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Ethnic and American Identity as Correlates of Eating Pathology in College Women

Liya Markovna Rakhkovskaya
University of Nevada, Las Vegas, rakhkovs@unlv.nevada.edu

ETHNIC AND AMERICAN IDENTITY AS CORRELATES OF EATING PATHOLOGY IN COLLEGE WOMEN

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Liya Markovna Rakhkovskaya

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Liya Markovna Rakhkovskaya

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Department of Psychology

Cortney Warren, Ph.D., Committee Chair
Jason Holland, Ph.D., Committee Member
Stephen Benning, Ph.D., Committee Member
Kathryn Hausbeck Korgan, Ph.D., Graduate College Representative
Kendall Hartley, Ph.D., Associate Dean of the Graduate College

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ABSTRACT

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by

Liya Markovna Rakhkovskaya

Dr. Cortney S. Warren, Examination Committee Co-Chair
Associate Professor of Psychology (Retired)
University of Nevada, Las Vegas

Dr. Jason M. Holland, Examination Committee Co-Chair
Associate Professor of Psychology
University of Nevada, Las Vegas

According to popular racial and cultural formation theories, *ethnic identity* is defined as the process of identifying with the culture and practices one's ethnic group while *American identity* is the process of identifying with the mainstream/majority culture and practices of the United States. A small body of research suggests that ethnic identity and American identity are positively associated with mental health in ethnic minority and European American individuals, respectively. Furthermore, a growing body of research suggests that ethnic identity is associated with diminished eating pathology in minority women. However, the protective effects of ethnic identity against eating pathology are unexplored in European American women. In addition, the relationship between American identity and eating pathology is unexplored in all ethnic groups. To expand our understanding of these constructs, this study examined the relationships between ethnic identity, American identity, thin-ideal internalization and eating pathology in 1018 college women who self-identified as European American, African American, Asian American or Latina. Results indicated that ethnic identity moderated the relationship between thin-ideal internalization and eating pathology for African Americans and Asian

Americans (but not for European Americans or Latinas), such that the relationship was weaker for women with strong ethnic identity. In contrast, American identity did not predict or moderate eating pathology. Nevertheless, American identity was a significant positive correlate with eating pathology and/or thin-ideal internalization in all ethnic groups. Overall, these findings suggest that ethnic identity serves as a protective factor against eating pathology, while American identity may be a factor of risk; and that ethnic identity and American identity are related but distinct constructs. Future directions include replication of this study in other populations, as well as an exploration of ethnic identity-geared clinical interventions for eating pathology.

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CHAPTER 1

Introduction

According to the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013), *Feeding and Eating Disorders* describe psychological problems associated with eating, weight, and *body image* (i.e., an individual's subjective, internal perception of his or her body; Cash, 2012). Anorexia nervosa (AN) is characterized by a marked fear of becoming fat that leads to excessive dieting and low body weight, generally defined as a body mass index (BMI) below 18 kg/m^2. Individuals with AN may or may not engage in *binge eating*, or consuming a large amount of food in a short period of time (e.g., over 1000 calories over 2 hours) while feeling out of control. Likewise, individuals with AN may or may not engage in *compensatory behaviors*, such as purging (i.e., self-induced vomiting), laxative abuse or excessive exercise. Conversely, bulimia nervosa (BN) is characterized by preoccupation with one's weight and shape, as well as binge eating episodes followed by compensatory behaviors. Individuals with BN engage in compensatory behaviors to rid their body of the calories ingested during a binge and are usually of average or above average weight. In contrast, binge eating disorder (BED) is characterized by binges unaccompanied by compensatory behaviors. As such, individuals with BED are often overweight or obese. Finally, Feeding or Eating Disorder Not Elsewhere Classified (FEDNEC) describes individuals exhibiting impairing levels of eating pathology who do not meet criteria for any of the diagnoses above.

According to the American Psychiatric Association (2013), prevalence rates of the primary eating disorders (i.e., AN, BN, BED) are relatively low in the general

population in the United States of America (US; i.e., .4% for AN, 1% -1.5% for BN, and 1.6% for BED). However, atypical eating disorders (i.e., FEDNEC) and subclinical eating pathology are rampant to the degree that preoccupation with dieting and body dissatisfaction are normative in women in Western cultures[1] (i.e., *normative discontent*; Rodin, Silberstein, & Striegel-Moore, 1984). *Eating pathology* is a broad term used to describe an array of symptoms characteristic of eating disorders, such as restrictive dieting, binge eating, a marked preoccupation and dissatisfaction with one's weight or shape, and compensatory behaviors. Approximately 11.5% of women in the US will be diagnosed with FEDNEC during their lifetime (Stice, Marti, & Rohde, 2013), and as many as 57% will struggle with eating pathology (Croll, Neumarksztainer, Story, & Ireland, 2002). This appears to be particularly true in college-aged samples, with the most conservative estimates suggesting that 13.5% of college women and 3.6% of college men endorse significant clinically-relevant symptoms of eating pathology (Eisenberg, Nicklett, Roeder, & Kirz, 2011). That said, a recent study of 189 college women found that almost half (49%) endorsed at least one disordered eating symptom per week, such as purging or binge-eating (Berg, Frazier, & Sherr, 2009).

Eating Pathology, Culture, and the Media

Theoretically, the normative discontent experienced by many women in the US stem from unattainable beauty ideals and ideals of appearance (Rodin et al., 1984). As perpetuated by most mainstream Western media outlets (e.g., movies, television, advertisements, video games), ideal women are predominantly thin, tall, young, blonde, sexually available and White/European American (i.e., the *thin ideal*; Scharrer, 2013). A

[1] In this context, the term *Western culture(s)* refers to majority cultures in Northern Europe, US, Canada and Australia.

large body of research suggests a positive association between consumption of thin-ideal media and eating pathology (Cafri, Yamamiya, Brannick, & Thompson, 2005; Grabe & Hyde, 2006; Groesz, Levine, & Murnen, 2002; Juarascio et al., 2011; J. K. Thompson & Stice, 2001; Vartanian & Dey, 2013). Theoretically, this association occurs because the thin ideal is unattainable for most women. As a result, exposure to and/or endorsement of thin-ideal media is associated with *body image dissatisfaction*, or the negative attitudes, cognitions and perceptions of one's body size and shape (Cash & Smolak, 2011).

The process through which individuals endorse Western cultural ideals of beauty is generally described through three sociocultural constructs: awareness, perceived pressure, and internalization (Cafri, Yamamiya, Brannick, & Thompson, 2005; Thompson & Stice, 2001). As described by Cafri and colleagues (2005), *awareness* of the thin ideal refers to the knowledge that the thin ideal exists in Western cultures. As most women do not meet mainstream media's body size criteria, awareness of the thin ideal often results in perceived *pressure* from family, peers and the media to become thinner or to conform to the thin ideal. Such extreme pressure often leads to increased thin-ideal *internalization*, or personal acceptance of the cultural thin ideal as relevant.

Extensive research shows that thin-ideal awareness, perceived pressure and internalization are positively associated with and predict body image dissatisfaction and more severe eating pathology in women (Cafri et al., 2005; Grabe & Hyde, 2006; Groesz et al., 2002). In particular, thin-ideal internalization is one of the most robust risk-factors for eating pathology (Dittmar & Howard, 2004; Grabe & Hyde, 2006; Groesz et al., 2002; Juarascio et al., 2011; Vartanian & Dey, 2013). Recent studies suggest that thin-ideal internalization acts as a mediator between a number of sociocultural factors (i.e.,

appearance-related social comparison, self-concept clarity) and body dissatisfaction (Vartanian & Dey, 2013). These effects appear to be more pronounced for women under age 19 (Groesz et al., 2002) and for women prone to negative social comparisons (Dittmar & Howard, 2004).

Eating Pathology in Ethnic Minority Women

Given that the mainstream media idealizes characteristics predominantly found in women of White, European descent, it is important to understand how women of other ethnic backgrounds and physical traits react to the thin-ideal media in Western cultural context. On one hand, ethnic minority women may be protected from developing eating pathology by perceiving the European American-centric thin ideal as less personally relevant (Chamorro & Flores-Ortiz, 2000; Hall, 1995; Overstreet, Quinn, & Agocha, 2010; Poran, 2002; Rubin, Fitts, & Becker, 2003; Santiago-Rivera, Arredondo, & Gallardo-Cooper, 2002; Warren, Gleaves, Cepeda-Benito, Fernandez, & Rodriguez-Ruiz, 2005). Namely, cultures valuing curvier or entirely different beauty ideals (e.g., African Americans, Latinas) may be less prone to internalize the European American-centered thin ideal message. (Overstreet et al., 2010; Poran, 2002; Rubin et al., 2003; Santiago-Rivera et al., 2002; Warren et al., 2005). For example, research suggests that the relationship between thin-ideal internalization and body dissatisfaction was weaker in Spanish and Mexican American women compared to European American women (Warren et al., 2005). Similarly, Grabe and Hyde (2006) found that African American women exhibit less body dissatisfaction than European American women.

On the other hand, ethnic minority women who do internalize majority cultural ideals may be at increased risk because the European-centric thin ideal is even less

attainable for that population. For example, research suggests the endorsement of a thin figure, fair skin and European facial features results in high body dissatisfaction and use of plastic surgery in Asian Americans (Hall, 1995). In addition, even women from cultures valuing a curvy beauty ideal, such as African Americans, may present with unique risk-factors for body dissatisfaction, such as predisposition to obesity, weight fluctuation, and internalized racism (B. W. Thompson, 1994). Accordingly, in a discussion group study of 15 African American college women, Poran (2006) found that participants felt targeted by mainstream media and pressured to become thinner and lighter in complexion.

Ethnic Identity and Eating Pathology in Ethnic Minority Women

Theoretically, the conditions under which ethnic minority women are at greater risk for or protected from eating pathology may stem from differences within ethnic groups. Therefore, it is essential to examine factors contributing to such differences. One important factor is *ethnic identity*, defined as the process of identifying with one's cultural group and the acceptance of its norms and practices, (Helms, 1990; Phinney, 1996). According to Nagel (2007), the development of high ethnic identity allows ethnic minorities to better understand themselves in the context of a multifaceted society. Nagel (2007) posits that identifying with one's cultural group is particularly important for Americans of color. Theoretically, this is largely due to the historically racist US culture, in which *Whiteness* is viewed as superior (Devos & Banaji, 2005), which often leads minorities to feel foreign, isolated, or disenfranchised.

Ethnic identity is of particular interest to understanding eating pathology because a growing body of research suggests a positive association between ethnic identity and

psychological health in ethnic minorities in the US (Kiang, Witkow, Baldelomar, & Fuligni, 2010; Martinez & Dukes, 1997; Schwartz et al., 2013; Umaña-Taylor, Wong, Gonzales, & Dumka, 2012; Veling, Hoek, Wiersma, & Mackenbach, 2010). For example, ethnic identity is associated with increased family cohesion (Kiang et al., 2010), high self-esteem (Martinez & Dukes, 1997), improved academic adjustment (Umaña-Taylor et al., 2012), reduced risk of schizophrenia (Veling et al., 2010), and diminished incidence of unprotected sex (Schwartz et al., 2013).

Much like the protective and risk factors outlined above, an emerging body of research suggests that ethnic identity is also associated with diminished eating pathology in women (Henrickson, Crowther, & Harrington, 2010; Rogers Wood & Petrie, 2010; Schooler, Monique Ward, Merriwether, & Caruthers, 2004; Stein, Corte, & Ronis, 2010; Stojek, Fischer, & Collins, 2010; Turnage, 2005). For example, ethnic identity positively correlated with self-esteem and positive appearance evaluation in African American adolescent girls (Turnage, 2005), and negatively correlated with disordered eating symptoms in African American women (Henrickson et al., 2010). Furthermore, experimental research suggests that ethnic identity positively predicts body image in African American women (Schooler et al., 2004) and negatively predicts binge eating in Mexican-American women (Stein et al., 2010). Similarly, Stojek and colleagues (2010) showed that ethnic identity predicts lower thinness expectancies and lower subsequent symptoms of BN in college women.

Ethnic Identity and Eating Pathology in European American Women

Although a small body of research suggests that ethnic identity is associated with positive mental health outcomes and reduced eating pathology in ethnic minority women

(Henrickson, Crowther, & Harrington, 2010; Rogers Wood & Petrie, 2010; Schooler, Monique Ward, Merriwether, & Caruthers, 2004; Stein, Corte, & Ronis, 2010; Stojek, Fischer, & Collins, 2010; Turnage, 2005), the nature of these relationships in White, European American women is unclear. Theoretically, ethnic identity could serve as a protective or risk factor for European American women. On one hand, high ethnic identity in European Americans could reinforce existing sociocultural attitudes typical of mainstream Western (i.e., European American) culture, including the thin ideal and subsequent body dissatisfaction. As such, high ethnic identity could be associated with higher thin-ideal internalization for European American women. On the other hand, it is also possible that the protective effects of ethnic identity extend to European Americans such that having a sense of belonging to a cultural group, independent from the values and ideals of that culture, is protective of mental health issues (Phinney, Cantu, & Kurtz, 1997).

Existing research on ethnic identity in European American women is sparse and conflicting (Baugh, Mullis, Mullis, Hicks, & Peterson, 2011; Phinney et al., 1997; Sabik, Cole, & Ward, 2010). For example, Phinney, Cantu and Kurtz (1997) showed that ethnic identity is a predictor of high self-esteem in European American adolescents. However, Baugh and colleagues (2011) found no relationship between ethnic identity and body image in European American women. Likewise, Sabik, Cole and Ward (2010) found no significant relationship between other group orientation (a subset of ethnic identity; see Phinney, 1992) and drive for thinness or appearance esteem in European American women.

Furthermore, research on ethnic identity and eating pathology in European American women is confounded by the fact that European American women tend to report the lowest levels ethnic identity (Rakhkovskaya & Warren, 2014; Rodriguez, Schwartz, & Krauss Whitbourne, 2010). This floor effect suggests that European American women may not view a sense of belonging to their ethnic group as a salient construct to their identity. Consequently, ethnic identity may play little or no role in the development of eating pathology in European American women because it may be less relevant to identity formation in this group.

American Identity: A New Way to Examine Cultural Belonging

Given conflicting data on eating pathology and ethnic identity, particularly for European Americans, one factor that may be more salient is American identity[2]. Schildkraut (2008) describes *American identity* as a sense of identifying with and attachment to the US. As individuals of European descent were historically in the majority in the US, European American values and cultural attributes largely comprise American identity today. Indeed, Devos and colleagues (2005; 2009) described the *American=White association*, or the tendency of Americans of all ethnic backgrounds implicitly identify being American with Whiteness. In this instance, *Whiteness* refers to aspects of European American majority culture (e.g., individualist and Protestant values) rather than a lighter skin color (Buchanan, 2006). Accordingly, Schwartz and colleagues (2012) showed that European Americans have a higher affirmation and commitment towards the US than other ethnic groups.

[2] Although the term "American" may be used to refer to individuals from South, Central or North America (e.g., Chilean, Canadian), here it pertains exclusively to the United States of America (US), in accordance with existing literature.

The *American=White* association likely facilitated American identity formation predominantly among European Americans. As such, for European Americans, American identity may be conceptually similar to ethnic identity for ethnic minority groups. Consequently, it may have similar positive associations with desirable mental health outcomes. In concordance with this hypothesis, a small body of research on American identity in European Americans suggests it has a positive association with self-esteem (Phinney et al., 1997), ego formation (Ohm, 1999) and sociocultural adaptation (Berry, Phinney, Sam, & Vedder, 2006). Although unexplored, the protective effect of American identity against eating pathology is also theoretically possible.

To date, the role of American identity in ethnic minorities is unexplored. Traditionally, Anglo-Protestant definitions of American identity excluded Americans of color. Nevertheless, recent studies show the definition of American identity shifting towards civic engagement, universal rights and diversity, rather than traditional "Whiteness" and insularity (Devos & Banaji, 2005; Schildkraut, 2008). Likely fueled by the increasing ethnic diversity in the US since the 1960's (U.S. Census Bureau, 2012), this conceptual shift may result in new formation of American identity in ethnic minorities in the US. For example, emerging research suggests that Americans of Middle Eastern origins show levels of American identity comparable to those of European Americans (Devos & Heng, 2009; Schwartz et al., 2012).

Current Study

Research on ethnic and American identity as correlates of eating pathology is sparse in a number of areas. First, while extensive extant findings suggest a negative association between ethnic identity and eating pathology in minority women

(Henrickson, Crowther, & Harrington, 2010; Rogers Wood & Petrie, 2010; Schooler, Monique Ward, Merriwether, & Caruthers, 2004; Stein, Corte, & Ronis, 2010; Stojek, Fischer, & Collins, 2010; Turnage, 2005), research examining these relationships in European American women is inconclusive (Baugh et al., 2011; Phinney et al., 1997; Sabik et al., 2010). Second, extant research has focused exclusively on the positive psychological effects of American identity in European Americans (Berry et al., 2006; Ohm, 1999; Phinney et al., 1997). Theoretically, it is possible that American identity has similar or additive protective effects for ethnic minorities. However, research on American identity in ethnic minorities is very sparse (e.g., Devos & Heng, 2009; Schwartz et al., 2012). Third, similarly to ethnic identity, American identity may also act as a protective factor against eating pathology. Nevertheless, research examining the relationships between American identity, body image dissatisfaction and eating pathology is lacking in all ethnic groups. Lastly, as most extant research on ethnic differences in disordered eating focuses on comparisons of African American and European American women (Soh & Walter, 2013), research examining these relationships in other ethnic groups (e.g., Asian American, Latina) is warranted.

To expand our understanding of the relationships between ethnicity and eating pathology, this study examined the relationships between ethnic identity, American identity, thin-ideal internalization and eating disorder symptomatology in European American, African American, Asian American and Latina college women. I attempted to answer the following research questions:

Research Question 1: Are there mean differences in levels of ethnic identity, American identity, thin-ideal internalization and eating pathology among the ethnic groups?

Research Question 2: What are the relationships between these constructs? Specifically, are ethnic and American identity correlated; and do they correlate with measures of eating pathology? Are these relationships statistically significant for each ethnic group?

Research Question 3: Are American identity and ethnic identity unique predictors of eating pathology in the overall sample and within each ethnic group? In other words, is there evidence that American identity and ethnic identity are independent constructs that uniquely predict eating pathology or are they essentially the same construct? Does this differ by ethnic group?

Research Question 4: Do ethnic identity and/or American identity moderate the relationship between thin-ideal internalization and eating pathology in the overall sample and within each ethnic group?

