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The Relationships Between Weight Stigma, Ethnic Identity, and Acculturation in Latinas

Catherine Rodríguez Torres
Walden University

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Walden University

College of Social and Behavioral Sciences

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Catherine Rodríguez Torres

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Walden University

2018

Abstract

The Relationships Between Weight Stigma, Ethnic Identity, and Acculturation in Latinas

by

Catherine Rodríguez Torres

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Social Psychology

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Abstract

Weight stigma has negative psychological and physical consequences including anxiety, depression, suicidal ideation, eating disorders, and lower quality of life. The purpose of this cross-sectional study was to explore the relationships between weight stigma, ethnic identity, and acculturation in Latinas. The intersectional theory provided the framework for this study. A sample of 154 Latinas over the age of 18 living in the United States or 1 of its territories was gathered through social media, a fat acceptance organization, and a research participant pool. The online survey consisted of 3 psychometric tools-Modified Weight Bias Internalization Scale, Multi-Group Ethnic Identity Measure-Revised, and the Abbreviated Multidimensional Acculturation Scale. Descriptive, correlational, and regression analyses were conducted. Results from this study indicated that ethnic identity was not significantly related to weight stigma and that acculturation to either the U.S. or culture of origin did not significantly interact with ethnic identity to predict weight stigma. This study was focused on a vulnerable population experiencing weight stigma, and provides the professional community with culturally relevant data on weight stigma in Latinas, information on weight stigma reduction interventions, and contributions to policy and paradigm changes about body diversity.

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Dedication

This dissertation is dedicated to my parents for the inheritance of my culture and my identity. It is dedicated to my brothers as a reminder that we can achieve anything we set our minds to.

Acknowledgements

Thank you Dr. Jonathan Cabiria and Dr. Brandon Cosley for your guidance through this process. Thank you, JK, for your support. Thank you, friends and family, for your constant cheering in the background.

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Chapter 1: Introduction

Introduction

The experience of weight stigma—the normalized, socially acceptable, and culturally widespread negative attitude against people because of their weight—has been linked to physical as well as psychological distress (Ambwani, Thomas, Hopwood, Moss, & Grilo, 2014; Frederick, Saguy, & Gruys, 2016; Marini et al., 2013; Puhl & Huer, 2009; Puhl, Latner, O'Brien, Luedicke, Danielsdottir, & Forhan, 2015). Weight stigma is a product of antifat attitudes based on cultural norms about body ideals (Elran-Barak & Bar-Anan, 2018). Weight stigma is experienced by individuals who have obesity and those who do not have obesity; it is pervasive in all areas of life; and it has negative consequences for psychological as well as physical health (Pearl et al., 2018). Women's experience of weight stigma has been found to contribute to their social vulnerability as belonging to an undervalued group, contributing to deleterious psychological and physical health issues (Fahs & Swank, 2017; Lillis, Thomas, Levin, & Wing, 2017; Major, Eliezer, & Rieck, 2012; National Bioethics Advisory Commission [NBAC], 2001; Wellman, Araiza, Newell, & McCoy, 2017).

Much research on weight stigma has been conducted using White and Black women, but less is known about weight stigma and Latinas (Antin & Hunt, 2013; Capodilupo, 2015; Kronenfeld, Reba-Harrelson, Von Holle, Reyes, & Bulik, 2010; Lillis, Luoma, Levin, & Hayes, 2010; Pausé, 2014; Pearl & Puhl, 2014; Puhl, White, Paris, Anez, Silva, & Grilo, 2011). Researchers who included Latinas in research have produced mixed results—some scholars have shown that ethnic identity does not protect Latinas from weight stigma, while others have shown that ethnic identity does act as a

buffer against weight stigma (Pompper & Koenig, 2004; Rakhkovskaya & Warren, 2014; Warren, 2014). In addition, little is known about the role of acculturation in the relationship between weight stigma and ethnic identity in Latinas (Antin & Hunt; 2013; Capodilupo, 2015). Researchers can provide data on the unique experiences of diverse groups, allowing for the identification of vulnerable populations (American Psychological Association [APA], 2002; Annunziato, Calogero, & Sysko, 2014).

The results of this quantitative study provides the psychological, medical, and professional communities the opportunity to learn about and accurately represent the experience Latinas have with weight stigma, as well as the development of effective stigma reduction interventions (Franko et al., 2012; Jackson, Beeken, & Wardle, 2014; Koball & Carels, 2015; Poloskov & Tracey, 2013). The results of this study can be used to advocate for policies that protect the human rights for victims of weight stigma (Cook, Purdie-Vaughns, Meyer, & Busch, 2014; Mann, Tomiyama, & Ward, 2015; Pearl & Lebowitz, 2014; Puhl & Liu, 2015; Puhl, Neumark-Sztainer, Austin, Luedicke, & King, 2014; Puhl, Suh, & Li, 2016; Suh, Puhl, Liu, & Fleming Milici, 2014). Results of this study can support a paradigm shift regarding cultural norms on body size and redirect the discourse on obesity to include body and weight diversity (Brewis, 2014; O'Hara & Taylor, 2014; Penney & Kirk, 2015; Pickett & Cunningham, 2017; Satinsky & Ingraham, 2014; Sikorski, Luppia, Angermeyer, Schomerus, Link, & Riedel-Heller, 2015; Smith, Heneghan, & Ward, 2015; Tylka et al., 2014). This study has the potential to identify vulnerable populations experiencing weight stigma (Bombak, 2014; Gurrieri & Cherrier, 2013; Puhl, Himmelstein, Gorin, & Suh, 2017), provide the professional community with culturally relevant data on weight stigma (Jackson, 2016; Tiggeman, 2015), inform upon

weight stigma reduction interventions (Afful & Ricciardelli, 2015), and contribute to policy and paradigm changes about weight, specifically with Latinas (Nutter et al., 2016; O'Reilly & Sixsmith, 2012; Suh et al., 2014).

In this chapter, I present the background, problem statement, and purpose of this study. I delineate the research questions, clarify the theoretical framework, and describe the nature of the study. I define the variables and explain assumptions, scope, delimitations, and limitations. I conclude with a discussion on the significance of the study and a summary.

Background

Latinas have complicated body experiences intertwined with their cultural identities. Some researchers have found that Latinas have different body ideals than the dominant U.S. thin body ideal, but it is not clear how Latinas experience weight stigma or whether there is a relationship with their ethnic identity and acculturation into U.S. culture (Nolan & Eshleman, 2016; Savoy, Almeida, & Boxer, 2012). Researchers studying weight stigma have not included diverse samples of Latinas. Scholars have not considered the multicultural complexity of a Latinas' experience of weight stigma as she navigates messages about dominant U.S. thin body ideals. Researchers have not investigated the possible influences of the strength of a Latina's ethnic identity and her level of acculturation on that experience.

Weight Stigma

Weight stigma is evident in homes, in schools, and in the medical field (Andreyeva, Puhl, & Brownell, 2008; 2009; Puhl & Brownell, 2006). Weight stigma is evident in real-time interactions as well as virtual-existing in the online world of social

media where people engage with other people around the world (de Brún, McCarthy, McKenzie, & McGloin, 2014; Hinman, Burmeister, Kiefner, Borushok, & Carels, 2015; Pagoto et al., 2015). The negative impact of weight stigma includes psychological and physical consequences (Azevedo, Macaluso, Viola, Sani, & Aglioti, 2014; Barlösius & Philipps, 2015; Barnes, Ivezaj, & Grilo, 2014; Rosenthal et al., 2015; Savoy et al., 2012; Vartanian & Novak, 2011; Wu & Berry, 2018). The goal of this study was to include Latinas in weight stigma research. In doing so, I filled the gap in the knowledge of Latinas' experiences with weight stigma and the factors that contribute to it.

