

Emphasizing the “Cultural” in Sociocultural: A Systematic Review of Research on Thin-Ideal Internalization, Acculturation, and Eating Pathology in US Ethnic Minorities

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Abstract: A large body of research suggests that thin-ideal internalization is a robust predictor of eating pathology in women and, to some degree, in men. Recent research is exploring the relationships between thin-ideal internalization and culture-specific factors that may be salient to women and men who live in the US but are marginalized based on racial or ethnic background, such as acculturation. This systematic review summarizes published articles examining the relationships among thin-ideal internalization, acculturation-related constructs (including assimilation, marginalization, biculturalism, and acculturative stress), and eating pathology in US adults. Following the PRISMA method, 15 empirical studies met inclusion criteria. Although existing literature was sparse and conflicting in large part due to heterogeneity in acculturation measures, results yielded some support for positive correlational relationships between acculturative stress, thin-ideal internalization, and eating pathology for both men and women (in 4 out of 5 relevant studies). Research on other aspects of acculturation (eg, integration, assimilation) is mixed, with some existing research suggesting a positive relationship and other research finding no statistically significant relationship. Future research would particularly benefit from a gold-standard, multi-dimensional transcultural measure of acculturation to examine how the acculturation process relates to thin-ideal internalization and eating pathology in ethnic and racial minorities in the US.

Keywords: eating pathology, thin-ideal internalization, acculturation, acculturative stress, biculturalism, generational status

Introduction

A large body of research suggests that thin-ideal internalization is a robust predictor of eating pathology in women,¹⁻⁴ and to some extent, in men.^{5,6} Defined as the personal acceptance and endorsement of thin cultural body ideal, research suggests that thin-ideal internalization is positively correlated with numerous aspects of eating pathology, including body dissatisfaction,⁷ disordered eating,³ binge eating,⁸ purging,⁹ and dietary restriction¹⁰ in adult samples of women. Furthermore, a recent meta-analysis³ found that thin-ideal internalization prospectively predicts disordered eating cognitions and behaviors, with small-to-medium effect sizes. Similar findings have emerged in studies using samples of children and adolescents.¹¹

Research on thin-ideal internalization emerged from sociocultural models of eating disorder development (eg, the Tripartite Model) that describe how values and ideals of appearance prevalent in mainstream Western cultures perpetuate eating

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pathology (see^{12–14}). In general, sociocultural models argue that living in a cultural climate that places paramount importance on physical appearance as a determinant of value and idealizes an unrealistically thin body, particularly for women, predisposes individuals to struggle with eating pathology as they unsuccessfully strive to attain the ideal appearance. As such, thin-ideal internalization emerges as individuals are exposed to Western values (through the media, family/parents, peers, and other culturally-influenced entities), become aware of cultural values and ideals of appearance, and feel pressure to attain these ideals (eg, through excessive dieting, exercise, use of make-up/plastic surgery).

Thin-Ideal Internalization in Racially and Ethnically Marginalized Groups

Given the powerful influence of thin-ideal internalization on the development of eating pathology and its etiological ties to Western cultural values and ideals of appearance, researchers and clinicians need to understand how thin-ideal internalization interacts with other culturally-salient factors to protect or put minorities at greater risk for eating pathology. To date, one of the most investigated topics is the direct and moderating roles of ethnicity and race on the relationships between thin-ideal internalization and eating pathology in samples of women in the United States (US).^{7,15,16} Race refers to self-identified belonging to one or more groups based on physical characteristics, such as skin color and eye shape (eg, Asian American); while ethnicity refers to self-identified belonging to one or more groups based on shared ancestry or culture (eg, Han Chinese or Chinese American¹⁷). This review focuses on ethnic/racial minority individuals in the US who are marginalized based on their race (eg, Black), ethnicity (eg, Armenian American women), or both.

Theoretically, ethnic/racial minority individuals may possess an array of culture-specific risk and protective factors for thin-ideal internalization and/or disordered eating as they move to the US. Ethnic/racial minorities in the US may: 1) experience thin-ideal internalization in the acculturative context of navigating their ancestral vs mainstream Western cultures;¹⁸ 2) internalize alternative or additional beauty ideals (eg, a curvy, rather than thin physique; a larger body ideal for men and women) and/or place less value on physical appearance as a determinant of worth;⁷ and 3) experience mainstream Western appearance ideals as particularly unattainable (as the mainstream Western ideal is Eurocentric, as well as thin²).