To answer these questions, I tested the following: (1) mean levels of ethnic identity, American identity, thin-ideal internalization and eating pathology by ethnic group; (2) correlations between these constructs for each ethnic group and in the overall sample; (3) American identity and ethnic identity as predictors of eating pathology in the overall sample and by ethnic group; and (4) the interactive effects of ethnic identity/American identity, and thin-ideal internalization predicting eating pathology.

Consistent with research on the relationships between thin-ideal internalization (Dittmar & Howard, 2004; Grabe & Hyde, 2006; Groesz et al., 2002; Juarascio et al.,

2011; Vartanian & Dey, 2013), ethnic identity (Henrickson, Crowther, & Harrington, 2010; Rogers Wood & Petrie, 2010; Schooler, Monique Ward, Merriwether, & Caruthers, 2004; Stein, Corte, & Ronis, 2010; Stojek, Fischer, & Collins, 2010; Turnage, 2005), American identity (Berry et al., 2006; Ohm, 1999; Phinney et al., 1997), and eating pathology, as well as the ethnic differences between these constructs (Rakhkovskaya & Warren, 2014; Rodriguez et al., 2010; Soh & Walter, 2013), I hypothesized that:

Hypothesis 1: European American participants would score significantly lower on ethnic identity, and higher on American identity, thin-ideal internalization and eating pathology than all other ethnic groups. In contrast, African American participants would exhibit a reversed pattern of scores: they would score significantly higher on ethnic identity and lower on American identity, thin-ideal internalization and eating pathology than all other ethnic groups.

Hypothesis 2: Thin-ideal internalization would positively correlate with eating pathology and ethnic identity would negatively correlate with eating pathology for each ethnic group and in the overall sample. Additionally, ethnic and American identity would positively correlate with one another other in European Americans; and American identity would negatively correlate with eating pathology in European Americans. However, I made no predictions for the correlations between ethnic and American identity or about the correlation between American identity and eating pathology in ethnic minority groups.

Hypothesis 3: Ethnic identity would predict decreased eating pathology in the overall sample and within each ethnic group. However, the relationship would be stronger for ethnic minority women than European American women. Assuming

that ethnic identity and American identity are correlated but not overlapping constructs, I predicted that American identity would be predictive of decreased eating pathology for European Americans. However, I had no hypothesis about the relationship between American identity and eating pathology for minority women.

Hypothesis 4: I predicted that ethnic identity would moderate the relationship between thin-ideal internalization and eating pathology for each ethnic group and in the overall sample. Specifically, the relationship between thin-ideal internalization and eating pathology would be weaker for participants with stronger ethnic identity. Although I posited this relationship would be statistically significant for all ethnic groups, I predicted that ethnicity would also be a significant interactive predictor such that the relationship would be stronger for ethnic minority women with strong ethnic identity than for European Americans with strong ethnic identity. Similarly, I believed that American identity would serve as a moderator of this relationship for European Americans, but made no predictions about the moderating effects of American identity in minority women.

CHAPTER 2

Literature Review

This literature review provides a foundation for this study and explores existing research on thin-ideal internalization, ethnic identity and American identity. This chapter discusses (a) eating disorders diagnoses and prevalence, (b) thin-ideal media and internalization as risk factors for the development of eating pathology, (c) ethnic minority status and eating pathology (d) ethnic identity and eating pathology and (e) American identity development and mental health

Eating Disorders Diagnoses and Prevalence

Eating Disorders (DSM-IV) and Feeding and Eating Disorders (DSM-5) generally describe psychological problems associated with eating, weight, and *body image* (i.e., an individual's subjective, internal perception of his or her own body; Cash, 2012). The publication of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) produced some noteworthy changes in the diagnostic criteria and prevalence of eating disorders as outlined in the DSM-IV (American Psychiatric Association, 2013). Now referred to as *Feeding and Eating Disorders*, the manual includes binge eating disorder (BED) as a separate diagnosis; eliminates the requirements of amenorrhea (i.e., delayed onset of menses or the absence of three consecutive menstrual cycles) and presumed refusal to maintain a healthy weight from the anorexia nervosa (AN) diagnosis; and reduces the required frequency of binge eating and compensatory behaviors for a bulimia nervosa (BN) diagnosis from twice to once a week (American Psychiatric Association, 2013).

Overall, the DSM-5 task force aimed to make the diagnostic criteria for eating disorders less restrictive, as Eating Disorder Not Otherwise Specified (EDNOS) had the highest prevalence rates of all of the eating disorders (American Psychiatric Association, 2013). Now referred to as *Feeding or Eating Disorder Not Elsewhere Classified* (FEDNEC), the prevalence of this "catch-all" diagnosis should subsequently decrease. Accordingly, Ornstein and colleagues (2013) examined epidemiological differences in 216 consecutive intake patients presenting for eating disorder evaluation. Physicians from six institutions assigned diagnoses using both DSM-IV and DSM-5 criteria. Results indicated significant increases in AN (10%, $p < .001$) and BN (4.5%, $p < .001$) prevalence when using the DSM-5 instead of DSM-IV diagnostic criteria. Subsequently, the use of DSM-5 diagnostic criteria resulted in a 30.3% ($p < .001$) decrease in the prevalence of FEDNEC.

Ornstein and colleagues' study suggests that the DSM-5 will allow for more precise eating disorder diagnostics. However, the updated manual fails for account for the dangerously high prevalence of subthreshold *eating pathology*, or the array of symptoms characteristic of eating disorders. Such symptoms include restrictive dieting, binge eating, a marked preoccupation and dissatisfaction with one's weight or shape, self-induced vomiting, excessive exercise and laxative abuse. Subthreshold eating pathology is rampant in the US and other Western cultures (Berg et al., 2009; Croll et al., 2002; Eisenberg et al., 2011). For example, in a study of 81,247 adolescents, Croll and colleagues (2002) found that as many as 57% of girls and 31% of boys endorsed disordered eating behaviors, such as excessive binge-eating, dieting, fasting, self-induced vomiting, or using diet pills or laxatives.

Understanding risk-factors and outcomes for eating pathology and disorders is particularly important in high risk populations, such as college students. For example, a study of 2822 undergraduates (Eisenberg et al., 2011) indicated that 13.5% of women and 3.6% of men screened positively for an eating disorder diagnosis. Among them, only 20% had received mental health treatment within the past year. When Eisenberg and colleagues (2011) followed up 2 years later (N = 753), eating disorder symptoms at Time 1 significantly positively predicted symptoms at Time 2.

Similarly, in a sample of 189 undergraduate women, Berg and colleagues (2009) investigated the prevalence of binge eating, purging, as well as preoccupation with weight and shape at two time points, two months apart. Results indicated that 49% of participants endorsed disordered eating symptoms at Time 1, compared to 40% at Time 2. In addition, Berg and colleagues (2009) examined potential risk-factors for eating pathology, such as academic stress, depression, body dissatisfaction, low self-esteem and social insecurity. Results showed that increases in body satisfaction and self-esteem from Time 1 to Time 2 were the most consistent predictors of diminished symptoms of eating pathology.

Internalization of the Thin Ideal as a Risk Factor for Eating Pathology

Rodin, Silberstein and Striegel-Moore (1984) first used the phrase *normative discontent* to capture the extent to which preoccupation with thinness and body dissatisfaction are rampant in Western cultures. Rodin and colleagues (1984) argued that mainstream Western social norms stigmatize obesity through psychological, social and economic punishment (e.g., bullying; workplace discrimination). These negative consequences are particularly relevant for women because social pressure conditions

them to view physical appearance—being "beautiful"—as their most prized attribute. Furthermore, contemporary beauty norms idealize extreme thinness (i.e., the *thin ideal*), which is unattainable for most women. As a result, women's socially encouraged preoccupation with thinness (i.e., *thin-ideal internalization*) results in low self-esteem, body image disturbances, repeated unsuccessful attempts of weight loss, as well as feelings of frustration and helplessness (Rodin et al., 1984).

Mainstream Western media reflects cultural ideals and values, such as the thin ideal. As such, it is essential to examine mainstream Western media to understand the detrimental effects of thin-ideal internalization on body image and eating pathology. In an analysis of gender representation in the media, Scharrer (2013) found that the media displays the ideal woman as thin, tall, young, sexually available, and phenotypically European (e.g., with blue eyes, fair skin and blond hair). For example, in a content analysis of the body weight of 52 main female characters from 28 prime-time television situation comedies, Fouts and Burggraf (2000) found that women of below average weight outnumbered above average-weight women. Similarly, in a review on 39 shows on three major television networks, Glascock (2003) found that female characters were significantly younger, more likely to dress provocatively, and more likely to be blond or red-haired than male characters.

In addition to overrepresentation of thin characters, the media tends to portray them more positively than characters of average or above average weight. Fouts and Burggraf (2000) showed that, compared to overweight and obese female characters, female characters of below average weight received significantly more positive comments from male characters regarding their body weight and shape. Similarly,

Glascock (2003) found thin female characters are more likely to be provocatively dressed and to engage in dating and sexual behaviors. Furthermore, while in the minority in advertising as a whole, women outnumber men in advertisements of beauty and health products, indicating a conceptual association between femininity and beauty (Scharrer, 2013).

Conversely, mainstream Western media tends to under-represent and stigmatize overweight and obese individuals through association with a number of negative characteristics (Greenberg, Eastin, Hofschire, Lachlan, & Brownell, 2003; Scharrer, 2013). In an analysis of 1018 major characters on 10 top-rated prime-time television shows, for example, Greenberg and colleagues (2003) found that only 14% of women and 24% of men were overweight or obese. Furthermore, obese and overweight characters were less likely to interact with romantic partners. An examination of gender differences showed that overweight and obese women were less likely to display physical affection and to be considered attractive. Meanwhile, overweight and obese men were less likely to discuss dating and more likely to be shown eating.

Extensive research suggests that exposure to such unrealistic portrayals of women in the media is indeed a risk-factor for eating pathology. In a meta-analysis of 77 experimental and correlational studies, Grabe, Ward and Hyde (2008) found small to moderate associations between exposure to mainstream Western media and eating pathology. Specifically, the effect sizes were d = -.28 for body dissatisfaction, d = -.39 for thin-ideal internalization, and d = -.30 for disordered eating behaviors and attitudes. Similarly, in a meta-analysis of 22 studies, Cafri, Yamamiya and Thompson (2005) showed that awareness of the thin ideal, thin-ideal internalization and perceived pressure

to be thin all had statistically significant positive associations with body dissatisfaction. That said, thin-ideal internalization and perceived pressure to become thin were more strongly associated with body image dissatisfaction than awareness of the thin ideal. These patterns persisted when Cafri and colleagues (2005) controlled for age and ethnicity.

Experimental research also documents the negative effects of media exposure on body image. Groesz and colleagues (2002) showed that even brief exposure to thin-ideal media in a laboratory environment had detrimental effects of body image in women. Specifically, in a meta-analysis of 25 experimental studies on thin-ideal internalization, Groesz and colleagues (2002) examined the effects of exposure to thin-ideal images on participants' body dissatisfaction. Results indicated that body image was significantly more negative after viewing images of thin women than it was after viewing images of average-sized women, plus-sized women or inanimate objects. These effects were particularly strong for participants under 19 years of age.

Other unique methodology similarly shows the negative relationship between thin-ideal internalization, body dissatisfaction and eating pathology. For example, in a study of 80 first-year college women, Juarascio and colleagues (2011) used the Implicit Relational Assessment Procedure (IRAP) to examine associations between thin-ideal internalization, body image dissatisfaction, disordered eating behaviors and weight gain. Similar to the Implicit Attitudes Test (IAT; Greenwald, McGhee, & Schwartz, 1998), the IRAP is an implicit measurements technique, in which respondents rapidly respond to pair a stimulus (e.g., images of thin women) to a response that is either consistent (e.g., "I want to look like") or inconsistent (e.g., "I don't want to look like") with their beliefs.

Theoretically, women with high thin-ideal internalization may pair images of thin women and the "I want to look like" response quicker than images of thin women and the "I don't want to look like" response. Juarascio and colleagues (2011) administered the IRAP in the beginning and at end of the participants' freshman year of college. Over the course of the academic year, results showed increases in weight, disordered eating and body image dissatisfaction. Additionally, thin-ideal internalization at the start of the year significantly predicted these symptoms at the end of the year.

In addition to being a unique risk factor, thin-ideal internalization also appears to be a strong mediator between cultural exposure and eating pathology. For example, Vartanian and Dey (2013) examined self-concept clarity, thin-idea internalization, social comparison tendencies and body in a sample of 278 university women. In this context, *self-concept clarity* refers to an individuals' clearly defined, consistent and stable sense of self and personal attributes (Campbell et al., 1996). Theoretically, individuals with low self-concept clarity may be more apt to seek external sources to define their identity (e.g., attaining culturally-defined ideals of appearance). In support of Vartanian and Dey's (2013) hypothesis, structural equation modeling showed that thin-ideal internalization mediated the relationship between self-concept clarity and body dissatisfaction. In addition, thin-ideal internalization mediated the relationship between appearance-related social comparison and body dissatisfaction. These results suggest that women with low self-concept clarity are at particular risk for eating pathology.

Ethnic Minority Status and Eating Pathology

There are competing theories about whether being an ethnic minority living in the US is a protective or risk factor for eating pathology. On one hand, ethnic minority

women may perceive the European American-centric thin ideal as less personally relevant (Chamorro & Flores-Ortiz, 2000; Hall, 1995; Overstreet et al., 2010; Poran, 2002; Rubin et al., 2003; Santiago-Rivera et al., 2002; Warren et al., 2005). As such, they may be at diminished risk for eating pathology. On the other hand, for ethnic minority women who do internalize the thin ideal, the Eurocentric beauty norms may be even less attainable than for European American women. As a result, ethnic minority women with high thin-ideal internalization may be at increased risk for eating pathology (Hall, 1995; Poran, 2006; B. W. Thompson, 1994). This conflicting research warrants an examination of both theories.

Ethnic minority status as a protective factor.

Mainstream US ideals of beauty are primarily European American-centric (Scharrer, 2013). As such, women of color receive mainstream media messages that are often incongruent their racial features and body shape. Furthermore, minority ethnic group may endorse different beauty ideals, such as a curvier or larger figure (Overstreet, Quinn & Agocha, 2010; Warren, Gleaves, Cepeda-Benito, Fernandez and Rodriguez-Ruiz, 2005). For example, in a study of 116 African American and 222 European American college women, Overstreet and colleagues (2010) examined whether a curvy ideal (rather than a thin ideal) influenced body dissatisfaction. While both groups preferred a curvaceous body shape to a thin one, African American participants preferred a curvier ideal compared to European American women. Specifically, African American participants endorsed an ideal figure with large buttocks and medium-sized breasts.

Body dissatisfaction research in Latina women found similar results. For example, Warren and colleagues (2005) tested the moderating effects of ethnicity on the

relationships between thin-ideal awareness and internalization, as well as between thin-ideal internalization and body dissatisfaction in European American (n = 100), Mexican American (n = 100) and Spanish (n = 100) women. As expected, thin-ideal internalization mediated the relationship between thin-ideal awareness and body dissatisfaction for all ethnic groups. However, this relationship was significantly stronger for European American than for Spanish or Mexican American women. These results indicate that ethnicity moderates the relationship between endorsement of mainstream Western media and body dissatisfaction, such that Spanish and Mexican American women benefit from its protective effects.

Furthermore, some subcultural and ethnic groups place differential value of physical appearance as a determinant of worth. Specifically, Santiago-Rivera, Arredondo and Gallardo-Cooper (2002) describe three core collectivist values of Latino culture: *familismo*, *personalismo*, and *fatalismo*. *Familismo*, encompasses a strong value for close, interdependent family relationships. *Personalismo* involves the cultural norm for sociability and amicable interactions. Finally, *fatalismo* involves deterministic thinking or the belief that events and life circumstances are fated and unchangeable. In contrast with more individualist mainstream US culture, these collectivist values theoretically divert Latinas' focus from thinness and beauty as foundations of self-worth.

Existing qualitative research further supports the protective effects of ethnic minority status. For example, Poran (2002) investigated conceptions of beauty and perceptions of cultural beauty ideals in small focus groups with European American, African American and Latina college women (N = 157). Results indicated significant ethnic differences in participants' relationships with their bodies and reactions to

mainstream beauty standards. Namely, African American participants (n = 52) scored highest on body esteem and were the most aware of the Eurocentricity of the thin ideal. In addition, they were the most likely to view themselves and their African American peers as relatively unaffected by the thin ideal.

Similarly, in a qualitative study examining self-concept and body ideals using focus groups of college-educated African American and Latina women (N = 18), Rubin, Fitts and Becker (2003) found that women reframed the discussion to focus on *body ethics* rather than *body esthetics*. That is, rather than focus on endorsement of curvaceous or thin ideals (i.e., body esthetics), participants disclosed significantly different attitudes towards their bodies (i.e., body ethics). Specifically, participants valued body care and nurturance (e.g., good style and attitude) rather than conformity to a particular body shape or size.

Unfortunately, the majority of research to date examining ethnic minority status as a protective factor examines African American and European American samples. As such, research examining Latina and Asian American samples is relatively sparse. For example, a meta-analysis of 98 studies on eating pathology in European American, African American, Asian American and Latina women showed that the majority (k = 93) of studied examined African American and European American participants (Grabe & Hyde, 2006). Comparatively, the number of studies comparing European American to Asian American and European American to Latina participants was smaller (k = 34 and 31, respectively).

As expected, Grabe and Hyde (2006) found that African American women reported significantly less body dissatisfaction than European American women (d = .29,

k = 93 studies). While the effects sizes were smaller for other ethnic groups (*d* = .01, *k* = 34 for European American and Asian American comparison; *d* = .09, *k* = 31 for European American and Latina comparison; *d* = -.12, *k* = 19 for African American and Asian American comparison; *d* = -.18, *k* = 26 for African American and Latina comparison; *d* = -.07, *k* = 17 for Asian American and Latina comparison), the results suggest significant ethnic differences in the prevalence of body dissatisfaction in women.

Ethnic minority status as a risk factor

Despite research suggesting that certain aspects of culture may be protective against thin-ideal internalization for ethnic minority women in the US, the tendency to reject a thin ideal does not universally protect minorities from eating pathology. Ethnic minority women who do internalize the thin ideal may be at higher risk for eating pathology than European American women. Specifically, the cultural ideal is *even less attainable* for ethnic minority women than it is for European American women, as it *is* Eurocentric. Furthermore, mainstream Western media's emphasis on thinness and European physical features is evident not only in large media outlets but also in media geared towards individuals of color. For example, an analysis of advertisements in African American-geared magazines (e.g., *Jet*, *Essence*) showed their tendency to depict African American women with straight hair, medium to light complexions and an increasingly thin figure (Hazell & Clarke, 2007). Scharrer (2013) posits that such depictions further promote the mainstream Western thin ideal through the portrayal of African American women with features more commonly occurring among European Americans.

