions might be clinically-indicated and evidence-based, based on both the present study's findings and previous literature. For example, clients presenting with primarily cognitive symptoms of disordered eating may be well-suited for interventions from Cognitive-Behavioral Therapy (CBT), such as cognitive restructuring (Beck, 2011). Bulimia behaviors may be more amenable to intuitive eating methods due to their categorization in the behavioral domain (Braun et al., 2016). Affective concerns, such as self-criticism and negative affect, could either be addressed with emotion-focused interventions (e.g., emotion-focused therapy) or self-compassion interventions (Dolhanty & Greenberg, 2007).

Finally, because of the direct associations between self-compassion and disordered eating behaviors, as well as self-compassion's relationships with the proposed risk factors, interventions with self-compassion components can also be helpful for treatment. Compassion-Focused Therapy (CFT), and even simple compassion-based commands without clinician interaction (e.g., "be kind to yourself"), can have positive effects on disordered eating, as well as other mental health concerns (e.g., negative affect; Adams & Leary, 2007; Gilbert, 2005; Kelly et al., 2014). Some question whether self-compassion is a personality trait or a trainable attribute; however, most studies utilizing self-compassion interventions have positive results, indicating at least moderate ability to modify self-compassion levels (Braun et al., 2016).

The core psychopathology of eating disorders is posited to be the overvaluation of shape and weight (Fairburn, 2008), which is likely a result of a culture that emphasizes the value of these characteristics (i.e., objectification theory; Fredrickson & Roberts, 1997), indicating the need for community-level interventions – a primary assertion of the Developmental Theory of Embodiment (Piran & Teall, 2012). While prevention programs currently exist to address the influence of media (Arendt, Peter, & Beck, 2016), the cultural implications are much broader than media alone. The National Eating Disorder Information Centre (NEDIC) presents several alternatives to specific prevention programs and instead encourages shifts in societal viewpoints, conversations, and actions taken regarding disordered eating (2003). For example, normalizing mental health concerns and reducing stigma surrounding mental health treatment can reduce overall incidence of disordered eating, as eating as emotion regulation may be avoided if treatment is sought for concerns such as depression or anxiety during childhood. NEDIC and others recommend imbedding more mental health treatment within the school system or in primary care settings, so that resources can be more easily accessed, particularly in rural areas (2003; Hach et al., 2005).

Limitations

The results of this study must be considered in the context of its limitations. First, this study was conducted utilizing only self-report measures, which have inherent biases and limitations. The average self-compassion scores were relatively low in this sample (M = 2.74), with many studies identifying 2.5 as "low self-compassion" in comparison group (Liss & Erchull, 2015; Neff, 2003a). This could have influenced overall findings, as the limited amount of variability in self-compassion could have prevented significant differences from being observed.

Additionally, this study was cross-sectional in nature, limiting ability to draw conclusions about directionality and causality of relationships. Although the analyses were constructed based on findings from previous literature, including experimental and longitudinal studies, data from this study alone cannot be utilized to determine causality.

Further, the sample consisted of primarily young, Caucasian females, limiting generalizability to other populations. While this sample is consistent with the literature which suggests that this group has the highest rates of disordered eating, having a diverse sample could provide additional information about disordered eating behaviors in populations other than those typically studied in the literature.

Finally, the Davis Assessment of Media Consumption (DAMC) measure is not a widely used measure for media exposure, though it appears to be a face valid measure with limited support in research (Davis & Dula, 2013; Davis, Curtin, Martz, & Bazzini, 2015).

Summary and Future Directions

The present study tested whether self-compassion moderated the relationships that thin-ideal internalization, media exposure, and negative affect have with disordered eating behaviors, including bulimia behaviors, body dissatisfaction, and drive for thinness. This study is one of few studies examining self-compassion's relationship with disordered eating, and it yielded information regarding how these risk factors influence disordered eating behaviors, as well as how self-compassion might operate within these relationships, though not as initially expected. Self-compassion was negatively and significantly related to all study variables aside from media exposure; however, because self-compassion primarily operates on affective and cognitive characteristics, it was not a global moderator of these relationships. Further, this study utilized a novel measure for media exposure, which contributed to the literature by supporting the previous

conclusions made about media and disordered eating, without the interference of thin-ideal internalization. While the present study did not yield a comprehensive model identifying the specific risk and protective factors of disordered eating behaviors, it provided valuable information regarding the translation of research to practice. For example, it further solidified the importance of selecting interventions that match the type of concern presented (e.g., cognitive, behavioral).

