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#### Recommended Citation

Burke, N. L., Schaefer, L. M., Karvay, Y. G., Bardone-Cone, A. M., Frederick, D. A., Schaumberg, K., Klump, K. L., Anderson, D. A., & Thompson, J. K. (2021). Does the tripartite influence model of body image and eating pathology function similarly across racial/ethnic groups of White, Black, Latina, and Asian women? *Eating Behaviors*, 42, 101519. <https://doi.org/10.1016/j.eatbeh.2021.101519>

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# Does the Tripartite Influence Model of Body Image and Eating Pathology Function Similarly Across Racial/Ethnic Groups of White, Black, Latina, and Asian Women?

## Comments

This article was originally published in *Eating Behaviors*, volume 42, in 2021. <https://doi.org/10.1016/j.eatbeh.2021.101519>

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## Does the tripartite influence model of body image and eating pathology function similarly across racial/ethnic groups of White, Black, Latina, and Asian women?

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### ARTICLE INFO

#### Keywords:

Tripartite influence model  
Race/ethnicity  
Disordered eating  
Body image  
Sociocultural pressures  
College women

### ABSTRACT

The tripartite influence model suggests that appearance pressures from family, peers, and the media contribute to thin-ideal internalization, which leads to increased body dissatisfaction and subsequent eating disorder pathology. The tripartite influence model was initially developed and tested among primarily White samples, and emerging research suggests racial/ethnic differences in mean levels of particular model constructs. Consequently, the model's appropriateness for understanding eating disorder risk in racial/ethnic minorities warrants investigation to determine its usefulness in explicating eating disorder risk in diverse populations. Participants in the current study were White ( $n = 1167$ ), Black ( $n = 212$ ), Latina ( $n = 203$ ), and Asian ( $n = 176$ ) women from five geographically disparate college campuses in the United States. Participants completed the Sociocultural Attitudes Towards Appearance Questionnaire-4, the Multidimensional Body-Self Relations Questionnaire - Appearance Evaluation Subscale, and the Eating Disorder Examination-Questionnaire. Analysis of variance was used to compare mean levels of each construct across racial/ethnic groups. Multigroup structural equation modeling was used to assess the appropriateness of the tripartite influence model for each racial/ethnic group, and to examine differences in the strength of the model pathways across groups. There were significant mean level differences across groups for most model constructs. However, results indicated similar model fit across racial/ethnic groups, with few differences in the strength of model pathways. Findings suggest that although some groups report lower levels of proposed risk factors, the sociocultural risk processes for eating pathology identified through the tripartite influence model are similar across racial/ethnic groups of young adult women. Such information can be used to inform culturally-sensitive interventions.

### 1. Does the tripartite influence model of body image and eating pathology function similarly across racial/ethnic groups of White, Black, Latina, and Asian women?

Eating disorders are considered by many to primarily affect White

women, despite evidence to the contrary (Root, 1990; Sonnevile & Lipson, 2018). However, most theoretical models of eating pathology were developed and initially validated with primarily White females, overlooking the unique experiences that may impact eating disorder risk in racial/ethnic minorities (Schaefer et al., 2018). One such theoretical

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<https://doi.org/10.1016/j.eatbeh.2021.101519>

Received 31 October 2020; Received in revised form 16 February 2021; Accepted 10 April 2021

Available online 8 May 2021

1471-0153/© 2021 The Authors.

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model is the tripartite influence model (TIM; Thompson et al., 1999), one of the most widely tested sociocultural models of body image and eating disturbance. The TIM suggests that appearance-related pressures from peers, family, and the media, lead to thin-ideal internalization and appearance comparisons with others. As the thin ideal is largely unattainable for most women (Thompson et al., 1999), comparison of one's appearance to the perceived ideal is thought to lead to body dissatisfaction, a well-established risk factor for eating pathology (Stice, 2002).