Theoretically, internalization of such racially ambiguous beauty ideals may contribute minority women's dissatisfaction with specific body features (e.g., hair). Indeed, a recent study by Warren (2012) examining ethnic identity and dissatisfaction with racially salient body areas (e.g., skin color, hair, eyes) in European American (n = 104), African American (n = 76) and Latina women (n = 106) supports this hypothesis. Results indicated that Latina participants reported significantly higher dissatisfaction with their eyes and nose than European American and African American participants. In addition, both European American and Latina women reported higher dissatisfaction with their facial feature, lips, lower body and overall body than African American participants.

Some research supports the theory that ethnic minority women living in Western cultures or exposed to Western ideals and values are at increased risk for eating pathology. Namely, the detrimental effects of thin-ideal media may be stronger than the protective effects of a large beauty ideal. The negative impact of television in Fiji is one famous example (Becker, Burwell, Herzog, Hamburg, & Gilman, 2002). Namely, Becker and colleagues (2002) used a multi-wave, cross-sectional design to compare two samples of Fijian high school girls. The first sample (N = 63) completed the study in 1995, one month after the introduction of television to Nadroga, Fiji. The second sample (N = 65) complete the study three years after, in 1998. Despite the strong traditional influences of a curvaceous body ideal in Fiji, participants in the 1998 sample scored significantly higher on disordered eating behaviors than the 1995 sample. The higher scores in the 1998 sample associated with dieting and self-induced vomiting. Specifically, the incidence of self-induced vomiting increased from 0% in the 1995 sample to 11.3% in the

1998 sample. Furthermore, open-ended interviews showed that many participants aimed to resemble the Western television characters, particularly through weight loss.

Becker and colleagues' (2002) findings highlight the detrimental effects mainstream Western media, particularly for individuals who are phenotypically further from the European-centric thin ideal. Research on minority women in the US offers evidence in support of this hypothesis. For example, Poran (2002) found that, compared to European American and African American participants, Latina women (n = 54) endorsed lowest body esteem scores, despite high racial identification scores. Latina participants did not tend to view depictions European American women as drastically different from women in their ethnic group. In contrast to European American participants, Latinas tended to view themselves and their Latina peers are equally susceptible to the thin ideal.

Research specifically examining acculturation into US culture and/or exposure to mainstream Western media also suggests that being an ethnic minority can be a risk-factor for eating pathology (Hall, 1995; Mintz & Kashubeck, 1999). For example, a review of research on Asian and Asian American body image, disordered eating and beauty ideals supports this hypothesis (Hall, 1995). Namely, Hall (1995) argued that Asian American women are at increasing risk for eating pathology as they acculturate in US and begin endorsing mainstream US beauty ideals. However, even non-acculturated Asian American women may be at risk for eating pathology, as Asian cultures tend to idealize European facial features (e.g., large, blue eyes; fair complexion) as well as a thin figure (Hall, 1995). Accordingly, Asian and Asian American women engage in highest

rates of plastic surgery, particularly to remove the epicanthic fold from the eyelid (i.e., epicanthoplasty; Hall, 1995).

Research on acculturation of Mexican American women further supports this hypothesis. For example, a study examining acculturation and eating pathology in 139 Mexican-American women (Chamorro & Flores-Ortiz, 2000) showed significant positive correlation (r = .24) between acculturation and perceived family pressure to gain weight. These findings suggest that more acculturated Mexican American women value thinner body ideals than their less acculturated family members (Chamorro & Flores-Ortiz, 2000).

Research on the relationships between race, body dissatisfaction and eating pathology offers more evidence of the detrimental effects of the European American-centric thin ideal in Asian American women. For example, Mintz and Kashubek (1999) examined body image distortion and disordered eating behaviors in European American and Asian American college students (N = 252). Results indicated that women in both groups (n = 138) endorsed higher levels of eating pathology than men (n = 114). Furthermore, while European American women (n = 105) endorsed more binge eating, fasting and dieting behaviors, Asian American women (n = 33) reported having lower self-esteem and higher dissatisfaction with their racially defined features. Specifically, Asian American women endorsed more dissatisfaction with their arms, breasts, height, eyes and body shape than their European American counterparts.

Hall's (1995) and Mintz and Kashubek's (1999) findings indicate that Asian American and European American women tend to value similar thin ideals and endorse comparable levels of eating pathology. As such, despite possessing non-European racial

features, Asian American women may internalize the Eurocentric thin ideal similarly to their European American counterparts. Indeed, in a study of 154 Asian American and 133 European American women, Nouri, Hill and Orrell-Valente (2011) showed that thin-ideal internalization mediated the relationship between exposure to Western media and body dissatisfaction equally well for both ethnic groups. Accordingly, Nouri and colleagues (2011) posited that Asian American and European American women likely engage in unhealthy weight control behaviors and are at risk for eating disorders at similar rates.

Extant research on Asian American women suggests that cultural beauty ideals and attitudes, rather than ethnicity itself, likely moderate thin-ideal internalization in minority women. However, Poran's (2006) qualitative research on African American women indicates that endorsement of a cultural curvaceous body ideal may not completely buffer the detrimental effects of mainstream Western media. Specifically, in a discussion group study of 15 African American college women, Poran (2006) found that participants endorsed pressures to become thin; pressures to conform to preferences of African American, European American and Latino men; and competition with other African American women for socially perceived attractiveness. Additionally, participants endorsed a strong sense of misrepresentation of African American women by mainstream media, as being thinner and lighter than most women in that ethnic group. Furthermore, despite not identifying with their unrealistic representations, African American women felt "targeted" and "used" by the media, resulting in higher levels of body dissatisfaction (Poran, 2006).

In conjunction with thin-ideal media, numerous sociocultural factors increase risk for eating pathology in some ethnic subgroups. Specifically, in a multicultural analysis of

eating problems in women, B.W. Thompson (1994) offered evidence that eating pathology in minority women is often a coping mechanism for the myriad of injustices they experience on a daily basis. Such injustices include racism, sexism, acculturative stress, class struggle, homophobia, as well as physical, sexual and emotional abuse. In addition, Thompson (1994) posited that African American women present with unique physiological (e.g., predisposition to obesity; weight fluctuation) and psychological (i.e., internalized racism) risk-factors for eating pathology.

Ethnic Identity, Mental Health and Eating Pathology

Given evidence suggesting that ethnic minority status can either serve as a protective or risk factor for the development of eating pathology, an examination of factors contributing to within group differences is of central importance. For ethnic minorities, one critical within group factor to consider is *ethnic identity*, or the process of identifying with and accepting the norms and practices of one's cultural group (Helms, 1990; Phinney, 1996). In a historical analysis of ethnicity and ethnic identity in the US, Nagel (2007) defines ethnic identity in the context of ethnic boundaries. Specifically, Nagel (2007) posits that ethnic identity helps determine membership within or outside of ethnic groups, which aids in the struggles for ethnically-centered recognition, empowerment and allocation of resources.

Given the shifting ethnic and cultural make-up of the US (U.S. Census Bureau, 2012), ethnic identity is increasingly multifaceted (Nagel, 2007). For example, personal preference or necessity may compel a Native American woman to identify with a subtribal group (e.g., clan or lineage), a particular tribe (e.g., Sioux), a region (e.g., the Southwest) or a supratribal group (e.g., American Indian). Nagel (2007) argues that

ethnic identity is of particular importance for ethnic minorities in the US, due to a history of racial discrimination against Americans of color. As such, despite its fluid definition, ethnic identity remains a highly salient identity factor for ethnic minorities in the US (Nagel, 2007).

Positive effects of ethnic identity in US minority samples.

Ethnic identity is of particular interest to clinicians and researchers because of its positive association with psychological health in many ethnic groups. For example, in a study of 12,386 adolescents, Martinez and Dukes (1997) conceptualized ethnic identity into three levels: unexamined, exploratory and achieved. Results indicated a positive association between achieved ethnic identity and global self-esteem, academic self-confidence and life purpose in the overall sample. Furthermore, Martinez and Dukes (1997) concluded that achieved ethnic identity may buffer the negative effects of stereotyping and social denigration among ethnic minorities as well as adolescent girls of all ethnic backgrounds.

Similarly, a longitudinal study of 173 Mexican-American adolescents (Umaña-Taylor et al., 2012) found that perceived discrimination was particularly harmful for male participants, as evidenced by lower grade points averages, teacher reports on externalizing behaviors and deviant peer associations. However, results indicated that *ethnic identity affirmation* (i.e., positive feelings regarding to one's ethnic group) moderated the negative effects of perceived discrimination on academic adjustment. Umaña-Taylor and colleagues (2012) showed that the protective effects of ethnic identity were particularly effective in preventing externalizing behaviors (e.g., school disobedience) in male adolescents.

Other research exploring ethnic identity describes it in the context of the immigrant paradox. According to Schwartz and colleagues (2013), the *immigrant paradox* is the tendency for immigrants to engage in more risky health behaviors, as they become more oriented towards US culture. Schwartz and colleagues (2013) explored the effects of ethnic identity and other components of acculturation on substance use and sexual behavior in a sample of 302 adolescent Latino immigrants. Participants provided baseline data on endorsement of mainstream US values, practices and identities, in contrast to those of their native cultures (e.g., Cuban, Mexican). At one year follow up, participants reported on smoking, alcohol use and sexual practices. Results indicated that endorsement of mainstream US individualist values predicted the number occasions of alcohol use and the maximum number of drinks per day. In addition, endorsement of individualist values predicted the number of oral sex partners in boys (but not in girls). However, engagement in mainstream US practices (e.g., speaking English, eating American food) and US identification predicted less heavy alcohol use, fewer sex partners and decreased frequency of unprotected sex in both genders. Finally, ethnic identity predicted increased numbers of sexual partners, but decreased frequency of unprotected sex. As such, both ethnic and US identification may have important protective effects for adolescent Latinos (Schwartz et al., 2010).

Research supports the protective effects of ethnic identity in samples as young as high school students. For example, Kiang, Witkow, Baldelomar and Fuligni (2010) examined changes in ethnic identity in a four-year study of 541 European American, Asian American and Latino high school students. Interestingly, despite significant individual changes in ethnic identity over time, results did not indicate normative group

changes in ethnic identity. Although Kiang and colleagues (2010) posit that these findings suggest that ethnic identity development can be unpredictable for adolescents, results indicated a positive association between ethnic identity and family cohesion. Specifically, the closer participants felt to their parents, the more they identified and connected with their ethnic group. This relationship was particularly strong among Asian American participants.

Research also supports the protective role of ethnic identity in adult samples. A study of non-Western immigrants to the Netherlands examined whether negative ethnic identity (i.e., feelings of marginalization) increased schizophrenia risk (Veling, Hoek, Wiersma, & Mackenbach, 2010). Veling and colleagues (2010) compared 100 first-episode schizophrenia cases, 100 matched general hospital controls, and 63 siblings of schizophrenia cases. Results indicated that schizophrenia patients endorsed a negative ethnic identity more often than general hospital controls (64% and 35%, respectively). These findings were consistent, when the authors (2010) controlled for marital status, social support, level of education, employment status, cannabis use, and self-esteem. According to Veling and colleagues (2010), negative ethnic identity may be a risk-factor for schizophrenia for immigrants faced with social adversity.

Ethnic identity and eating pathology in minority women

A growing body of research suggests that ethnic identity is negatively associated with eating pathology in ethnic minority women in Western cultures (Henrickson, Crowther, & Harrington, 2010; Rogers Wood & Petrie, 2010; Schooler, Monique Ward, Merriwether, & Caruthers, 2004; Stein, Corte, & Ronis, 2010; Stojek, Fischer, & Collins, 2010; Turnage, 2005). For example, in a study of 105 African American female high

school seniors living in the Southern US, Turnage (2005) found a significant positive correlation between ethnic identity achievement and global self-esteem (r = .40), as well as a significant negative correlation between ethnic identity achievement and positive appearance evaluation (r = .31). Stepwise multiple regression of predictors of variance in global self-esteem indicated that ethnic identity accounted for 7% of the variance alone, and 28% of the variance in conjunction with positive appearance evaluation. Turnage's (2005) findings demonstrate the protective effects of ethnic identity against eating pathology in African American adolescents.

Similarly, Henrickson, Crowther and Harrington (2010) examined ethnic identity, expectancies about thinness and eating and maladaptive eating patterns in 93 undergraduate (n = 85) and non-student (n = 8) adult African American women. For participants with strong expectancies about eating and thinness, ethnic identity negatively correlated with maladaptive eating patterns. In contrast, for participants with strong expectancies about thinness only, *other group orientation* (i.e., a sense of identifying with beliefs and practices of another ethnic group, such as European Americans) positively correlated with maladaptive eating patterns. In addition, results showed a significant negative association (r = -.22) between ethnic identity development and maladaptive eating behaviors. Henrickson and colleagues (2010) argue that identification with own vs. other culture is an important moderating factor for eating pathology for African American women.

A small body of research supports the protective effects of ethnic identity on eating pathology in Latina samples. For example, in study of 66 Mexican-American women, Stein, Corte and Ronis (2010) examined ethnic identity, *fat self-definition* (i.e.,

the perception of one's own body as overweight), eating pathology and acculturation. Consistent with existing literature (Chamorro & Flores-Ortiz, 2000; Schwartz et al., 2013), acculturation had a significant effect on body dissatisfaction, such that participants who were more acculturated endorsed higher body dissatisfaction. In addition, ethnic identity was a significant unique negative predictor of binge eating. These findings suggest that prolonged exposure to mainstream US values negatively influences body image, although ethnic identity may buffer these detrimental effects (Stein et al., 2010).

Research also supports the role of ethnic identity as a buffer against thin-ideal internalization. Theoretically, the endorsement of curvaceous or different beauty ideals by ethnic minority women, in part, accounts for diminished incidence of eating pathology in those groups. As such, ethnic identity may act as a protective factor by diminishing thin ideal endorsement in women of color or weakening the relationship between media exposure and thin-ideal internalization. An emerging body of research provides evidence in support of this hypothesis (Chamorro & Flores-Ortiz, 2000; Hall, 1995; Overstreet et al., 2010; Poran, 2002; Rubin et al., 2003; Santiago-Rivera et al., 2002; Warren et al., 2005). For example, Stojek, Fischer and Collins (2010) examined the relationship between ethnic identity, *thinness expectancies* (i.e., the value and desire for thinness) and BN symptoms in a sample of 493 college women from diverse ethnic backgrounds (n = 399 for European Americans; n = 47 for African Americans; n = 38 for Asian American and Pacific Islanders; n = 10 for Latinas; n = 15 for Biracial individuals; n = 41 for individuals with other ethnic or cultural identities). Ethnic identity significantly negatively correlated with thinness expectancies (r = -.11) as well as BN symptoms (r = -.09). Hierarchical regression analysis indicated that ethnic identity significantly

negatively predicted thinness expectancies, while thinness expectancies significantly positively predicted BN symptoms. These findings suggest that thinness expectancies mediate the negative relationship between ethnic identity and eating pathology.

Stojek and colleagues' (2010) results indicate an inverse relationship between ethnic identity and value for thinness. As such, ethnic identity may likewise negatively correlate with endorsement of thin-ideal media. Indeed, a study examining media consumption and body image in 87 African American and 584 European American college women (Schooler et al., 2004) supports this hypothesis. Hierarchical regression indicated that ethnic identity was a negative predictor of negative thoughts about one's own body for African American participants. In addition, ethnic identity moderated the relationship between consumption of African American-oriented television (e.g., the *BET* channel) and body image in African American participants.

My previous research (Rakhkovskaya & Warren, 2014) further examined the relationship between ethnic identity, thin-ideal media and eating pathology. Specifically, in a study of 816 diverse college women (n = 384 for European Americans; n = 90 for African Americans; n = 184 for Asian Americans; n = 158 for Latinas), we examined the moderating effects of ethnic identity on the relationship between thin-ideal internalization and eating concerns, as well as the relationship between thin-ideal internalization and weight concerns. Hierarchical regression analyses indicated that BMI and thin-ideal internalization positively, and ethnic identity negatively, predicted both eating and weight concerns. In addition, ethnic identity moderated the relationship between thin-ideal internalization and eating concerns, such that the relationship was diminished for participants with stronger ethnic identity. These findings suggest that ethnic identity acts

as a protective factor against eating pathology by buffering against thin-ideal internalization.

Ethnic identity and mental health in European American women

As European American women are the most affected by thin-ideal media (Chamorro & Flores-Ortiz, 2000; Hall, 1995; Overstreet et al., 2010; Poran, 2002; Rodin et al., 1984; Rubin et al., 2003; Santiago-Rivera et al., 2002; Warren et al., 2005), an examination of the role of ethnic identity in European American women is of interest. Unfortunately, research on this topic is sparse (Baugh et al., 2011; Phinney et al., 1997; Sabik et al., 2010). Phinney and colleagues (1997) were one of the first to examine ethnic identity in a sample of American-born Latino (n = 372), African American (n = 232) and European American (n = 65) high school students. Multiple regression analyses indicated that ethnic identity was a significant positive predictor of self-esteem for all ethnic groups. While Phinney and colleagues (1997) did not examine eating pathology, these results suggest that the protective effects of ethnic identity may theoretically apply for European Americans.

Nevertheless, existing research on the relationship between ethnic identity and eating pathology for European American women is conflicting. While my previous study (Rakhkovskaya & Warren, 2014) included European American participants, hierarchical regression analyses focused on the entire sample. As such, the results did not offer evidence of ethnic differences in the role of ethnic identity in eating pathology and its risk-factors. Notably, preliminary correlational analyses indicated that ethnic identity significantly negatively correlated with eating concerns for European Americans (r = -.11) and well as the overall sample (r = -.13). In addition, ethnic identity negatively

correlated with weight concerns in the overall sample (r = -.11), but not in any of the ethnic groups. While not definitive, these findings point to similarities in the relationship between ethnic identity and eating pathology in European American and minority women.

Notably, the Stojek and colleagues' (2010) study described above conducted comparisons between European American and ethnic minority participants. Results showed significantly negative correlations between ethnic identity and thinness expectancies, as well as ethnic identity and BN symptoms. There relationships were not significantly different for European American vs. minority women. Stojek and colleagues' (2010) findings provide further evidence that ethnic identity may be protective against eating pathology for European Americans.

In contrast, a small body of research found no significant effects of ethnic identity on eating pathology. Namely, Baugh and colleagues (2011) examined ethnic identity and body image in African American (n = 48) and European American (n = 70) college women. European American participants scored significantly higher on body dissatisfaction and significantly lower on ethnic identity than African American participants. However, the results indicated no significant relationship between ethnic identity and body dissatisfaction in either ethnic group.