Areas of consideration for future research include: 1) the exploration of additional risk factors for disordered eating, as those chosen for the present study do not represent total risk; 2) identification of other potential protective factors, aside from self-compassion; 3) an alternative approach to examining the impact of self-compassion on proposed risk factors for disordered eating (e.g., as predictor, mediation, examining individual tenets of self-compassion, comparison groups for high and low levels of self-compassion, only using positively-valenced [i.e., self-compassion] questions); 4) development of a more complex model and analysis of factors contributing to disordered eating behaviors; and 5) designing the model to be more specific to eating-related concerns, rather than global (e.g., negative affect → shame). Based on the results of this study, as well as findings from previous research, body dissatisfaction may better fit into models of disordered eating as a moderator, rather than an outcome, as level of body dissatisfaction can influence one's response to other risk factors (Rahimi-Ardabili, Reynolds, Vartanian, McLeod, & Zwar, 2017; van den Berg et al., 2002).

This study is a small, but significant, step toward exploration of a vast topic, as there is much left to learn regarding disordered eating and its origins. Additional research in this area can make way for the development of more effective interventions for disordered eating and modify those currently being used to more accurately target specific symptom experiences. Ideally,

research can also be used to develop prevention programs to reduce the overall impact that

disordered eating has in Westernized societies today and in the future.

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List of Measures

Davis Assessment of Media Consumption

Please answer each of the following items as honestly as possible. Please read each item carefully, and then select your answer. If none of the choices seem to be ideal, then select the answer that comes closest to your ideal. THERE ARE NO RIGHT OR WRONG ANSWERS. Select your answers quickly and do not spend too much time analyzing your answers.

With ALL types of media outlets in mind (e.g., internet, newspaper), how often do you seek out the following types of information/content?

1. Culture/Foreign
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

2. Travel/Geography
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

3. Hunting/Fishing
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

4. Sports/Athletics
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

5. Automotive/Mechanics/Racing
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

6. History/Documentary
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

7. Guns/Weaponry/Ammunition/Military
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

8. Pornography/Erotica
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

9. Business/Finance/Economics
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

10. Style/Fashion
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

11. Beauty/Grooming/Upkeep
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

12. Biography/Autobiography
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

13. Performing Arts/Theater
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

14. Drama
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

15. Action/Adventure/Thriller
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

16. Horror
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

17. Romance/Love Stories
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

18. Mystery/Crime/Suspense
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

19. Reality
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

20. Sci-Fi/Fantasy/Role-Play
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

21. Science
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

22. Computers/Electronics/Technology/Robotics
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

23. Fitness/Health
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

24. General News/Current Affairs
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

25. Comics/Cartoons/Anime/Manga/Graphic Novels
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

26. Nature/Recreation
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

27. Education
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

28. Personal Profession/Career
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

29. Crafts/Hobbies
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

30. Religion/Faith/Spirituality/Theology/Metaphysics
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

31. Paranormal/Aliens/ESP/Ghost/Supernatural/Conspiracy
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

32. Self-Improvement/Self-Help
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

33. Home/Garden
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

34. Poetry/Literature
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

35. Family/Parenting
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

36. Civil Rights/Human Rights/Social Issues
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

37. Entertainment/Celebrity
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

38. Real Estate/Property
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

39. For Children (Literature/Entertainment/Education/Cartoons)
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

40. Politics
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

41. Wedding/Parties/Event Planning
A. Never   B. Rarely   C. Sometimes   D. Often   E. As Frequently as Possible

Eating Disorder Inventory – 2 (Items from Relevant Subscales)