There is support for the TIM internationally (e.g., de Carvalho et al., 2017; Rodgers et al., 2015; Shagar et al., 2019; Shahyad et al., 2018; Yamamiya et al., 2008) and in United States (US) samples of girls and women (e.g., Hazzard et al., 2019; Keery et al., 2004). Nevertheless, evidence suggests racial/ethnic differences in mean levels of the TIM constructs, with pressures for thinness, thin-ideal internalization, body dissatisfaction, and/or scores on broad measures of eating pathology being significantly higher for White and Latina women compared to Black women (e.g., Bardone-Cone et al., 2011; Grabe & Hyde, 2006; Javier et al., 2016; Kelly et al., 2012; Perez et al., 2002; Rakhkovskaya & Warren, 2016; Roberts et al., 2006). In addition, in a study of White, Black, Latina, and Asian US undergraduate women, portions of the TIM were examined, and group variations in the strength of model pathways were found (Rakhkovskaya & Warren, 2016). In this study, ethnic identity served as a protective factor against eating pathology for Black and Asian women, but not Latina or White women (Rakhkovskaya & Warren, 2016). Such findings suggest that culturally-relevant factors may influence the significance and strength of TIM pathways for US women from racially/ethnically diverse backgrounds.

Although media messages regarding appearance are pervasive, media's impact on thin-ideal internalization and body dissatisfaction is more pronounced among vulnerable individuals (Hausenblas et al., 2013), and there are reasons to question whether this pathway functions similarly across racial/ethnic groups. US media has historically featured White individuals, with very little representation of racial/ethnic minorities (Jankowski et al., 2017). Being underrepresented in this context may be somewhat protective, as immediate comparisons with like others are hampered, particularly for those farthest from a Eurocentric look (Jankowski et al., 2017). For Black women, this potential departure from media's influence might be especially pronounced when considered with Black culture's greater acceptance of larger body sizes (Rucker & Cash, 1992), and may be the reason for Black women's lower internalization of media ideals compared to White women (Cashel et al., 2003; Quick & Byrd-Bredbenner, 2014; Rakhkovskaya & Warren, 2014). For Asian women, however, research indicates this protection may not exist, as media influences thin-ideal internalization and body dissatisfaction in similar ways as White women (Nouri et al., 2011). Nevertheless, it behooves the eating disorder field to determine if media is indeed as salient a risk factor for all, as several eating disorder prevention interventions focus on the media, and some exclusively (e.g., Wilksch & Wade, 2009).

Other sociocultural factors may also differ by race/ethnicity and have important implications for intervention and treatment. For instance, familism, which includes family obligation and family as referents, is a central cultural value for most Latinas (Sabogal et al., 1987). Therefore, the influence of family on body image may be particularly salient for Latina women, where strong family connection and interdependence are characteristic (Sabogal et al., 1987). Burgeoning research has harnessed the importance of family in culturally-adapted eating disorder interventions for Latinas (Reyes-Rodriguez et al., 2019). Providing theoretical support would be a boon to such interventions and potentially add nuance to intervention targets by addressing relevant TIM pathways.

To date, no study has examined the full TIM (versus individual pathways) simultaneously across White, Black, Latina, and Asian US women to determine whether the model functions similarly across groups, and whether the significance and strength of model pathways are similar for all. However, such work would have important

implications for tailored intervention and treatment approaches. Therefore, the current study evaluated TIM elements among White, Black, Latina, and Asian college women using multi-group structural equation modeling. The model proposed that appearance pressures from family, peers, and media contribute to thin-ideal internalization, which leads to reduced body satisfaction, and ultimately increased eating pathology. We hypothesized adequate model fit across groups, but that pathways would vary across racial/ethnic groups, demonstrating greater similarity among White, Latina, and Asian women compared to Black women, considering the greatest mean-level differences tend to occur between Black women and women from other groups (e.g., Rakhkovskaya & Warren, 2016). In addition, we examined mean level differences of each model construct among racial/ethnic groups.

## 2. Method

### 2.1. Participants

Participants were undergraduate women enrolled at one of five universities across the US ( $N = 1758$ ). Consistent with study goals, the sample was restricted to individuals who self-identified as White, Black, Latina, or Asian. The sample was further restricted to individuals aged 18–30 ( $M = 19.58$ ,  $SD = 1.97$ ), given evidence that disordered eating and body dissatisfaction decline in adulthood (Keel et al., 2007). In the final sample, 1167 (66.4%) participants self-identified as White, 212 (12.1%) as Black, 203 (11.5%) as Latina, and 176 (10.0%) as Asian. Demographic information is provided in Table 1.