Ethnic Identity

Latinas' unique experiences with body image are complicated. They navigate between different cultural worlds-between a dominant U.S. value system and their oft-traditional immigrant value system (Lund & Miller, 2014; Mills, Jadd, & Key, 2012; Schooler, 2008; Yanover & Thompson, 2010). Latinas receive conflicting messages about beauty-thin figures promoted in the U.S. culture and curvier figures that are embraced in the Latino culture (Cheney, 2011; Franko et al., 2013). Latinas in the U.S. have a variety of experiences with their bodies-recognizing and subscribing to the cultural meaning of a U.S. thin body ideal while reporting a fuller or curvier body ideal acceptable in their ethnic culture of origin (Agne, Daubert, Munoz, Scarinci, Cherrington, 2012; Masterson Creber et al., 2016; Romo, Mireles-Rios, & Hurtado, 2016; Viladrich, Yeh, Bruning, & Weiss, 2009). Latinas may have different experiences of weight stigma depending on where they are and how long they have been there (Flórez & Abraido-Lanza, 2017; Rakhkovskaya & Warren, 2016). The goal of this study was to garner information on an ethnic identity's relationship with weight stigma in Latinas. Levels of

acculturation to U.S. mainstream body ideals may provide further insight into Latinas' experiences with weight stigma and its negative impact.

Acculturation

Latinas' membership as part of an ethnic group is a complicated process that may be impacted by acculturation into the U.S. culture, influencing their self-perception and behavior. Latinas' membership and identity with their group may be impacted by their comparison with the dominant U.S. thin body ideal (Corning, Krumm, & Smitham, 2006; Mills et al., 2012). Research on acculturation is mixed, scant, and lacking representation in diverse Latino populations. Some researchers have shown that obesity and dieting behavior is related to acculturation (New, Xiao, & Ma, 2013). Other researchers have shown that obesity is not related to acculturation (Fialkowski et al., 2015; Isasi et al., 2015). There have been no studies conducted on the relationships between weight stigma, ethnic identity, and acculturation in Latinas. The goal of this study was to fill that gap in an effort to get more information so as to serve the needs of this population.

Problem Statement

Researchers studying weight stigma have not included diverse samples of Latinas. Scholars have not considered the multicultural complexity of a Latinas' experience of weight stigma as she navigates messages about dominant thin body ideals. Researchers have not investigated the possible influences of the strength of her ethnic identity and her level of acculturation on that experience. Much research has been conducted with White or Black women (Antin & Hunt, 2013; Capodilupo, 2015; Kronenfeld et al., 2010; Lillis et al., 2010; Pausé, 2014; Pearl & Puhl, 2014; Puhl, White, Paris, Anez, Silva, & Grilo, 2011). A majority of the research conducted with Latinas has been done with Mexican

samples that cannot be generalized to diverse Latino populations or Latino populations living in the United States (Bojorquez-Chapela, Unikel, Mendoza, & deLachica, 2014; Flórez, Dubowitz, Saito, Guilherme, & Breslau, 2012; Jay et al., 2014).

Purpose of the Study

The purpose of this quantitative study was to explore the relationships between weight stigma, ethnic identity, and acculturation in Latinas. I also explored the strength, direction, and interaction of the relationships between weight stigma, ethnic identity, and acculturation in Latinas. The research questions and hypotheses were expected to answer whether the levels of ethnic identity and acculturation for U.S. thin body ideals were related to the experience of weight stigma in Latinas.

Research Questions and Hypotheses

Research Question #1: Is ethnic identity as measured by the Multi-Group Ethnic Identity Measure-Revised (MEIM-R) related to weight stigma reported by Latinas in the Modified Weight Bias Internalization Scale (WBIS-M)?

H_01 : Ethnic identity as measured by the MEIM-R is not related to weight stigma reported by Latinas in the WBIS-M.

H_11 : Ethnic identity as measured by the MEIM-R is related to weight stigma reported by Latinas in the WBIS-M.

Research Question #2: Does acculturation as measured by the Abbreviated Multidimensional Acculturation Scale (AMAS-ZABB) moderate the relationship between weight stigma and ethnic identity in Latinas?

H_02 : Acculturation as measured by the AMAS-ZABB does not moderate the relationship between weight stigma and ethnic identity in Latinas.

*H*₁₂: Acculturation as measured by the AMAS-ZABB moderates the relationship between weight stigma and ethnic identity in Latinas.

Theoretical Framework

The feminist theory of intersectionality provided the lens from which this study was created, conducted, analyzed, and interpreted. Through this lens, I examined the intersection of weight stigma, ethnic identity, and acculturation in Latinas. I used intersectionality theory to explore women in weight stigma research as well as the intersection of identities that influence women's experiences with weight stigma. Intersectionality theory provided the foundation from which to examine and learn about weight stigma, ethnic identity, and acculturation in Latinas. For the purpose of this study, intersectional theory provided the opportunity to explore weight stigma alongside and together with ethnicity in Latinas, as well as the interaction of acculturation on weight stigma and ethnic identity. When size is paired with another social category, the social meaning of weight stigma and size changes – being a woman of size could be different from being a Latina of size.

Nature of the Study

Latinas born in the United States and Latinas born outside of the United States differ in areas of mental health, stigma, and body image (Añez, Paris, Bedregal, Davidson, & Grilo, 2005; Franko et al., 2012; Greenhalgh & Carney, 2014; Poloskov & Tracey, 2013; Puhl et al., 2011; Rakhkovskaya & Warren, 2016). In this cross-sectional, nonexperimental, quantitative study, I used a web-based approach to administer an online survey. I analyzed data from a population of Latinas. The design was consistent with other researchers who used surveys to analyze similar variables.

A moderator variable (acculturation) interacts with the stimulus (ethnic identification) and response (weight stigma) variables (Baron & Kenny, 1986). I applied the interaction of a moderator variable (MacKinnon, 2011) in my research design to explore the complexity of the relationship in Latinas. The WBIS-M (Hubner et al., 2016; Pearl & Puhl, 2014) was used to measure the level of internalization of weight stigma. The MEIM-R (Phinney & Ong, 2007) and the AMAS-ZABB (Zea, Asner-Self, Birman, & Buki, 2003) were used to measure ethnic identity and acculturation, respectively. To measure the relationships of each variable (correlation) and measure the strength, direction, and interaction of the relationships of the variables (multiple regression), I gathered data used to analyze weight stigma, ethnic identity, and acculturation in Latinas. These data provided answers to the research questions.

Definitions

Acculturation: The process of change from a person's own country's cultural values and beliefs to the host country's cultural values and beliefs, leading to the adoption of the new country's mainstream cultural norms (Berry, 1980).

Body mass index: A screening tool to measure obesity. The tool was calculated as the ratio of a person's weight and his or her height, falling into four categories: underweight, normal, overweight, and obese (Center for Disease Control and Prevention [CDC], 2018; World Health Organization [WHO], 2017).

Hispanic or Latino: A "person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race" (US Census, 2011, p. 2).

Weight stigma: The normalized, socially acceptable, and culturally widespread negative attitude against people because of their weight (Puhl & Hueur, 2009).

Assumptions

I made several assumptions. I assumed that the participants understood and would be aware of weight stigma. I assumed that the participants understood the concept of a thin body ideal. I assumed that the participants had computer skills and had access to the Internet. I also assumed that the participants were fluent in English.

Scope and Delimitations

The scope of this study was limited to a quantitative study using data taken from participants who self-identified as Latinas, who were over the age of 18, who lived in the United States or one of its territories, and who had access to the Internet. The participants were obtained from a purposive and snowball sampling, which limited the generalizability of the results because these participants may have had greater awareness of weight stigma than those who did not agree to or were not targeted to participate, as well as an awareness of body positivity that might not represent what the general public is aware of. All participants completed a demographic form and three psychometric measures.

The theoretical foundation of this study was based on the interactions between weight stigma, ethnic identity, and acculturation in Latinas. A delimitation of this study was an assessment of the participants' awareness of the fat activist movement that could impact the internalization of weight stigma. Another delimitation was keeping the study to English only, which limited what a Spanish-speaking Latina might have to offer to the study of acculturation and if language had anything to do with internalization of the thin

ideal. Another delimitation was an assessment of the different Latin countries' values of body size and how they might differ so as to affect the participants' experience of weight stigma in this study. These were beyond the scope of this study, but could offer guidance for and insight in future studies.

Limitations

In this quantitative study, I identified relationships between weight stigma, ethnic identity, and acculturation in Latinas. Although the results of the correlational and multiple regression analyses were used to measure the relationships and strength, direction, and interaction of those relationships between weight stigma, ethnic identity, and acculturation in Latinas, they could not be used to determine cause and effect. In addition, the initial prerecruitment targeted self-identifying Latinas from online fat activist and fat positive bloggers—a population that has awareness of U.S. thin body ideals and weight stigma. This unique population's results may not be representative of the general population.

