



---

**THE HONORS PROGRAM**

**Hearing the Media:  
An Investigation of Mainstream Media and  
Deaf/deaf Women's Body Image Development**

*An Honors Capstone Submitted in Partial Fulfillment of the Requirements for Graduation with  
University Honors*

*By: Aileen Aldalur*

---

*Committee Chair: Deborah Schooler, Ph.D.*

*Second Reader: Deborah Maxwell-McCaw, Ph.D.*

*Honors Director: Shirley Shultz Myers, Ph.D.*

*Honors Coordinator: Geoffrey Whitebread, M.A.*

*Date: April 12, 2013*

**Table of Contents**

Abstract	p. 3
Introduction	p.4
Media Influences	p. 5
Existing Perspectives	p. 6
Culture and Body Image	p. 7
Acculturation	p. 9
Acculturative Stress	p. 11
Deaf Cultural Identity	p. 12
Deaf Women and Body Image: Previous Studies	p. 14
The Current Study	p. 15
Method	p. 16
Results	p. 24
Discussion	p. 27
References	p. 35
Tables	p. 42
Appendix	p. 50

## Abstract

The positive relationship between exposure to mass media and body image disturbances has been well documented. However, for the most part, these studies have focused on the contributions of media exposure on the body image of White women. Recent research suggests that for ethnic minority women, membership in a cultural minority may be a protective factor against internalization of mainstream standards of beauty and the development of body image disturbance; although this protective buffer depends on women's levels of acculturation within their ethnic cultures and their respective levels of acculturative stress. The current paper presents survey data investigating whether these patterns extend to D/deaf women. Data was collected from 96 deaf, female, undergraduate students at Gallaudet University. Results indicate that exposure to mainstream media was not a significant predictor of body image disturbance among deaf women; however, degree of Deaf acculturation, acculturative stress, and internalization of mainstream messages were all significant predictors of body image. Higher levels of internalization and acculturative stress were associated with body image disturbance, while stronger Deaf acculturation was associated with healthier body image. Although stronger Deaf acculturation was predictive of a healthier body image, results do not support the hypothesis that stronger Deaf acculturation helps deaf women resist internalizing mainstream messages. Instead, degree of Deaf acculturation and acculturative stress seem to have a direct path to body image. These results may inform practice with deaf women. Facilitating open discussion of Deaf acculturation status and feelings of marginalization may be especially important when working with deaf women.

### **Introduction**

Body image dissatisfaction among females is prevalent in American society and is a cause for serious concern due to its significant role in predicting eating disturbances and low self-esteem (Dohnt & Tiggemann, 2006; Stice, Schupak-Neuberg, Shaw, & Stein, 1994), as well as leading to more serious disorders, such as depression, anorexia, and bulimia (Stice & Bearman, 2001; Taylor, et al., 1998). Research has examined the relationship between media influences and body image disturbances in females, and the net result of these studies has shown a positive relationship between exposure to mass media and body dissatisfaction, body image disturbances, and disordered eating behaviors (Dohnt & Tiggemann, 2006; Grabe, Ward, & Hyde, 2008; Stice, et al., 1994).

Less research has examined the effects of mainstream media on culturally diverse women, although over the past decade, research in this area has increased (Grabe & Hyde, 2006). More research with culturally diverse women would enhance our understanding of the impact of mass media on women's body image development. The current study aims to further research examining the influences of mainstream media on the body image of culturally diverse women by examining media use and body image among a sample of Deaf/deaf women at Gallaudet University. Data collected through an online survey is used to examine media influences by investigating whether media use, internalization of mainstream messages, Deaf acculturation status, and acculturative stress are associated with body image among deaf women and whether deaf women's level of acculturation within Deaf culture can predict the extent to which they internalize mainstream media's societal messages of female beauty.

### Media Influences

Mass media (television, internet, movies, music, and print) in general serves as a channel through which dominant political and cultural ideals can be transmitted to society. The public perception of the ideal female body type has been shaped by cultural standards of beauty throughout history. Beauty messages in today's media, however, are far more ubiquitous and powerful than in the past. This presents growing concerns, especially when coupled with rising rates of eating disorders in the population (Derenne & Beresin, 2006). Images in mass media portray an unattainable reality for most women, as the "ideal body size" portrayed in the media is on average 13-19% below the expected weight for a healthy woman (Wiseman, Gray, Mosimann, & Ahrens, 1992, p. 89). According to the *Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> edition, text revision* (DSM-IV-TR) the first criterion for anorexia is a body weight 15% below of what is expected (American Psychiatric Association, 2000). Therefore, a majority of the women depicted in the mass media meet one of the major criteria required for the diagnosis of an eating disorder. A content analysis of 18 prime-time television situation comedies revealed that below-average weight females were overrepresented in the programs. Likewise, the heavier the female character, the more negative comments were made about or to her, and negative comments were significantly associated with audience reactions such as laughter (Fouts & Burggraf, 2000). Exposure to images of women in mass media and the related messages of these images about weight and body shape is associated with body dissatisfaction, drive for thinness, weight concerns, and disordered eating among women and even now among girls as young as six (Dohnt & Tiggemann, 2006; Grabe, Ward, & Hyde, 2008; Field, Cheung, Wolf, Herzog, Gortmaker, & Colditz, 1999).

### **Existing Perspectives**

How might mass media affect a woman's body image? Most theories that have evolved in an attempt to provide an answer to this question revolve around amounts of exposure, as in cultivation theory, and comparisons made to media images, as in social comparison theory.

#### **Cultivation Theory**

Cultivation theory focuses on television's contributions to viewer conceptions of social reality. Simply stated, those with more exposure to mass media are more likely to perceive the real world in ways that reflect the recurrent messages inherent in the media (Morgan, Shanahan, & Signorielli, 2009). The media's representations of women's bodies are so skewed that they paint a false portrait of reality, and adopting this alternative reality as valid is believed to lead to negative consequences for women such as decreased satisfaction with their bodies, a desire to be thinner, and disordered eating behavior. Hundreds of studies have been conducted based on this theory, and results have supported the association between exposure to mass media and greater body dissatisfaction (Grabe, Ward, & Hyde, 2008).

#### **Social Comparison Theory**

Working with the premises of cultivation theory, Festinger's (1954) social comparison theory provides a more in depth analysis of the mechanisms that underlie the relationship between media exposure and body image disturbances. Social comparison theory is based on the notion that individuals are constantly making comparisons between themselves and other individuals with similar attributes. The theory states that in a highly achievement-oriented culture such as America, an individual will compare him/herself to someone who is faring slightly better on the dimension of comparison. This process is referred to as upward

comparison, and it has been noted that upward comparison forces the comparer to evaluate him/herself as inferior, which ultimately results in feelings of failure and a depression of mood (Wheeler, 1966). Since the images of women portrayed in the media are unrealistic and unattainable for the majority of women in society, upward comparisons with these characters are likely to result in stress and persistent feelings of inadequacy, leading to greater body dissatisfaction. Research has supported this notion with the findings that weight, body shape, and other comparisons with peers and models alike are primary correlates of body dissatisfaction (Jones, 2001).

### **Culture and Body Image**

Representations of women in the media are not only unrealistically thin; they almost exclusively represent dominant American cultural ideals and values. Women depicted in mass media are typically White<sup>1</sup>, affluent, heterosexual, and without disability. Research on body image has predominantly focused on White women and girls, with less focus on ethnic differences, although due to differences in cultural contexts and meanings, women from different cultures may differ in the extent to which they are dissatisfied with their bodies (Grabe & Hyde, 2006). While research shows that exposure to mainstream media affects the body image development of women who identify with dominant American culture, it is not possible to generalize this finding to ethnic minorities or other diverse groups of women. Women identifying with a different culture or adhering to the values of a different subgroup may not internalize the messages of mainstream media to the same extent as White women.

---

<sup>1</sup> The term “White” is capitalized throughout this paper because it is used to represent a culture group; mainstream culture.