### 2.2. Measures

#### 2.2.1. Demographic information

Participants reported their age, race/ethnicity, sexual orientation, height, and weight. Participant's self-reported height and weight were used to calculate body mass index (BMI).

#### 2.2.2. Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4)

The SATAQ-4 (Schaefer et al., 2015) is a 22-item self-report measure of appearance pressures and appearance ideal internalization. In the current study, the three Pressures subscales (i.e., Pressures: Peers, Pressures: Family, Pressures: Media; 4 items each) were used to assess perceived appearance-related pressures. The 5-item Internalization: Thin/Low Body Fat subscale was used to assess thin-ideal internalization. Respondents indicate their level of agreement with each item using a 5-point scale ranging from 1 (*definitely disagree*) to 5 (*definitely agree*). Higher scores indicate higher levels of perceived appearance-related pressure or thin-ideal internalization. SATAQ-4 subscale scores have demonstrated good reliability and validity in each of the racial/ethnic groups examined within the present study (Burnette et al., 2020; Llorente et al., 2015; Schaefer et al., 2015; Yamamiya et al., 2016). In the current study, Cronbach's alpha for each subscale exceeded 0.79 in all racial/ethnic groups.

#### 2.2.3. Multidimensional Body-Self Relations Questionnaire – Appearance Evaluation Subscale (MBSRQ-AE)

The 7-item MBSRQ-AE (Brown et al., 1990) was used to assess body satisfaction. Items are rated on a 5-point scale ranging from 1 (*definitely disagree*) to 5 (*definitely agree*). Higher scores indicate greater body satisfaction. Scores on the MBSRQ-AE have demonstrated good reliability and validity in White, Black, Latina, and Asian women (Cash, 2000; Forbes & Frederick, 2008; Kelly et al., 2012; Smith & Davenport, 2012). In the current study, Cronbach's alpha exceeded 0.86 in all racial/ethnic groups.

#### 2.2.4. Eating Disorder Examination-Questionnaire (EDE-Q)

The EDE-Q (Fairburn & Beglin, 2008) is a 28-item self-report

**Table 1**  
Analysis of variance results by race/ethnicity.

	White (N = 1167)	Black (N = 212)	Latina (N = 203)	Asian (N = 176)			
	<i>M (SD)</i>				<i>F (df)</i>	Partial $\eta^2$	Pairwise comparisons
Family appearance pressures	2.40 (1.12)	2.50 (1.19)	2.70 (1.20)	2.87 (1.13)	$F(3, 1754) = 11.10^*$	0.02	W, B < A; W < L
Peer appearance pressures	2.35 (1.08)	2.05 (1.01)	2.29 (1.01)	2.46 (1.03)	$F(3, 1754) = 6.03^*$	0.01	B < W, A
Media appearance pressures	3.87 (1.11)	3.20 (1.31)	3.78 (1.11)	3.71 (1.15)	$F(3, 1754) = 20.96^*$	0.04	B < A, L, W
Thin-ideal internalization	3.58 (0.86)	2.81 (0.88)	3.22 (0.90)	3.40 (0.84)	$F(3, 1754) = 50.92^*$	0.08	B < L < W; B < A
Body satisfaction	3.28 (0.86)	3.65 (0.90)	3.39 (0.81)	3.16 (0.75)	$F(3, 1754) = 14.00^*$	0.02	A < L < B; W < B
Dietary restraint	2.35 (1.98)	1.46 (1.73)	2.28 (2.02)	1.70 (1.58)	$F(3, 1754) = 16.74^*$	0.03	A, B < L, W
Shape/weight overvaluation	2.61 (2.03)	1.80 (1.93)	2.45 (1.96)	2.48 (1.82)	$F(3, 1754) = 9.79^*$	0.02	B < L, A, W
Body mass index	22.75 (4.30)	24.59 (5.38)	23.11(4.16)	21.74 (3.54)	$F(3, 1746) = 15.31^*$	0.03	A < W, L < B
Age	19.57 (2.01)	19.56 (2.01)	19.81 (2.12)	19.41 (1.40)	$F(3, 1739) = 1.39$	0.00	–
	Frequency (%)				$\chi^2 (df, N)$		<i>p</i>
Sexual orientation							
Heterosexual	953 (81.9)	165 (77.8)	162 (79.8)	140 (80)	$\chi^2 (6, N = 1754) = 16.86$		.01
Bisexual	50 (4.3)	12 (5.7)	16 (7.9)	1 (0.6)			
Lesbian	161 (13.8)	35 (16.5)	25 (12.3)	34 (19.4)			