Significance

The results of this quantitative study could contribute to the field's limited understanding of Latinas' experiences with weight stigma. Culturally relevant research could provide data on the experiences of diverse groups, allowing for the identification of vulnerable populations (Annunziato et al., 2014; APA, 2002). Women's experience of weight stigma has been found to contribute to their social vulnerability as belonging to an undervalued group, contributing to deleterious psychological and physical health issues (Major et al., 2012; NBAC, 2001).

The results of this quantitative study provides the psychological, medical, and professional communities the opportunity to learn about and accurately represent the experience Latinas have with weight stigma, as well as the development of effective stigma reduction interventions (Franko et al., 2012; Jackson et al., 2014; Koball & Carels, 2015; Poloskov & Tracey, 2013). The results of this study can be used to advocate for policies that protect the human rights for victims of weight stigma (Cook et al., 2014; Mann et al., 2015; Pearl & Lebowitz, 2014; Puhl & Liu, 2015; Puhl et al., 2014; Puhl, et al., 2016; Suh et al., 2014). Results of this study can support a paradigm shift regarding cultural norms on body size and redirect the discourse on obesity to include body and weight diversity (Brewis, 2014; O'Hara & Taylor, 2014; Penney & Kirk, 2015; Pickett & Cunningham, 2017; Satinsky & Ingraham, 2014; Sikorski et al., 2015; Smith et al., 2015; Tylka et al., 2014). This study has the potential to identify vulnerable populations experiencing weight stigma (Bombak, 2014; Gurrieri & Cherrier, 2013; Puhl et al., 2017), provide the professional community with culturally relevant data on weight stigma (Jackson, 2016; Tiggeman, 2015), inform upon weight stigma reduction interventions (Afful & Ricciardelli, 2015), and contribute to policy and paradigm changes about weight, specifically with Latinas (Nutter et al., 2016; O'Reilly & Sixsmith, 2012; Suh et al., 2014).

Summary

Research on weight stigma has often been conducted with White and Black women, but has less often included diverse samples of Latinas. The purpose of this quantitative study was to measure the relationships between weight stigma, ethnic identity, and acculturation in Latinas over the age of 18 and living in the United States or

one of its territories, as well as the strength, direction, and interaction of those relationships. The participants completed a demographic form and three psychometric tools that measured weight stigma, ethnic identity, and acculturation in Latinas.

This study has the potential to identify vulnerable populations experiencing weight stigma, provide the professional community with culturally relevant data on weight stigma, inform upon weight stigma reduction interventions, and contribute to policy and paradigm changes about weight, specifically with Latinas. In the following chapter, I provide an overview of the literature and research conducted in the field, as well as a presentation of the conceptual framework and research on the variables.

Chapter 2: Literature Review

Introduction

The experience of weight stigma—the normalized, socially acceptable, and culturally widespread negative attitude against people because of their weight—has been linked to physical as well as psychological distress (Ambwani et al., 2014; Frederick et al., 2016; Marini et al., 2013; Puhl & Huer, 2009; Puhl et al., 2015). Much research on women and weight stigma has been done with White and Black women (Antin & Hunt, 2013; Capodilupo, 2015; Kronenfeld et al., 2010; Lillis et al., 2010; Pearl & Puhl, 2014; Puhl et al., 2011). Research using Latina subjects has been limited and the understanding of Latinas' experiences of their bodies has proven to be a complicated area of research, enmeshed with failed citizenship and oppression (Pausé, 2014). Latinas face structural barriers (lack of access to healthy food options and exercise environments, single parent households, and lower socioeconomic standard of living) that keep them from attaining a good, fit, and responsible U.S. biocitizenship, further alienating them from full participation in mainstream society and contributing to stigmatization that includes weight (Greenhalgh & Carney, 2014; Morey, 2018).

Some Latinas are buffered from negative body experiences because of their ethnic identity; however, some researchers have suggested that ethnic identity does not protect Latinas from weight stigma (Pompper & Koenig, 2004; Rakhkovskaya & Warren, 2014; Warren, 2014). Rakhkovskaya and Warren (2014) found that women who belonged to ethnic groups that preferred larger figures (Latina and Black) had lower levels of endorsement of the U.S. thin body ideal and fewer eating concerns than women who belonged to groups that preferred thin figures. Pompper and Koenig (2004) found that

Latinas who were born or immigrated to the U.S. before the age of 5 absorbed U.S. cultural ideals of beauty, strived to attain a thin body ideal, and were in conflict as they negotiated between two cultural ideas for body size and beauty.

Researchers who measured levels of acculturation in Latinas (the process of cultural learning that changes the attitudes and behaviors of those in contact with a host culture) (Berry, 1980) have shown it to play a moderating role between several variables. Acculturation (adopting Western cultural ideals about beauty and body size) was found to moderate the relationship between antifat attitudes, body dissatisfaction, and eating concerns in Latinas (Pepper & Ruiz, 2007). Little is known, however, about the role of acculturation specific to weight stigma in Latinas (Antin & Hunt; 2013; Capodilupo, 2015).

The purpose of this study was to measure the relationships between weight stigma, ethnic identity, and acculturation in Latinas. Levels of ethnic identity and acculturation for U.S. thin body ideals were expected to impact weight stigma in Latinas. In this chapter, I describe the literature search strategy and a theoretical framework that maps out the connections between the variables. I include a review of the literature on weight stigma, ethnic identity, and acculturation in Latinas. In the summary, I include themes and possible contributions to the field of psychology.

Literature Search Strategy

A review of available literature was conducted via Google Scholar as well as via access through Walden University's library databases, including Academic Search Complete, Mental Measurements Yearbook, ProQuest, PsycARTICLES, PsycINFO, and SocINDEX. The following key search terms were entered into the search engines

individually and in combination: *acculturation, ethnic identity, Latina, multicultural, stigma, weight stigma, obesity, fat, body image, body size, and thin ideal*. The majority of the resources were peer-reviewed journal articles ranging from the years 2012–2018; however, some older material was referenced to provide a historical review of the phenomenon of weight stigma.

Theoretical Framework

The feminist theory of intersectionality provided the lens from which this study was created, conducted, analyzed, and interpreted. Through this lens, I examined the intersection of weight stigma, ethnic identity, and acculturation in Latinas. Feminist, fat feminist, and Chicana feminist theories provided guidance, but could not support the focus of this research. Intersectionality theory was used to explore underrepresented women in weight stigma research as well as the intersection of identities that influence Latina's experiences with weight stigma. Feminist theory's lens focuses on inequalities experienced by women, fat feminist theory focuses on inequalities related to weight experienced by women, and Chicana feminist theory focuses on inequalities experienced by Latin women. Intersectionality theory provided the foundation from which to examine and learn about weight stigma, ethnic identity, and acculturation in Latinas.

Feminist Theory

Feminist theory evolved via waves (Evans, 2015). In the first wave, feminists were focused on gaining basic rights for women such as the right to vote; the second wave focused on gaining equal opportunity and pay; the third wave focused on inclusion of diversity in women the movement was fighting for—women diverse in class, race, and sexual orientation. The first two waves were dominated by White, middle-class women

who focused on gender equality without consideration for other identity intersections with gender.

Feminist scholars have discussed the pressure on women to conform to unrealistic and narrowly defined body ideals, positing that women are expected to conform to mainstream body ideals that are homogenized—removing racial, ethnic, and sexual differences that disturb Anglo-Saxon, heterosexual expectations and identity (Bordo, 2004; Gill, 2007). A woman's value has been tied to her appearance, and her worth has been dependent upon her beauty—the thin body was constructed as an ideal related to beauty, has been supported by media, and is an expectation placed on women (Bordo, 1995; Roehling, 2012; Wolf, 1991). Nonconformity is equal to failure, subject to rejection, and deemed as deviant. Feminist theorists examine the inequalities of gender, including the misogynistic dictates of a woman's value based on beauty and expectations of femininity. It does not, however, encapsulate the inequalities faced by fat women.

Fat as a Feminist Issue

Norms about beauty are dominated by thin body ideals within the U.S. patriarchal culture (Bordo, 1995, Wolf, 1991). Fat women are considered second class, seen as less desirable, and are discredited by the patriarchy's sociocultural norms about femininity and womanhood (Fikkan & Rothblum, 2012). Fat is associated with failed femininity based on aesthetic criteria created for the male gaze. It is a social construct representing a failed body.