Body Dissatisfaction Subscale

1. I think that my stomach is too big.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
2. I think that my thighs are too large.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
3. I think that my stomach is just the right size.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
4. I feel satisfied with the shape of my body.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
5. I like the shape of my buttocks.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
6. I think my hips are too big.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
7. I think that my thighs are just the right size.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
8. I think my buttocks are too large.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
9. I think that my hips are just the right size.
    a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always

Bulimia Subscale

1. I eat when I am upset.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
2. I stuff myself with food.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
3. I eat or drink in secrecy.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
4. I have done on eating binges where I felt that I could not stop.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
5. I think about bingeing (overeating).
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
6. I eat moderately in front of others and stuff myself when they're gone.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
7. I have the thought of trying to vomit in order to lose weight.
   b. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always

Drive for Thinness Subscale

1. I eat sweets and carbohydrates without feeling nervous.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
2. I think about dieting.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
3. I feel extremely guilty after overeating.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
4. I am terrified of gaining weight.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
5. I exaggerate or magnify the importance of weight.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
6. I am preoccupied with the desire to be thinner.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always
7. If I gain a pound, I worry that I will keep gaining.
   a. Never   b. Rarely   c. Sometimes d. Often   e. Usually   f. Always

Sociocultural Attitudes Toward Appearance Questionnaire – 4 (Items from Relevant Subscale)

Internalization: Thin Subscale

1. I want my body to look very thin.

2. I want my body to look like it has little fat.

3. I think a lot about looking thin.

4. I want my body to look very lean.

5. I think a lot about having very little body fat.

Positive and Negative Affect Schedule – Extended Version

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way during the past few weeks.

Use the following scale to record your answers:

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

_____ cheerful

_____ sad

_____ active

_____ angry at self

_____ disgusted

_____ calm

_____ guilty

_____ enthusiastic

_____ attentive

_____ afraid

_____ joyful

_____ downhearted

_____ bashful

_____ tired

_____ nervous

_____ sheepish

_____ sluggish

_____ amazed

_____ lonely

_____ distressed

_____ daring

_____ shaky

_____ sleepy

_____ blameworthy

_____ surprised

_____ happy

_____ excited

_____ determined

_____ strong

_____ timid

_____ hostile

_____ frightened

_____ scornful

_____ alone

_____ proud

_____ astonished

_____ relaxed

_____ alert

_____ jittery

_____ interested

_____ irritable

_____ upset

_____ lively

_____ loathing

_____ delighted

_____ angry

_____ ashamed

_____ confident

_____ inspired

_____ bold

_____ at ease

_____ energetic

_____ fearless

_____ blue

_____ scared

_____ concentrating

_____ disgusted with self

_____ shy

_____ drowsy

_____ dissatisfied with self

Self-Compassion Scale

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost				Almost
never				always
1	2	3	4	5

_____ 1. I'm disapproving and judgmental about my own flaws and inadequacies.

_____ 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.

_____ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.

_____ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

_____ 5. I try to be loving towards myself when I'm feeling emotional pain.

_____ 6. When I fail at something important to me I become consumed by feelings of inadequacy.

_____ 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

_____ 8. When times are really difficult, I tend to be tough on myself.

_____ 9. When something upsets me I try to keep my emotions in balance.

_____ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

_____ 11. I'm intolerant and impatient towards those aspects of my personality I don't like.

_____ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.

_____ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.

_____ 14. When something painful happens I try to take a balanced view of the situation.

_____ 15. I try to see my failings as part of the human condition.

_____ 16. When I see aspects of myself that I don't like, I get down on myself.

_____ 17. When I fail at something important to me I try to keep things in perspective.

_____ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.

_____ 19. I'm kind to myself when I'm experiencing suffering.

_____ 20. When something upsets me I get carried away with my feelings.

_____ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.

_____ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.

_____ 23. I'm tolerant of my own flaws and inadequacies.

_____ 24. When something painful happens I tend to blow the incident out of proportion.

_____ 25. When I fail at something that's important to me, I tend to feel alone in my failure.

_____ 26. I try to be understanding and patient towards those aspects of my personality I don't like.

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