Note. *M* = mean; *SD* = standard deviation; *df* = degrees of freedom; W = White; B = Black; L = Latina; A = Asian. Appearance pressures and thin-ideal internalization all represent subscales from the Sociocultural Attitudes Towards Appearance Questionnaire-4; Body Satisfaction = Multidimensional Body-Self Relations Questionnaire Appearance Evaluation subscale; Dietary Restraint and Shape/Weight Overvaluation both represent subscales from the 7-item version of the Eating Disorder Examination - Questionnaire. Effect size was assessed via partial  $\eta^2$  across the four racial/ethnic groups. Pairwise comparisons were performed using Tukey's HSD test when the assumption of equal variances was met and Dunnett's C test when the assumption of equal variances was violated. \**p* < .005. All pairwise comparisons listed were significant at least at *p* < .05.

questionnaire that measures eating disordered attitudes and behaviors from the past 28 days. Items are rated on a 7-point scale (e.g., from 0 [no days/not at all] to 6 [everyday/markedly]). The current study utilized the 3-item Dietary Restraint and 2-item Shape/Weight Overvaluation subscales from the brief 7-item version of the measure, which has demonstrated strong psychometric properties in a variety of samples, including individuals from diverse racial/ethnic backgrounds (Burke et al., 2017; Claudat et al., 2016; Grilo et al., 2015). In the current study, Cronbach's alpha for the two brief EDE-Q subscales exceeded 0.81 in all racial/ethnic groups.

2.3. Procedure

Participants were recruited through each university's research participant pool. Measures were completed online or in small group settings using a paper and pencil format. Participants received extra course credit as compensation.

2.4. Data analysis

Rates of missingness were low (<1% for all variables), and missing data were handled using listwise deletion. Skewness for all variables was less than 2.1, with most below 1.0. One-way analysis of variance (ANOVA) tests were performed in SPSS Version 25.0 to examine differences in age, BMI, appearance pressures, thin-ideal internalization, and eating pathology across the four racial/ethnic groups. Effect size was assessed via partial eta-squared ( $\eta_p^2$ ); a small effect is 0.01, medium 0.06, and large 0.14 (Cohen, 1988). Significant ANOVAs were followed by pairwise-comparisons using Tukey's HSD when the assumption of equal variances was met and Dunnett's C test when it was not. A chi-square test was used to examine differences in sexual orientation by race/ethnicity.

Multigroup structural equation modeling was conducted using Mplus 8.4 to evaluate measurement and structural models. For the measurement models, confirmatory factor analyses (CFAs) were conducted with robust weighted least squares mean- and variance-adjusted (WLSMV) estimation, which is appropriate for ordinal data. CFAs were examined in the full sample and then separately for each racial/ethnic group prior to multi-group testing. Model fit was assessed with the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), and chi-square ( $\chi^2$ ). Fit was considered adequate with values of CFI >0.95, RMSEA ≤0.08, and SRMR ≤0.08 (Swami & Barron, 2019). The chi-square statistic was

examined; however, as chi-square tends to be statistically significant with larger sample sizes, more emphasis was given to other estimates of model fit. Adequate fit for the measurement model was needed in each racial/ethnic group as a prerequisite for inclusion in multigroup structural testing.