Taken together, disordered eating etiology in racial/ethnic minorities in the US may be more complex than in White samples of European descent; and retrofitting sociocultural models for disordered eating risk for ethnic/racial minorities may overlook key contributors to disordered eating etiology.

Unfortunately, these culture-specific considerations are absent from most thin-ideal internalization and disordered research focusing on ethnic/racial minority women;¹⁶ and, data on the role of race and ethnicity as it relates to thin-ideal internalization and disordered eating are mixed. On one hand, some research suggests that women of color are protected from eating pathology compared to White women of European descent.¹⁹ On the other hand, a recent longitudinal investigation found no significant ethnic differences in eating disorder prevalence, predictive risk prevalence, or future onset of an eating disorder.¹⁵

Thin-Ideal Internalization, Acculturation, and Eating Pathology

Instead of looking at the relationship between race or ethnicity to thin-ideal internalization and eating pathology, examining how culture-specific variables (eg, acculturation, acculturative stress) influence or correlate with thin-ideal internalization and disordered eating in ethnic/racial minorities in the US may be more meaningful because such variables are theoretically tied to the cultural values and ideals of a person. Acculturation is the process of simultaneous cultural and psychological change as a result of navigating two or more cultural groups.^{20,21} Specifically, individuals may identify predominantly with their acquired culture (ie, assimilation); identify predominantly with their native culture (ie, separation); identify with both cultures (ie, integration or biculturalism); or, with neither culture (ie, marginalization). In general, research indicates biculturalism is associated with the best mental health outcomes, while marginalization is associated with the worst.^{20,21}

Furthermore, the relationship between acculturation and mental health outcomes may be mediated by acculturative stress, or the aggregate physical, biological, social, cultural, and psychological difficulties that individuals have to face as they encounter a new culture.^{22–24} Specifically, research on acculturative stress suggests that it negatively impacts general mental health^{22,25,26} and buffers/accounts for the association between biculturalism and overall mental health.^{22,23} With regard to thin-ideal internalization and eating pathology, as women of color from different cultural contexts adapt to Western cultural contexts (eg, US), they are confronted with

a barrage of cultural messages promoting a thin, White, young ideal of beauty that is highly prized for women. Theoretically, as women acculturate immediately after immigrating (ie, first generation) or over many generations, the process can encourage or discourage women from internalizing a thin-ideal, thereby putting them at greater or lesser risk for eating pathology.

Thin-Ideal Internalization and Acculturation in Ethnic/Racial Minority Men

Although thin-ideal internalization is historically framed through a gender-based lens, emerging research suggests that men experience considerable sociocultural pressure to maintain a thin and fit physique.^{5,6} As men are exposed to Western values, they become aware of a largely unattainable thin, muscular, athletic societal ideal for men. Whereas women are generally focused on thinness (ie, thin-ideal internalization), men may focus on thinness and/or gaining muscle (referred to as athletic-ideal internalization^{27,28}) as both reflect Western cultural values and ideals of appearance for men.

Some research suggests that thin-ideal or general-media internalization (which is associated with low body fat) is a predictor of eating pathology for men (eg, body dissatisfaction^{29,30}). For example, in the development and validation of the SATAQ-4, Schaefer et al³¹ found that items reflecting internalization of a thin/low body fat ideal loaded on a separate subscale than items reflecting internalization of a muscular ideal (labeled muscular/athletic ideal internalization) in a sample of 271 US male college students. Furthermore, thin-ideal internalization was more strongly correlated with eating pathology (ie, EDE-Q scores, largely focused on shape concerns and a desire to lose weight) than athletic-ideal internalization, which may be more strongly related with muscle dysmorphia (or a desire to gain muscle mass and have low body fat).

In addition, some research suggests that ethnic and racial minority men endorse greater body dissatisfaction³² and use more extreme body-altering behaviors compared to White males.^{5,6} For example, in a recent study of 343 college men,³³ Asian American and Hispanic/Latino men reported greater drive for muscularity, muscle dysmorphia, global eating pathology, body checking, binge eating, and driven exercise compared to African American and European American men. In addition, given that rates of overweight or obesity tend to be higher in ethnic minority groups in the US³⁴ and are

directly counter to US ideals of appearance for both men and women,^{35,36} adolescent boys and men from ethnic/racial minority groups who are overweight may be more likely to internalize a male thin-ideal and strive to lose weight. For example, high BMI is associated with increased disordered eating behaviors in Asian American men³⁷ and increased body dissatisfaction and thinness expectancies in Latino boys.³⁸ As such, further examination of acculturation, thin-ideal internalization, and eating pathology in ethnic or racial minority men in the US is warranted.