Similarly, Sabik and colleagues (2010) examined out-group vs. in-group identification, weight-based contingency of self-worth, body dissatisfaction and drive for thinness in a sample of African American (n = 68), Asian American (n = 123), and European American (n = 714) college women. For African American participants, definition of self-worth was contingent on weight and identification with out-group (i.e.,

European American) identity. As such, self-worth positively moderated the relationship between appearance esteem and drive for thinness. For Asian American and European American participants, appearance esteem likewise positively associated with drive for thinness. However, in- vs. out-group association had no effect on this relationship for either ethnic group.

One reason for the conflicting research on ethnic identity and eating pathology in European American women is that they tend to report lower levels of ethnic identity than minority women (Rakhkovskaya & Warren, 2014; Rodriguez, Schwartz, & Krauss Whitbourne, 2010). For example, in my aforementioned study (Rakhkovskaya & Warren, 2014) European American participants scored significantly lower on ethnic identity than all other groups. Similarly, notable ethnic differences emerged in Martinez and Dukes' (1997) aforementioned study. Specifically, European Americans (n = 7839) and Native Americans (n = 425) endorsed lowest levels of ethnic identity; Asian American (n = 327) and multiracial (n = 2064) participants endorsed intermediate levels; and African Americans (n = 739) and Latinos (n = 992) endorsed highest levels. Furthermore, in a study examining American, ethnic and personal identity in 287 college students (Rodriguez et al., 2010), European American participants (n = 43) endorsed significantly less attachment to their ethnic heritage than African American (n = 68) or Latino (n = 176) participants.

These uniformly low scores may indicate a floor effect in ethnic identity among European Americans. Theoretically, this construct may be less salient for European Americans than for ethnic minority groups. As such, factors other than ethnic identity (e.g., religious identity, geographic identity, American identity) likely play a larger role

in identity formation for European Americans. An examination of such factors is warranted, as they may similarly affect the development of eating pathology in that ethnic group.

American Identity Development, Mental Health and Eating Pathology

American identity, or a sense of identifying with and attachment to the US, is one salient factor to European American identity (Schildkraut, 2008). Historically, the individualist and Protestant values of the first Western European immigrant groups largely comprised American identity (Buchanan, 2006; Huntington, 2004). As such, the earlier definitions of American identity failed to encapsulate individuals outside of these criteria, such as Americans of color, non-European immigrants and religious minorities.

The exclusion of these groups from the conceptualization of American identity likely facilitated its formation predominantly among European Americans. Extant research on modern American identity development supports this hypothesis (Devos & Banaji, 2005; Devos & Heng, 2009). For example, in a series of six consecutive studies, Devos and Banaji (2005) examined the association with the category "American" among European American (n = 274), African American (n = 38) and Asian American (n = 84) participants. Results of Study 1 suggested strong explicit commitments to egalitarian principles in all participants. However, Studies 2 through 6 demonstrated the *American=White association*, or the tendency of Americans of all ethnic backgrounds implicitly identify being American with "Whiteness". In this instance, *Whiteness* refers to majority European American culture and identity, rather than light skin complexion (Buchanan, 2006). Specifically, compared to European Americans, both African Americans and Asian Americans reported a weaker personal association with the

category “American”. Furthermore, the *American=White* association positively correlated with the strength of national identity among European American participants.

Given the *American=White* association, European Americans should theoretically endorse higher levels of American identity than other groups. Indeed, in a study of 10,573 college students, Schwartz and colleagues (2012) supported this hypothesis. Specifically, the results showed that European Americans (n = 6,132) have the highest affirmation and commitment towards the US, while Asian Americans (n = 1,374) and first-generation immigrants (n = 1,269) have the lowest. Interestingly, the association between American identity and individualist values was weak in the overall sample, suggesting that “rugged individualism” may no longer closely associate with the construct of American identity.

Conceptually, American identity among European Americans may resemble ethnic identity for ethnic minority groups. As such, American identity may have similar positive associations with positive mental health outcomes. Limited research on American identity in European Americans offers evidence in support of this hypothesis (Phinney et al., 1997). Namely, in an aforementioned study, Phinney and colleagues (1997) examined ethnic and American identity as predictors of self-esteem in a sample of 669 American-born high school students. Among European American participants (n = 65), American identity positively correlated with ethnic identity and significantly predicted self-esteem.

Limited research on American identity in ethnic minorities further suggests its positive association with mental health. Specifically, Ohm (1999) explored the formation of ego identity in a sample of 100 Asian American college students. American identity

was a significant positive predictor of ego identity status. Furthermore, compared to Asian-born participants (n = 55), American-born participants (n = 45), scored higher on ego identity, ethnic identity and American identity. Ohm's (1999) results suggest that American identity may be a protective factor for Asian immigrant groups, particularly as they assimilate into mainstream US culture.

Although sparse, these findings suggest American identity may resemble ethnic identity in its protective effects. As such, the protective effect of American identity against eating pathology is also theoretically possible. On the other hand, high American identity may reinforce endorsement of thin-ideal media and internalization in women. Unfortunately, research on the effects of American identity on beauty attitudes, thin-ideal internalization and eating pathology is lacking in all ethnic groups.

Current Study

Research on ethnic and American identity as correlates of eating pathology is sparse in a number of areas. First, while extensive extant findings suggest a negative association between ethnic identity and eating pathology in minority women (Henrickson, Crowther, & Harrington, 2010; Rogers Wood & Petrie, 2010; Schooler, Monique Ward, Merriwether, & Caruthers, 2004; Stein, Corte, & Ronis, 2010; Stojek, Fischer, & Collins, 2010; Turnage, 2005), research examining these relationships in European American women is inconclusive (Baugh et al., 2011; Phinney et al., 1997; Sabik et al., 2010). Second, extant research has focused exclusively on the positive psychological effects of American identity in European Americans (Berry et al., 2006; Ohm, 1999; Phinney et al., 1997). Theoretically, it is possible that American identity has similar or additive protective effects for ethnic minorities. However, research on the

American identity in ethnic minorities is very sparse (e.g., Devos & Heng, 2009; Schwartz et al., 2012). Third, similarly to ethnic identity, American identity may also act as a protective factor against eating pathology. Nevertheless, research examining the relationships between American identity, body image dissatisfaction and eating pathology is lacking in all ethnic groups. Lastly, as most extant research on ethnic differences in disordered eating focuses on comparisons of African American and European American women (Soh & Walter, 2013), research examining these relationships in other ethnic groups (e.g., Asian American, Latina) is warranted.

To address these gaps in the literature, the overarching goal of this study was to understand the relationships between ethnic identity, American identity, thin-ideal internalization and eating disorder symptomatology in a large, diverse sample of college women (i.e., European American, African American, Asian American and Latina). Specifically, I attempted to answer four research questions.

The first research question (RQ1) was: are there mean differences in levels of ethnic identity, American identity, thin-ideal internalization and eating pathology among the ethnic groups? In light of existing research on ethnic differences in these constructs (Rakhkovskaya & Warren, 2014; Rodriguez et al., 2010; Soh & Walter, 2013), I hypothesized that (H1) European American participants would score significantly lower on ethnic identity, and higher on American identity, thin-ideal internalization and eating pathology than all other ethnic groups. In contrast, I predicted that African American participants would exhibit a reversed pattern of scores: they would score significantly higher on ethnic identity and lower on American identity, thin-ideal internalization and eating pathology than all other ethnic groups.

Secondly (RQ2), what are the relationships between these constructs? Specifically, are ethnic and American identity correlated; and do they correlate with measures of eating pathology? Are these relationships statistically significant for each ethnic group? To answer these questions, I looked to extant research on the relationships between thin-ideal internalization (Dittmar & Howard, 2004; Grabe & Hyde, 2006; Groesz et al., 2002; Juarascio et al., 2011; Vartanian & Dey, 2013), ethnic identity (Henrickson, Crowther, & Harrington, 2010; Rogers Wood & Petrie, 2010; Schooler, Monique Ward, Merriwether, & Caruthers, 2004; Stein, Corte, & Ronis, 2010; Stojek, Fischer, & Collins, 2010; Turnage, 2005), American identity (Berry et al., 2006; Ohm, 1999; Phinney et al., 1997). I hypothesized that (H2) thin-ideal internalization would positively correlate with eating pathology and ethnic identity would negatively correlate with eating pathology for each ethnic group and in the overall sample. Additionally, I predicted that ethnic and American identity would positively correlate with one another other in European Americans; and American identity would negatively correlate with eating pathology in European Americans. However, I made no predictions on the correlations between ethnic and American identity or about the correlation between American identity and eating pathology in ethnic minority groups.

Given these hypothetical associations, the third research question was (RQ3): are American identity and ethnic identity unique predictors of eating pathology in the overall sample and within each ethnic group? In other words, is there evidence that American identity and ethnic identity are independent constructs that uniquely predict eating pathology or are they essentially the same construct? Does this differ by ethnic group? Given my previous research (Rakhkovskaya & Warren, 2014), I hypothesized that (H3)

ethnic identity would predict decreased eating pathology in the overall sample and within each ethnic group. However, I predicted that ethnicity would serve as a moderating factor such that the relationship would be stronger for ethnic minority women than European American women. Assuming that ethnic identity and American identity are correlated but not overlapping constructs, I hypothesized that American identity would be predictive of decreased eating pathology for European Americans. However, I had no hypothesis about the relationship between American identity and eating pathology for minority women.

Finally (RQ4), do ethnic identity and/or American identity moderate the relationship between thin-ideal internalization and eating pathology in the overall sample and within each ethnic group? Again, my hypothesis was based on my previous project (Rakhkovskaya & Warren, 2014). Specifically, I hypothesized (H4) that ethnic identity would moderate the relationship between thin-ideal internalization and eating pathology for each ethnic group and in the overall sample. Specifically, I predicted that the relationship between thin-ideal internalization and eating pathology would be weaker for participants with stronger ethnic identity. Although I posited this relationship would be statistically significant for all ethnic groups, I predicted that ethnicity would also be a significant interactive predictor such that the relationship would be stronger for ethnic minority women with strong ethnic identity than for European Americans with strong ethnic identity (i.e., an ethnicity by ethnic identity by thin-ideal internalization interaction predicting eating pathology). Similarly, I hypothesized that American identity would serve as a moderator of this relationship for European Americans, but made no predictions about the moderating effects of American identity in minority women.

CHAPTER 3

Method

Participants

Participants were 1162 undergraduate women enrolled in psychology courses at the University of Nevada, Las Vegas, between Spring 2013 and Spring 2014 semesters. Data collection was open to women of all ethnic groups from Spring 2013 through Fall 2013 for a study titled "Ethnic Identity and Body Image in Female Undergraduates." I had collected sufficient data on European American women by the end of Fall 2013. In hopes of increasing recruitment of women from ethnic minority groups, I changed the tile of the study to "Ethnic Identity and Body Image in Minority Women" for Spring 2014. I made no other changes to the study.

To be eligible for this study, participants needed to be female, age 18 or over, and identify with one of the four major US ethnic groups (i.e., European American, African American, Asian American or Latina). From the original 1162, I removed 144 participants because they did not belong to one of these four ethnic groups, yielding a final sample of 1018 participants. In the final sample, 36.5% of participants identified as European American (n = 372), 13.5% as African American (n = 137), 22.8% as Asian American (n = 232), and 27.2% as Latina (n = 277). With regard to generational status, 14.3% of participants were first-generation Americans (i.e., born outside of US; n = 146), 35.0% were second-generation Americans (i.e., born in the US to non US-born parents; n = 356), 16.3% were 3rd or 4th generation (n = 166), and 30.4% were 5th or greater generation (n = 309). A small number of participants (1.3%, n = 13) did not report generational status.

Procedure

Eligible students were recruited from introductory psychology courses via the university psychology department's online subject pool (i.e., Sona Systems). Students meeting inclusionary criteria (i.e., female, age 18 and up) were be able to register for the study through the subject pool system. Each participant was automatically assigned a unique numeric code, devoid of any personal identifiers. An individualized link containing that code was sent to the participant through e-mail. Clicking on the e-mailed link allowed her to complete the study. Before a participant could begin completing any of the surveys, she must have reviewed the informed consent form and selected "yes" to give her consent to participate. Individuals who did not consent to the study procedures were not allowed to complete the survey.

After consenting, participants were routed to the survey on a separate survey platform (i.e., Qualtrics). Participants were able to log in multiple times to complete all the questionnaires. However, once they completed the final questionnaire and submitted their data, they were not able to log back in and change any of their responses. The questionnaire took approximately 45 minutes to one hour to complete. To help ensure attentiveness in responding, the survey included three validity measures (i.e., "Please mark Strongly Agree, if you are paying attention") throughout the questionnaires. After completing the questionnaires, participants were automatically awarded course credit.

Measures

Demographics. Participants reported their age, height, weight, race, ethnicity, marital status, parental status, native language and generational status in the US. Examples of generational status response items are "First generation = You were born in

another country but live in the USA" and "Second generation = You were born in the USA; either parent was born in another country".

Thin-ideal internalization. The Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4; Schaefer et al., 2012) is a 22-item measure of internalization, or endorsement, of sociocultural beauty standards in mainstream Western media (i.e., the thin ideal). Items are rated on a 5-point Likert scale ranging from "Definitely Disagree" to "Definitely Agree", with higher scores indicating higher thin-ideal internalization. Heinberg, Thompson and Stormer (1995) developed the original version of the SATAQ to assess endorsement of mainstream Western media ideals (e.g., the thin-ideal) in community women. The latest version of the questionnaire (SATAQ-4) is the first to distinguish media, family and peers as separate sources of pressure to become thin (Schaefer et al., 2012).

Previous research suggests that the SATAQ-4 has high internal consistency among college women in the US (Schaefer et al., 2012) and Spain (Llorente, Gleaves, Warren, Pérez-de-Eulate, & Rakhkovskaya, 2014). Furthermore, a previous version of the questionnaire (SATAQ-3) has been validated in the current population (i.e., UNLV college women; Warren, Gleaves, & Rakhkovskaya, 2013), supporting its use in ethnically diverse college populations. Examples of questions on the SATAQ-4 are "I want my body to look very lean" and "My peers encourage me to get thinner". Internal consistency was strong in the overall sample (Cronbach's alpha = .90), and adequate to strong within each ethnic group (Cronbach's alpha = .90 for European Americans; .92 for African Americans, .88 for Asian Americans; and .91 for Latinas).

Ethnic identity. The Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) is a 22-item self-report scale measuring ethnic attitudes and behaviors. Responses are recorded on a 4-point Likert-type scale, ranging from "Strongly Disagree" to "Strongly Agree", with higher scores indicating stronger ethnic identity. The MEIM was the first scale to measure ethnic identity based on elements common across groups, rather than unique to each ethnic group. As such, the MEIM allows to cross-cultural comparisons of ethnic identity. The MEIM has been validated in numerous demographic groups, such as US high school and college students (Phinney, 1992), African American children (Reese, Vera, & Paikoff, 1998), and Armenian adolescents in Lebanon (Kazarian & Boyadjian, 2008). A meta-analysis of the psychometric properties of the MEIM found satisfactory to good internal consistency (Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003).

The MEIM has two subscales: ethnic identity and other-group orientation. According to Ponterotto and colleagues (2003), the subscales are conceptually distinct. Specifically, the ethnic identity subscale measures a sense of belonging to one's ethnic or cultural group, while the other-group orientation subscale measures a sense of belonging to the majority culture or group (e.g., European American). For that reason, I only used the 14-item ethnic identity subscale (MEIM-EI). Examples of questions on the MEIM-EI are "I am active in organizations or social groups that include mostly members of my own ethnic group" and "I am happy that I am a member of the group I belong to". Internal consistency of the MEIM-EI was moderate in the overall sample (Cronbach's alpha =.87) and within each ethnic group (Cronbach's alpha = .87 for European Americans; .85 for African Americans, .86 for Asian Americans; and .87 for Latinas).

American identity. The American Identity Measure (AIM) is a 12-item self-report scale developed for assessment of the sense of belonging and attachment to the US (Schwartz et al., 2012). Responses are recorded on a 4-point Likert-type scale, ranging from "Strongly Disagree" to "Strongly Agree", with higher scores indicating stronger American identity. Schwartz and colleagues (2012) adapted the MEIM to explore and affirm individuals' identification with the US. Unlike the MEIM, the AIM lacks the other group orientation subscale. A recent validation (Schwartz et al., 2012) suggested that the AIM has 2 subscales: American Identity Affirmation (AIM-AFF) and American Identity Exploration (AIM-EXP). Examples of questions on the AIM are "I am active in organizations or social groups that include mostly Americans" and "I am happy that I am an American".

Schwartz and colleagues (2012) validated the AIM in an ethnically diverse, large sample of US college students and found it to have adequate internal consistency. In this sample, AIM-AFF internal consistency was strong in the overall sample (Cronbach's alpha = .92), and strong within each ethnic group (Cronbach's alpha = .93 for European Americans; .91 for African Americans, .91 for Asian Americans; and .91 for Latinas). For AIM-EXP, internal consistency based on the original scoring method was adequate for European Americans and Asian Americans (Cronbach's alpha = .71 for both). In contrast, the AIM-EXP showed weak internal consistency for the overall sample (Cronbach's alpha = .69), as well as for African Americans (Cronbach's alpha = .61) and Latinas (Cronbach's alpha = .64).

Eating pathology. The Eating Disorder Examination Questionnaire (EDEQ) is a 31-item questionnaire designed to measure self-reported symptoms of eating pathology

over the past 28 days, with higher scores indicating higher levels of disordered eating symptoms (Fairburn & Beglin, 1994). The first 12 items and items 19 and 20 are measured on a 7-point rating scale, ranging from "No days" to "Every day". Items 13 through 18 are fill-in-the-blank items, assessing the number of times the participants experienced eating pathology symptoms over the past 28 days. Items 21 through 28 assess the frequency of body dissatisfaction symptoms on a 7-point Likert scale, ranging from "Not at all" to "Markedly". Lastly, items 29 through 31 are fill-in-the-blank items assessing the participant's height, weight, presence of missed menstrual periods and use of hormonal birth control.

Fairburn and Beglin (1994) developed the EDEQ to complement and/or replace Eating Disorder Examination (EDE), a structured clinical interview assessing for eating pathology. The EDEQ has been validated in eating disordered patients (Fairburn & Beglin, 1994), as well as ethnically diverse community samples (Mond, Hay, Rodgers, Owen, & Beumont, 2004), including undergraduate women (Luce, Crowther, & Pole, 2008). These studies showed EDEQ to have adequate to strong internal consistency. Examples of questions on the EDEQ are "Have you had a definite desire to have a totally flat stomach?" and "How dissatisfied have you been with your shape?" Internal consistency was strong in the overall sample (Cronbach's alpha = .94) within each ethnic group (Cronbach's alpha = .94 for European Americans; .94 for African Americans, 93 for Asian Americans; and .94 for Latinas).