**Mass Media and Minority Women**

According to social comparison theory, the tendency to compare oneself with another person decreases as the difference between the two persons increases (Festinger, 1954). Findings from social psychological research state that individuals are more likely to compare themselves to others who share relevant attributes and hence are more informative and appropriate for accurate self-appraisal (Crocker & Major, 1989). A few studies that have been conducted to examine the influences of mainstream media on ethnic minority women have shown support for social comparison theory. One study that compared the effects of viewing both mainstream and Black-oriented television on White and Black women found that viewing mainstream media was correlated with poorer body image among White women, but because Black women tended to reject comparison with White female characters, they were generally not influenced (Schooler, Ward, Merriwether, & Caruthers, 2004). Also, viewing Black-oriented television was not related to body image conception in White women, but was positively correlated with healthier body image in Black women. Supporting the notion that ethnic minority women are less likely to compare themselves to images of White women in the media, Botta (2000) states that as long as images of Black women in mass media represent a larger body size or are nonexistent, African American adolescents will remain less affected by the media. Nevertheless, research indicates that Black adolescents show similar patterns of idealizing media images and making comparisons to images of women of color in mass media (Botta 2000). Therefore, Botta (2000) claims that as images of thin women in the media continue to diversify in terms of race, the gap between White and Black women's body image disturbances will shrink.

While studies examining the influences of mainstream media on Black women indicate that they are unaffected by representations of thin White women in the media, research



investigating the influences of mainstream media on other ethnic minority women has not obtained the same results. One study found that among Latina women, viewing mainstream media was correlated with body dissatisfaction, suggesting that Latina women may consider images of White women in the media to be valid targets of comparison (Schooler, 2008). The results of studies examining the specific influences of mainstream media on culturally diverse individuals are inconclusive, and more research is needed in order to gain an understanding of the ways in which mainstream media affects culturally diverse individuals.

### **Acculturation**

Acculturation refers to a process of psychological and behavioral change that occurs as individuals engage in ongoing contact with a new culture. An individual's customs, beliefs, values, and standards are often shaped by their cultural identity and background. Because standards of beauty and body shape ideals among various ethnic minority cultures often diverge significantly from the mainstream American ideal, an individual's level of acculturation within both mainstream American culture and in their ethnic culture of origin may determine to which set of cultural values that individual attends. Furthermore, the process of acculturation is often difficult in itself, and individuals may encounter specific frustrations as they attempt to place themselves somewhere in between the lines of two cultures. The resultant feeling of stress from the process of acculturation may lead to unhealthy behaviors and mental processes. Therefore, both an individual's level of acculturation and their resultant levels of acculturative stress may have an impact on their body image development.

### **Competing Cultural Values**

As previously stated, standards of beauty and ideal body shapes differ among various cultures. For example, research indicates that in general Latino and Black cultures espouse larger body shape ideals for women (Gordon, Castro, Sitnikov, Holm-Denoma, 2010). Membership in an ethnic minority has been considered a “protective factor” against the internalization of mainstream media’s societal messages and the development of negative body image, but an individual’s ethnic identity does not guarantee them invulnerability (Root, 1990). An individual’s level of acculturation is an important consideration when conducting research on body image because while an individual may identify with a minority culture, they may not necessarily maintain a high level of cultural practice in that culture (Maxwell-McCaw & Zea, 2010). The extent to which women identify with Western culture influences the way they relate to mainstream media. In fact, research findings have shown that the amount of exposure and internalization of Western ideals is positively correlated with body dissatisfaction. For example, one study examined the eating behaviors and attitudes of ethnic Fijian adolescent girls after prolonged exposure to Western television and explicitly linked changing attitudes about diet, weight loss, and aesthetic ideals in the peer environment to Western media imagery (Becker, Burwell, Herzog, Hamburg, & Gilman, 2002). Another study examined the influence of awareness and internalization of Western ideals on body dissatisfaction in Euro-American and Hispanic males and found that awareness of Western ideals positively predicted internalization of those ideals and that internalization positively predicted body dissatisfaction (Warren, 2008). Also, findings from studies examining the influences of mainstream media on Latina adolescents have demonstrated the importance of considering the factor of acculturation in studies of body image development (Schooler, 2008). Specifically, the body image of Latina adolescents who are

more acculturated with Western ideals is influenced to a greater extent by exposure to mainstream media than those Latina adolescents who maintain a stronger level of acculturation with their native culture (Schooler, 2008). The results of these studies, along with several others, have displayed the importance of considering degree of acculturation when conducting research with culturally diverse individuals.

### **Acculturative Stress**

As individuals go through the process of acculturation, they often encounter several hardships and frustrations along the way. Gowen et. al. (1999) suggested that acculturative stress may arise when an individual encounters the specific difficulties of the acculturation process as they try to fit in with a culture that is different from that of their upbringing. Acculturative stress can lead to maladaptive coping behaviors among ethnic minority individuals (Gowen et. al, 1999) and therefore may stand as a key factor in the link between internalization of Western ideals and the development of body image disturbances among ethnic minority women. A study examining the cultural body shape ideals and eating disorder symptoms among White, Black, and Latina women found that higher levels of acculturative stress, rather than acculturation, were predictive of higher levels of body dissatisfaction and drive for thinness among Blacks and Latinas (Gordon, Castro, Sitnikov, Holm-Denoma, 2010).

Although an individual's cultural values may serve as a buffer against the influences of mainstream media, acculturation to Western ideals can undermine the protective buffer. Also, acculturative stress has been associated with body dissatisfaction in previous studies with ethnic minority women. Therefore, it is important to include both acculturation and acculturative stress

as factors in research examining body image among cultural minorities, including deaf individuals.

### **Deaf Cultural Identity**

Two<sup>2</sup> separate models reflect the different social perspectives on deafness: the medical model and the sociolinguistic/cultural model. Physicians, audiologists, and other professionals typically view hearing loss as a disability that should be treated with various remedies, and are often unaware of the distinction that Deaf people make between Hearing and Deaf culture (Andrews, Leigh, & Weiner, 2004). In this model, deafness is considered a disability that should be corrected so that deaf individuals may function within a hearing world. On the other hand, the sociolinguistic/ cultural model rejects the notion of deafness as a disability. Instead, many deaf persons consider themselves as part of a unique culture with its own language, belief systems, values and standards (Andrews, Leigh, & Weiner, 2004). Members of Deaf culture interact with one another within their own community, which contains its own schools, clubs, organizations, traditions and customs. However, regardless of whether they identify as culturally Deaf or not, all deaf /hard-of-hearing (d/hh) people must, to varying extents, interact with the hearing majority around them (Maxwell-McCaw & Zea, 2011). Like any ethnic minority in an open society, deaf persons must acquire enough social apparatus to behave efficiently within the majority system (Broom, & Kitsuse, 1955). Once they have reached that point, they have the option of furthering the process of acculturation into the hearing majority society or maintaining a strong Deaf identity. Based on the various acculturative experiences of d/hh persons in America, researchers have identified four separate Deaf acculturation statues or identities.

---

<sup>2</sup> A third, Disability model of deafness is present in some literature. This model acknowledges deafness as a physical limitation but no desire to correct the limitation is present. Instead, the model places responsibility on society to take down barriers and provide access for all individuals. However, this is beyond the scope of the current study. The medical and cultural models are presented simply to provide a clarifying contrast for the purpose of this study.

Depending on their psychological identification, cultural behaviors, cultural attitudes, cultural knowledge, and language competence within both Deaf and Hearing culture, deaf individuals may be classified as Deaf acculturated, Hearing acculturated, bicultural, or marginal (see Table 1) (Maxwell-McCaw & Zea, 2011). It is important to note that deaf individuals come from a variety of ethnic backgrounds and therefore members of Deaf culture may also be members of several other cultural minority groups which may influence their body image development.

### **Deaf Acculturation Status: Impact on Body Image?**

Studies examining the psychological effects of each Deaf acculturation status have shown that both Deaf and bicultural identities are associated with higher self-esteem in deaf individuals compared to Hearing and marginal identities (Bat-Chava, 2000). In previous studies among other populations, high self-esteem has been shown to be associated with positive body image, although the casual direction of the relationship between the two factors has not been established (Grogan, 2010). Marginal identities, comprised of those who receive low scores on both the Deaf and Hearing cultural scales, have been found to be the least adaptive of the four acculturation statuses (Andrews, Leigh, & Weiner, 2004). This could be due to the unique acculturative stress faced by those who have yet to fit into either culture. Coping with the pressures of acculturation and dealing with acculturative stress has been linked to the development of bulimic behaviors and drive for thinness among ethnic minority women (Gordon, Castro, Sitnikov, Holm-Denoma, 2010). However, the content of cultural experiences of deaf women may significantly differ from other ethnic minority women. Therefore, it is unclear how deaf women's level of acculturation within Deaf and Hearing culture and their respective levels of acculturative stress are related to their body image development.