Current Study

Given the robust relationship between thin-ideal internalization and eating pathology, many scholars have specifically called attention to the need for research examining how culture-specific factors like acculturation and acculturative stress relate to internalization of the greater sociocultural context and eating pathology.^{15,23,39–42,44–48} Given that 30.9% of Americans are people of color or multiracial and 12.9% of Americans are first-generation,⁴⁹ the lack of existing research in this area is noteworthy. Consequently, the overarching goal of this systematic review is to summarize empirical articles examining the relationships among thin-ideal internalization, acculturation, and eating pathology in US adults. Specifically, we reviewed published studies that measured internalization of a thin cultural ideal, eating pathology (broadly defined), and an acculturation-related construct by directly measuring cultural identity (eg, assimilation, biculturalism), using a proxy to approximate acculturation (eg, generational status), or measuring an important aspect of the acculturation process (eg, acculturative stress).

Methods

This review follows the PRISMA statement for reporting systematic reviews and meta-analyses. We used PubMed and SCOPUS to identify relevant papers for inclusion, conducting the search in June and August, 2019. The following seven dyadic and one triadic search terms were used: 1) “Thin-ideal internalization” and “Acculturation”; 2) “Thin-ideal internalization” and “Acculturative stress”; 3) “Internalization” and “Acculturation”; 4) “Thin-ideal internalization” and “Generational status”; 5) “Internalization” and “Generational status”; 6) “Thin-ideal internalization” and “Disordered Eating”; 7) “Eating pathology” and “Immigrants”; 8) “Acculturation” and “Eating disorders” and “Internalization.” The search was conducted by the two study authors. To be included, studies must have been published in peer-reviewed journals and written in English. In addition, studies must have used: 1) a sample of greater than 10 participants age 18

and older; 2) assessed for thin-ideal internalization; 3) assessed for acculturation (either directly using a measure of biculturalism or cultural identity or using a proxy like generational status) and/or acculturative stress; and 4) assessed for eating pathology (broadly defined).

While conducting our review, there were many studies that included constructs related to thin-ideal internalization (eg, drive for thinness, fat phobia) that were not specifically looking at personal acceptance and desire to attain a thin ideal based on cultural values and ideals. Consequently, we excluded studies that did not specifically measure sociocultural aspects of thin-ideal acceptance and internalization; did not have a thin-ideal internalization focus; did not focus on eating pathology of some type; did not include a measure of acculturation; focused on non-diaspora population (ie, Fijian adolescents in Fiji); or described a case study.

Results

General Literature Review Information

Figure 1 summarizes the PRISMA⁵⁰ literature review procedure. Out of 175 unique identified records, 27 were included in the qualitative synthesis. Reasons for exclusion were: 1) record had no thin-ideal internalization focus; 2) record had no eating pathology or body dissatisfaction focus; 3) record had no acculturation focus; 4) record did not focus on an ethnic/racial minority population (ie, Taiwanese adolescents in Taiwan; deaf women in the US); 5) record described a case study; and 6) record did not include an adult US sample. Of them, 15 (9% of total) were included in the quantitative review and 12 (7% of total) were noted for qualitative overview only because they were reviews or commentaries.

Overview of Included Studies

Sampled Populations

A total of 15 studies met inclusion criteria for this quantitative review. Among them, 12 studies included a female sample (see Table 1) and 5 included a male sample (see Table 2), with two of those studies including both men and women (Menon et al (2012)⁵¹ and Blow et al (2010)⁵² which are double listed in Tables 1 and 2). Of the 15 studies, seven focused on Latinx participants, seven focused on Asian American participants, and one study focused on White, Black, and Latina participants (ie, Gordon et al (2010)⁵³). Most (13) examined college students and/or predominantly college-aged adults, with mean ages in the early 20's. One study (Reddy and Crowther (2007)¹⁸) examined adolescents and adults, while another (Liao et al (2019)⁵⁴) used

a community sample of adults. All studies were correlational surveys, except Franko et al (2012)⁵⁵ and Liao et al (2019),⁵⁶ which were qualitative.

Thin-Ideal Internalization Measures

Of the quantitative studies that used a questionnaire to measure thin-ideal internalization, almost all used the original or a revised version of the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ^{31,57-59}). The two exceptions were Reddy and Crowther (2007),¹⁸ who used the Ideal-Body Internalization Scale-Revised (IBIS-R⁶⁰), and Gordon et al⁵³ who used image ratings of cultural ideal body size.