Statistical Analyses

I used IBM SPSS Statistics version 20 for Windows for factor analyses, analyses of variance, Pearson's correlations and hierarchical regressions. Missing data were

handled using listwise deletion for factor analyses and pairwise deletion for all other analyses. First, prior to analyses, I examined the data for ineligible (i.e., male) participants or invalid responses (i.e., participants who answered incorrectly to validity prompts). As no such responses were found, I did not delete any cases from the dataset.

Second, I screened data for normality. Ad-hoc descriptive statistics showed that age and BMI were highly kurtotic (40.90 and 4.44, respectively). Inverse transformation (i.e., 1/age; 1/BMI) resulted in minimized kurtosis for both variables (6.07 for age and -.01 for BMI). Thus, I used inverted age and BMI for all regression analyses. In addition, all variables except ethnicity were *z*-transformed prior to regression analyses. As I was unable to standardize ethnicity (because it is a categorical variable), I re-coded the ethnic groups to help minimize standard error. Specifically, I coded European Americans as -2, African Americans as -1, Asian Americans as 1, and Latinas as 2.

Third, given that American identity is a relatively new construct and the AIM a new measure, I examined the factor structure of the AIM to support its use in this sample. Specifically, I conducted a principle components analysis with multiple factors. I used a Scree plot and parallel analysis (Horn, 1995; Cota, Longman, Holden & Rekken, 1993) to determine the number of factors. Fourth, to test internal consistency and mean levels of demographic variables, ethnic identity, American identity, thin-ideal internalization, and eating pathology, I examined Cronbach's alphas for each questionnaire or measure score (i.e., age, BMI, SATAQ-4, MEIM-EI, AIM-AFF, AIM-EXP, and EDEQ) in the overall sample and in each ethnic group.

Following data screening, I conducted the primary study analyses. To examine descriptive statistics and mean differences between ethnic groups (RQ1), I completed a

one-way Analysis of Variance (ANOVA) for age, BMI, SATAQ-4, MEIM-EI, AIM-AFF, AIM-EXP, and EDEQ by ethnicity with Bonferroni corrected post-hoc tests to interpret significant overall ANOVAs. To test the relationships between the variables of interest (RQ2), I examined bivariate Pearson's correlations among scores for age, BMI, SATAQ-4, MEIM-EI, AIM-AFF, AIM-EXP, and EDEQ by ethnic group and in the overall sample. In addition, I used VassarStats (Lowry, 2001) to conduct Fisher's *z* comparisons by ethnic group. This allowed me to compare the strengths of the correlations by ethnic group.

To test American identity and ethnic identity as predictors of eating pathology, examine whether either contributes unique variance to eating pathology (RQ3), and test whether they ethnic identity and/or American identity moderated the relationship between thin-ideal internalization and eating pathology (RQ4), I used hierarchical regression analyses in four steps. Specifying EDEQ scores as the dependent variable, in Step 1, I entered all demographic variables (i.e., age, ethnicity, BMI) simultaneously to control for group differences other than the main effects. In Step 2, I entered SATAQ-4 scores to control for thin-ideal internalization. In Step 3, I entered MEIM-EI, AIM-AFF, and AIM-EXP scores. In Step 4, I added the MEIM-EI x SATAQ-4, the AIM-AFF x SATAQ-4, and the AIM-EXP x SATAQ-4 interaction terms. To determine ethnic differences in these relationships, I re-ran the same model within each ethnic group, excluding ethnicity from the list of predictors.

When statistically significant interactions emerged, I examined moderating effects according to Baron and Kenny's procedure (1986). To achieve this, I created a categorical dummy variable for the level of ethnic identity or American identity.

Specifically, I separated participants into two groups: a Low subgroup (i.e., participants with scores greater than one standard deviation below the mean) and a High subgroup (i.e., participants with scores greater than one standard deviation above the mean). I then plotted both subgroups with thin-ideal internalization (i.e., the SATAQ-4) as the independent variable and eating pathology (i.e., the EDEQ) as the dependent variable. I used Interaction software (Soper, 2010) to test the significance of the difference between the Low and High subgroup slopes.

CHAPTER 4

Results

Factor Analysis of the AIM

Prior to conducting any primary analyses, I examined the factor structure of the AIM. Figure 1 displays the Scree plot for AIM factor structure. The sharp slope for components 1 and 2, in contrast to the flat slope for components 3 through 12, suggested a 2-factor solution. Likewise, parallel analysis showed indicated that the AIM has a 2-factor structure (Table 1). Specifically, raw data eigenvalues for roots 1 and 2 were larger than the 95th percentile for random data eigenvalues. In contrast, raw data eigenvalues for the remaining roots were smaller than the 95th percentile for random data eigenvalues. As such, I proceeded with a 2-factor extraction, which was consistent with the original AIM validation study (Schwartz et al., 2012).

I used eight different rotations to determine the simplest factor structure of the AIM: (1) a Varimax rotation; (2) a Quartimax rotation; (3) an Equamax rotation; (4) a Direct Oblimin rotation with delta set to 0; (5) a Direct Oblimin rotation with delta set to -1; (6) a Direct Oblimin rotation with delta set to .7; (7) a Promax rotation with kappa set to 3; and (8) a Promax rotation with kappa set to 4. The Direct Oblimin rotation with delta set to -1 came closest to the ideal of simple structure, as evidenced by a high number of hyperplanars, a low number of complex items, and the lowest maximum and average correlations. As such, I selected the Direct Oblimin rotation with delta set to -1.

Figure 1.

Scree Plot for American Identity Measure Factor Structure.

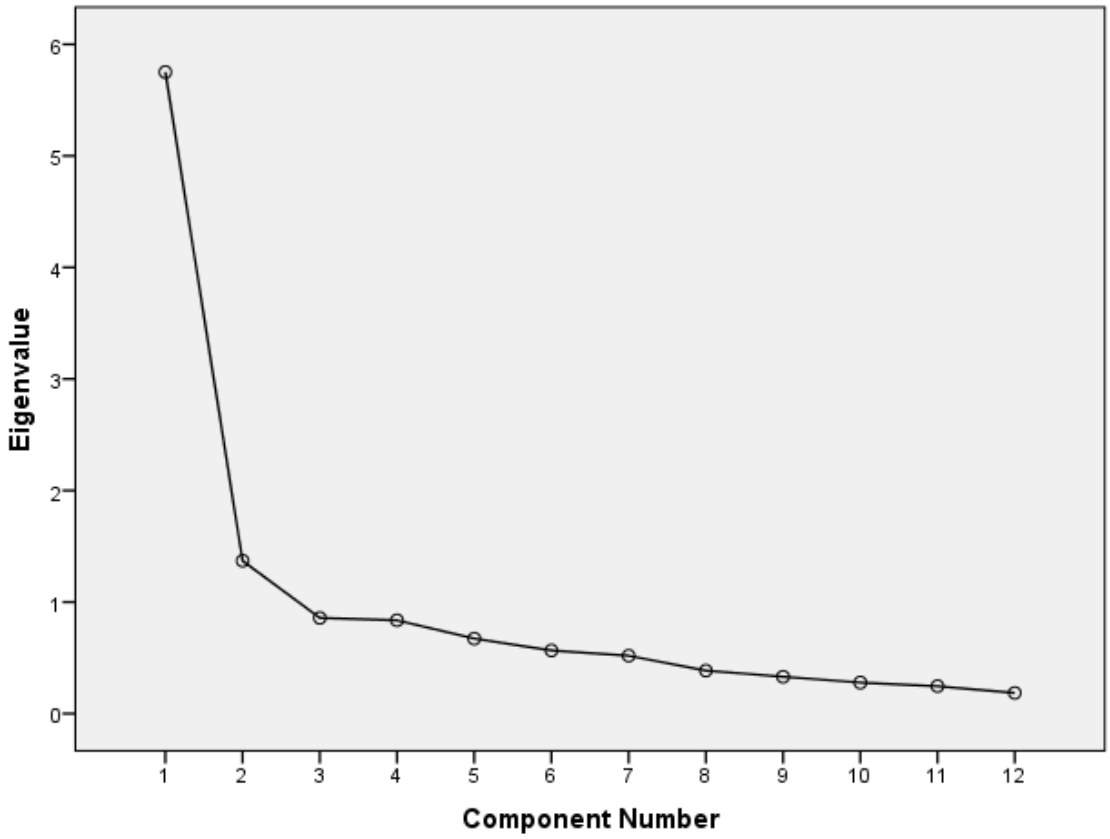


Table 1

Parallel Analysis of American Identity Measure Factor Structure.

Root	Raw data eigenvalue	Random data eigenvalue mean	Random data eigenvalue 95th percentile
1	5.75	1.19	1.23
2	1.37	1.14	1.17
3	0.86	1.10	1.12
4	0.84	1.07	1.09
5	0.67	1.04	1.06
6	0.57	1.01	1.03
7	0.52	0.98	1.00
8	0.39	0.96	0.98
9	0.33	0.93	0.95
10	0.28	0.90	0.92
11	0.25	0.87	0.90
12	0.19	0.83	0.86

Table 2 shows the correlation pattern matrix for the AIM factor analysis results. Items 3, 5, 6, 7, 9, 10, 11, and 12 had salient positive coefficients for factor 1. No items had salient negative coefficients for that factor. I interpreted the items in factor 1 to measure positive emotions related to being American and/or the United States (e.g., pride, understanding, happiness, attachment), or American Identity Affirmation (AIM-AFF). Items, 1, 2, 4, 8, and 10 had salient positive coefficients for factor 2. No items had salient negative coefficients for that factor. I interpreted factor 2 to measure effortful consideration of being American, active participation in American-geared activities, and learning about the US, or American Identity Exploration (AIM-EXP).

Item 10 loaded on both factors, although its loading on factor 2 was higher (.43 for factor 2; .32 for factor 1). Given the factor interpretations above, I determined that item 10 (“I participate in cultural practices of the United States, such as special food,

music and groups") was a better qualitative fit for factor 2. The scale structure, interpretation and item content of the two subscales in this dataset were consistent with the original validation by Schwartz and colleagues (2012).

Table 2

Factor Analysis Results for Rotated 2-Factor Solution

Items	Factor		
	1	2	h^2
AIM 5. I am happy that I am an American	**.916**	-.093	.784
AIM 12. I feel good about being American.	**.909**	-.085	.775
AIM 6. I have a strong sense of belonging to the United States.	**.871**	-.032	.738
AIM 9. I have a lot of pride in the United States	**.794**	.067	.675
AIM 11. I feel a strong attachment towards the United States.	**.775**	.150	.710
AIM 7. I understand pretty well what being American means to me.	**.761**	.096	.644
AIM 3. I have a clear sense of the United States and what being American means for me.	**.576**	.296	.548
AIM 1. I have spent time trying to find out more about the United States, such as its history, traditions, and customs.	.023	**.756**	.585
AIM 8. In order to learn more about being American, I have often talked to other people about the United States.	.091	**.703**	.550
AIM 4. I think a lot about how my life will be affected by being American.	.080	**.595**	.397
AIM 2. I am active in organizations or social groups that include mostly Americans.	.109	**.520**	.325
AIM 10. I participate in cultural practices of the United States, such as special food, music, or customs.	**.317**	**.432**	.389
	1	2	
Factor 1	1.00	.38	
Factor 2	.38	1.00	

Note. h^2 = communality. Salient factor pattern matrix coefficients are in boldface. No items were reverse-scored for this analysis. AIM = American Identity Measure. Factor 1 = American Identity Affirmation. Factor 2 = American Identity Exploration.

Descriptive Information by Ethnic Group

As shown in Table 3, the average participants was 19.97 years old (*SD* = 3.85 years) and was of normal weight (BMI *M* = 23.40, *SD* = 4.81; de Onis & Habicht, 1996). Univariate ANOVAs indicated that ethnic groups differed significantly by age [*F* (3, 991) = 4.45, $p = .004$], BMI [*F* (3, 996) = 17.67, $p < .001$] and generational status [*F* (3, 990) = 247.204, $p < .001$]. Specifically, Asian Americans were significantly younger than European Americans and African Americans. African Americans had significantly higher BMI than all other ethnic groups, while Latinas had significantly higher BMI than Asian Americans. African Americans had significantly higher generational status than all other ethnic groups. Meanwhile, European Americans' generational status was significantly lower than African Americans and significantly higher than Asian Americans and Latinas.

RQ1: Mean Differences by Ethnic Group

As expected, significant ethnic differences emerged on all study outcome variables. Compared to all other ethnic groups, African Americans scored significantly lower on thin-ideal internalization [*F* (3, 738) = 10.44, $p < .001$] and eating pathology [*F* (3, 971) = 4.65, $p = .003$], while European Americans scored significantly lower on ethnic identity [*F* (3, 987) = 24.63, $p < .001$]. As hypothesized, European Americans scored significantly higher on American identity exploration than African Americans [*F* (3, 977) = 6.43, $p < .001$]; and higher on American identity affirmation than African Americans and Asian Americans. Finally, Latinas scored higher than African Americans [*F* (3, 971) = 9.79, $p < .001$] on American identity affirmation. Effect sizes suggested

that ethnic differences in ethnic identity were moderate in size, whereas ethnic differences in all other variables were small.

Table 3

Means (SDs) and ANOVAs Examining Demographic and Outcome Variables by Ethnic Group

Variable	European Americans	African Americans	Asian Americans	Latinas	*F*	*p*	η^2
Age	20.29(4.38)	$20.59(5.44)_a$	$19.30(2.25)_b$	19.82(3.10)	4.45	.004	.01
Body Mass Index	$22.90(4.32)_a$	$25.88(6.90)_b$	$22.39(3.93)_a$	$23.71(4.27)_{ac}$	17.67	<.001	.05
Generation Status	$3.99(1.34)_a$	$4.46(1.10)_b$	$2.04(1.11)_c$	$2.16(1.01)_c$	247.20	<.001	.43
Thin-ideal Internalization	68.80(16.17)	$58.68(18.10)_a$	68.03(15.01)	66.01(16.08)	10.44	<.001	.04
Ethnic Identity	$2.66(0.48)_a$	$2.91(0.47)_b$	$2.81(0.45)_{ac}$	$2.96(0.44)_{ad}$	24.63	<.001	.07
American Identity Exploration	$17.96(3.53)_a$	$16.51(3.57)_b$	17.29(3.44)	17.23(3.29)	6.34	<.001	.02
American Identity Affirmation	$24.73(4.64)_a$	$22.80(4.67)_b$	$23.07(4.09)_{bc}$	$24.09(4.12)_{ac}$	9.79	<.001	.03
Eating Pathology	2.95(1.38)	$2.46(1.28)_a$	2.89(1.26)	2.89(1.27)	4.65	.003	.01

Note. Means in the same row that do not share subscripts differ at $p < .05$ on post hoc tests with Bonferroni correction.

RQ2: Correlations Among Variables

Table 4 presents Pearson's correlations for variables of interest in the overall sample and within each ethnic group. As expected, thin-ideal internalization significantly positively correlated with BMI and eating pathology in the overall sample, as well as within each ethnic group. Notably, Fisher's *z* analyses (not shown) indicated that the relationship between thin-ideal internalization and BMI is significantly stronger in African Americans, than in Asian Americans and Latinas. Similarly, the relationship between eating pathology and BMI was significantly stronger in African Americans, than in all other ethnic groups. Finally, the relationship between thin-ideal internalization and eating pathology was significantly stronger for European Americans, than for Latinas.

Additionally, age significantly positively correlated with BMI in the overall sample, as well as in European Americans and African Americans; and, age significantly positively correlated with generational status in the overall sample, but not in any of the ethnic groups. Results showed a small, but statistically significant positive correlations between American identity affirmation and generational status in the overall sample, European Americans, and African Americans. There were no ethnic differences in the strengths of these relationships.

Additionally, American identity exploration and American identity affirmation significantly positively correlated with ethnic identity and with one another in the overall sample in all ethnic groups. One exception was the non-significant correlation between American identity affirmation and ethnic identity in African Americans. Notably, the relationship between ethnic identity and American identity exploration was significantly stronger for European Americans than for Asian Americans and Latinas.

That said, these variables appeared to function differently with regard to their relationship with thin-ideal internalization and eating pathology. Specifically, ethnic identity was significantly negatively correlated with thin-ideal internalization in the overall sample, although the relationship was not statistically significant for any individual ethnic groups. Additionally, ethnic identity significantly negatively correlated with eating pathology in the overall sample and among African Americans.

In contrast, American identity exploration significantly positively correlated with thin-ideal internalization in the overall sample and in ethnic minorities (i.e., African Americans, Asian Americans, and Latinas), but not in European Americans. For eating pathology correlates, the ethnic differences were reversed. Specifically, American identity exploration significantly positively correlated with eating pathology in the overall sample and in European Americans, but not in ethnic minorities. Meanwhile, American identity affirmation significantly positively correlated with thin-ideal internalization in the overall sample and in European Americans, but not ethnic minorities. All correlations between American identity affirmation and eating pathology were not statistically significant. There were no ethnic differences in the strengths of these relationships.

Table 4

Bivariate Correlations for the Sample and by Ethnic Group

Group	2	3	4	5	6	7	8
Overall Sample							
1. Age	.16**	.09**	-.04	.04	.03	.05	.02
2. BMI	-	.11**	.24**	.05	.01	.02	.30**
3. Generational status		-	-.05	-.20**	-.01	.09**	-.07*
4. Thin-ideal int			-	-.09*	.19**	.14**	.66**
5. Ethnic identity				-	.22**	.16**	-.07*
6. Am id exploration					-	.58**	.11**
7. Am id affirmation						-	.06
8. Eating pathology							-
European Americans							
1. Age	.21**	.03	.03	.05	-.02	.03	.02
2. BMI	-	.02	.29**	.00	-.02	.02	.29**
3. Generational status		-	.00	-.34**	-.05	.13*	-.08
4. Thin-ideal int			-	-.01	.12	.13*	.71**
5. Ethnic identity				-	.37**	.25**	.02
6. Am id exploration					-	.59**	.10*
7. Am id affirmation						-	.09
8. Eating pathology							-
African Americans							
1. Age	.22*	.09	-.08	.10	.09	.17	.09
2. BMI	-	.12	.42**	.07	.14	.09	.51**
3. Generational status		-	-.07	.06	.04	.20*	-.05
4. Thin-ideal int			-	-.16	.26**	.13	.66**
5. Ethnic identity				-	.22*	.12	-.21*
6. Am id exploration					-	.55**	.08
7. Am id affirmation						-	.02
8. Eating pathology							-

Note. $^{**}p < .01$; $^{*}p < .05$. BMI = Body Mass Index. Thin ideal int = Thin-ideal internalization. American id = American identity.