Placing the mainstream thin ideal within a historical context, Derenne and Beresin (2006) provided a picture from which to understand the evolution of the U.S. thin body ideal. During U.S. beginnings, strength and ability were valued physical characteristics

in women for survival and success of the community. With the onset of technology, city living, and greater comfort in the industrial era, women were no longer required to participate in physical labor, and delicate figures were valued as a sign of prosperity (Derenne & Beresin, 2006). In the early 20th century, women were fighting for the right to vote and rebelling against traditional gender roles—giving up corsets for less complicated clothing; cutting their hair; and espousing angular, thin, and boyish figures (Derenne & Beresin, 2006). During WWII, body ideals changed once again to value strong and physically abled women as they went to work and played professional sports while men went to war. When the men returned home, traditional gender roles were reemphasized, and delicate figures were valued. With the sexual revolution of the mid 20th century, body ideals once again changed to promote thin figures.

The current thin body ideal has been shaped by social context via mass media (television, magazines, movies, and the Internet)—successfully reaching people across the world, dictating what is acceptable and what is not, and relegating obesity as deviant from the mainstream thin body ideal (Derenne & Beresin, 2006; Standford, Tauqueer, & Kyle, 2018). The biomedical field has constructed fatness as a disease, contributing to social stigma and a fat-phobic society. Dominant thin body ideals represent U.S. values of self-control, self-discipline, and competitiveness that reinforce the rejection of fatness (Puhl & Heuer, 2009).

Couch, Thomas, Lewis, Blood, Holland, and Komseroff (2016) explored the attitudes of obese participants toward media portrayals of thin bodies. Couch et al. found that the participants understood the thin body ideal was an expected social norm. The participants also understood that to be thin was to be accepted, approved of, and

successful. Couch et al. found that participants expressed the pressure to conform and control their weight in order to achieve the thin ideal and to fit in.

Vartanian and Hopkinson (2010) found that conforming to mainstream body ideals was positively related to internalization of those ideals. Internalization of thin ideals was related to greater dissatisfaction with a person's body (Vartanian & Hopkinson, 2010). Identification with obese people was not shown to improve self-image (Puhl et al., 2011). Consequently, obese people feel the effects of antifat from those on the outside, those on the inside, and from within themselves. Fat-talk, known as the internalization of messages about obesity, was positively correlated with body dissatisfaction and wanting to be thin (Warren, Holland, Billings, & Parker, 2012). Although the thin body ideal is unrealistic for most women, it is accepted, internalized, and used as a reference for comparison and self-evaluation.

Fat feminist activists have worked to gain visibility for and end the oppression of fat women; however, they overlooked the diversity of experiences of fat people, fat women, and fat women of color (Evans, 2015). Scholars have focused on fat people as a social group that faces discrimination and disempowerment paralleled to other oppressed and marginalized groups. Himmelstein, Puhl, and Quinn (2017) found that weight stigma is felt across all groups, but groups internalized and coped with it differently based on different identity variables such as ethnicity. Feminist and fat feminists address inequalities based on gender and size, but have not addressed ethnicity and race. Fat women of color have different experiences than fat White women because of their intersectional experiences with size and ethnicity/race.

Chicana Feminism and Black Feminism

White women were more vulnerable to weight stigma than women of color were because women of color were immune to it or protected from it (Fikkan & Rothblum, 2012). Women of color did not subscribe to a thin body ideal, they disengaged from mainstream messages about body size, and their cultural influences supported a different body ideal (Roehling, 2012). Feminist and fat feminist approaches to weight stigma in women alone does not accurately capture the experience of women from diverse backgrounds (Saguy, 2012). Chicana feminism and Black feminism sought to fill the gap in the movement towards equality for women. Delgado Bernal, Burciaga, and Flores Carmona (2012) suggested the importance of “testimonio” from Latinas in research as a reflection of their personal experience within the U.S. culture. Latinas, Black women, and other women of color need representation in science.

Latinas receive conflicting messages about beauty—thin figures are promoted in the U. S. culture, while thicker figures have been embraced in the Latino culture (Cheney, 2011). Franko et al. (2013) conducted a content analysis evaluating magazine covers over a 15-year period and found that *Latina* magazine depicted a diverse body size over the years. These results provide an alternative to mainstream thin ideal, increasing diversity in body size as a viable option. Positive diverse images could prevent negative effects of the internalization of the thin ideal.

Bojorquez-Chapela et al. (2014) found that the participants in their study accepted a thin body ideal, equating it with beauty and a desire to look good, to be accepted, and to feel active. Motherhood played a role in the women’s perception of their bodies—sacrificing a body as a single woman to transition into their role as mother (Bojorquez-

Chapela et al., 2014). Culturally collectivistic, these women made their families a priority over themselves (Bojorquez-Chapela et al., 2014). Obesity measures and studies need to include a multicultural understanding of Latina women's perspectives, values, and experiences of their body.

Some scholars have shown links between internalization of thin body ideals and disordered eating in Latinas, suggesting there are physical consequences to weight stigma (Poloskov & Tracey, 2013; Warren et al., 2005; Warren, Schoen, & Schafer, 2010).

Other researchers have shown there to be a connection between weight-based discrimination and mental health (Bowleg, 2012; Ciciurkaite & Perry, 2018). Further research should include an intersectional examination of the experiences of fat women by gender, social class, race/ethnicity, and sexual orientation, as well as other identities.

Intersectional Feminist Theory

Intersectionality recognizes multiple and overlapping points of identity, including women of color in research on discrimination, misogyny, and racism (Evans, 2015).

According to intersectionality, points of identity such as race, sexual orientation, and gender do not exist isolated and separate, but have complex relationships with each other that together shed light on a person's experience (Crenshaw, 1991; Hill Collins, 2009).

Multiple oppressed identities are often overlooked in research, and intersectional theory can be used to understand systemic/structural injustice and social inequality.

Intersectional theory incorporates issues of gender inequality into an expansive group of other social categories that have been overlooked (hooks, 2014). Not all women are having the same experience because they are women. Different social categories impact the experience of being a woman (Keane, 2014).

Intersectional theory was used in this study on weight stigma, ethnic identity, and acculturation in Latinas. Latinas are marginalized by their gender, their ethnicity, and their size. These unique perspectives of oppression are unlike those experienced by White women in that the multiple oppressed identities intersect in women of color producing stress, physical and mental disease, and shared injustice (Hill Collins, 2009). In intersectional theory, identities are multilayered, and people belong to more than one social group at a time, leading to prejudice and discrimination being multilayered across different identities (Nash & Warin, 2017). Fat and body size are other social categories of identity that intersect with other axes such as gender, race, sexuality, social class, and age (van Amsterdam, 2013).

There are gaps in research on the intersections of race, class, immigration, origin of birth, and gender in Latinas (Viruell-Fuentes, Miranda, & Abdulrahim, 2012). Intersectionality is also underused in the area of weight stigma (Grzanka, Santos, & Moradi, 2017; Himmelstein et al., 2017; Williams & Fredrick, 2015). Race/ethnicity has often been included only as a control variable and without meaningful information about stigma in diverse populations (Himmelstein et al., 2017). The lack of diversity in research on weight stigma in Latinas needs to be addressed from both a public health and a social justice perspective (Brewis, SturtzSreetharan, & Wutich, 2018; Nutter et al., 2016; Nutter, Russell-Mayhew, Arthur, & Ellard, 2018).

Himmelstein et al. (2017) found that weight stigma is not just experienced by White women, but across all diverse groups of women. It is, however, internalized differently among Black and Latina women. More research is needed on Latinas and weight stigma.

Intersectional theory (Viruell-Fuentes et al., 2012) is used to examine weight stigma, ethnic identity, and acculturation in this study and the quantitative analysis of the interaction of these variables. I considered the multiple social categories of identity and oppression. Specifically, acculturation was analyzed within the context of its intersection with multiple identity factors which contribute to physical and psychological health disparities.