### **Deaf Women and Body Image: Previous Studies**

Very few studies have been conducted on deaf women and body image. To date, three previous studies have examined Deaf identity, body image and eating disorder symptoms. A study conducted by Hills, Rappold and Rendon at Gallaudet University examined body image and eating behaviors in 100 deaf students (as cited in Moradi & Rottenstein, 2007). In this study, women self-reported disturbed eating behaviors such as binge eating, vomiting for weight control, and strict dieting or fasting, along with fear of weight gain and estimation of body size. From the findings, the researchers concluded that body image disturbance and eating disorder symptoms were a serious concern for deaf women. However, these findings should be interpreted with caution, as a presentation on eating disorders was given prior to administering the survey and a description of anorexia and bulimia were posted in the room during data collection. The presented information could have influenced participant's responses. Another study measured Deaf cultural affiliation and eating disorder symptoms in adolescent girls attending residential schools for the deaf (DeWalt, 1998). Findings suggested that Deaf cultural affiliation was related to lower eating disorder symptoms for deaf girls. However, the measure for Deaf culture affiliation was created for and used only for this study and therefore had little evidence of reliability or validity, and Deaf cultural identity was only assessed unidimensionally, and thus could not account for marginal identities.

Building on these studies, Moradi and Rottenstein (2007) examined the relationships between internalization of sociocultural standards of beauty, body surveillance, body shame, and eating disorder symptoms with a sample of deaf women. Using Glickman's model of Deaf cultural identity, their study specifically took into account marginal and bicultural Deaf identities. Results indicated positive relations between internalization of sociocultural standards

of beauty and body surveillance, body shame, and eating disorder symptoms among the sample of deaf women, which were consistent with prior research findings from other populations. Furthermore, the study found that marginal identities were related uniquely with eating disorder constructs, but hearing, Deaf, or bicultural identities were not. Also, marginal identities were related to greater internalization, body surveillance, and body shame. Further research that takes into account the various Deaf acculturative experiences and internalization of dominant cultural standards is needed in order to determine the significance of Deaf acculturation status on the body image development of deaf women.

### **The Current Study**

The primary goals of the current study were to examine media use, internalization of mainstream beauty messages, Deaf acculturation status, and acculturative stress, as predictors of body image among deaf women and to investigate whether or not Deaf acculturation may serve as a buffer for deaf women against internalization of the beauty messages presented in mainstream media. Previous studies with deaf women have not considered the use of media and the ways in which it may influence the development of a healthy body image. This study evaluated the extent to which both media and cultural variables predict deaf women's body image development by investigating the following research questions and hypotheses:

- 1) Are media use and internalization of mainstream societal messages associated with body image disturbance among deaf women? Using several body attitude measures and subscales from the Sociocultural Attitudes Towards Appearance scale, a replication of previous findings from other populations was expected, such that media use and internalization of mainstream messages would be associated with body image disturbance and disordered eating among deaf women.

- 2) Are Deaf acculturation status and acculturative stress associated with body image disturbance among deaf women? Drawing from Moradi and Rottenstein's (2007) findings as well as others displaying the associations between Deaf identity and body image, it was expected that stronger Deaf acculturation would be associated with healthier body image, while stronger Hearing acculturation would be associated with a more negative body image among deaf women. Also, Drawing from Gordon, Castro, Sitnikov, and Holm-Denoma's (2010) findings displaying the associations between acculturative stress and body image in ethnic minority women, it was expected that acculturative stress would be associated with higher levels of body image disturbance and disordered eating in deaf women.
- 3) Is Deaf acculturation status predictive of internalization of mainstream beauty messages among deaf women? Under the premises of social comparison theory, it was expected that Deaf acculturation would act as a buffer against internalization of mainstream beauty messages, such that stronger Deaf acculturation would be predictive of lower levels of internalization among deaf women. While stronger Hearing acculturation would be predictive of higher levels of internalization.

## **Method**

### **Participants**

Participants consisted of 96 deaf, female, undergraduate students, aged 18-54 ( $M = 21.9$ ) at Gallaudet University in Washington, D.C. Seventy-two percent were White, 10% were Hispanic/Latino, 8% were Black/ African American and 10% were classified as multiracial. In terms of hearing loss, about 1% of the sample reported a mild hearing loss of 10-39db, 14% a



moderate loss of 40-69db, 14% a severe loss of 70-89db, 63% a profound loss of 90-120db, and approximately 8% did not know their loss or did not answer. The Body Mass Index scores for this sample [ $\frac{\text{Weight in pounds}}{(\text{Height in inches})^2} \times 703$ ] fell into a normal weight category and ranged from 16.3 to 44.9 (M= 24.62).

## Procedure

This study was approved by the Institutional Review Board at Gallaudet University in Washington, D.C.

Data was collected through an anonymous online survey throughout the fall semester of 2012. Students were recruited from undergraduate psychology courses as well as courses from various departments offering extra credit for participation and through flyers posted in campus buildings. Participants were told that the purpose of the study was to examine how Deaf/deaf women think about themselves and mass media and were given the URL to access the survey which they then completed on their own time. Upon accessing the survey participants received the informed consent form and indicated their agreement to participate by clicking “Yes” before continuing to the survey. Participants then answered 197 questions regarding their background, media use, Deaf acculturation status, acculturative stress, internalization of mainstream media female beauty messages, body satisfaction, and eating behaviors. Once participants completed the survey, they were instructed to print the last page of the survey as proof of completion and take it to the designated office in the psychology department to receive an extra credit certificate for any participating course. The last page contained a thank you note to participants for completing the survey, and instructions for obtaining the extra credit certificate.

A total of 175 surveys responses were collected and screened to eliminate (1) male responses (2) ineligible responses (hearing or no reported hearing loss) and (3) surveys missing substantial amounts of information, resulting in a final sample of 96 deaf women for analyses.

### **Instruments**

Selected instruments consisted of Maxwell-McCaw and Zea's Deaf Acculturation Scale (2011) and the Societal, Attitudinal, Familial, and Environmental Acculturative Stress Scale (SAFE; Fuentes, & Westbrook, 1996), as well as several psychological measures which have been used extensively in previous research to assess various aspects of body image and internalization among women. Several steps were taken to maximize the applicability of the survey measures for use with deaf participants. First, a professor at Gallaudet University with expertise in Deaf culture, identity, communication, and research, served as a consultant and reviewed the survey in order to evaluate its appropriateness for use with a deaf population. Recommendations for modifications were made regarding content, diction, format, and syntax of survey items and directions in order to reduce possible misinterpretations. Resultant changes are described in the instruments section. Also, Microsoft Word was used to calculate the Flesch-Kincaid grade level score<sup>3</sup> for the entire survey and the result indicated that the survey approximated a sixth-grade reading level. Although the average reading level of the prelingually deaf has been reported to be around the fourth grade level (Leigh & Anthony-Tolbert, 2001; Olkin, 2004), the current sample consisted of college educated deaf students, therefore a sixth-grade reading level seemed suitable.

---

<sup>3</sup> The Flesch-Kincaid Grade Level of a document is calculated by taking into consideration the average sentence length (number of words/ number of sentences) and the average number of syllables per word (the number of syllables/ the number of words). The formula is  $(.39 \times \text{average sentence length}) + (11.8 \times \text{average number of syllables}) - 15.59$  (Microsoft Corporation, 2013).