Table 4 (Continued)

Bivariate Correlations for the Sample and by Ethnic Group

Group	2	3	4	5	6	7	8
Asian Americans							
1. Age	-.06	.00	-.11	.08	-.01	-.10	-.10
2. BMI	-	.05	.25**	-.05	-.01	.06	.35**
3. Generational status		-	-.10	.07	-.10	-.09	-.09
4. Thin-ideal int			-	-.10	.15*	.11	.64**
5. Ethnic identity				-	.21**	.18**	-.10
6. Am id exploration					-	.59**	.08
7. Am id affirmation						-	.05
8. Eating pathology							-
Latinas							
1. Age	.04	-.04	.02	.02	.12	.07	.07
2. BMI	-	.15*	.26**	.07	.04	.01	.28**
3. Generational status		-	.12	-.09	.03	.09	.05
4. Thin-ideal int			-	-.04	.24**	.13	.57**
5. Ethnic identity				-	.17**	.14*	-.05
6. Am id exploration					-	.54**	.09
7. Am id affirmation						-	-.03
8. Eating pathology							-

Note. $^{**}p < .01$; $^{*}p < .05$. BMI = Body Mass Index. Thin ideal int = Thin-ideal internalization. American id = American identity.

RQ3 and RQ4: Ethnic and American Identity as Correlates of Eating Pathology

Overall Sample. As shown in Table 5, results of hierarchical regression with ethnic identity and American identity as unique predictors of eating pathology indicated that the overall model accounted for 47% of variance in eating pathology. In Step 1, the model as a whole was statistically significant, $F(4, 697) = 26.31$, $p < .001$, and ethnicity, BMI and generational status were each significant negative predictors of eating pathology. In Step 2, thin-ideal internalization additionally explained unique variance in eating pathology, as indicated by a significant change in R^2 from Step 1 to Step 2, $\Delta R^2 = .33$, $F\Delta (1, 692) = 422.31$, $p < .001$. Step 3 showed that ethnic identity, American identity exploration, and American identity affirmation were not significant unique predictors of eating pathology as indicated by a non-significant change in R^2 from Step 2 to Step 3, $\Delta R^2 = .00$, $F\Delta (3, 689) = 0.84$, $p = .473$. However, Step 4 showed a small but significant change in R^2 from Step 3 to Step 4, $\Delta R^2 = .01$, $F\Delta (3, 686) = 3.21$, $p = .02$, explained by a statistically significant ethnic identity by thin-ideal internalization interaction term.

Table 5

Ethnic and American identity as Predictors of Eating Pathology in the Overall Sample.

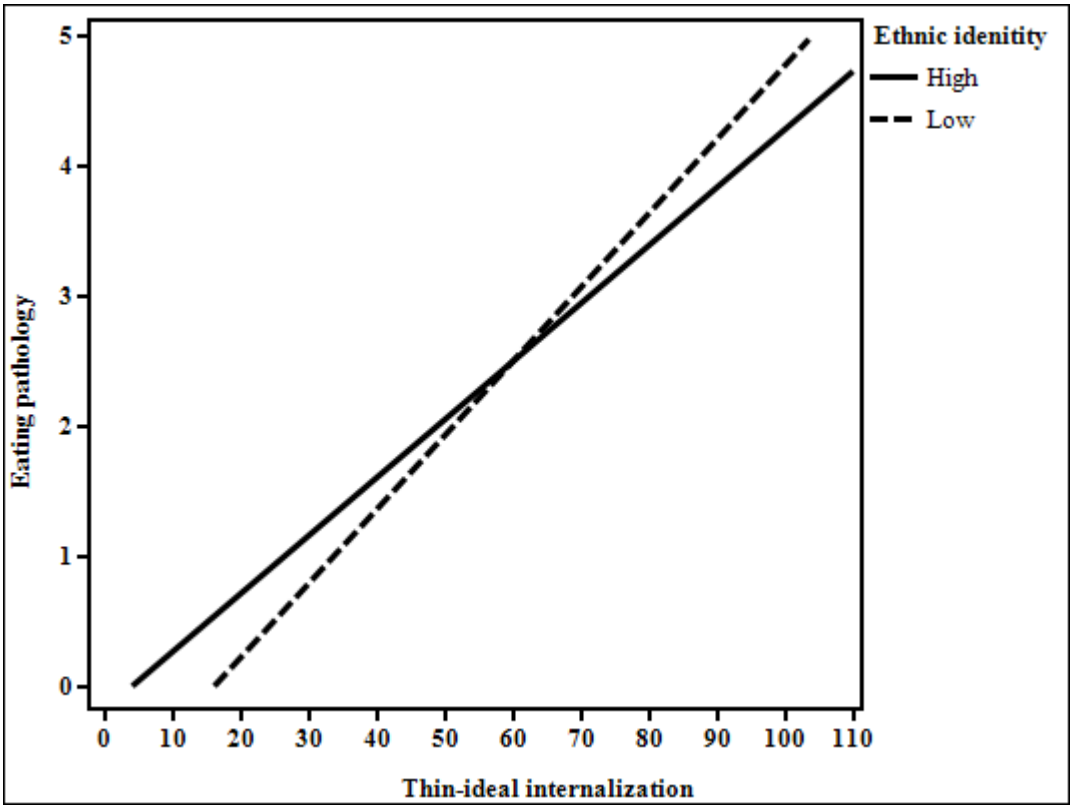
	Predictor	*B*	SE *B*	*B*	*T*	*p*	R^2
Step 1	Ethnicity	-0.06	0.03	-0.10	-2.33	.020	.13**
	BMI†	-0.36	0.04	-0.36	-9.99	.000	
	Age†	0.04	0.04	0.04	1.06	.289	
	Generational status	-0.16	0.04	-0.16	-3.62	.000	
Step 2	Ethnicity	-0.02	0.02	-0.04	-1.16	.245	.46**
	BMI†	-0.18	0.03	-0.18	-5.94	.000	
	Age†	-0.02	0.03	-0.02	-0.54	.592	
	Generational status	-0.08	0.04	-0.08	-2.32	.020	
	Thin-ideal internalization	0.60	0.03	0.60	20.55	.000	
Step 3	Ethnicity	-0.02	0.02	-0.04	-1.01	.312	.46
	BMI†	-0.18	0.03	-0.18	-5.98	.000	
	Age†	-0.02	0.03	-0.02	-0.62	.534	
	Generational status	-0.08	0.04	-0.08	-2.27	.023	
	Thin-ideal internalization	0.60	0.03	0.60	19.81	.000	
	Ethnic identity	-0.03	0.03	-0.03	-0.92	.358	
	Am id exploration	0.02	0.04	0.02	0.43	.665	
	Am id affirmation	-0.04	0.03	-0.04	-1.13	.257	
Step 4	Ethnicity	-0.02	0.02	-0.04	-1.02	.310	.47*
	BMI†	-0.18	0.03	-0.18	-5.86	.000	
	Age†	-0.02	0.03	-0.02	-0.57	.568	
	Generational status	-0.09	0.04	-0.09	-2.41	.016	
	Thin-ideal internalization	0.61	0.03	0.61	20.04	.000	
	Ethnic identity	-0.03	0.03	-0.03	-0.92	.356	
	Am id exploration	0.02	0.04	0.02	0.45	.652	
	Am id affirmation	-0.03	0.04	-0.03	-0.95	.343	
	Eth id x Thin-ideal int	-0.08	0.03	-0.08	-2.86	.004	
	Am id exp x Thin-ideal int	0.03	0.03	0.03	0.87	.385	
	Am id aff x Thin-ideal int	0.02	0.04	0.02	0.68	.495	

Note. ** Δ in R^2 is significant at $p < .01$; * Δ in R^2 is significant at $p < .05$; † indicates inverted variables. Am id = American identity. Eth id x Thin-ideal int = Ethnic identity by thin-ideal internalization interaction. Am id exp x Thin-ideal int = American identity exploration by thin-ideal internalization interaction. Am id aff x Thin-ideal int = American identity affirmation by thin-ideal internalization interaction.

Figure 2 shows differences in the relationship between thin-ideal internalization and eating pathology for the low vs. high ethnic identity subgroups in the overall sample. Consistent with hypotheses, results suggest that the relationship between thin-ideal internalization and eating concerns was stronger (p = .003) for the low ethnic identity group, B = .06, SE B = .00, t = 18.52, p < .001, than for the high ethnic identity group, B = .04, SE B = .00, t = 14.85, p < .001.

Figure 2

Moderating Effects of Ethnic Identity in the Overall Sample.



Note. High = scores 1 standard deviation above the mean. Low = scores 1 standard deviation below the mean.

European Americans. As shown in Table 6, results of hierarchical regression with ethnic identity and American identity as unique predictors of eating pathology indicated that the overall model accounted for 52% of variance in eating pathology. In Step 1, BMI was a significant negative predictor of eating pathology. The model as a whole was statistically significant, $F(3, 240) = 9.86$, $p < .001$. In Step 2, thin-ideal internalization additionally explained unique variance in eating pathology, as indicated by a significant change in R^2 from Step 1 to Step 2, $\Delta R^2 = .41$, $F\Delta\ (1, 236) = 198.83$, $p < .001$. Step 3 showed that ethnic identity, American identity exploration, and American identity affirmation were not significant unique predictors of eating pathology as indicated by a non-significant change in R^2 from Step 2 to Step 3, $\Delta R^2 = .00$, $F\Delta\ (3, 233) = 0.11$, $p = .957$. Likewise, Step 4 showed that ethnic identity by thin-ideal internalization interaction, American identity affirmation by thin-ideal internalization interaction, and American identity exploration by thin-ideal internalization interaction terms were a non-significant unique predictor of eating pathology, as indicated by a non-significant change in R^2 from Step 3 to Step 4, $\Delta R^2 = .01$, $F\Delta\ (3, 233) = 0.92$, $p = .43$.

Table 6

Ethnic and American identity as Predictors of Eating Pathology in European Americans.

	Predictor	*B*	SE *B*	*B*	*T*	*p*	R^2
Step 1	BMI†	-0.35	0.07	-0.33	-5.28	.000	.11**
	Age†	0.04	0.06	0.05	0.72	.471	
	Generational status	-0.10	0.07	-0.09	-1.41	.161	
Step 2	BMI†	-0.11	0.05	-0.10	-2.10	.037	.52**
	Age†	0.00	0.04	0.01	0.11	.912	
	Generational status	-0.10	0.05	-0.08	-1.82	.070	
	Thin-ideal internalization	0.72	0.05	0.68	14.10	.000	
Step 3	BMI†	-0.11	0.05	-0.10	-2.11	.036	.52
	Age†	0.00	0.04	0.00	0.09	.928	
	Generational status	-0.10	0.06	-0.08	-1.66	.099	
	Thin-ideal internalization	0.72	0.05	0.67	13.77	.000	
	Ethnic identity	-0.01	0.05	-0.01	-0.17	.863	
	Am id exploration	0.03	0.06	0.03	0.54	.592	
	Am id affirmation	-0.01	0.06	-0.01	-0.15	.878	
Step 4	BMI†	-0.12	0.05	-0.11	-2.23	.026	.52
	Age†	0.01	0.04	0.01	0.12	.903	
	Generational status	-0.11	0.06	-0.09	-1.74	.084	
	Thin-ideal internalization	0.70	0.06	0.66	12.29	.000	
	Ethnic identity	-0.01	0.06	-0.01	-0.24	.808	
	Am id exploration	0.02	0.06	0.02	0.37	.708	
	Am id affirmation	0.01	0.06	0.01	0.15	.885	
	Eth id x Thin-ideal int	0.00	0.05	0.00	-0.01	.993	
	Am id exp x Thin-ideal int	-0.02	0.06	-0.02	-0.26	.795	
	Am id aff x Thin-ideal int	0.09	0.07	0.09	1.39	.166	

Note. ** Δ in R^2 is significant at $p < .01$; * Δ in R^2 is significant at $p < .05$; † indicates inverted variables. Am id = American identity. Eth id x Thin-ideal int = Ethnic identity by thin-ideal internalization interaction. Am id exp x Thin-ideal int = American identity exploration by thin-ideal internalization interaction. Am id aff x Thin-ideal int = American identity affirmation by thin-ideal internalization interaction.

African Americans. As shown in Table 7, results of hierarchical regression with ethnic identity and American identity as unique predictors of eating pathology indicated that the overall model accounted for 61% of variance in eating pathology. In Step 1, BMI was a significant negative predictor of eating pathology. The model as a whole was statistically significant, $F(3, 97) = 15.47$, $p < .001$. In Step 2, thin-ideal internalization additionally explained unique variance in eating pathology, as indicated by a significant change in R^2 from Step 1 to Step 2, $\Delta R^2 = .19$, $F\Delta\ (1, 93) = 37.409$, $p < .001$. Step 3 showed that ethnic identity, American identity exploration, and American identity affirmation were not significant unique predictors of eating pathology as indicated by a non-significant change in R^2 from Step 2 to Step 3, $\Delta R^2 = .04$, $F\Delta\ (3, 90) = 2.42$, $p = .071$. However, Step 4 showed a small, but significant change in R^2 from Step 3 to Step 4, $\Delta R^2 = .05$, $F\Delta\ (3, 87) = 3.55$, $p = .002$, explained by a statistically significant ethnic identity by thin-ideal internalization interaction term.

Table 7

Ethnic and American identity as Predictors of Eating Pathology in African Americans.

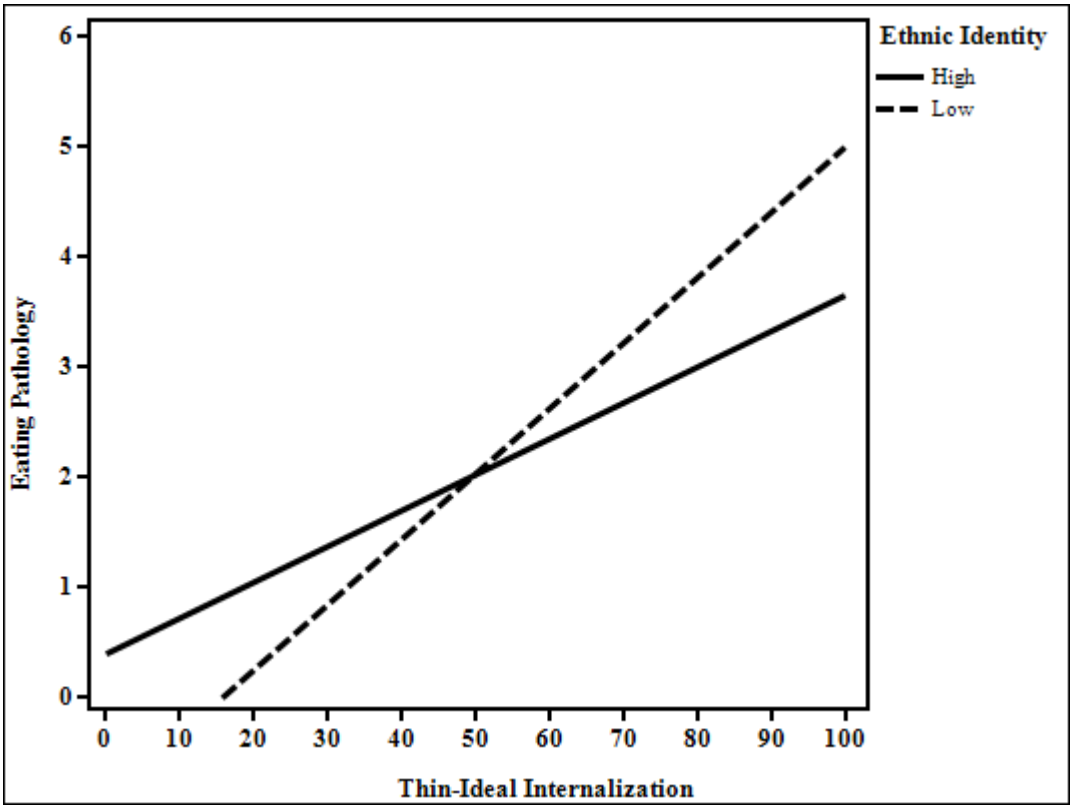
	Predictor	*B*	SE *B*	*B*	*T*	*p*	R^2
Step 1	BMI†	-0.49	0.07	-0.58	-6.69	.000	.33**
	Age†	0.03	0.07	0.03	0.38	.704	
	Generational status	-0.16	0.12	-0.12	-1.36	.178	
Step 2	BMI†	-0.27	0.07	-0.32	-3.72	.000	.52**
	Age†	-0.05	0.06	-0.06	-0.82	.412	
	Generational status	-0.08	0.10	-0.06	-0.78	.436	
	Thin-ideal internalization	0.45	0.07	0.51	6.09	.000	
Step 3	BMI†	-0.30	0.07	-0.35	-4.14	.000	.56
	Age†	-0.07	0.06	-0.08	-1.12	.265	
	Generational status	-0.06	0.10	-0.04	-0.56	.579	
	Thin-ideal internalization	0.43	0.08	0.49	5.60	.000	
	Ethnic identity	-0.16	0.07	-0.16	-2.09	.039	
	Am id exploration	-0.03	0.08	-0.03	-0.39	.696	
	Am id affirmation	-0.06	0.08	-0.07	-0.78	.435	
Step 4	BMI†	-0.27	0.07	-0.32	-3.89	.000	.61*
	Age†	-0.06	0.06	-0.07	-1.00	.319	
	Generational status	-0.10	0.10	-0.08	-1.05	.296	
	Thin-ideal internalization	0.50	0.08	0.56	5.99	.000	
	Ethnic identity	-0.21	0.07	-0.21	-2.80	.006	
	Am id exploration	0.05	0.09	0.05	0.55	.584	
	Am id affirmation	-0.15	0.08	-0.17	-1.83	.070	
	Eth id x Thin-ideal int	-0.14	0.06	-0.19	-2.35	.021	
	Am id exp x Thin-ideal int	0.14	0.07	0.18	1.91	.059	
	Am id aff x Thin-ideal int	-0.11	0.07	-0.16	-1.57	.120	

Note. ** Δ in R^2 is significant at $p < .01$; * Δ in R^2 is significant at $p < .05$; † indicates inverted variables. Am id = American identity. Eth id x Thin-ideal int = Ethnic identity by thin-ideal internalization interaction. Am id exp x Thin-ideal int = American identity exploration by thin-ideal internalization interaction. Am id aff x Thin-ideal int = American identity affirmation by thin-ideal internalization interaction.