Weight stigma. Goffman (1963) described stigma as an “attribute that is deeply discrediting,” reducing the person possessing the stigmatized attribute as tainted, less than, and devalued (p. 3). People with obesity face pervasive stigmatization because of their weight (Hackman, Maupin, & Brewis, 2016; Puhl & Brownell, 2001; Puhl & Heuer, 2009). Obese bodies are visible, deviant, associated with moral failings, and open for ridicule and stigmatization (Lewis et al. 2011). Researchers have focused on the cause of weight stigma and its impact on psychological and physical health, including studies on obesity, thin body ideals, and internalization (Hunger & Major, 2015; Major, Hunger, Bunyan, & Miller, 2014; Savoy et al., 2012; Vartanian & Novak, 2011). Most of these studies, however, have been conducted with White women, indicating a lack of diversity and limitation in generalizability to Latinas. Little is known about weight stigma in Latinas and the impact of ethnic identity.

Ethnic identity. Hispanic or Latino refers to a “person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race” (US Census, 2011, p. 2). Hispanic or Latino does not describe race, specify nationality, assign immigration status, clarify language use, or even explain cultural affiliation (Schooler, 2008). Race and ethnicity are two distinct constructs—race is a

characterization based on visible traits such as skin color; ethnicity is a sense of belonging to and acceptance of the norms, beliefs, and practices of a person's cultural group (APA, 2002; Warren, 2014). Affiliation with her ethnic group has been found to protect Latinas from White-centric thin body ideals, body dissatisfaction, and eating disorders (Rakhkovskaya & Warren, 2014; Schooler & Daniels, 2014; Warren, 2014). Other scholars have shown that Latinas were not immune to messages about thin body ideals and body image issues (Franko et al., 2012; Pompper & Koenig, 2004; Puhl et al., 2011; Rakhkovskaya & Warren, 2016). Researchers have not measured the impact of ethnic identity on the experience of weight stigma in Latinas and its interaction with acculturation.

Acculturation. Acculturation is the process of change from a person's own country's cultural values and beliefs to the host country's cultural values and beliefs, leading to the adoption of the new country's mainstream cultural norms (Berry, 1980; Baker, Soto, Perez, & Lee, 2012). The tension that accompanies the process of facing a different culture contributes to stress and poses health risks for Latino populations (Millender, 2012). The Latino population is rapidly increasing in the U.S., presenting an opportunity for scholars to conduct research including this demographic (Abraido-Lanza, Echeverria, & Flórez, 2016; McLeod, Buscemi, & Bohnert, 2016). Researchers have found that higher levels of acculturation were related to internalization of U.S. beauty ideals and obesity (Marquez, Ayala, & Wing, 2015; New et al., 2013; Poloskov & Tracey, 2013; Rogers Wood & Petrie, 2010; Sabik, Cole, & Ward, 2010; Warren, 2014). No studies have been done, however, on its relationship to weight stigma.

Research on weight stigma has not included diverse samples of Latinas. It has not considered the multicultural complexity of Latinas and weight stigma as she navigates messages about dominant U.S. thin body ideals. It has neglected an investigation into the possible influences of the strength of her ethnic identity and her level of acculturation on that experience. The theoretical framework for this study guided the investigation of these variables.

Summary

Feminist theory addresses inequalities of gender, supporting women. Fat feminist theory addresses inequalities of fat women, but has historically neglected the diversity of oppression experienced by fat women of color. Chicana and black feminism theories address inequalities experienced by women of color, seeking greater representation and awareness in feminist and social justice movements. Intersectional theory allows for the evaluation of fat women of color's experiences with inequality, oppression, marginalization, etc. Intersectional theory provided the framework from which to understand how Latinas experience weight stigma and the impact of ethnic identity and acculturation on that experience. For the purpose of this study, intersectional theory provided the opportunity to explore weight stigma alongside and together with ethnicity in Latinas, as well as the interaction of acculturation on weight stigma and ethnic identity. When fatness is paired with another social category, the social meaning of weight stigma and fatness changes – being a fat woman is different from being a fat Latina woman.

Approaches to the Problem

There have been two approaches to weight stigma research. One approach has focused on attitudes, stigmatizing experiences, and stigma reduction strategies (Ebnetter

& Latner, 2013; Lewis et al., 2011; Puhl & Heuer, 2009; Robinson & Kirkham, 2014; Star, Hay, Quirk, & Mond, 2015; Tomiyama et al., 2015). The other approach has sought to critique mainstream obesity discourses and challenge institutional responses to large bodies, contributing to a paradigm shift for body diversity and advocating for human rights protection against weight stigma (Campos, Saguy, Ernsberger, Oliver, & Gaesser, 2006; Cooper, 2010; Ellis, Rosenblum, Miller, Peterson, & Lumen, 2014; Hopkins, 2012; Kwan, 2009; Lewis et al., 2011; Meleo-Erwin, 2015; Nolan, 2017; Robinson & Christiansen, 2014). Within these approaches, few studies included an investigation of Latinas and weight stigma. These investigations have not considered the interaction of ethnic identity and acculturation. The literature review explores the current research and the gaps found on these variables.

Literature Review

The literature review is a critical evaluation of the research done on weight stigma, ethnic identity, and acculturation. Understanding these key variables provides clarity on what has been done and what has been left out in the research on weight stigma. As the details connect and create a broad picture, the gap in the research becomes apparent. This literature review supports the purpose of this current study with Latinas (Jackson, 2016).

Weight Stigma

Weight stigma has been found to occur in all life domains, including with family and friends (Andreyeva et al., 2008; Pearl et al., 2018; Puhl & Brownell, 2006) and in people of varying BMI status (Latner, Ebner, & O'Brien, 2012; Spahlholz, Baer, Konig, Riedel-Heller, & Luck-Sikorski, 2016; Vartanian & Novak, 2011; Vartanian, Pinkus, &

Smyth, 2014). Weight stigma is present in the medical field where medical staff have been found to hold bias against their patients who have obesity, as well as with patients who judge their doctors who have obesity (Blackburn, Stathi, Keogh, & Eccleston, 2015; Flint, 2015; Gudzone, Bennett, Cooper, & Bleich, 2014a; Gudzone, Bennett, Cooper, & Bleich, 2014b; Phelan et al., 2014; Phelan et al., 2015; Phelan, Burgess, Yeazel, Hellerstedt, Griffin, & van Ryn, 2015; Puhl, Gold, Luedicke, & DePierre, 2013; Setchell, Watson, Jones, Gard, & Briffa, 2014; Setchell, Watson, Jones, & Gard, 2015; Swift, Hanlon, El-Redy, Puhl, & Glazebrook, 2013; Vartanian & Fardouly, 2013). Weight stigma is present in gyms and fitness facilities where people with overweight or obesity are shamed for their bodies in the very place that is meant for them to work on their bodies (Schvey et al., 2017).

Weight stigma is present in schools where children are bullied because of their weight and college admissions are negatively affected (Aimé, LeBlanc, & Maiano, 2017; Burmeister, Kiefner, Carles, & Musher-Eizenman, 2013; Cardinal, Whitney, Narimatsu, Hubert, & Souza, 2014; Puhl, Peterson, & Luedicke, 2013b). Weight stigma is present in the workplace, in dating situations, in travel, and in the court room (Blodorn, Major, Hunger, & Miller, 2016; Collisson, Howell, Rusbasan, & Rosenfeld, 2017; Farhat, Haynie, Summersett-Ringgold, Brooks-Russell, & Iannotti, 2015; Grant & Mizzi, 2014; King et al., 2014; Lesser & Puhl, 2014; Poria & Beal, 2017; Schvey, Puhl, Levandoski, & Brownell, 2013). Weight stigma is also evident in the military where strict weight standards are promoted (Schvey et al., 2017).

In an effort to understand weight stigma, Myers and Rosen (1999) conducted two studies using a sample of people with obesity. In the first study, Myers and Rosen (1999)

created an inventory of stigmatizing situations from items listed by their research participants. Eleven categories were created from 185 self-reported stigmatizing situations. The categories included: being made fun of by children, not being able to find clothes that fit, ridicule and criticism from doctors, nasty comments from family and others, job discrimination, and violence. In the second study, Myers and Rosen (1999) measured the frequency of each stigmatizing situation, coping responses, mental health symptoms, body image, and self-esteem in a sample of 146 patients with clinical obesity. Results showed that weight stigma was a common experience, the stigmatized individuals used a variety of coping strategies, and exposure to stigmatization was associated with greater mental health issues, lower body image, and lower self-esteem. Weight was not strongly related to stigma, but stigma was strongly associated with psychological distress, indicating that stigma was correlated to negative psychological health consequences. The samples in both studies were mostly of a White demographic, limiting its generalizability.