**Deaf acculturation measures.** The 58-item measure Deaf Acculturation Scale (DAS; Maxwell-McCaw & Zea, 2011) was used to measure levels of acculturation to both Deaf and Hearing cultures among the participants. Items on the DAS measure acculturation across five domains including cultural identification, cultural involvement, cultural preferences, cultural knowledge, and language competence. Responses are rated on a Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The DAS measures the strength of acculturation to both Hearing and Deaf cultures on two separate acculturation scales; the DASd (Deaf) and the DASH (Hearing). Two separate scoring methods have been validated for the DAS. In the first method, participants are given a separate acculturation score (scored as a continuous variable) for each culture. The acculturation score is obtained by totaling the average scores of each of the individual subscales within the DASd and DASH and then dividing them by the number of subscales (5). The acculturation scores indicate participants' level of acculturation to both Deaf and Hearing cultures in which higher numbers indicate higher cultural involvement. The second scoring method assigns participants a high score (above a 3) or a low score (below a 2.9) on each of the acculturation scales (Hearing and Deaf). Then by combining the two scores, participants are classified into one of four acculturation styles, Deaf (high on Deaf acculturation, low on Hearing acculturation), Hearing (low on Deaf acculturation and high on Hearing acculturation), bicultural (high on both Deaf and Hearing acculturation), or marginal (low on both Deaf and Hearing acculturation). For the current study, the second scoring method of classification was not possible due the low number of marginal and Hearing identities compared to Deaf and bicultural identities. Therefore, the first scoring method was used and acculturation was measured as a continuous variable for both Deaf and Hearing acculturation. Strong internal reliability for the DAS has been established; Maxwell-McCaw and Zea reported Cronbach

alphas<sup>4</sup> ranging from .88 to .92 for the subscales of the DASd with an alpha of .95 for the overall scale, and Cronbach alphas ranging from .71 to .85 for the subscales of the DASH with an alpha of .91 for the overall scale. Validity has been established for the DAS through factorial analysis and the demonstration of its ability to discriminate between groups based on school background, parental hearing status, and the use of self-labels. For the current sample, Cronbach alphas for the DASd ranged from .75 to .93 with an alpha of .92 for the overall scale and the Cronbach alphas for the DASH ranged from .63 to .86 with an alpha of .88 for the overall scale.

**Acculturative stress measures.** Levels of acculturative stress were measured by a modified version of the 24-item Societal, Attitudinal, Familial, and Environmental Acculturative Stress Scale (SAFE; Fuertes, & Westbrook, 1996). The shortened version of the original 60-item scale has been used extensively in previous research, and reasonable reliability characteristics have been shown with a variety of populations including a heterogeneous group of black college students (Cronbach alpha: .87; Perez, Voelz, Pettit, & Joiner, 2002), African Americans (alpha: .89; Joiner, & Walker, 2002), and Hispanic Americans (alpha: .89; Fuertes, & Westbrook, 1996). In order to measure acculturative stress specifically with regard to Hearing and Deaf culture, several modifications were made to the scale including, word and phrase substitutions, removal of two irrelevant items, and the addition of one item regarding American Sign Language. For example, the word “ethnicity” was substituted with “hearing status,” the item “It bothers me to think that so many people use drugs” was deemed irrelevant to Deaf culture and thus omitted from the scale, and references to “cultural background” were substituted with references to important values in Deaf culture (educational background) to avoid confusion with ethnic culture

---

<sup>4</sup> Cronbach alpha is a statistic that is commonly used as a measure of the internal reliability of a given measure. Internal reliability refers to the degree in which the various items of a test deliver consistent scores. A high Cronbach alpha is a sign of strong internal reliability. In general, alphas above .65 are accepted (DeVellis, 2003).

(A full list of the modifications made to this measure is provided in the appendix). The resultant 23 items measured participants' acculturative stress in social, attitudinal, familial, and environmental contexts, as well as perceived discrimination towards one's identity as a deaf person. Using a 5 point Likert-type scale ranging from 1 (not stressful) to 5 (extremely stressful) participants rated how stressful certain situations are for them, such as "I often feel ignored by people who are supposed to assist me." The additional response of (not applicable) was also an available choice. Those items that were not applicable to subjects were assigned a score of 0. Mean scores were then computed across the items for each participant with higher scores indicating higher levels of stress. The construct validity<sup>5</sup> of the SAFE has been established through correlational analyses relating acculturative stress to general life stress, as well as depressive and anxious symptoms (Joiner, & Walker, 2002). Also, in an earlier study the items were found to discriminate between generations of both Japanese and Mexican American students (Padilla, Alvarez, & Lindholm, 1985). In this sample, the Cronbach alpha for the modified SAFE was .93.

**Internalization measures.** Participants' internalization of mainstream societal influences was measured by the *Internalization: General* subscale of the Sociocultural Attitudes Towards Appearance Scale-3 (SATAQ-3; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2003). The *Internalization: General* subscale contains nine items, such as "I compare my body to the bodies of people who are on TV"; and respondents indicated how strongly they agreed with each item from 1 (definitely disagree) to 5 (definitely agree). For emphasis, consultants recommended capitalizing the negative words in items in which double negatives were created by disagreeing with the item such as, "It does NOT matter if my body looks like the body of people who are on

---

<sup>5</sup> Construct validity refers to whether or not a given measurement actually measures the construct under investigation. Constructs are abstract psychological concepts that cannot be directly measured.

TV.” Appropriate items were reverse scored, and item ratings were averaged across the subscale, with higher scores indicating greater levels of internalization. The *Internalization: general* subscale has established reliability, and a reported high Cronbach alpha of .92. In regards of validity, construct validity has been established for the subscales of the SATAQ-3 by demonstrating their ability to discriminate between known groups of eating disordered inpatients, eating disturbed non-patients and a control group of individuals showing no signs of disturbed eating or body image disturbance (Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2003) . The Cronbach alpha for the subscale in the present sample was .91.

**Body Image Measures.** Three subscales of the Eating Disorders Inventory (EDI; Garner, Olmstead, & Polivy, 1983) *Drive for Thinness*, *Bulimia*, and *Body Dissatisfaction* along with the Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987) were used to assess various dimensions of the participants’ body image.

The first measurement, the three chosen subscales from the original 64-item, self-report EDI (Garner, Olmstead, & Polivy, 1983), measured both psychological and behavioral components of body image. For each item included in the *Drive for Thinness* and *Bulimia* subscales, respondents indicated how often each statement applies to them by choosing a value between 1 (never) and 6 (always). However, the *Body Dissatisfaction* subscale was rated on a scale of 1 (never) to 5 (always) due to a technical error. The *Drive for Thinness* subscale measures preoccupation with weight, excessive dieting, and entrenchment in the pursuit of thinness, and contains seven items such as “I feel extremely guilty after overeating.” The *Bulimia* subscale measures the tendency towards episodes of bingeing and towards the impulse to engage in compensatory behaviors, and it contains seven items such as “I eat when I’m upset.” The *Body Dissatisfaction* subscale measures the belief that specific parts of the body are disproportionate

and contains nine items such as “I think my thighs are too large.” Appropriate items were reverse coded and average ratings were calculated for each of the subscales with higher scores indicating more maladaptive body image attitudes and behaviors.<sup>6</sup> All three subscales have reported uniformly high Cronbach alphas (*Drive for Thinness*: .85; *Bulimia*: .83; *Body Dissatisfaction*: .91) establishing their internal reliability. Validity for the EDI has been constructed through a cross-validation<sup>7</sup> procedure of anorexia patients and a female comparison group, comparison of female self-report and clinician’s ratings, and the establishment of convergent and discriminative<sup>8</sup> validity (Garner, Olmstead, Polivy, 1983). The Cronbach alphas for the EDI subscales in this sample were *Drive for Thinness* .91, *Bulimia* .86, and *Body Dissatisfaction* .92.

The second measurement, the self-report Body Shape Questionnaire (BSQ: Cooper, Taylor, Cooper, & Fairburn, 1987) measured cognitive aspects of body image such as concerns about body shape. The BSQ contains 34 items such as, “Has feeling bored made you brood about your shape?” Items are rated on a six-point Likert scale ranging from 1 (never) to 6 (always), and respondents indicated how often each statement had applied to them over the previous four weeks. Mean scores were computed across the items for each participant, with higher scores indicating a more negative body image. Previous studies in which the BSQ has been administered have reported high Cronbach alphas such as .98 (Schooler, Ward, Merriwether, & Caruthers, 2004), and the validity of the BSQ have been demonstrated through its correlation with the *Body Dissatisfaction* subscale of the EDI and by its ability to discriminate between

---

<sup>6</sup> The clinical scoring method outlined by the measure’s creators which designates the “most anorexic response” a score of 3, the immediate adjacent response a 2, the next response a 1, and the three choices opposite the “most anorexic response” 0, was not used because due to a technical error the *Body Dissatisfaction* subscale was measured on a scale of 1-5 instead of 1-6 and therefore could not be clinically scored.