Eating Pathology Measures

Among the quantitative studies, ten assessed for body dissatisfaction only, while four broadly assessed eating pathology (eg, restrictive eating, binge eating), and one study (Poloskov and Tracey, 2013⁶¹) assessed both. Measures of eating pathology measures included the Eating Attitudes Test⁶² and the Eating Disorders Inventory.⁶³ Measures examining body dissatisfaction (or body satisfaction) were: 1) Body Esteem Scale;⁶⁴ 2) Body Areas Satisfaction Questionnaire;⁶⁵ 3) Multidimensional Body-Self Relations Questionnaire;⁶⁵ 4) Drive for Muscularity Scale;⁶⁶ 5) Muscle Appearance Satisfaction Scale;⁶⁷ 6) Body Happiness Questionnaire;⁵² 7) Body Shape Questionnaire;⁸¹ 8) Body Parts Satisfaction Scale;⁶⁸ and 9) the Body Comparison Scale.⁶⁹

Acculturation Measures

The studies used a variety of measures of acculturation. Specifically, nine studies used culture-specific measures designed for a given ethnic or cultural group, including the Acculturation Rating Scale for Mexican Americans-II⁷⁰ (ARMSA-II); Cultural Values Conflict Scale for South Asian Women⁷¹ (CVCS); Suinn-Lew Asian Self-Identity Acculturation Scale⁷² (SL-ASIA); Short Acculturation Scale for Hispanics⁷³ (SASH); and the Asian Values Scale⁷⁴ (AVS). An additional four studies used transcultural measures designed for participants moving from any cultural context, including the Riverside Acculturative Stress Inventory⁷⁵ (RASI); Vancouver Index of Acculturation⁷⁶ (VIA); American-International Relations Survey⁷⁷ (AIRS); and the Stephenson Multi-Group Acculturation Measure⁷⁸ (SMAS). Finally, one study used language spoken at home as a proxy for acculturation (Nouri et al, 2011⁷⁹), while one assessed acculturation qualitatively (Liao et al, 2019⁵⁶).

In terms of the kinds of acculturation studies aimed to measure (eg, assimilation, marginalization, biculturalism), almost all focused on assimilation, with two exceptions.

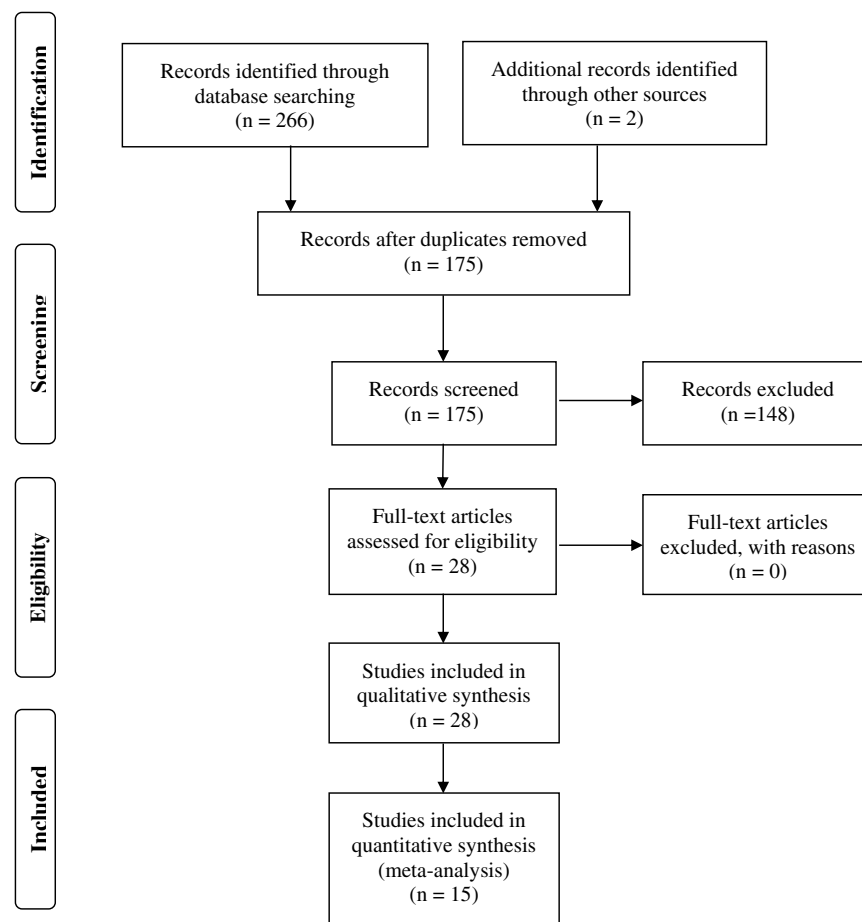


Figure 1 Overview of PRISMA literature review procedure.