Puhl and Brownell's 2006 quantitative investigation on weight stigma used a modified version of Myers and Rosen's inventory with two subsamples of participants in a weight loss support group (1999). The researchers found that weight stigma was experienced by subjects across the BMI spectrum suggesting that individuals who did not have obesity might also be vulnerable to weight stigma. Stigma was commonly experienced as nasty comments from children, doctors, and family members as well as classmates and coworkers, indicating that that stigma is present in multiple daily settings. Stigma was also experienced as barriers and inaccessibility in public spaces. Weight stigma was not found to be related to psychological functioning, but the researchers explained this could be possible because the sample population was part of a support

group which might have protected them from the negative effects of weight stigma. Ninety-five percent of the first sample and 94% of the second sample were White women, limiting results and generalizability to diverse populations.

Vartanian (2015) developed and validated a briefer version of the social stigmatizing inventory as an alternative to the original longer version. Vartanian (2015) found the brief version performed as well as the full version. Scores on the inventory positively correlated to BMI. Although the sample included non-clinical participants and men, the majority of the subjects were White women, limiting generalizability to diverse populations.

In their qualitative study, Puhl, Moss-Racusin, Schwartz, and Brownell (2008) explored the subjective experiences of weight stigma in 318 research participants with overweight and obesity. Participants reported experiencing the most stigma as adults from other adults - friends, parents, and significant others. Verbal stigma was the most common form of weight stigma and happened most often at home, a public space, school, work, and medical facilities. Participants expressed their desire for others to know how difficult it was to lose weight, the consequences of stigma including depression and disordered eating in response to it, and wanted to challenge the stereotypes of obesity. The participants also offered suggestions for stigma reduction including education about obesity and weight stigma as well as changes in media portrayal. The research participants were from a weight loss organization and 96% of the women in the sample were White. The sample was motivated to lose weight and was lacking in diversity, indicating the lack of generalizability to the general public.

Lewis, Thomas, Blood, Castle, Hyde, and Komseroff (2011) conducted a qualitative exploration of the perception of weight stigma in people with obesity. The researchers discovered examples of direct, environmental, and indirect stigma experiences ranging from: verbal abuse, bullying, discrimination, inaccessibility to suitable public spaces, fear, and criticism. Participants reported rarely challenging stigmatizing experiences, never fighting back, and feeling helpless. The participants also shared the impact of these experiences, reporting low self-esteem, depression, isolation and withdrawal from social events, and loneliness. Weight stigma was found to be pervasive throughout daily life, from many sources, and in many different formats. This was conducted with an Australian sample of people with obesity, limiting its generalizability to other populations of people with diverse socio-cultural backgrounds.

Owen's 2012 ethnographic study explored the experiences of weight stigma in people with obesity. The participants reported the many ways they navigated their spaces in the world. The participants shared stories of towels not fitting around their bodies, narrow doorways, small seats on public transportation, and seatbelts that did not reach. The participants reported feeling hyperaware and vigilant of their bodies as they negotiated around spaces that reminded them that they did not fit, were not welcome, were undeserving, or were offensive. The participants often withdrew from the public to avoid the stress and shame of inaccessible spaces, felt that their needs were censored and ignored, and experienced a complicated relationship of disconnect between how they perceived their bodies versus what their bodies actually were. While this study contributed to the discourse on weight stigma, it did not address the complexity of the interaction of variables such as race or ethnicity and weight stigma.

Most quantitative research has used retrospective self-reporting with clinical sample populations. Myers and Rosen's inventory measures respondent's experiences of stigmatizing situations over their lifetime, possibly underestimating or distorting the frequency of the experiences (1999). In addition, little research has been done with non-clinical sample populations and results of research may be limited in their generalizability to the general population. In their study, Seacat, Dougal, and Roy (2014) measured weight stigma using a daily diary assessment—reporting stigmatizing situations on a daily basis for seven days. The researchers found that participants experienced 3.08 stigmatizing events per day, including experiencing physical barriers (84%), nasty comments (74%), and being stared at (72%). Adjusting the measurement from retrospective to daily/present reports provided clearer representation of the experience of weight stigma, demonstrating that weight stigma is prevalent and occurring with greater frequency than retrospective studies showed. This study was conducted with a sample of 94% White research participants, limiting its generalizability.

Media. Weight stigmatization shows up in magazine articles with anti-obesity messages and video campaigns for public health that focus on weight (Barry, Gollust, McGinty, & Niederdeppe, 2014; Johnstone & Grant, 2018; Pearl, Dovidio, Puhl, & Brownell, 2015; Puhl, Peterson, & Luedicke, 2013a; Puhl, Luedicke, & Peterson, 2013; Shentow-Bewsh, Keating, & Mills, 2016). Weight stigma shows up in news, television shows, and movies where obese people are negatively portrayed or made fun of (Brochu, Pearl, Puhl, & Brownell, 2013; Burmeister & Carles, 2014a; Burmeister & Carles, 2014b; Gollust, Eboh, & Barry, 2012; Klos, Greenleaf, Paly, Kessler, Shoemaker, & Suchla, 2015; Ramos, Costa, Araujo, Severo, & Lopes, 2013; Saguy, Frederick, & Gruys, 2014).

In separate content analyses examining news images and stories of people with obesity, researchers found that people with obesity were portrayed negatively – headless, with isolated body parts, eating, sedentary, or inappropriately dressed. The results indicated that people with obesity were isolated by unflattering body parts that reduced them as degrading symbols of sickness and disgust, promoting blame and shame - contributing to the negative public perception of obesity and the public acceptance of weight stigma (Heuer, McClure, & Puhl, 2011; Leehr et al., 2018; Puhl, Peterson, DePierre, & Lueicke, 2013).

Weight stigma is also evident in online social media such as Facebook, Twitter, and YouTube (de Brun et al., 2014; Hinman et al., 2015; Jeon, Hale, Knackmuhs, & Mackert, 2018; Pagoto et al., 2015). Fardouly, Diedrichs, Vartanian, and Halliwell (2015) measured the impact of social media use on mood and body image in 112 women in the United Kingdom. The participants reported on their mood before and after viewing an assigned appearance neutral website, an online fashion magazine, or Facebook for 10 minutes (Fardouly et al., 2015). Participants in the Facebook control reported greater negative mood than the other website condition (Fardouly et al., 2015). The participants in the online fashion magazine control group reported greater body dissatisfaction and weight/shape discrepancy (Fardouly et al., 2015). The research participant sample were 75% White, limiting its generalizability to other populations (Fardouly et al., 2015). Fardouly et al. (2015) suggested using a larger sample, a more diverse sample, and including other image oriented social media sites such as Instagram to further measure online media impacts on body image.

In October 2013, an online fat-shaming campaign was created, encouraging participants to tweet negative comments with the hashtag #FatShamingWeek. Lydecker et al. (2016) found 4,596 “fat” text in 4 hours—56.57% were negative. Of those negative weight stigmatizing content, themes included gluttony, unattractiveness, not sexually desirable, sedentary, lazy, and stupid (Lydecker et al., 2016). Lydecker et al. (2016) demonstrated that weight stigmatizing messages were prevalent in social media, creating hostile virtual environments, perpetuating stigma, fostering discrimination, and spreading the stigmatizing messages worldwide.

Jeon et al. (2018) analyzed YouTube comment content discussing individuals with overweight. The researchers found comments attacking individuals with overweight were twice as high as comments defending them. Women with overweight were attacked for their capacity, were attacked more by men, and were attacked more with swear words than comments that attacked men. Results of this study established women’s vulnerability online and the importance of intervening against weight stigma specifically regarding gender.

Weight stigmatization is evident in homes, in schools, and with medical staff. Weight stigma is evident in real time interactions as well as virtual. Weight stigma exists in the online world of social media, where people engage with other people around the world. The impact of weight stigma has been shown to have negative psychological and physical consequences.