<sup>7</sup> Cross validation is a statistical procedure for estimating how accurately the results of a statistical analysis will generalize to a given data set.

<sup>8</sup> Convergent validity refers to the degree to which a measure shows correspondence with similar constructs. Discriminative validity refers to the degree to which a measure is able to discriminate between dissimilar constructs.

known groups including women who fulfilled the self-report diagnostic criteria for bulimia nervosa classified as “probable cases” and a control group of women classified as “definite non-cases” (Cooper, Taylor, Cooper, Fairburn, 1987). The Cronbach alpha for the BSQ in the present sample was .98.

**Media Use Measures.** To assess participants’ media use patterns, a few, adapted, self-report questions from the Print Media, Movies and Television sections of the Kaiser Family Foundation’s study, *Generation M2: Media in the Lives of 8-to-18 Year Olds* (Rideout, Foehr, & Roberts, 2010), were used. Respondents reported the amount of time they spent reading both mainstream and Deaf magazines, and watching mainstream and Deaf movies and television on a typical weekday and weekend day. Response categories for media use included no time, 5 minutes, 15 minutes, 30 minutes, 45 minutes, 1 hour, and continuing in ½ hour increments up to 5 or more hours. Responses were scaled into total hours per week for mainstream media use and Deaf media use, based on the amount of time reported for each category on typical week and weekend days.

## Results

### Preliminary Analyses

The sample’s mean scores on the body satisfaction and eating disorder constructs were generally close to the mid range (Table 2). The current sample’s means for the EDI subscales and the SAFE scale cannot be compared to previous studies due to modifications made to the scales and differences in scoring methods. However, the sample’s means for the body shape questionnaire ( $M=2.47$ ,  $SD= 1.08$ ) and internalization ( $M= 2.59$ ,  $SD= 0.98$ ) are comparable to the means for the Body Shape Questionnaire reported by Schooler et al. (2004) for Black



( $M=2.1$ ) and White ( $M=2.9$ ) women and the mean obtained by Moradi and Rottenstein (2007) for internalization ( $M=2.75$ ,  $SD=0.98$ ). The means of both Deaf acculturation ( $M=3.90$ ,  $SD=0.59$ ) and Hearing acculturation ( $M=2.92$ ,  $SD=0.55$ ) for the current sample are comparable to those obtained by Maxwell-McCaw and Zea (2011) for the Dasd ( $M=4.04$ ,  $SD=0.70$ ) and the Dash ( $M=3.02$ ,  $SD=0.64$ ). The current samples means for reported weekly Deaf ( $M=3.90$ ,  $SD=8.53$ ) and mainstream media use ( $M=22.08$ ,  $SD=18.42$ ) are also comparable to those reported by Schooler et al. (2004) for television with Black casts (White women  $M=2.7$ ; Black women  $M=7.9$ ) and television with White casts (White women  $M=19.1$ , Black women  $M=18.4$ ). According to the American Obesity Treatment Association (n.d.), the sample's average BMI ( $M=24.62$ ,  $SD=4.93$ ) fell into the normal weight category. Approximately 3.2% of the sample is categorized as underweight, 61.3% normal weight, 25.8% overweight and 9.7% obese.

### **Main Research Questions**

The first and second research questions focused on the potential links between exposure to mainstream media, internalization of media messages, Deaf acculturation status, acculturative stress and the body image of deaf women. The third research question focused on the possible contributions of degree of Deaf acculturation and degree of Hearing acculturation as predictors of internalization among deaf women. In order to assess these questions, separate hierarchical regressions were run for internalization and each of the body image measures. Age, ethnicity, and BMI were included in the first step, Deaf acculturation, Hearing acculturation, and acculturative stress were included in the second step and viewing of both mainstream media and Deaf media were included in the third step. For the regressions predicting the four body image measures, internalization of media messages was included in the fourth step.

As indicated in Tables 3 and 4, when combined the predictor variables accounted for 25%-65% of the variance in the body image variables. Consistent with hypothesis 1, internalization of mainstream messages was associated with body image disturbance among the deaf women included in the sample. Internalization and BMI were the most consistent predictors for all four body image measures; the *Drive for Thinness*, *Bulimia*, and *Body Dissatisfaction* subscales of the EDI, as well as the Body Shape Questionnaire. Deaf women with higher BMIs as well as those who showed greater internalization of mainstream messages reported poorer body image on each of the four body image measures. However, inconsistent with hypothesis 1, exposure to mainstream media was not a significant predictor of body image disturbance.

Regarding hypothesis 2, as indicated in Tables 3 and 4, degree of Deaf acculturation and acculturative stress, but not degree of Hearing acculturation, were associated with body image among the deaf women in the current sample. Degree of Deaf acculturation was a significant predictor of body image on two of the body image measures, the Body Shape Questionnaire and the *Body Dissatisfaction* subscale of the EDI. For both of these measures, consistent with hypothesis 2, stronger Deaf acculturation was predictive of a healthier body image such that it was associated with having greater body satisfaction and holding fewer negative thoughts about one's body. However, inconsistent with hypothesis 2, degree of Hearing acculturation was not associated with body image disturbance among deaf women. Acculturative stress was a significant predictor of body image on two of the body image measures, the Body Shape Questionnaire scale and the *Bulimia* subscale of the EDI. For both of these measures, greater acculturative stress was predictive of higher levels of body image disturbance among deaf women such that it was associated with bulimic tendencies and holding more negative thoughts

about one's body. It is notable that degree of Deaf acculturation and acculturative stress both remained significant predictors of body image even after controlling for internalization.

As for hypothesis 3, as indicated in Table 5, degree of Deaf acculturation and degree of Hearing acculturation were not associated with internalization of mainstream messages. Neither degree of Deaf acculturation nor degree of Hearing acculturation was a significant predictor of internalization of mainstream messages among the deaf women included in the sample.

### **Discussion**

This study investigates several connections between media exposure and body image in Deaf/ deaf women. Specifically the contributions of mainstream media exposure, Deaf acculturation, acculturative stress, and internalization are examined. Under the premise of cultivation theory, previous studies have highlighted that media use promotes poorer body image among women. However, for the most part, these studies have focused on the contributions of exposure to mainstream media on the body image of White, hearing, women. Findings from recent studies suggest that mainstream media may not influence the body image of culturally diverse women to the same extent (e.g. Schooler, Ward, Merriwether, & Caruthers, 2004). To a certain extent, the current study replicates this finding for deaf women. Exposure to mainstream media was not associated with the body image of the deaf women included in this sample. However, consistent with previous findings including those found in Moradi and Rottenstein's (2007) study with deaf women, internalization of media messages was associated with body image disturbance among the deaf women included in this sample. Therefore, rather than the amount of exposure to mainstream media, it was the extent to which the women internalized the

messages of female beauty inherent in the media that was associated with body image disturbance.

Previous findings suggest that for ethnic minority women, acculturation with one's ethnic culture can serve as a buffer against internalization of messages in mainstream media and therefore reduce the association between media exposure and negative body image (Schooler, Ward, Merriwether, & Caruthers, 2004; Schooler, 2008). The current study suggests that this finding may not generalize to deaf women. Neither degree of Deaf acculturation nor degree of Hearing acculturation was significantly associated with internalization. This suggests that stronger Deaf acculturation may not serve as a protective buffer against internalization of mainstream beauty standards. Deaf women who are strongly acculturated within Deaf culture may be just as likely to internalize messages in mainstream media as those deaf women who are not as strongly acculturated within Deaf culture. Instead, degree of Deaf acculturation and acculturative stress seem to have a direct path to body image. Stronger Deaf acculturation and lower levels of acculturative stress were predictive of healthier body image among the deaf women included in the sample. This finding is consistent with previous research investigating the contributions of acculturation and acculturative stress among ethnic minority women (e.g. Gordon, Castro, Sitnikov, Holm-Denoma, 2010). The fact that both degree of Deaf acculturation and acculturative stress remained significant predictors of body image even after controlling for internalization is notable because this suggests that stronger Deaf acculturation does not promote healthy body image by reducing internalization of mainstream norms; but instead maintaining a strong cultural Deaf identity may provide direct protective benefits to deaf women in spite of internalization of mainstream media norms.