Notes: Adapted from Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009) Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097.⁵⁰ Reasons for exclusion were: 1) record had no thin-ideal internalization focus; 2) records had no disordered eating focus; 3) record had no acculturation focus; 4) record focused on non-diaspora population (ie, Taiwanese adolescents in Taiwan); 5) record described a case study; and 6) record did not include an adult US sample. Among the 28 studies included in qualitative synthesis, 13 were excluded from the quantitative synthesis because they were reviews or commentaries.

First, Reddy and Crowther, 2007¹⁸ measured cultural conflict (ie, the opposite of cultural integration; using CVCS). Second, Gordon et al, 2010⁵³ used the dominant society immersion (EDI) and ethnic society immersion (ESI) subscales of the SMAS,⁷⁸ to measure assimilation and separation, respectively (but, unfortunately, did not measure their associations with thin-ideal internalization). In addition, two studies (ie, Cheng et al 2015 and Lau et al 2006)^{80,82} measured separation/marginalization (ie, attachment to Asian cultural values only) and three studies measured acculturative stress (ie, Menon et al 2012; Reddy and Crowther, 2007; Warren et al 2010).^{18,51,83}

pathology. Of the 12 studies that examined the relationship between assimilation (ie, the degree to which individuals identify with mainstream American culture), thin-ideal internalization and eating pathology, three found positive relationships while six found non-significant results. In addition, of the three studies that measured acculturative stress, two found a significant positive relationship whereas one did not. No studies examined integration/biculturalism and only one study examined the relationship between thin-ideal internalization and separation/marginalization, making summative conclusions on these aspects of acculturation impossible.

Thin-Ideal Internalization, Acculturation and Eating Pathology in Women

As shown in Table 1, existing empirical research yields conflicting evidence regarding the relationships among thin-ideal internalization, acculturation, and eating

Thin-Ideal Internalization, Acculturation and Eating Pathology in Men

As shown in Table 2, all of the studies that measured acculturative stress, thin-ideal internalization and eating pathology found a positive relationship (ie, three of

Table 1 Studies Examining the Relationships Between Thin-Ideal Internalization, Acculturation, and Eating Pathology by Type of Acculturation Measured in Women

| Study | N | Sample | Thin-Ideal Internalization Measure | Acculturation Measure | Eating Pathology Measure | Support for Relationships by Type of Acculturation Measured | | | |
|--|-----|---|--|--|--|---|---------|-------------|---------|
| | | | | | | INT (-) | ASM (+) | SEP/MAR (+) | STR (+) |
| Poloskov and Tracey, 2013 ⁶¹ | 211 | Mexican American college women | SATAQ-I | Acculturation Rating Scale for Mexican Americans-II | Eating Disorders Inventory; Multidimensional Body-Self Relations Questionnaire | - | Yes | - | - |
| Menon and Harter, 2012 ⁵¹ | 399 | Latino college men, women (n = 262) | SATAQ-R | Riverside Acculturative Stress Inventory | Body Esteem Scale; Body Areas Satisfaction Questionnaire; Multidimensional Body-Self Relations Questionnaire | - | - | - | Yes |
| Nouri et al, 2011 ⁷⁹ | 154 | Asian American college women | SATAQ-3 | Language fluency | Body Shape Questionnaire | - | No | - | - |
| Reddy and Crowther, 2007 ¹⁸ | 74 | South Asian American women | Ideal-Body Internalization Scale-Revised | Suinn-Lew Asian Self-Identity Acculturation Scale; Cultural Values Conflict Scale for South Asians | Eating Attitudes Test | Yes* | No | - | Yes |
| Warren et al, 2010 ⁸³ | 94 | Mexican American women | SATAQ-3 | Acculturation Rating Scale for Mexican Americans-II | Body Shape Questionnaire | - | Yes | - | - |
| Blow et al, 2010 ⁵² | 163 | Hispanic college men and women (n = 95) | SATAQ | Short Acculturation Scale for Hispanics | Body Happiness Questionnaire | - | No | - | - |
| Lau et al, 2006 ⁸² | 59 | Asian American women | SATAQ-3 | Asian Values Scale | Body Parts Satisfaction Scale, Body Comparisons Scale | - | - | No | - |
| Stark-Wroblewski et al, 2005 ⁸⁶ | 106 | Asian female international students in US | SATAQ | American-International Relations Survey | Eating Attitudes Test | - | No | - | - |
| Franko et al, 2012 ⁵⁵ | 27 | Latina college women | Qualitative data | Qualitative data | Qualitative data | - | Yes | - | - |
| Gordon et al, 2010 ⁵³ | 276 | White, Latina, and Black college women | Stunkard Body Figure scale | Stephenson Multigroup Acculturation Scale, Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale | Eating Disorders Inventory | - | - | - | No |
| Lester and Petrie, 1995 ⁹⁰ | 142 | Mexican American women | Beliefs About Attractiveness Questionnaire | Acculturation Rating Scale for Mexican Americans | Body Parts Satisfaction Scale | - | No | - | - |