Two separate structural models examined outcomes of dietary restraint and shape/weight overvaluation. Prior to multigroup testing, each structural model was assessed in the full sample. In the event of poor model fit, modification indices were consulted to identify source of misfit and avenues for modification. Once adequate fit was achieved, multigroup analyses were conducted. The first step in the multigroup analysis was a fully unconstrained model, where all model parameters were free to vary across groups. The next step was a fully constrained model, where all model parameters were held equal across groups. The models were compared using the DIFFTEST function in Mplus, the chi-square difference test for WLSMV estimation. If significant at *p* < .05, the less constrained model was considered a better fit than the more constrained model, indicating group differences on at least one pathway. Model pathways were then relaxed one at a time to determine where (at least one pair of) racial/ethnic groups differed. Each model with one pathway relaxed was compared to the fully constrained model, and if they differed significantly by the DIFFTEST function, each pair of racial/ethnic groups were compared for that pathway.

3. Results

ANOVAs indicated significant differences across racial/ethnic groups for all variables except age (see Table 1). Generally, Black women demonstrated the lowest levels of appearance pressures and internalization, while White and Asian women demonstrated the highest levels. Body satisfaction was highest among Black women and lowest among Asian women. Regarding eating pathology, Black women reported the lowest levels of shape/weight overvaluation and body dissatisfaction, while Asian women reported the lowest levels of dietary restraint. Asian women reported the lowest BMI, while Black women reported the highest. As racial/ethnic groups differed on sexual orientation status, and research indicates differences in TIM pathways by sexual orientation for women (Hazzard et al., 2019), sexual orientation was adjusted for in structural models. BMI was considered as a covariate, but as the pattern of BMI differences reflected the robust and known BMI differences by race/ethnicity in the US (Flegal et al., 2016) and are reflective of actual weight-based differences in lived experiences, BMI was not added as a covariate. Study site was also considered as a covariate;

however, partially by design to increase the number of racial/ethnic minority women, site was significantly associated with race/ethnicity and was not added as a covariate.

Measurement models evidenced good model fit for the full sample and each racial/ethnic group except Black women, whose measurement model for shape/weight overvaluation was not identified due to negative residual variance for one of the items on the subscale. Consequently, Black women were not included in subsequent shape/weight overvaluation structural models. Both structural models evidenced poor model fit, and modification indices suggested the addition of a pathway from perceived family pressures to body dissatisfaction. As this path was theoretically justified, it was retained in all subsequent models. Once this pathway was added, structural models evidenced adequate model fit (CFI  $\geq$  0.97, RMSEA  $\leq$  0.07, SRMR  $\leq$  0.05), allowing for multigroup model testing.

In multigroup models, the unconstrained model showed good fit for dietary restraint (CFI = 0.98, RMSEA = 0.06, SRMR = 0.06) and shape/weight overvaluation (CFI = 0.98, RMSEA = 0.06, SRMR = 0.06). The constrained model for dietary restraint also showed good fit (CFI = 0.98, RMSEA = 0.06, SRMR = 0.07), but significantly worse fit than the unconstrained model ( $\chi^2[36, N = 1754] = 51.76, p = .04$ ) indicating at least one model pathway differed by racial/ethnic group. The constrained model for shape/weight overvaluation also showed good fit (CFI = 0.98, RMSEA = 0.06, SRMR = 0.06), which was not significantly different than the unconstrained model ( $\chi^2[24, N = 1542] = 35.41, p = .06$ ). This indicated no significant difference in shape/weight overvaluation model pathways for Asian, Latina, and White women, precluding the need for further testing.

For dietary restraint, further testing indicated two pathways differed, perceived media pressures predicting thin-ideal internalization ( $\chi^2[3, N = 1754] = 8.31, p = .04$ ) and body satisfaction predicting dietary restraint ( $\chi^2[3, N = 1754] = 8.63, p = .03$ ). The pathway from perceived media pressures to thin-ideal internalization was significantly weaker for Black women compared to White women ( $\chi^2[1, N = 1376] = 4.70, p$

= .03). The pathway from body satisfaction to dietary restraint was significantly weaker for Black women compared to Latina women ( $\chi^2[1, N = 415] = 6.25, p = .01$ ), and for Asian women compared to Latina women ( $\chi^2[1, N = 378] = 5.89, p = .02$ ). Fig. 1 presents standardized path estimates for each racial/ethnic group from the unconstrained models.