Impact of weight stigma. Weight stigma was found to be positively correlated to body dissatisfaction, drive for thinness, and bulimic symptoms as well as negatively correlated with self-esteem (Vartanian & Novak, 2011). Research participants who

experienced greater weight stigma reported higher levels of depression, anxiety, and antisocial behavior, posing a risk to psychological health (Hand, Robinson, Stewart, Zhang, & Hand, 2017; Himmelstein, Puhl, & Quinn, 2018; Savoy et al., 2012). Research participants in a weight stigma control group consumed more calories during a snack break and were more concerned about being the target of weight stigma (Major et al., 2014). Research participants with high perceived weight stigma performed poorly on inhibitory control tasks (Araiza & Wellman, 2017). Research participants with higher BMI had lower psychological and physical health—a relationship mediated by weight stigma (Hunger & Major, 2015). Research participants in the above studies were mostly White women, indicating a lack of diversity and limitation in generalizability to other populations.

Weight stigmatization has the opposite effect of motivation to lose weight—an argument often used when shaming people with obesity, an approach which has not been supported by empirical evidence (Chrisler & Barney, 2017; Iles, Seate, & Waks, 2017; Lewis et al., 2011; Nolan & Eshelman, 2016; Tomiyama & Mann, 2013; Vartanian & Porter, 2016; Vartanian & Smyth, 2013). Weight stigmatization threatens health, instead of promoting it, contributing to a social justice issue against people with obesity (Hunger, Major, Blodorn, & Miller, 2015; Puhl & Heuer, 2010; Sikorski et al., 2015; Sutin, Stephan, Grzywacz, Robinson, Daly, & Terracciano, 2016). In their quantitative study, Puhl, Andreyeva, and Brownell (2008) compared weight discrimination to race and gender discrimination. They found that weight/height discrimination was the third most common type of discrimination amongst women—comparable to the experience of racial and gender discrimination.

Weight stigmatization often takes the form of bullying (Rosenthal et al., 2015), socially excludes its victims (Westermann, Rief, Euteneuer, & Kohlmann, 2015), and impacts life expectancy (Sutin, Stephan, & Terracciano, 2015). It is a physiological stressor (Azevedo et al., 2014; Barlösius & Philipps, 2015; Tomiyama, 2014) that affects neural reactivity and cortisol, reduces working memory, and decreases quality of life (Guardabassi & Tomasetto, 2018; Himmelstein, Incollingo Belsky, & Tomiyama, 2015; Incollingo Rodriguez, Heldreth, & Tomiyama, 2016; Olson, Landers, Thaxton, & Emery, 2018; Schvey, Puhl, & Brownell, 2014; Wee, Davis, Chiodi, Huskey, & Hamel, 2014; Wee, Davis, Huskey, Jones, & Hamel, 2012). Weight stigma contributes to psychological distress such as anxiety, loneliness, depression, and suicidal ideation (Juvonen, Lessard, Schacter, & Suchilt, 2016; Puhl & King, 2013). It impacts eating and other health-related behavior (Mensinger, Calogero, & Tylka, 2016; Murakami, Essayli, & Latner, 2016; Sutin, Robinson, Daly, & Terracciano, 2016).

Internalization of weight stigma has been found to have negative consequences for psychological and physical health in those who internalize stigma (Pearl et al., 2017; Pearl & Puhl, 2018; Pearl, White, & Grilo, 2014; Puhl, Moss-Racusin, & Schwartz, 2007; Sutin & Terracciano, 2013). Weight stigma has been associated with depression, anxiety, low self-esteem, eating disorder psychopathology, social and behavioral problems, and lower quality of life (Hilbert, Braehler, Haeuser & Zenger, 2014). Weight stigma has been linked to decreased physical activity and increased weight gain (Mensinger & Meadows, 2017; Puhl, Quinn, Weisz, & Suh, 2017). Internalization of weight stigma was found to continue to influence individuals who formerly had obesity, leading to anxiety, depressive disorders, and suicidal ideation (Levy & Pilver, 2012). Unlike

Goffman's supposition (1963) that stigma was erased once the person left the stigmatized group, people with a history of obesity did not stop feeling the negative impact of weight stigma.

Quantitative and qualitative studies have demonstrated the existence of weight stigma, its impact, and its complexities (Monaghan, 2016). Many studies have been conducted with mostly White participants. Research has provided a wealth of information on obesity, thin body ideals, and weight stigma in White samples. Not as much is known, however, about Latinas and weight stigma, how their ethnic identity in the U.S. culture plays a role, or if acculturation influences it all.

In her qualitative study, Meleo-Erwin (2015) explored weight stigma in bariatric patients in a mostly New York City sample with 30 Latina participants. The participants reported experiencing overt and indirect remarks, dirty looks and open gawking, being shamed by friends and strangers alike, and being bullied and physically assaulted. The participants received criticism and condemnation from medical professionals, causing them to avoid care. The participants shared challenges of navigating public transportation in a city with a high population density, experiencing shame and discomfort, as well as hostility and isolation. The participants were hypervigilant of their bodies in public, scanning spaces and evaluating access. The researcher pointed out that the diversity of experiences of the Latinas in the study warranted further exploration of the complexity of ethnicity and weight stigma.

Multicultural awareness in psychological research is essential to ethically sound and accurate representation of diverse communities (APA, 2002). Inclusive research on weight stigma contributes to knowledge about underserved populations. In their

intersectional study on weight stigma, Himmelstein et al. (2017) found that weight stigma is experienced across diverse ethnic groups, suggesting that inclusion of diverse samples in research is necessary to understand the phenomenon. In their quantitative study on body image, Hart, Sbrocco, and Carter (2016) found that Black women held a positive explicit attitude of larger figures, but a negative implicit bias that was related to ethnic identity, suggesting they are not immune to weight stigma. Those women with lower affiliation with their ethnic identity held greater implicit anti-fat bias. In their study on weight bias in four Western countries, Puhl et al. (2015) found that negative attitudes and beliefs about weight were similar in Canada, the United States, Iceland, and Australia, suggesting the widespread sociocultural norms on body size. In their study, Hackman, et al. (2016) found that weight stigma was experienced by both underweight and overweight women in Guatemala and was a significant psychosocial stressor. The goal of this current study was to purposely include Latinas in weight stigma research. In doing so, this study fills the gap in the knowledge of Latinas and weight stigma as well as the factors that interact with it, including ethnic identity.

Ethnic Identity

Hispanic and Latino populations are increasing in the United States, as are their obesity rates (CDC, 2016; State of Obesity, 2014). Young Latina women are at risk for body dissatisfaction, eating disorders, and obesity (Flegal, Kruszon-Moran, Carroll, Fryar, & Ogden, 2016; Franko, Coen, Roehrig, Rodgers, Jenkins, Lovering, & Dela Cruz, 2012; Ivezaj, Wiedemann, Lydecker, & Grilo, 2018). Latinas' unique experiences with body image are complicated. They navigate between different cultural worlds-between a

dominant U.S. value system and their oft-traditional immigrant value system (Mills et al., 2012; Schooler, 2008; Yanover & Thompson, 2010).

In their research, Lund and Miller (2014) explored whether obesity was part of an U.S. identity. The researchers found that obesity was excluded from the implicit attitudes of national identity. Obesity was culturally rejected as part of a U.S. in-group identity, especially when heuristic cues for disease and pathology were activated. Exclusion of Latinas with obesity from a U.S. national identity places them outside of the accepted superordinate group, effectively characterizing them as un-American and contributing further to the complicated experience of weight stigma in Latinas.

Codes of good moral bodies extend to Latino populations in a complicated message of citizenship (Greenhalgh & Carney, 2014; Morey, 2018). According to the 2010 U.S. Census, the number of Hispanic/Latinos in the United States was estimated at 50 million, the largest ethnic or racial minority in the country (2015). In their 2014 special report on racial and ethnic disparities in obesity, the Trust for America's Health and the Robert Wood Johnson Foundation's collaborative efforts found that 77% of Latino adults in the United States had overweight or obesity (State of Obesity). Flórez and Abraido-Lanza found that significant increases in obesity with Latinos in the United States were associated with longer duration of residency in the country, health status, and ethnicity (2017).

Investigations of body image requires an exploration of the complex belief systems in Latinas' ideas and attitudes regarding body image, weight, and shape. An understanding of these complicated experiences must include a cultural investigation into the different values of body ideals (Cheney, 2011; Franko et al., 2012; Martinez, Rhee,

Blanco, & Boutelle, 2017). Latinas receive conflicting messages about beauty—thin figures are promoted in the U.S. culture, while curvier figures are embraced in the Latino culture (Cheney, 2011). Franko et al. (2013) conducted a content analysis evaluating magazine covers in *Latina* magazine over a 15 year period. Covers depicted a diverse body size over the years, providing an alternative to the dominant U.S. thin body ideal.