Explanations for this set of findings may revolve around the nature of Deaf culture and its difference from other cultural groups. Deaf culture is not as physically visible as other minority groups in society. Deaf individuals consist of people from various ethnic backgrounds. Therefore, the appearances, beauty standards, and body shape ideals of deaf individuals may vary, reflecting the diverse standards of various ethnic groups more than a single cohesive Deaf standard of beauty. Results from the current study indicated, for example, that deaf women who identified as Black or African-American reported significantly less drive for thinness than other deaf women and this is consistent with previous research indicating a larger body shape ideal among African-Americans. The protective buffer of acculturation against internalization of messages in mainstream media occurs when ethnic minority women reject comparison with the women portrayed in mainstream media. The appearance and beauty standards of women portrayed in mainstream media may not fit with the cultural values and standards of ethnically acculturated women and therefore they are not seen as accurate sources of comparison. Accordingly, ethnic minority women who are not strongly acculturated with their ethnic culture are more likely to internalize messages in mainstream media and therefore experience higher rates of body image disturbances. Due to the fact that Deaf culture is not physically visible and may not necessarily have a unified set of beauty standards, the rate of internalization and adoption of Western standards of beauty may be roughly the same for deaf women regardless of their level of Deaf acculturation. Deaf women who are strongly acculturated within Deaf culture may still find hearing women in mainstream media to be accurate sources of comparison regarding beauty and body shape, depending on their ethnic cultural identity.

Although degree of Deaf acculturation is not associated with rates of internalization, it does positively predict body image. In the current study, the majority of participants were

relatively immersed in Deaf culture and reported overall high levels of Deaf acculturation. Consequently, instead of being classified into specific acculturation styles, participants received separate scores for their level of Deaf acculturation and their level of Hearing acculturation. Results indicate that those participants whose identification with Deaf culture was strongest had healthier body images than those participants who were still identified with Deaf culture, but not as strongly. Hearing acculturation was not associated with body image; therefore among those individuals who were acculturated into Deaf culture, no differences were found between those who also identified with Hearing culture (bicultural) and those who did not (Deaf). It is possible that for deaf women, stronger identification with Deaf culture may be associated with a more positive image of oneself as a deaf person and higher self-esteem. Members of Deaf culture consider themselves a part of a unique culture and interact with each other within their own community which consists of Deaf schools, organizations, and clubs (Andrews, Leigh, & Weiner, 2004). Within such a community the medical perspective of deafness as a disability is often lost and many Deaf individuals do not consider themselves as having a disability but instead simply consider themselves as members of a separate culture. Among deaf individuals who are associated with Deaf culture, those with a stronger identification with Deaf culture may be more likely to adopt a more positive view of themselves as a deaf person, thereby increasing their general self-esteem. In support of this explanation, previous research findings indicate that both Deaf and bicultural identities are associated with higher self-esteem in comparison to Hearing and marginal identities (Bat-Chava, 2000). Previous research among other populations has established a positive association between self-esteem and body image, and low self-esteem has been considered a risk factor for the development of disordered eating among young girls (Grogan, 2010; Button, Loan, Davies, & Sonuga-Barke, 1998). Therefore, stronger Deaf

acculturation may assist deaf women in developing more positive images of themselves as deaf individuals and higher self-esteem which can protect them against the development of body image disturbance and disordered eating behaviors. Furthermore, stronger identification with Deaf culture is likely to be associated with greater community ties and involvement which can provide deaf individuals with a solid foundation of accessible social support.

Along with stronger Deaf acculturation, lower levels of acculturative stress were also predictive of healthier body image among the deaf women included in the current sample. It is possible that higher levels of acculturative stress may influence deaf women to adopt maladaptive coping behaviors including disturbed eating patterns. This explanation fits with the finding reported in Moradi and Rottenstein (2007) study that out of the four possible Deaf identity styles, Deaf, bicultural, Hearing, and marginal, only marginal identities were related uniquely with eating disorder constructs. Moradi and Rottenstein (2007) explain this finding under the conceptualization of marginal identities as sources of psychological distress. The tension of internalizing a majority or minority cultural identity that is characteristic of acculturative stress has been shown to be associated with disordered body image and eating behavior for cultural minority women (Gordon, Castro, Stinkov, Holm-Denoma, 2010), and the results from the current study support the generalizability of this finding to deaf women. The higher the level of acculturative stress experienced by deaf women, the more negative their body image.

This pattern of findings suggests that degree of Deaf acculturation and the level of acculturative stress experienced by deaf women, as well as the extent to which they internalize messages from mainstream media are critical factors in the development of negative body image. These findings may inform practice with deaf women. For example, because internalization is

central to the body image of deaf women, strategies that focus on the evaluation and critique of the female beauty standards presented in mainstream media and help clients adopt healthier and more realistic perspectives on beauty and self-evaluation are likely to be as beneficial with deaf women as they are with other groups. However, because degree of Deaf acculturation and acculturative stress are also important correlates of body image among deaf women, it is critical that these factors also inform practice with deaf women. Having a strong Deaf identity may place deaf women within a cultural context in which they are more likely to develop a positive image of themselves as a deaf person and higher self-esteem. Furthermore, addressing and adopting healthy strategies for reducing levels of acculturative stress may be critical in the development of healthy body images among deaf women. Therefore, facilitating open discussion of Deaf identity and feelings of marginalization may be especially important when working with deaf women.

### **Limitations and Directions for Future Research**

Although the current investigation contributes to understanding of the media's impact on the body image of culturally diverse women, the findings must be interpreted in light of several limitations. First, generalization is limited by the small sample size and the homogeneity of the participants' ethnic backgrounds and Deaf acculturation statuses. Replication of the current findings with larger and more diverse samples that include students from both Deaf and mainstream schools as well as non-students from diverse backgrounds is critical for evaluating the generalizability of the results. Second, the small sample size may have also limited the study's ability to detect small effects. Similarly, although the impact of degree of Deaf and Hearing acculturation on body image was examined, specific investigations of the separate Deaf identities were not possible because there was not enough data on marginal or Hearing individuals. This was likely due to the fact that the population from which the sample was drawn was a Deaf



university. Therefore, although stronger Deaf acculturation seems to be associated with healthy body image, distinctions cannot be made between deaf individuals who are strongly acculturated within Deaf culture (Deaf and bicultural identities), and those with weaker Deaf acculturation (Hearing and marginal identities). Future research with larger and more diverse samples could examine the specific contributions of each Deaf acculturation status on the body image of deaf women. In addition, casual inferences are limited by the research design. The current findings are in line with, but do not directly test the direction of causality inherent in the stated theories. Longitudinal and experimental data can expand the current findings and test the directional relations between the variables.

Furthermore, although the SAFE measure of acculturative stress was adapted to examine acculturative stress specific to Deaf and Hearing acculturation, it is possible that the reports of acculturative stress collected from ethnically diverse participants overlapped with their experiences of acculturative stress stemming from their ethnic culture. A possible avenue for future research could be to examine the interaction of Deaf acculturation status and ethnic acculturation as they relate to the body image of ethnically diverse deaf women. Also, although no standards of female beauty or body shape ideals are easily identifiable within Deaf culture, it is possible that some standard ideals do exist among Deaf women. Research examining female beauty ideals and standards among ethnically diverse Deaf women is needed.

Very few studies of body image and eating disorders have been conducted with deaf women and more information is needed before we can begin to understand, prevent, and treat body image disturbance and disordered eating among deaf women. The current study is intended to open the doors to further research that addresses deaf women and body image, especially as deaf women are beginning to appear more frequently in mass media. Knowing the potential

effects of such exposure will be beneficial to our understanding of body image development and the prevention and treatment of related disorders.