#### 4. Discussion

As most theoretical models of eating pathology were developed with primarily White women, their usefulness in explicating risk for others outside that particular demographic warrants investigation (Schaefer et al., 2018). The primary goal of the current study was to examine whether the tripartite influence model of body image and disordered eating functioned similarly among a sample of White, Black, Latina, and Asian women. Although groups differed in their degree of endorsement of hypothesized risk factors, the TIM functioned well across racial/ethnic groups, consistent with hypotheses. Further, while few group differences emerged for individual pathways of the model, observed differences highlighted somewhat reduced pathway strength for Black women compared to other groups, which was also consistent with study hypotheses. Overall, results suggest more similarities than differences with respect to the suitability of the TIM in explaining body image and eating disturbance across diverse racial/ethnic women, and provide evidence that sociocultural influences on body image and eating pathology function similarly among White, Black, Latina, and Asian women in the US.

In the overall model, family pressures exhibited only small or non-significant relationships with thin-ideal internalization across groups, in contrast with the stronger associations observed for peer and media pressures. However, modification indices suggested the addition of a path from family pressures to body satisfaction, which was significant for all racial/ethnic groups. These findings suggest that family pressures may impact college women's appearance evaluation directly or through

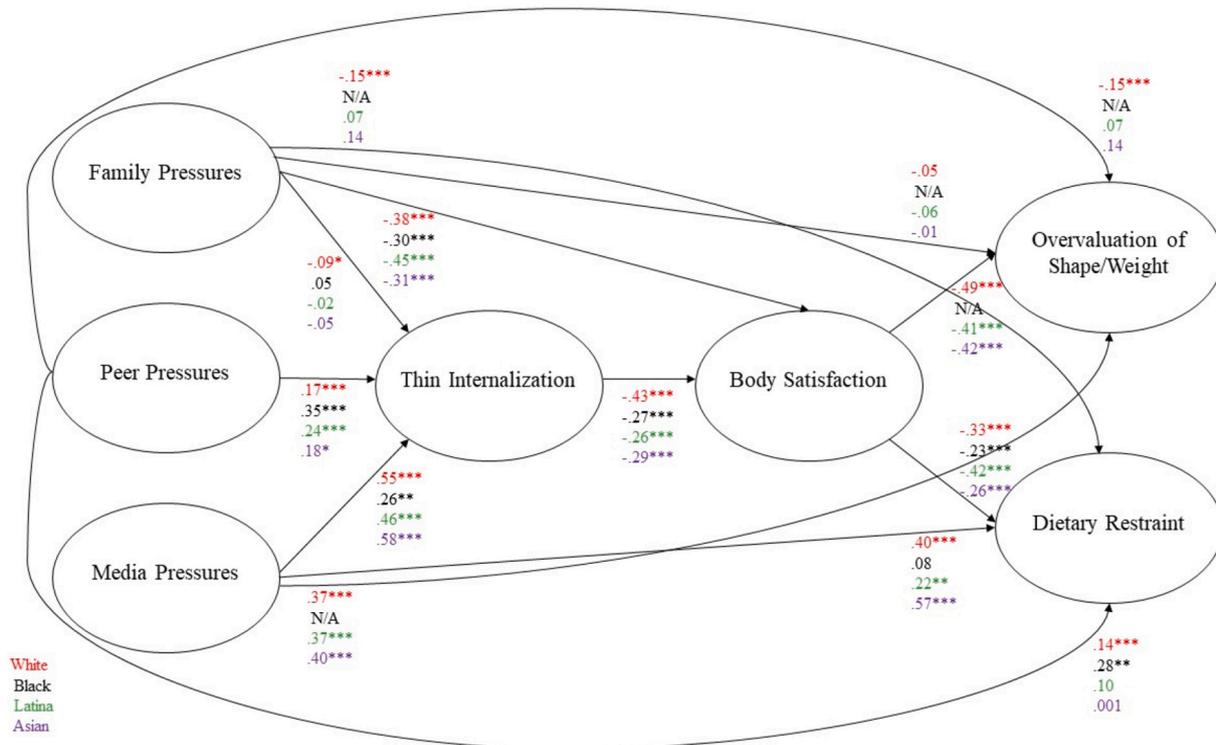


Fig. 1. Multigroup structural equation model results.