Figure 3 shows differences in the relationship between thin-ideal internalization and eating pathology for the low vs. high ethnic identity subgroups in African Americans. Consistent with hypotheses, results indicate that the relationship between thin-ideal internalization and eating concerns was stronger (p = .003) for the low ethnic identity group, B = .03, SE B = .00, t = 18.52, p < .001, than for the high ethnic identity group, B = .06, SE B = .01, t = 8.25, p < .001.

Figure 3

Moderating Effects of Ethnic Identity in African Americans.



Note. High = scores 1 standard deviation above the mean. Low = scores 1 standard deviation below the mean.

Asian Americans. As shown in Table 8, results of hierarchical regression with ethnic identity and American identity as unique predictors of eating pathology indicated that the overall model accounted for 49% of variance in eating pathology. In Step 1, BMI was a significant negative predictor of eating pathology. The model as a whole was statistically significant, $F(3, 168) = 11.40$, $p < .001$. In Step 2, thin-ideal internalization additionally explained unique variance in eating pathology, as indicated by a significant change in R^2 from Step 1 to Step 2, $\Delta R^2 = .29$, $F\Delta\ (1, 164) = 88.55$, $p < .001$. Step 3 showed that ethnic identity, American identity exploration, and American identity affirmation were not significant unique predictors of eating pathology as indicated by a non-significant change in R^2 from Step 2 to Step 3, $\Delta R^2 = .00$, $F\Delta\ (3, 161) = 0.18$, $p = .910$. However, Step 4 showed a small, but significant change in R^2 from Step 3 to Step 4, $\Delta R^2 = .03$, $F\Delta\ (3, 158) = 3.55$, $p = .03$, explained by a statistically significant ethnic identity by thin-ideal internalization interaction term.

Table 8

Ethnic and American identity as Predictors of Eating Pathology in Asian Americans.

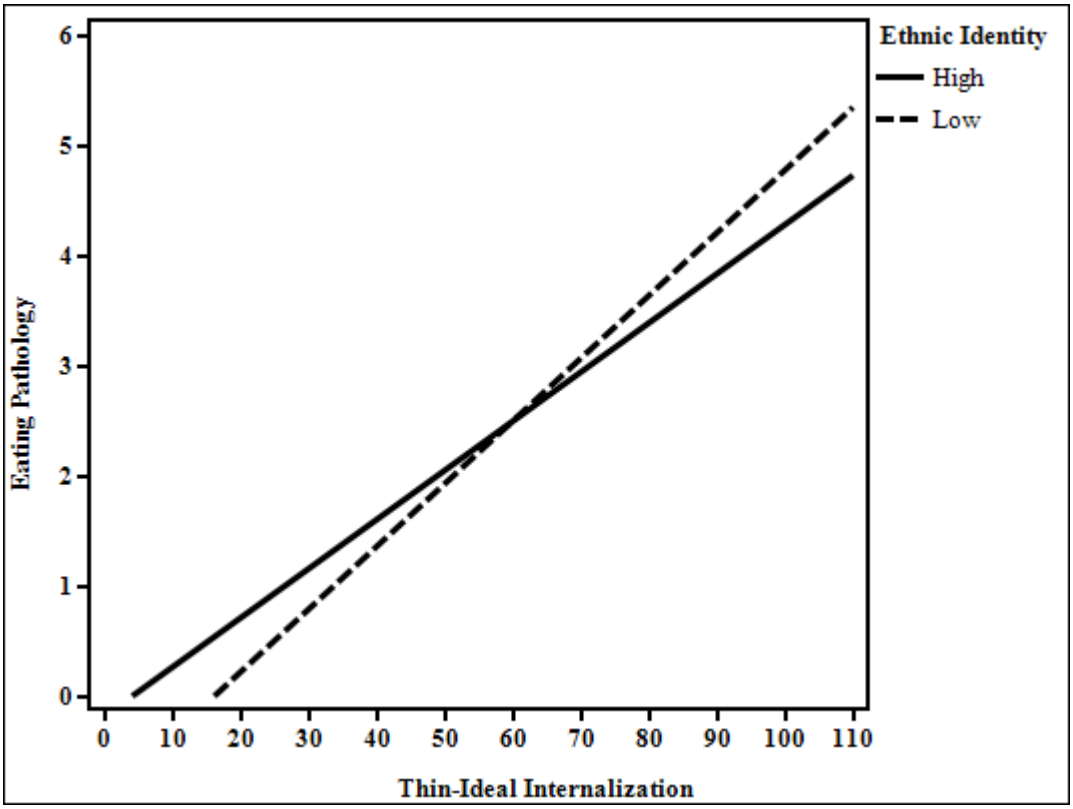
	Predictor	*B*	SE *B*	*B*	*T*	*p*	R^2
Step 1	BMI†	-0.40	0.07	-0.39	-5.47	.000	.17**
	Age†	0.13	0.09	0.10	1.45	.150	
	Generational status	-0.16	0.10	-0.12	-1.66	.099	
Step 2	BMI†	-0.23	0.06	-0.23	-3.80	.000	.46**
	Age†	0.05	0.07	0.04	0.68	.500	
	Generational status	-0.07	0.08	-0.05	-0.86	.390	
	Thin-ideal internalization	0.60	0.06	0.57	9.41	.000	
Step 3	BMI†	-0.23	0.06	-0.23	-3.77	.000	.46
	Age†	0.05	0.08	0.04	0.68	.498	
	Generational status	-0.07	0.08	-0.05	-0.84	.402	
	Thin-ideal internalization	0.59	0.06	0.57	9.15	.000	
	Ethnic identity	-0.03	0.06	-0.03	-0.43	.666	
	Am id exploration	0.03	0.07	0.03	0.37	.710	
	Am id affirmation	-0.04	0.08	-0.04	-0.55	.585	
Step 4	BMI†	-0.23	0.06	-0.22	-3.73	.000	.49*
	Age†	0.07	0.08	0.06	0.94	.347	
	Generational status	-0.03	0.08	-0.03	-0.43	.670	
	Thin-ideal internalization	0.64	0.07	0.61	9.62	.000	
	Ethnic identity	-0.01	0.06	-0.01	-0.13	.899	
	Am id exploration	0.01	0.07	0.01	0.20	.841	
	Am id affirmation	-0.03	0.07	-0.03	-0.37	.715	
	Eth id x Thin-ideal int	-0.18	0.07	-0.16	-2.65	.009	
	Am id exp x Thin-ideal int	-0.05	0.07	-0.05	-0.70	.483	
	Am id aff x Thin-ideal int	0.15	0.09	0.13	1.71	.089	

Note. ** Δ in R^2 is significant at $p < .01$; * Δ in R^2 is significant at $p < .05$; † indicates inverted variables. Am id = American identity. Eth id x Thin-ideal int = Ethnic identity by thin-ideal internalization interaction. Am id exp x Thin-ideal int = American identity exploration by thin-ideal internalization interaction. Am id aff x Thin-ideal int = American identity affirmation by thin-ideal internalization interaction.

Figure 4 shows differences in the relationship between thin-ideal internalization and eating pathology for the low vs. high ethnic identity subgroups in Asian Americans. Again, consistent with hypotheses, results indicate that the relationship between thin-ideal internalization and eating concerns was stronger (p = .003) for the low ethnic identity group, B = .06, SE B = .00, t = 18.52, p < .001, than for the high ethnic identity group, B = .04, SE B = .00, t = 14.85, p < .001.

Figure 4

Moderating Effects of Ethnic Identity in Asian Americans.



Note. High = scores 1 standard deviation above the mean. Low = scores 1 standard deviation below the mean.

Latinas. As shown in Table 9, results of hierarchical regression with ethnic identity and American identity as unique predictors of eating pathology indicated that the overall model accounted for 37% of variance in eating pathology. In Step 1, BMI was a significant negative predictor of eating pathology. The model as a whole was statistically significant, $F(3, 181) = 7.12$, $p < .001$. In Step 2, thin-ideal internalization additionally explained unique variance in eating pathology, as indicated by a significant change in R^2 from Step 1 to Step 2, $\Delta R^2 = .25$, $F\Delta\ (1, 177) = 67.10$, $p < .001$. Step 3 showed that ethnic identity, American identity exploration, and American identity affirmation were not significant unique predictors of eating pathology as indicated by a non-significant change in R^2 from Step 2 to Step 3, $\Delta R^2 = .01$, $F\Delta\ (3, 174) = 1.04$, $p = .379$. Likewise, Step 4 showed that ethnic identity by thin-ideal internalization interaction, American identity affirmation by thin-ideal internalization interaction, and American identity exploration by thin-ideal internalization interaction terms were a non-significant unique predictors of eating pathology, as indicated by a non-significant change in R^2 from Step 3 to Step 4, $\Delta R^2 = .00$, $F\Delta\ (3, 171) = 0.25$, $p = .858$.

Table 9

Ethnic and American identity as Predictors of Eating Pathology in Latinas

	Predictor	*B*	SE *B*	*B*	*T*	*p*	R^2
Step 1	BMI†	-0.34	0.07	-0.32	-4.51	.000	.11**
	Age†	-0.03	0.08	-0.02	-0.34	.734	
	Generational status	0.01	0.11	0.00	0.05	.959	
Step 2	BMI†	-0.18	0.07	-0.18	-2.76	.006	.35**
	Age†	-0.03	0.06	-0.03	-0.49	.627	
	Generational status	-0.06	0.09	-0.04	-0.64	.525	
	Thin-ideal internalization	0.51	0.06	0.52	8.19	.000	
Step 3	BMI†	-0.19	0.07	-0.18	-2.78	.006	.36
	Age†	-0.04	0.06	-0.03	-0.56	.577	
	Generational status	-0.05	0.09	-0.03	-0.54	.587	
	Thin-ideal internalization	0.52	0.06	0.53	8.02	.000	
	Ethnic identity	-0.04	0.07	-0.04	-0.57	.569	
	Am id exploration	0.02	0.08	0.02	0.30	.761	
	Am id affirmation	-0.11	0.08	-0.11	-1.49	.138	
Step 4	BMI†	-0.18	0.07	-0.18	-2.72	.007	.37
	Age†	-0.04	0.07	-0.04	-0.62	.535	
	Generational status	-0.05	0.09	-0.04	-0.57	.569	
	Thin-ideal internalization	0.49	0.08	0.50	6.39	.000	
	Ethnic identity	-0.03	0.07	-0.03	-0.49	.627	
	Am id exploration	0.02	0.08	0.02	0.28	.781	
	Am id affirmation	-0.12	0.08	-0.12	-1.51	.133	
	Eth id x Thin-ideal int	0.04	0.07	0.04	0.56	.579	
	Am id exp x Thin-ideal int	-0.06	0.08	-0.05	-0.68	.495	
	Am id aff x Thin-ideal int	-0.01	0.07	-0.01	-0.12	.902	

Note. ** Δ in R^2 is significant at $p < .01$; * Δ in R^2 is significant at $p < .05$; † indicates inverted variables. Am id = American identity. Eth id x Thin-ideal int = Ethnic identity by thin-ideal internalization interaction. Am id exp x Thin-ideal int = American identity exploration by thin-ideal internalization interaction. Am id aff x Thin-ideal int = American identity affirmation by thin-ideal internalization interaction.

CHAPTER 5

Discussion

This study explored the relationships among ethnic identity, American identity, thin-ideal internalization and eating pathology in a sample of over 1000 college women from the largest ethnic groups in the United States. Results yielded some important information that has implications for future research and clinical practice. In particular, these data suggest that (1) ethnic identity moderates the relationship between thin-ideal internalization and eating pathology for African American and Asian American women; (2) American and ethnic identity are related but distinct constructs; and (3) American identity is likely a risk-factor for eating pathology, though it functions differently by ethnicity.

Complex relationships between ethnic identity, ethnicity, and eating pathology

One key finding from this study is that the relationships between thin-ideal internalization, eating pathology, and ethnic identity are complex and differ by ethnicity. Specifically, in this dataset, ethnic identity was significantly negatively correlated with thin-ideal internalization in the overall sample; and negatively correlated with eating pathology in the overall sample and among African Americans. Additionally, ethnic identity moderated the relationship between thin-ideal internalization and eating pathology for African Americans and Asian Americans, such that the relationship between thin-ideal internalization and eating pathology was weaker for African Americans and Asian Americans with stronger ethnic identity. That said, ethnic identity was not statistically significantly correlated with thin-ideal internalization for any

individual ethnic group or with eating pathology among European Americans, Asian Americans, or Latinas. It was also not moderator in European Americans or Latinas.

These mixed findings are consistent with some extant literature on the relationship between ethnic identity and eating pathology (Henrickson et al., 2010; Rakhkovskaya & Warren, 2014; Schooler et al., 2004; Stein et al., 2010; Stojek et al., 2010; Turnage, 2005). Most obviously, these data are consistent with research documenting a buffering effect of ethnic identity on eating pathology in African American women (Henrickson et al., 2010; Turnage, 2005). Theoretically, researchers posit that unique aspects of African American culture, such as endorsement of a curvaceous body ideal (Cepeda-Benito et al., 2005; Overstreet et al., 2010) and highly valued behavioral characteristics (i.e., good style and attitude; Rubin et al., 2003), contribute to diminished risk and incidence of eating pathology in that group (APA, 2013). For example, Poran (2006) showed that African American women are aware of the Eurocentricity of the thin ideal and report feeling unaffected by it.

Furthermore, these data are consistent with extant research (Rakhkovskaya & Warren, 2014; Rodriguez, Schwartz, & Krauss Whitbourne, 2010) suggesting that European Americans generally do not identify strongly belonging to an ethnic group. The fact that they scored lowest on ethnic identity in this study support the low salience of ethnic identity for European American women, particularly in relation to eating pathology (Baugh et al., 2011; Sabik et al., 2010). As such, ethnic identity did not appear to be strongly related to eating pathology in this group.

That said, in contrast to previous research, these data suggest a moderating effect of ethnic identity in Asian Americans. This finding is particularly important in light of

Hall's (1995) and Mintz and Kashubek's (1999) research, indicating that Asian Americans idealize Eurocentric facial features (e.g., large, blue eyes) and report dissatisfaction with racially salient body features (e.g., eye-shape). Furthermore, Asian American women may be at increased risk for eating pathology as they acculturate to the US and are increasingly exposed to the thin-ideal (Hall, 1995). However, the present study suggests that ethnic identity may be protective against thin-ideal internalization (either native or acquired) for Asian American women.

Additionally, data on Latinas in this sample challenge existing literature on cultural buffers against thin-ideal internalization in that group. Namely, Santiago and colleagues' posited that traditional Latino values (i.e., *familismo, personalismo,* and *fatalismo)* are potential deterrents from focus on beauty or thinness. As such, Latina women with strong ethnic identity could hypothetically focus less on the thin-ideal and subsequently endorse less eating pathology. Contrary to that hypothesis, ethnic identity was not a negative predictor or buffer against eating pathology in that group. As such, despite traditionally endorsing a larger, curvier body ideal (Warren et al., 2005), Latina women may internalize thin-ideal media and develop eating pathology regardless of ethnic identity salience. Continued research on the relationship between ethnic identity and eating pathology in Latina women is warranted.

American and ethnic identity are related, but distinct constructs

A second key finding from these data is that while strong ethnic identity may be a protective factor against eating pathology, strong American identity may be a factor of risk. Thus, American identity and ethnic identity are unique but related constructs. Namely, results showed that ethnic identity and American identity significantly positively

correlated with one another. However, ethnic identity had inverse relationships with thin-ideal internalization and/or eating pathology, while American identity had positive relationships. Furthermore, ethnic and American identity diverged in their interactive effects with thin-ideal internalization. Unlike ethnic identity, American identity did not moderate the relationship between thin-ideal internalization and eating pathology.

These findings suggest that despite being a significant correlate, American identity is not a direct or interactive predictor of eating pathology. As such, unlike those of ethnic identity, the protective effects of American identity in other domains (i.e., self-esteem; Phinney et al., 1997, ego formation; Ohm, 1999, and sociocultural adaptation; Berry et al., 2006) likely do not extend to diminished thin-ideal internalization. In fact, the positive direction of the correlations indicates that American identity may be a risk-factor or a by-product of thin-ideal internalization and/or eating pathology.

As this was the first known study to date to explore the relevance of American identity to eating pathology, the non-significance of American identity as a predictor suggests that it may be less relevant to eating pathology than ethnic identity. This diminished salience may stem from possible multicollinearity of American identity and thin-ideal internalization. In other words, participants may conflate identifying with being American with endorsing mainstream American beauty ideals. As such, American identity alone could be of diminished salience to this population. That said, American identity had a significant positive relationship with eating pathology and/or thin-ideal internalization in all ethnic groups. These results highlight American identity as a unique risk-factor for eating pathology in college women. As such, a further examination of these relationships is of interest.

American identity's relationship with eating pathology functions differently by ethnicity

A third key finding is that American identity affirmation and American identity exploration play different roles for European American vs. ethnic minority participants (i.e., African Americans, Asian Americans, and Latinas). Specifically, American identity affirmation was a correlate of thin-ideal internalization for European Americans only: it was not a correlate of eating pathology for any of the ethnic minority groups. Meanwhile, American identity exploration was a correlate of thin-ideal internalization for ethnic minorities, as well as a correlate of eating pathology for European Americans.

These findings showed a number of similarities to extant research on American identity (i.e., Devos & Banaji, 2005; Schwartz et al., 2012). Consistent with the original validation (Schwartz et al., 2012), factor analysis of the AIM yielded two factors: American identity affirmation (i.e., pride, understanding, and attachment to the US) and American identity exploration (i.e., behavioral aspects of American identity). In addition, European Americans scored highest on American identity exploration and American identity affirmation. These findings are consistent with hypotheses and extant research on the high salience of American identity for European Americans (Devos & Banaji, 2005). Furthermore, results for European American women suggest that affirming American identity is related to endorsement of mainstream cultural beauty ideals, while exploring American identity is related to eating pathology. These findings suggest that for European Americans, American identity is closely tied with endorsement of beauty ideals of their, majority culture.

That said, contrary to Buchanan's (2006) *American=White association* argument, the results indicate that American identity is of non-insubstantial salience to American women of color. Furthermore, the findings suggest that ethnic minority women who actively engage in being American and/or explore Eurocentric, mainstream American culture are also likely to endorse and internalize the thin-ideal. This pattern appears to be true for participants, whose native cultures endorse the thin-ideal (i.e., Asian Americans; Hall, 1995), as well as for those traditionally endorsing a larger, curvier ideal (i.e., African Americans and Latinas; Cepeda-Benito et al., 2005; Overstreet et al., 2010). This is a serious concern given the large body of literature showing thin-ideal internalization as a risk-factor for eating pathology (Cafri, Yamamiya, Brannick, & Thompson, 2005; Grabe & Hyde, 2006; Groesz, Levine, & Murnen, 2002; Juarascio et al., 2011; J. K. Thompson & Stice, 2001; Vartanian & Dey, 2013).