(Continued)

Table 1 (Continued).

| Study | N | Sample | Thin-Ideal Internalization Measure | Acculturation Measure | Eating Pathology Measure | Support for Relationships by Type of Acculturation Measured | | | |
|-------------------------------|----|-----------------------------|------------------------------------|---|----------------------------|---|---------|-------------|---------|
| | | | | | | INT (-) | ASM (+) | SEP/MAR (+) | STR (+) |
| Yoshimura, 1995 ⁹¹ | 31 | Asian American females w/ED | Body Attitudes Scale | Suinn-Lew Asian Self-Identity Acculturation Scale | Eating Disorders Inventory | - | No | - | - |

Notes: Types of acculturation noted with a (+) indicate that they theoretically have a positive correlation with thin-ideal internalization whereas types of acculturation with a (-) have a negative association with thin-ideal internalization. Support for Relationship by Type of Acculturation Measured indicates whether study findings lend support (or not) for the relationship between that type of acculturation, thin-ideal internalization, and eating pathology. *Reddy and Crowther (2007)¹⁸ found a negative association between thin-ideal internalization and cultural conflict (ie, the opposite of cultural integration).

Abbreviations: SATAQ, Sociocultural Attitudes Towards Appearance Questionnaire; INT, Integration; ASM, Assimilation; SEP/MAR, Separation and/or Marginalization; STR, Acculturative stress.

Table 2 Studies Examining the Relationships Between Thin-Ideal Internalization, Acculturation, and Eating Pathology by Type of Acculturation Measured in Men

| Study | N | Sample | Thin-Ideal Internalization Measure | Acculturation Measure | Eating Pathology Measure | Support for Relationship by Type of Acculturation Measured | | | |
|--------------------------------------|-----|---|------------------------------------|--|--|--|---------|-------------|---------|
| | | | | | | INT (-) | ASM (+) | SEP/MAR (+) | STR (+) |
| Menon and Harter, 2012 ⁵¹ | 399 | Latino college men (n = 137) and women | SATAQ-R | Riverside Acculturative Stress Inventory | Body Esteem Scale; Body Areas Satisfaction Questionnaire; Multidimensional Body-Self Relations Questionnaire | - | - | - | Yes |
| Cheng et al, 2015 ⁸⁰ | 338 | Asian American college men | SATAQ-3 | Vancouver Acculturation Index | Drive for Muscularity Scale | - | Yes | Yes | - |
| Warren and Rios, 2012 ⁸⁸ | 100 | Hispanic college men | SATAQ-3 | Social, Attitudinal, Familial, and Environmental Acculturative Stress Scale; Acculturation Rating Scale for Mexican Americans-II | Muscle Appearance Satisfaction Scale | - | No | - | Yes |
| Blow et al, 2010 ⁵² | 163 | Hispanic college men (n = 68) and women | SATAQ | Short Acculturation Scale for Hispanics | Body Happiness Questionnaire | - | No | - | - |
| Liao et al, 2019 ⁵⁶ | 11 | Asian American men | Qualitative data | Qualitative data | Qualitative data | - | Yes | - | Yes |

Notes: Types of acculturation noted with a (+) indicate that they theoretically have a positive correlation with thin-ideal internalization whereas types of acculturation with a (-) have a negative association with thin-ideal internalization. Support for Relationship by Type of Acculturation Measured indicates whether study findings lend support (or not) for the relationship between that type of acculturation, thin-ideal internalization, and eating pathology. Spaces marked with a dash (-) indicate that the study did not measure the construct noted in the table.