Note. Standardized path coefficients are adjusted for sexual orientation and are listed in the following order from top to bottom: White, Black, Latina, Asian. Bold indicates path differs by racial/ethnic group. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

other potential mechanisms, such as parental communication and modeling (Bardone-Cone et al., 2011; van den Berg et al., 2010). As evidence suggests that Black and Latinx families may encourage curvier body shapes (Franko et al., 2012; Kelch-Oliver & Ancis, 2011), it is also possible that findings may partially reflect a reduced emphasis on thinness for these families. Nonetheless, all proposed risk factors exhibited robust associations with at least one proposed downstream outcome, suggesting the relevance of sociocultural pressures, thin-ideal internalization, and body satisfaction in understanding eating outcomes for women of diverse racial/ethnic backgrounds.

Despite the overall model functioning similarly across groups, significant group differences were observed for two sections of the model. Media pressures was a significantly stronger predictor of thin-ideal internalization for White women compared to Black women, suggesting that when White women experience appearance pressures from media sources, they are more likely than Black women to adopt physical appearance ideals focused around thinness. Representations of women in mass media and Black-oriented media may somewhat explain these findings. Black women are less commonly featured in mass media (Jankowski et al., 2017). Because of this, Black women may view mainstream appearance ideals as less relevant (Chin Evans & McConnell, 2003; Milkie, 1999), resulting in reduced thin-ideal internalization. Further, as appearance ideals for Black women are generally more flexible and accepting of larger figures (Gordon et al., 2010; Rucker & Cash, 1992), appearance pressures from Black-oriented media may less commonly result in a personal desire for thinness or body dissatisfaction (Schooler et al., 2004). Nevertheless, appearance pressures for Black women remain, including pressures to achieve shapely, curvaceous figures (Kelch-Oliver & Ancis, 2011; Overstreet et al., 2010), which may involve bigger breasts and buttocks (Capodilupo & Kim, 2014). Further, non-figure specific aspects of appearance ideals may be relevant for Black women as well, including ideals around longer hair and skin clarity/tone (Capodilupo & Kim, 2014).

Body satisfaction was related to dietary restraint differently across racial/ethnic groups. The strongest relationship between body satisfaction and dietary restraint was for Latina women, and this relationship was significantly stronger for Latina women than for Black and Asian women. Notably, the current study utilized a broad assessment of appearance evaluation, which may have influenced these results. Evidence indicates that appearance concerns for Black and Asian women frequently include physical characteristics unrelated to weight or shape (e.g., skin tone, hair texture, eye shape/color; Awad et al., 2014; Bond & Cash, 1992; Capodilupo & Kim, 2014; Frederick et al., 2016), which may be less likely to motivate weight-loss promoting behaviors. In contrast, appearance concerns for Latinas tend to be more centrally focused on shape/weight, perhaps related to conflicting cultural messages promoting thin and curvy ideals (Franko et al., 2012). Given this, Latinas' reduced appearance satisfaction may be more likely to reflect shape/weight concerns and ultimately promote dietary restriction.

Regarding endorsement of sociocultural risk factors and eating pathology, Black women experienced the lowest levels of appearance pressures and thin-ideal internalization, but the highest BMI and body satisfaction. In contrast, White women experienced the highest levels of media appearance pressures and internalization, while Asian women experienced the highest levels of family and peer appearance pressures. Latina women tended to experience more moderate levels of proposed risk factors and eating pathology. These results align with research suggesting increased levels of appearance pressures, internalization, and body dissatisfaction for White, Latina and Asian women relative to Black women (e.g., Javier et al., 2016; Rakhkovskaya & Warren, 2016).