## References

- American Obesity Treatment Association. (n.d.). How is BMI calculated and interpreted in adults? Retrieved from <http://www.americanobesity.org/adultMeasurement.htm>
- American Psychiatric Association (2000). DSM-IV-TR Diagnostic and Statistical Manual of Mental Disorders. Retrieved from: <http://dsm.psychiatryonline.org/book.aspx?bookid=22>.
- Andrews, J. F., Leigh, I. W., & Weiner, M. I. (2004). The deaf community: A diverse entity. In *Deaf people: Evolving perspectives from psychology, education, and sociology* (15-35). Boston: Pearson Education.
- Bat-Chava, Y. (2000). Diversity of deaf identities. *American Annals of the Deaf*, 145(5), 420-428.
- Becker, A. E., Burwell, R. A., Gilman, S. E., Herzog, D. B., & Hamburg, P. (2002). Eating behaviours and attitudes following prolonged exposure to television among ethnic Fijian adolescent girls. *British Journal of Psychiatry*, 180, 509-514.
- Botta, R. A. (2000). The mirror of television: A comparison of black and white adolescents body image. *Journal of Communication*, 50, 144-159.
- Broom, L., Kitsuse, J. I. (1955). The validation of acculturation: A condition to ethnic assimilation. *American Anthropologist*, 57(1), 44-48.
- Button, E. J., Loan, P., Davies, J., Sonuga-Barke, E. J.S.(1998). Self-esteem, eating problems,

- and psychological well being in a cohort of schoolgirls aged 15-16: A questionnaire and interview study. *International Journal of Eating Disorders*, 21(1), 39-47.
- Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairburn, C. J. (1987). The development and validation of the body shape questionnaire. *International Journal of Eating Disorders*, 6(4), 485-494.
- Crocker, J., Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review*, 96(4), 608-630.
- Derenne, J. L., & Beresin, E. V. (2006). Body image, media, and eating disorders. *Academic Psychiatry*, 30(3), 257-261.
- Dewalt, J. L. R. (1998). I'm proud that I'm Deaf: Deaf culture as a preventive factor against eating-disordered attitudes and behaviors for adolescent females. *Dissertation Abstracts International*, 59(08), 2866A.
- Dohnt, H., & Tiggemann, M. (2006). The contribution of peer and media influences to the development of body satisfaction and self-esteem in young girls: A prospective study. *Developmental Psychology*, 134 (5), 929-936.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.
- Field, A. E., Cheung, L., Wolf, A. M., Herzog, D. B., Gortmaker, S. L., & Colditz, G. A. (1999).

- Exposure to the mass media and weight concerns among girls. *Pediatrics*, 103(3), 1-5.
- Fouts, G., & Burggraf, K. (2000). Television situation comedies: Female weight, male negative comments and audience reactions. *Sex Roles*, 42(9/10), 925-932.
- Fuertes, J. N., & Westbrook, F. D. (1996). Using the social, attitudinal, familial and environmental (S. A. F. E.) acculturation stress scale. *Measurement and Evaluation in Counseling and Development* 29(2), 67-76.
- Garner, D. M., Olmstead, M. P., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders* 2(2), 15-34.
- Gordon, K. H., Castro, Y., Sitnikov, L., & Holm-Denoma, J. M. (2010). Cultural body shape ideals and eating disorder symptoms among White, Latina, and Black college women. *Cultural Diversity and Ethnic Minority Psychology*, 16(2), 135-143.
- Gowen, K. L., Hayward, C., Killen, J. D., Robinson, N., Taylor, B. C. (1999). Acculturation and eating disorder symptoms in adolescent girls. *Journal of Research on Adolescence*, 9(1), 67-83.
- Grabe, S., & Hyde, J. S. (2006). Ethnicity and body dissatisfaction among women in the United States: A meta-analysis. *Psychological Bulletin*, 132(4), 622-640.

- Grabe, S., Ward, M. L., & Hyde, J. S. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin*, 134(3), 460-476.
- Grogan, S. (2010). Promoting positive body image in males and females: Contemporary issues and future directions. *Sex Roles*, 63, 757-765.
- Joiner, T. E., & Walker, R. L. (2002). Construct validity of a measure of acculturative stress in african americans. *Psychological Assessment*, 14(4), 462-466.
- Jones, D. C. (2001). Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles*, 45(9/10), 645-664.
- Leigh, I. W., & Anthony-Tolbert, S. (2001). Reliability of the BDI-II with deaf persons. *Rehabilitation Psychology*, 46(2), 195-202.
- Maxwell-McCaw, D., & Zea, M. C. (2011). The Deaf acculturation scale (DAS): Development and validation of a 58-Item measure. *Journal of Deaf Studies and Deaf Education*, 16(3), 325-342.
- Microsoft Corporation (2013). Test your document's readability. Retrieved from <http://office.microsoft.com/en-us/word-help/test-your-document-s-readability-HP010148506.aspx>
- Moradi, B., & Rottenstein, A. (2007). Objectification theory and Deaf cultural identity attitudes:

- roles in Deaf women's eating disorder symptomatology. *Journal of Counseling Psychology*, 54(2), 178-188.
- Morgan, M., Shanahan, J., & Signorielli, N. (2009). Growing up with television: Cultivation processes. In J. Bryant, & M. B. Oliver (Ed.), *Media effects: Advances in theory and research* (3<sup>rd</sup> ed.) (pp. 34-49). New York, NY: Routledge.
- Olkin, R. (2004). Making research accessible to participants with disabilities. *Journal of Multicultural Counseling and Development*, 32, 332-343.
- Padilla, A., Wagtsuma, Y., & Lindholm, K. (1985). Acculturation and personality as predictors of stress in Japanese and Japanese Americans. *Journal of Social Psychology*, 125, 295-305.
- Perez, M., Voelz, Z. R., Pettit, J. W., & Joiner, T. E. (2002). The role of acculturative stress and body dissatisfaction in predicting bulimic symptomatology across ethnic groups. *International Journal of Eating Disorders*, 31(4), 442-454.
- Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). Generation M2: Media in the lives of 8-to 18-year-olds. *Henry J. Kaiser Family Foundation*, 1-78.
- Root, M. P. (1990). Disordered eating in women of color. *Sex Roles*, 22, 525-536.
- Schooler, D. (2008). Real women have curves: A longitudinal investigation of TV and the body image development of latina adolescents. *Journal of Adolescent Research*, 23(2), 132-153.

Schooler, D., Ward, M. L., Merriwether, A., & Caruthers, A. (2004). Who's that girl:

Television's role in the body image development of young white and black women.

*Psychology of Women Quarterly*, 28, 38-47.

Snyder, R., Hasbrouck, L. (1996). Feminist identity, gender traits, and symptoms of disturbed

eating among college women. *Psychology of Women Quarterly* 20, 593-598.

Stice, E., Bearman, S. (2001). Body-image and eating disturbances prospectively predict

increases in depressive symptoms in adolescent girls: A growth curve analysis.

*Developmental Psychology*, 37(5), 597-607.

Stice, E., Schupak-Neuberg, E., Shaw, H. E., & Stein, R. I. (1994). Relation of media exposure

to eating disorder Symptomatology: An examination of mediating mechanisms. *Journal of*

*Abnormal Psychology*, 103(4), 836-840.

Taylor, C. B., Sharpe, T., Shisslak, C., Bryson, S., Estes, L. S., Gray, N., McKnight, K. M.,

Crago, M., Kraemer, H. C., Killen, J. D. (1998). Factors associated with weight concerns in

adolescent girls. *International Journal of Eating Disorders*, 24(1), 31-42.

Thompson, J. K., van den Berg, P., Roehrig, M., Guarda, A. S., & Heinberg, L. G. (2003). The

sociocultural attitudes towards appearance scale-3 (SATAQ-3): Development and validation.

*Wiley Periodicals*, 293-304.



Warren, C. S. (2008). The influence of awareness and internalization of western appearance

ideals on body dissatisfaction in euro-American and Hispanic males. *Psychology of men & masculinity*, 9(4) 257-266.

Wheeler, L. (1966). Motivation as a determinant of upward comparison. *Journal of*

*Experimental Social Psychology Supplement 1*, 27-31.

Wiseman, C. V., Gray, J. J., Mossiman, J. E., & Ahrens, A. H. (1992). Cultural expectations of

thinness in women: An update. *International Journal of Eating Disorders*, 11(1), 85-89.