Abbreviations: SATAQ, Sociocultural Attitudes Towards Appearance Questionnaire; INT, Integration; ASM, Assimilation; SEP/MAR, Separation and/or Marginalization; STR, Acculturative stress.

three). Of the four studies that examined assimilation, two found positive relationships and two found non-significant results. No studies examined integration/biculturalism, and only one study examined the relationship between thin-ideal internalization and separation/marginalization, making summative conclusions on these aspects of acculturation impossible.

Discussion

This was the first known review of research examining the relationships among thin-ideal internalization, acculturation, and eating pathology among ethnic/racial minority women and men in the US. This review attempted to fill the gap in the literature identified by numerous previous reviews calling for more culturally-informed and acculturation-focused research on disordered eating etiology that examines how Eurocentric, Western values of appearance interact with the acculturation process.^{15,39–48}

Primary Study Findings

Perhaps the largest take-home message from this study is that research on the relationship between acculturation and thin-ideal internalization in ethnic/racial minorities in the US is mixed and methodologically challenged. In particular, measurement of acculturation made comparisons with meaningful conclusions very challenging. For example, in the 15 studies identified that met inclusion criteria for this review, nine different quantitative measures of acculturation and one qualitative analysis were used. Of the quantitative measures, nine studies used culture-specific measures designed for a given ethnic or cultural group; four studies used transcultural measures designed for participants moving from any cultural context; and one used language spoken at home as a proxy. Furthermore, among the culture-specific measures used in this review, one assessed unique cultural attributes, non-transferable to other cultures (eg, filial piety; family recognition through achievement; ie, Asian Values Scale⁷⁴) and the remaining culture-specific measures assessed transcultural attributes (eg, ARSMA-II:⁷⁰ “My friends, while I was growing up, were of Mexican origin”).

To further complicate matters, almost all studies in this review used unidimensional measures of acculturation (eg, Suinn-Lew Asian Self-Identity Acculturation Scale⁷²) that assessed assimilation to US culture rather than integration of both US and minority cultures (ie, biculturalism) or a more complex assessment of the acculturation process (eg, acculturative stress). Specifically, of the 12 studies

that examined assimilation in this review using male or female samples, five studies found positive relationships and seven found non-significant results. Given that most existing research on acculturation and eating pathology focuses on assimilation, existing research may not be capturing aspects of acculturation that are particularly salient to thin-ideal internalization. For example, research suggests that biculturalism tends to be associated with mental health well-being among US minority individuals, such as a positive correlation with self-esteem⁸⁴ and negative correlation with depression symptoms.⁸⁵ Given these methodological challenges, it is unsurprising that research on thin-ideal internalization, eating pathology, and acculturation is so mixed and inconclusive.

Despite the overall inconclusive findings, the clearest empirical finding that emerged from this review is that acculturative stress was positively correlated with thin-ideal internalization and eating pathology in four of the five studies that measured it. For example, in a sample of 399 Latino college men and women, Menon and Harter (2012)⁵¹ found that acculturative stress was significantly positively correlated with body image disturbance after controlling for BMI, age, and gender; and, thin-ideal internalization mediated the relationship between acculturative stress and body image disturbance. Similarly, Liao et al⁵⁶ described links between acculturative stress and athletic-ideal internalization, such as participants’ resignation of the “dream” of an athletic/Western physique, because they are Asian men. As such, researchers examining both male and female samples should include acculturative stress in their conceptualization of acculturation and its relationship to eating pathology.

Areas for Future Research

Specific recommendations for future research as suggested from these data are summarized in Table 3. In this review and as noted by other authors,^{40,46} analysis of extant acculturation research is made difficult by the lack of a gold-standard, multi-dimensional acculturation measure. Ideally, such a measure would include both culture-specific and transcultural aspects of the acculturation process and experience that are relevant to eating pathology and mental health outcomes. On one hand, measurement of acculturation should extend beyond language fluency, generational status and identification to examine culture-specific attributes relevant to identity (eg, cultural rites of passage, authoritarian vs egalitarian familial attitudes, gender roles). For example, the TRIOS scale of African