Limitations

It is essential to consider the findings of the study in light of its limitations. First, I cannot make causal inferences from the results or ensure the direction of the relationships in question, as the study used correlational measures. Even though the presence of validity measures (i.e., "Please mark Strongly Agree, if you are paying attention") aided in my confidence in the truthfulness and attentiveness of the participants, I neglected to counterbalance the survey. As such, it is possible that response fatigue or order of the questionnaires may have influenced responding.

Second, the American Identity Measure Exploration subscale (AIM-EXP) had weak internal validity for African Americans and Latinas. As such, I cannot be confident that the subscale indeed measured American identity exploration in those groups.

Therefore, it is possible that this study failed to capture the true relationships between American identity exploration, thin-ideal internalization and eating pathology for African American and Latina college women. Notably, the original validation of the AIM (Schwartz et al., 2012) and the validation conducted in this study support its use in ethnically diverse college samples. However, item 10 ("I participate in cultural practices of the United States, such as special food, music and groups") loaded on both factors in this study's EFA. As such, a revised version of the AIM with item 10 deleted may have been a more accurate measure of American identity for this sample.

Third, the ethnic identity by thin-ideal internalization interaction term accounted for a small percentage of variance in eating pathology (1% in the overall sample, 5% in African Americans, and 3% in Asian Americans). As such, the practical significance of the protective effects of ethnic identity is in question. However, a substantial proportion of variance in eating pathology was explained by the direct effects of thin-ideal internalization, one of the most robust predictors of eating pathology (e.g., Berg et al., 2009). While comparatively small, the predictive effects of the interaction term are nevertheless significant above and beyond thin-ideal internalization and would hypothetically explain more variance, should thin-ideal internalization be excluded from the list of predictors.

In addition, according to McClelland and Judd (1993), detection of significant interactions in correlational community research is difficult without oversampling. As I, in fact, under-sampled the study (i.e., the African American subsample was 63 participants short of the proposed 200), the interaction term was unlikely to explain large and/or significant proportions of criterion variance. In accordance with McClelland and

Judd (1993), I posit that small, but significant interaction terms can still be practically meaningful in cross-sectional community studies, such as this one.

Fourth, the results of the study have limited generalizability. Namely, participants were college women from four major US ethnic groups. As such, the results may not extend to non-college samples, to men or transgendered individuals, or to other ethnic and cultural groups. In addition, my study did not account to within-group differences (e.g., Chinese American vs. Japanese American participants). As such, is it possible that the results are overgeneralized. Furthermore, the study was conducted at the University of Nevada, Las Vegas. UNLV is one of the most ethnically diverse universities in the US, located in a metropolitan area with a highly hyper-sexualized, body-conscious microculture. As a result, the results are not generalizable to other geographic regions of the US, as well as other, less ethnically diverse universities.

Clinical Implications

Despite these key limitations, the key findings of this study have some important clinical implications. For African American and Asian American women with stronger ethnic identity, the relationship between thin-ideal internalization and eating pathology was diminished. Consequently, assessments of ethnic identity could be instrumental in determining risk and protective factors relevant to eating pathology for women in those groups. For example, clinicians could use the MEIM as a screener during intake appointments. In those instances, a low MEIM score could indicate higher risk for thin-ideal internalization and/or eating pathology.

Alternatively, ethnic minority clients presenting with high MEIM scores could benefit from culturally-sensitive, ethnic identity-geared interventions. Such interventions

could be effective against internalization of Eurocentric beauty ideals and may be particularly salient for African American and Asian American women. Specifically, such interventions could focus on cultural beauty norms (e.g., a curvy figure; Overstreet et al., 2010) or alternative definitions of beauty (e.g., good style; Rubin et al., 2003), rather than challenging or unpacking the mainstream beauty ideal. Alternatively, clients would explore appearance role models who demonstrate racially congruent features, such as a dark complexion (e.g., Lupita Nyong'o) or an epicanthic fold (e.g., Sandra Oh).

Finally, American identity did not predict or buffer against eating pathology in any of the ethnic groups. These findings contraindicate the development of American identity-geared interventions for eating pathology. On the contrary, American identity had a positive relationship with eating pathology and/or thin-ideal internalization for all ethnic groups, particularly European Americans. As such, screeners for American identity (especially American identity exploration) could be a valuable risk assessment of eating pathology. Such an assessment could be particularly useful for European American women, as they report lowest levels of ethnic identity. As such, an ethnic identity screener may be less salient for them than for women of color.

Future Research Directions

To date, this is the first known study to (1) examine both ethnic and American identity as a correlates of eating pathology and (2) to compare these relationship across four major ethnic groups in the US. Accordingly, future research should examine these relationships other demographic groups, such as men, transgender individuals, other age groups (e.g., adolescents), less populous ethnic groups (e.g., Native Americans), multiracial individuals, as well as within ethnic cultural groups (e.g., Japanese

Americans). It will also be important to replicate these findings in a more typical (i.e., predominantly European American) university settings as well as in the community (e.g., in adults outside of the university setting; in eating pathology treatment settings).

Additionally, given the limitations of correlational research, an examination of these variables through other study design is warranted. For example, researchers could assess for thin-ideal internalization in an experimental setting, such as before or after an intervention aimed at activating ethnic or American identity (e.g., a discussion of one's cultural heritage; a typical Thanksgiving meal). Alternatively, researchers could use a longitudinal study design to examine whether children with high ethnic and/or American identity endorse high thin-ideal internalization and/or eating pathology in adolescence or adulthood.

Furthermore, for women in treatment for eating pathology, a further examination of American identity is warranted. The instance of women who endorse high thin-ideal internalization and high subsequent eating disorder symptoms is of particular interest. Specifically, such individuals may wish to not only attain mainstream Western beauty norms, but broadly integrate into mainstream American culture. This potential desire may be particularly salient to European American women, who endorse highest levels of American identity (Schwartz et al., 2012), thin-ideal internalization (Grabe & Hyde, 2006), and eating pathology (APA, 2013).

Finally, continued examination of ethnic identity, American identity and other culturally-relevant variables and their relationship to eating pathology is warranted. Specifically, this study did not elucidate the relationship of generational status with the variables of interest. As such, future research should examine generational status as a

potential contributing factor. In addition, this study did not examine combined properties of ethnic and American identity. Accordingly, future research should help determine whether ethnic identity and American identity are, in fact, opposite ends of the same cultural identity spectrum for African Americans or other ethnic groups.

APPENDIX I

Demographic Questionnaire

Age: _____

What is your race?

- White
- Black
- Asian
- Hispanic/Latino
- American Indian/Alaska Native
- Other, please specify: _____

What is your ethnicity?

- Euro-American (e.g., Ethnic background is Irish, English, Scottish, French, Italian)
- African American (e.g., Ethnic background is African)
- Hispanic/Latino (e.g., Ethnic background is Mexican, South American, Puerto Rican)
- Asian American/Pacific Islander (e.g., Ethnic background is Chinese, Japanese, Indonesian)
- American Indian/Alaska Native
- Other, please specify: _____

What is your marital status?

- Never Married
- Married
- Married but separated
- Divorced
- Widowed

Do you have any children?

- Yes; If yes, how many children do you have?

- No

Current Weight

Pounds

Current Height

Feet

Inches

Do you have a disability?

- Yes;

If yes, what is your disability?

- No

Is English your first language?

- Yes
- No;

If no, what is your first language?

If you are an American, what generation best applies to you?

- First generation = You were born in another country but live in the USA.
- Second generation = You were born in the USA; either parent was born in another country.
- Third generation = You were born in the USA; both parents were born in the USA and all grandparents were born in another country.
- Fourth generation = You and your parents were born in the USA and at least one grandparent was born in another country with the remainder born in the USA.
- Fifth or greater generation = You and your parents were born in the USA and all of your grandparents were born in the USA.
- Other, please specify:

APPENDIX II

Sociocultural Attitudes Towards Appearance Questionnaire-4

Please read each of the following items and choose the response that best reflects your agreement with each statement.

	Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree
It is important for me to look athletic	●	●	●	●	●
I think a lot about looking muscular.	●	●	●	●	●
I want my body to look very thin.	●	●	●	●	●
I want my body to look like it has little fat	●	●	●	●	●
I think a lot about looking thin.	●	●	●	●	●
I spend a lot of time doing things to look more athletic	●	●	●	●	●
I think a lot about looking athletic.	●	●	●	●	●
I want my body to look very lean.	●	●	●	●	●
I think a lot about having very little body fat.	●	●	●	●	●
I spend a lot of time doing things to look more muscular.	●	●	●	●	●
I feel pressure from family members to look thinner.	●	●	●	●	●
I feel pressure from family members to improve my appearance.	●	●	●	●	●
Family members encourage me to decrease my level of body fat.	●	●	●	●	●

	Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree
Family members encourage me to get in better shape.	●	●	●	●	●
My peers encourage me to get thinner.	●	●	●	●	●
I feel pressure from my peers to improve my appearance.	●	●	●	●	●
I feel pressure from my peers to look in better shape.	●	●	●	●	●
I get pressure from my peers to decrease my level of body fat.	●	●	●	●	●
I feel pressure from the media to look in better shape.	●	●	●	●	●
I feel pressure from the media to look thinner.	●	●	●	●	●
I feel pressure from the media to improve my appearance.	●	●	●	●	●
I feel pressure from the media to decrease my level of body fat.	●	●	●	●	●

APPENDIX III

Ethnic Identity Measure (Ethnic Id Subscale)

In this country, people come from a lot of different cultures and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of names of ethnic groups are Mexican-American, Hispanic, Black, Asian-American, Anglo-American, and White. Every person is born into an ethnic group, or sometimes two groups, but people differ on how important their ethnicity is to them, how they feel about it, and how much their behaviors are affected by it. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I have spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs.	●	●	●	●
I am active in organizations or social groups that include mostly members of my own ethnic group.	●	●	●	●
I have a clear sense of my ethnic background and what it means for me.	●	●	●	●
I like meeting and getting to know people from ethnic groups other than my own.	●	●	●	●
I think a lot about how my life will be affected by my ethnic group membership.	●	●	●	●
I am happy that I am a member of the group I belong to.	●	●	●	●
I sometimes feel it would be better if	●	●	●	●

	Strongly Disagree	Disagree	Agree	Strongly Agree
different ethnic groups didn't try to mix together.				
I am not very clear about the role of my ethnicity in my life.	●	●	●	●
I often spend time with people from ethnic groups other than my own.	●	●	●	●
I really have not spent much time trying to learn more about the culture and history of my ethnic group.	●	●	●	●
I have a strong sense of belonging to my own ethnic group.	●	●	●	●
I understand pretty well what my ethnic membership means to me, in terms of how to relate to my own group and other groups.	●	●	●	●
In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.	●	●	●	●
I have a lot of pride in my ethnic group and its accomplishments.	●	●	●	●
I don't try to become friends with people from other ethnic groups.	●	●	●	●
I participate in cultural practices of my own group, such as special food, music, or customs.	●	●	●	●

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am involved in activities with people from other ethnic groups.	●	●	●	●
I feel a strong attachment towards my own ethnic group.	●	●	●	●
I enjoy being around people from ethnic groups other than my own.	●	●	●	●
I feel good about my cultural or ethnic background.	●	●	●	●

APPENDIX IV

American Identity Measure

Please read each of the following items and choose the response that best reflects your agreement with each statement.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I have spent time trying to find out more about the United States, such as its history, traditions, and customs.	●	●	●	●	●
I am active in organizations or social groups that include mostly Americans.	●	●	●	●	●
I have a clear sense of the United States and what being American means for me.	●	●	●	●	●
I think a lot about how my life will be affected by being American.	●	●	●	●	●
I am happy that I am an American	●	●	●	●	●
I have a strong sense of belonging to the United States.	●	●	●	●	●
I understand pretty well what being American means to me.	●	●	●	●	●
In order to learn more about being American, I have often talked to other people about the United States.	●	●	●	●	●
I have a lot of pride in	●	●	●	●	●

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
the United States					
I participate in cultural practices of the US such as special food, music, or customs.	●	●	●	●	●
I feel a strong attachment towards the United States.	●	●	●	●	●
I feel good about being American.	●	●	●	●	●

APPENDIX V

Eating Disorder Examination Questionnaire

The following questions refer to the **past four weeks (28 days)** only. Please choose the appropriate response.

	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)	●	●	●	●	●	●	●
Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	●	●	●	●	●	●	●
Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	●	●	●	●	●	●	●
Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	●	●	●	●	●	●	●
Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?	●	●	●	●	●	●	●

	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
Have you had a definite desire to have a totally flat stomach?	●	●	●	●	●	●	●
Has thinking about food, eating, or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	●	●	●	●	●	●	●
Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	●	●	●	●	●	●	●
Have you had a definite fear of losing control over eating?	●	●	●	●	●	●	●
Have you had a definite fear that you might gain weight?	●	●	●	●	●	●	●
Have you felt fat?	●	●	●	●	●	●	●
Have you had a strong desire to lose weight?	●	●	●	●	●	●	●

Please fill in the appropriate number. Remember that the questions only refer to the **past four weeks (28 days)** .

Over the past 28 days, how many times have you eaten what other people would regard as an unusually large amount of food (given the circumstances)?

On how many of these times did you have a sense of having lost control over your eating (at the time that you were eating)?

Over the past 28 days, on how many **DAYS** have such episodes of overeating occurred (i.e., you have eaten an unusually large amount of food and have had a sense of loss of control at the time)?

Over the past 28 days, how many times have you made yourself sick (vomit) as a means of controlling your shape or weight?

Over the past 28 days, how many times have you taken laxatives as a means of controlling your shape or weight?

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

Over the past 28 days, on how many days have you eaten in secret (i.e., furtively)? Do not count episodes of binge eating.

- No days
- 1-5 days
- 6-12 days
- 13-15 days
- 16-22 days
- 23-27 days
- Every day

On what proportion of the times that you have eaten have you felt guilty (felt that you've done wrong) because of its effect on your shape or weight? Do not count episodes of binge eating.

- None of the times
- A few of the times
- Less than half
- Half of the time

- More than half
- Most of the time
- Every time

Over the past 28 days, how concerned have you been about other people seeing you eat? Do not count episodes of binge eating.

- Not at all
- Very little
- Slightly
- Somewhat
- Moderately
- Quite a bit
- Markedly

Please, answer the following questions.

	Not at all	Very little	Slightly	Somewhat	Moderately	Quite a bit	Markedly
Has your weight influenced how you think about (judge) yourself as a person?	●	●	●	●	●	●	●
Has your shape influenced how you think about (judge) yourself as a person?	●	●	●	●	●	●	●
How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less,	●	●	●	●	●	●	●

	Not at all	Very little	Slightly	Somewhat	Moderately	Quite a bit	Markedly
often) for the next four weeks?							
How dissatisfied have you been with your weight?	●	●	●	●	●	●	●
How dissatisfied have you been with your shape?	●	●	●	●	●	●	●
How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing, or taking a bath or shower)?	●	●	●	●	●	●	●
How uncomfortable have you felt about others seeing your shape or figure (for example, in communal	●	●	●	●	●	●	●

	Not at all	Very little	Slightly	Somewhat	Moderately	Quite a bit	Markedly
changing rooms, when swimming, or wearing tight clothes)?							

Over the past three-to-four months, have you missed any menstrual periods?

- Yes;

if yes, how many?

- No

Have you been using hormonal birth control (e.g., the pill, patch, shot, etc.)?

- Yes
- No

APPENDIX VI

IRB Approval

UNLV
UNIVERSITY OF NEVADA LAS VEGAS

Social/Behavioral IRB – Expedited Review
Approval Notice

NOTICE TO ALL RESEARCHERS:

Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation, suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

DATE: March 15, 2013

TO: **Dr. Cortney Warren**, Psychology

FROM: Office of Research Integrity - Human Subjects

RE: Notification of IRB Action
Protocol Title: **Body Image and Ethnic Identity in College Women**
Protocol #: 1303-4394
Expiration Date: March 14, 2014

This memorandum is notification that the project referenced above has been reviewed and approved by the UNLV Social/Behavioral Institutional Review Board (IRB) as indicated in Federal regulatory statutes 45 CFR 46 and UNLV Human Research Policies and Procedures.

The protocol is approved for a period of one year and expires March 14, 2014. If the above-referenced project has not been completed by this date you must request renewal by submitting a Continuing Review Request form 30 days before the expiration date.

Should there be *any* change to the protocol, it will be necessary to submit a **Modification Form** through ORI - Human Subjects. No changes may be made to the existing protocol until modifications have been approved by the IRB. Modified versions of protocol materials must be used upon review and approval. Unanticipated problems, deviations to protocols, and adverse events must be reported to the ORI – HS within 10 days of occurrence.

If you have questions or require any assistance, please contact the Office of Research Integrity - Human Subjects at IRB@unlv.edu or call 895-2794.

Office of Research Integrity - Human Subjects
4505 Maryland Parkway • Box 451047 • Las Vegas, Nevada 89154-1047
(702) 895-2794 • FAX: (702) 895-0805

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VITA

Graduate College
University of Nevada, Las Vegas

Liya Markovna Rakhkovskaya

Degree:

Bachelor of Science, Psychology & Statistics, 2011
Michigan State University

Honors and Awards:

The Lovinger Award ($1500; Fall 2014)
University of Nevada, Las Vegas Graduate and Professional Student Association Research Forum Honorable Mention for Oral Presentation (March 2014)
University of Nevada, Las Vegas Graduate and Professional Student Association Travel Grant (*varied*; Fall 2012, Fall 2013, Summer 2014, Fall 2014)
University of Nevada, Las Vegas Graduate and Professional Student Association Research Grant ($100; Summer 2013)
Patricia Saustanik Scholarship ($2500; Fall 2013-Spring 2014)

Publications:

Rakhkovskaya, L.M. & Warren C.S. (2014). Ethnic identity, thin-ideal internalization and eating pathology in ethnically diverse college women. *Body Image, 11*, 428-445. doi: 10.1016/j.bodyim.2014.07.003

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Thesis Title: Ethnic and American Identity as Correlates of Eating Pathology in College Women

Thesis Examination Committee:

Co-Chair, Cortney S. Warren, PhD
Co-Chair, Jason M. Holland, PhD
Committee Member, Stephen D. Benning, PhD
Graduate College Representative, Kate H. Korgan, PhD