**Table 1***Deaf Acculturation Status/ Cultural Identities*

	Strong Hearing Acculturation	Weak Hearing Acculturation
Strong Deaf Acculturation	Bicultural	Deaf acculturated
Weak Deaf Acculturation	Hearing acculturated	Marginal

*Note.* Individuals are categorized into one of the four possible Deaf identity categories based on a combination of their scores on two separate acculturation scales; the DASd (Deaf) and the DASH (Hearing).

**Table 2**  
*Summary Statistics and Partial Intercorrelations with Body Mass Index and Age Controlled*

Variable	1	2	3	4	5	6	7	8	9	10	Possible range	M	SD	$\alpha$
<b>Body Image</b>														
<b>Measures</b>														
1. BD	---										1-5	2.74	1.03	.92
2. Bulimia	.51***	---									1-6	2.01	0.89	.86
3. DFT	.69***	.53***	---								1-6	3.07	1.27	.91
4. BSQ	.81***	.58***	.81***	---							1-6	2.47	1.08	.98
<b>Internalization</b>														
<b>Measure</b>														
5. SATAQ-3	.72***	.39***	.61***	.73***	---						1-5	2.59	0.98	.91
<b>Deaf Acculturation</b>														
<b>Measure</b>														
6. DAS(d)	-.09	-.03	-.08	-.11	.10	---					1-5	3.90	0.59	.92
7. DAS(h)	-.11	-.03	.02	-.06	-.09	-.41***	---				1-5	2.92	0.55	.88

**Acculturative****Stress Measure**

8. SAFE	.15	.25*	.05	.19	.01	-.21	.11	---		1-5	1.9	0.88	.93
---------	-----	------	-----	-----	-----	------	-----	-----	--	-----	-----	------	-----

**Media Use****Measures**

9. Mainstream	-.11	-.04	-.07	-.12	-.07	-.15	-.05	-.15	---	0-35	22.08	18.42	---	
10. Deaf	.18	.13	.15	.05	-.02	-.09	-.01	.08	.26*	---	0-35	4.77	8.53	---

---

*Note.* Scale names are abbreviated. BD= Body dissatisfaction subscale; DFT= Drive for Thinness subscale; BSQ= Body Shape Questionnaire; SATAQ-3= Sociocultural Attitudes Towards Appearance Scale-3; DAS(d)= Deaf Acculturation Scale (deaf); DAS(h)= Deaf Acculturation Scale (hearing); SAFE= Societal, Attitudinal, Familial, and Environmental Acculturative Stress Scale.

\* $p \leq .05$ . \*\*  $p \leq .01$ . \*\*\*  $p \leq .001$

**Table 3***Hierarchical Regressions Predicting D/deaf Women's Body Image*

	Body Dissatisfaction				Bulimia			
	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$
<b>Step 1</b>								
Age	.00	.00	-.03	.08	-.24*	-.23*	-.24*	-.18
BMI	.40***	.32**	.35**	.32***	.41***	.32**	.32**	.31**
White	.03	.04	.08	.08	-.02	.00	.01	.00
Hispanic/ Latina	-.18	-.22	-.18	-.11	-.10	-.15	-.14	-.11
African American/ Black	-.07	-.09	-.07	.08	-.10	-.10	-.12	-.05
<b>Step 2</b>								
DAS (h)		-.18	-.18	-.13		-.06	-.06	-.03
Das (d)		-.14	-.15	-.19*		-.02	-.01	-.03
Acculturative Stress		.20	.16	.12		.28*	.27*	.25*
<b>Step 3</b>								
Mainstream Media			-.13	-.14			.02	.01
Deaf Media			.19	.18*			.12	.11

Step 4

Internalization				.66***				.33**
R Square Change	.206	.068	.038	.388		.176	.070	.101
F	3.74	3.26	3.04	13.98		3.08	2.81	3.39
P	.005	.003	.003	.000		.014	.009	.001

\*p ≤ .05 \*\*p ≤ .01 \*\*\*p ≤ .001

**Table 4***Hierarchical Regressions Predicting D/deaf Women's Body Image*

	Drive for Thinness				Body Shape Questionnaire			
	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$	$\beta$
<b>Step 1</b>								
Age	-.16	-.16	-.17	-.09	-.08	-.08	-.09	.02
BMI	.37***	.34**	.35**	.33***	.44***	.37**	.37**	.35***
White	-.11	-.12	-.09	-.09	-.12	-.12	-.11	-.11
Hispanic/ Latina	-.25	-.28	-.25	-.20	-.24	-.29	-.27	-.21
African American/ Black	-.26	-.27*	-.29*	-.17	-.22	-.24	-.23	-.08
<b>Step 2</b>								
DAS (h)		-.08	-.08	-.04		-.14	-.14	-.09
Das (d)		-.13	-.12	-.15		-.15	-.15	-.19*
Acculturative Stress		.08	.06	.03		.21	.20	.16*
<b>Step 3</b>								
Mainstream Media			-.03	-.04			-.05	-.06
Deaf Media			.18	.17			.06	.05

Step 4

Internalization	.54***				.66***			
R Square Change	.208	.023	.028	.267	.232	.069	.004	.392
F	3.78	2.58	2.33	6.63	4.34	3.71	2.93	13.74
P	.004	.016	.020	.000	.002	.001	.004	.000

\*p ≤ .05 \*\*p ≤ .01 \*\*\*p ≤ .001



**Table 5***Hierarchical Regression Predicting Internalization among D/deaf women*

	Internalization		
	$\beta$	$\beta$	$\beta$
<b>Step 1</b>			
Age	-.15	-.15	-.15
BMI	.06	.03	.03
White	.14	.13	.15
Hispanic/ Latina	.00	-.01	.01
African American/ Black	-.17	-.19	-.19
<b>Step 2</b>			
DAS (h)		-.09	-.09
DAS (d)		.03	.04
Acculturative Stress		.06	.06
<b>Step 3</b>			
Mainstream Media			.02
Deaf Media			.06
R Square Change	.089	.013	.003
F	1.41	.98	.79
P	.232	.462	.643

\*p ≤ .05 \*\*p ≤ .01 \*\*\* p ≤ .001

## Appendix

### Survey Item Modifications

#### Societal, Attitudinal, Familial, and Environmental Acculturative Stress Scale

1) **Original Item:** (1) I feel uncomfortable when others make jokes about or put down people of my ethnic background.

**Modified Item:** (66) I feel uncomfortable when others make jokes about or put down deaf/ hard-of-hearing people.

2) **Original Item:** (3) It bothers me that family members I am close to do not understand my new values.

**Modified Item:** (68) It bothers me that family members I am close to do not understand how I see myself as a deaf/ hard-of-hearing person.

3) **Original Item:** (7) It bothers me to think that so many people use drugs.

**Modified Item:** Deleted.

4) **Original Item:** (9) In looking for a good job, I sometimes feel that my ethnicity is a limitation.

**Modified Item:** (73) In looking for a good job, I sometimes feel that my hearing status is a limitation.

5) **Original Item:** (11) Many people have stereotypes about my culture or ethnic group and treat me as if they are true.

**Modified Item:** (75) Many people have stereotypes about my hearing status and treat me as if they are true.

6) **Original Item:** (15) It bothers me when people pressure me to assimilate.

**Modified Item:** (80) [assimilate defined for clarity] It bothers me when people pressure me to assimilate (Change myself to act more like everyone else).

7) **Original Item:** (18) It bother me that I have an accent.

**Modified Item:** Deleted

8) **Original Item:** (19) Loosening the ties with my country is difficult.

**Modified Item:** (83) Loosening the ties with my background is difficult.

9) **Original Item:** (20) I often think about my cultural background.

**Modified Item:** (84) I often think about my educational (mainstream vs. deaf institute) background.

10) **Original Item:** (21) Because of my ethnic background, I feel that others often exclude me from participating in their activities.

**Modified Item:** (85) Because of my hearing status, I feel that others often exclude me from participating in their activities.

11) **Original Item:** (23) People look down upon me if I practice customs of my culture.

**Modified Item:** (87) People look down upon how I act as a deaf/ hard-of-hearing person.

12) **Original Item:** (24) I have trouble understanding others when they speak.

**Modified Item:** (88) I have trouble communicating with others.