Table 3 Recommendations for Future Research on Acculturation and Thin-Ideal Internalization

| Recommendations for Future Research | Examples | Proposed Benefits |
|--|---|--|
| 1. Multi-dimensional assessment of acculturation (ie, identification to both minority and majority cultures) | Poloskov and Tracey, 2017; ⁶¹ Reddy and Crowther, 2007 ¹⁸ | Measurement in line with acculturation theory; Potential for more consistency in findings |
| 2. Simultaneous assessment of acculturation and acculturative stress | Reddy and Crowther, 2007; ¹⁸ Warren and Rios, 2012; ⁸⁸ Gordon et al, 2010 ⁵³ | Understanding of relationships among acculturation, acculturative stress, eating pathology and/or thin-ideal internalization; Understanding how aspects of acculturation differentially affect acculturative stress and, subsequently, thin-ideal internalization |
| 3. Acculturation measures that assess culture-specific attributes to identity (eg, rites of passage; familial attitudes; gender roles) | TRIOS (Time, Rhythm, Improvisation, Orality, and Spirituality ⁸⁷) scale of African American and Afro-Caribbean cultures | Understanding of salient cultural factors for specific groups |
| 4. Transcultural, multi-dimensional measures of acculturation | BIIS ⁸⁹ (Bicultural Identity Integration Scale) | Study of low-resourced groups (eg, Alaskan Natives), for whom no culture-specific measures currently exist; Possibility of comparisons between groups |
| 5. Cessation of use of language fluency and generational status as proxies for acculturation | See all quantitative studies (exception: Menon and Harter, 2012 ⁵¹) | More accurate measurement in cultures with high generational status but low assimilation into US culture (eg, Amish Americans); More accurate measurement in cultures whose language was systematically erased by colonization (eg, Alaskan Natives) |

American and Afro-Caribbean cultures⁸⁷ measures five domains: Time, Rhythm, Improvisation, Orality, and Spirituality. These are key cultural features that are particularly salient to this cultural group, and that are not interchangeable with other cultural groups.⁸⁷ Furthermore, a diminished reliance on language fluency as a proxy for acculturation allows for accurate measurement in cultures whose language was systematically erased by colonization (eg, Alaskan Natives). Similarly, the diminished reliance on generational status as a proxy for acculturation allows for more accurate measurement in cultures with high generational status but low assimilation into US culture (eg, Amish Americans). On the other hand, development of a gold-standard transcultural acculturation scale that captures aspects of the acculturation process (eg, acculturative stress) that are relevant to ethnic minority individuals from many backgrounds is also important. Such a measure would allow for empirical cross-cultural comparisons, enhancing the field's understanding of cross-cultural differences in etiology and treatment of disordered eating.

Until such a measure exists, future research should aim to measure not only assimilation but also other aspects of

acculturation including integration and marginalization. For example, using a sample of 211 Mexican and Mexican American college women, Poloskov and Tracey (2013)⁶¹ found that thin-ideal internalization was significantly positively correlated with affiliation to White American culture and significantly negatively correlated with attachment to Mexican culture (as measured by the ARSMA-II Anglo Orientation Scale (0.21) and Mexican Orientation Scale (−0.39)). Furthermore, thin-ideal internalization was a significant mediator between dominant US orientation and body dissatisfaction. In addition, Reddy and Crowther (2007)¹⁸ was the only known study to both use a multi-dimensional, cross-cultural measure of acculturation (ie, the CVCS⁷¹), allowing for an assessment of integration/biculturalism (or, rather the lack of integration) in South Asian American women. These articles serve as good examples of how one can include various types of acculturation (eg, assimilation, integration, cultural conflict) as well as integrate culture-specific and transcultural aspects of the acculturation process into research.

Future research in this area should also continue to examine the role of acculturative stress as it relates to thin-ideal internalization and eating pathology. This review

suggests that stress related to cultural adjustment and perceived conflict in ideals and values appears to be associated with increased thin-ideal internalization and eating pathology. As such, assessing for acculturative stress as well as other aspects of internalization of Western values and ideals of appearance, such as athletic-ideal internalization, is warranted. Examining these relationships across the lifespan (ie, from youth to older adulthood) and generations will be important to understand the interaction between acculturation of mainstream US values and ideals of appearance, stress related to the process of acculturation, and eating pathology.

Conclusion

This review of the literature on acculturation and thin-ideal internalization yielded a small and conflicting body of work. The findings are particularly inconclusive, due to the heterogeneity of acculturation measures, as well as the predominant focus on assimilation, rather than integration/biculturalism. One consistent finding was the positive association between thin-ideal internalization and acculturative stress, for both women and men. Future directions include the development of a gold-standard, multi-dimensional measure of acculturation, as well as the examination of acculturation and thin-ideal internalization in groups other than Latinx and Asian Americans.

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