#### 4.1. Strengths and limitations

The current study simultaneously tested a theoretical model of body image and eating pathology in four racial/ethnic groups. Collaboration across multiple sites allowed for the large racial/ethnic minority

samples (~200/group) that made this possible. The use of validated measures and multigroup SEM to formally test the model supported the examination of measurement and structural models within each racial/ethnic group, as well as the comparison of individual pathways across groups.

Nevertheless, focusing on US college-aged women limits generalizability, suggesting future research expand to more diverse samples. Cross-sectional data preclude establishing temporal precedence or causality, highlighting the need for prospective examination. In addition, considering heterogeneity within each examined racial/ethnic group, future work should investigate the role of social and cultural factors (e.g., acculturation processes, discriminatory stress, ethnic identity) as potential moderators of the TIM within each group. Further to this point, culture of origin was not assessed in the current study. Although subgroups within each racial/ethnic group (e.g., Latinas) may share some cultural values (e.g., Sabogal et al., 1987), we are unable to evaluate the nuances within each racial/ethnic group, and this is an important area for future study. Additionally, as the questionnaires were all in English, this precluded inclusion of non-English speakers and perhaps those less acculturated to the US. Consequently, how the model would function in less acculturated individuals is still unknown.

Notably, we were unable to examine the relationship between body satisfaction and shape/weight overvaluation among Black women. As shape/weight overvaluation is posited to be the central maintaining feature of eating disorders in transdiagnostic models (Cooper et al., 1989; DuBois et al., 2017; Fairburn et al., 2003), examining this relationship among Black women remains important. Additionally, the SATAQ-4 media pressures subscale may not adequately capture social media's influence, which is negatively associated with body satisfaction irrespective of race/ethnicity (Saiphoo & Vahedi, 2019). As such, future research should investigate social media pressures in the context of the TIM. Finally, as with much of the research on the TIM (e.g., de Carvalho et al., 2017; Hazzard et al., 2019; Shagar et al., 2019; Shahyad et al., 2018), this study examined an adapted version of the original model (Thompson et al., 1999). Specifically, to include as many racial/ethnic minority women as possible across sites, appearance comparison was not included as a mediator between perceived pressures and body satisfaction. Adding this additional pathway is an important avenue for future work.

#### 4.2. Conclusion

Overall, results provide support for the TIM's applicability in understanding body image and disordered eating among diverse racial/ethnic groups. These findings indicate that although White, Black, Latina, and Asian women may endorse traditionally-recognized sociocultural risk factors to different degrees, when those risk factors are present, they likely contribute to proposed downstream consequences in similar ways. Consequently, interventions developed with predominantly White individuals (e.g., dissonance-based and media literature approaches; Stice et al., 2008; Wilksch & Wade, 2009) might be useful for disrupting TIM pathways across racial/ethnic groups, though further research is needed to determine this. Findings also highlight the importance of examining the experiences of Black women in further detail, to harness and cultivate cultural and interpersonal processes that may be protective. Possibly, such processes could be integrated or developed into interventions to improve body image and disordered eating for others. More information is needed to understand the particularly strong, negative pathway between body satisfaction and dietary restraint in Latina women, and what might be more protective for Black and Asian women in this regard.

#### Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## CRediT authorship contribution statement

Natasha L. Burke: Conceptualization, Formal analysis, Methodology, Project administration, Supervision, Writing - Original Draft, Writing - Review & Editing; Lauren M. Schaefer: Formal analysis, Resources, Writing - Original Draft, Writing - Review & Editing; Yvette G. Karvay: Writing - Original Draft, Writing - Review & Editing; Anna M. Bardone-Cone: Resources, Writing - Review & Editing; David A. Frederick: Resources, Writing - Review & Editing; Katherine Schaumberg: Writing - Review & Editing; Kelly L. Klump: Resources, Writing - Review & Editing; Drew A. Anderson: Resources; J. Kevin Thompson: Resources, Writing - Review & Editing; All authors contributed to and have approved the final manuscript.

## Declaration of competing interest

The authors have no conflicts to declare.

## Acknowledgements

The authors wish to thank Ola S. Rostant, PhD, for conducting preliminary analyses.

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