Cheney (2011) presented data from an ethnographic study on women of color's experiences with anxiety, emotional stress, and social inequalities as related to their bodies. Results suggest that buying into the thin body ideal was a means of fitting in and gaining power. Weight stigma further marginalized this group already experiencing race and class issues with body pathology (Colls & Evans, 2014). Lack of access to healthy and affordable food options, time to exercise, and stress were found to contribute to obesity (Tovar et al., 2013).

A sample of Mexican-American teenage girls in California reported that a slender, but curvy body was ideal (Romo et al., 2016). Research with Mexican women in Alabama studied their perceptions of obesity and found that social isolation, depression, and stress contributed to weight gain (Agne et al., 2012). In a sample of Dominican women in NYC with overweight and obesity, half of the sample were content with their weight, even though it was associated with hypertension and depression (Masterson Creber et al., 2016).

In their study with New York Latinas, Viladrich et al. (2009) found that their participants recognized that the thin body ideal represented the ultimate body ideal and the Latina curvy shape was its counter. In another study with women in the northeast, Cheney (2011) found that Latinas experienced anxiety and emotional stress over

messages of the thin body ideal. Researchers in both studies suggested that narratives about the body include the social meaning of size. In other words, thin equals power, status, and success.

In a diverse sampling of Latina participants, Isasi et al. (2015) found that obesity was associated with chronic stress, but not with perceived stress. Results suggest that an understanding of stressors in a Latina's life inform upon the phenomenon of increases in obesity rates in this population. In a qualitative study, Corsino, Chinae, Ard, Voils, Rocha-Goldberg, and Svetkey (2016) found that Latinas ranked psychological stress as a factor contributing to their obesity, ranking fatigue and physical weakness as a limiting factor to losing weight. Women also ranked time and location higher as a barrier to participating in a weight loss program. These results indicate that an understanding of stressors in a Latina's unique experience (immigration, culture, identity) would enlighten upon the phenomenon of weight stigma.

In a qualitative study with Mexican women in Mexico city, Bojorquez-Chapela et al. (2014) found that the participants recognized the thin body ideal was a positive representation of beauty, acceptance, and health. There is an underrepresentation of diverse Latino populations in obesity research and an overabundance of focus on Mexican and Mexican-American populations that do not capture the diverse experiences of other Latino populations (Jay et al., 2014). For example, research has shown that unique immigrant experiences were associated with obesity in Mexican sample populations such as less support from family, social isolation, limited time, psycho-social stress, and exposure to obesogenic environments in the U.S. with an over-abundance of fast food (Flórez et al., 2012; Lindberg & Stevens, 2011; Sussner, Lindsay, Greaney, &

Peterson, 2008; Visocky, 2011). While this information is an important contribution to this area of study, it does not include a diverse sampling of Latino populations in the United States and limits generalizability.

Research with Mexican sample populations cannot be generalized to other Latino populations. There is heterogeneity within the Latino population that must be attended to in an effort to gain accurate and valid data about this population's experiences with weight stigma.

Research needs to include a multicultural understanding of Latina's perspectives, values, and experiences of their body. Most body image research has been conducted with White and Black women. Few have examined weight stigma in diverse samples of Latinas (Antin & Hunt, 2013; Capodilup, 2015; Hebl, King & Perkins, 2009; Lynch & Kane, 2014; Mitchell & Mazzeo, 2009; Poran, 2006; Reel, SooHoo, Franklin Summerhays, & Gill, 2008; Puhl et al., 2008).

Hunger and Major's 2015 study on BMI, health, discrimination, and stigma included both men and women, but 85% were White. In their 2007 study on internalization of weight stigma and health, Puhl et al. had a sample of 95% White women. Results from research with White samples cannot be generalized to other ethnic populations without an understanding of the distinct cultural influences on those ethnic groups and an examination of other variables such as region, age, or socioeconomic status (Couch et al., 2016; Swami, Airs, Chouhan, Padilla Leon, & Towell, 2009). Understanding Latinas and weight stigma requires an investigation into the cultural belief systems they hold about body ideals.

Protective factor. Results from Schooler and Daniels' 2014 study with 118 Latina teenagers suggest that saliency of ethnic identity might act as a protective factor against the negative effects from viewing images of women who represent the white-centric thin body ideal. Latinas might resist comparison with these images if they strongly identify with their ethnic group. In her 2014 study, Warren found that identification with one's ethnic group predicted lower levels of body area dissatisfaction and more positive feelings about racially salient features in Black and Latina women. In an ethnically diverse sample, Rakhkovskaya & Warren (2014) found that ethnic identity moderated the relationship between thin ideal internalization and eating disorders, suggesting it could be a protective factor against eating concerns.

Nonprotective factors. In their study, Pompper & Koenig (2004) reported mixed results about Latinas' vulnerability to body image issues. Puhl et al. (2011) found that stigmatizing attitudes about obesity in Latino participants with obesity was similar to attitudes held by White participants, suggesting Latinos were not immune to weight stigma. Franko et al. (2012) found that ethnic identity has a complex relationship with body image, suggesting that women of color were not protected from messages about body ideals, whether thin or curvy. Rodgers, Watts, Austin, Haines, & Neumark-Sztainer (2016) found that young women with overweight were at risk for disordered eating, regardless of ethnic and racial group. In another study, Rakhkovskaya & Warren (2016) found that ethnic identity was protective for Black women, but not for Latinas.

Vulnerable population. Latinas who have obesity are part of a vulnerable population based on gender, ethnicity, and weight (Shivayhogi, 2013; Warren, 2014). Social vulnerability "is a function of the social perception of certain groups, which

includes stereotyping and can lead to discrimination” (NBAC, 2001, p. 9). Multicultural awareness is essential to conducting research, identifying phenomena, and providing services for diverse populations (APA, 2002; Seacat et al., 2014). Latinas may have different experiences of weight stigma depending on where they are and how long they have been there. Levels of acculturation to U.S. mainstream body ideals may provide further insight into Latinas and weight stigma.

Acculturation

Latinas’ membership as part of an ethnic group is a complicated process that may be impacted by acculturation into the U.S. culture, influencing their self-perception and behavior. Their membership as part of an obese group is further complicated by dominant cultural norms that value a type of body ideal that might differ from their own. Latinas with obesity that have a positive membership with their group (Tajfel & Turner 1986) may experience less stigmatization.

In their study, Pepper and Ruiz (2007) found that Latinas compared their bodies to the dominant U.S. thin body ideal. While they first applied weight stigma to themselves, Latinas then projected that stigma onto others after acculturation into the dominant culture. Understanding how Latinas with obesity compare themselves to other women requires an exploration of the cultural context in which they identify themselves (Corning et al., 2006; Mills et al., 2012). Latinas’ membership and identity with their group may be impacted by their comparison with the dominant U.S. thin body ideal. They might also be comparing themselves to another body (curvy) ideal that impacts how they identify with their dominant culture. The direction in which Latinas compare themselves to the dominant U.S. thin body ideal may influence their identity.

Researchers measuring acculturation have found it to be related to internalization of U.S. beauty ideals, disordered eating, and body dissatisfaction in Latinas (Poloskov & Tracey, 2013; Rogers Wood & Petrie, 2010; Sabik et al., 2010; Warren, 2014). New et al. (2013) found that the higher the acculturation, the higher the weight among Hispanic adults. Marquez et al. (2015) found that the higher the acculturation, the higher the obesity and dieting behavior in Latinas. Isasi et al. (2015) found that prolonged exposure to the environment of the new culture was related to obesity in Latinos, not acculturation. Fialkowski et al. (2015) also found that acculturation was not related to obesity.

Research on acculturation is mixed, scant, and lacking representation in diverse Latino populations. There have been no studies conducted on the relationships between weight stigma, ethnic identity, and acculturation in Latinas. The goal of this study was to fill that gap in an effort to get more information so as to serve the needs of this population.

Summary

Weight stigma is a product of anti-fat attitudes based on cultural norms about body ideals. Weight stigma is experienced by individuals who have obesity and those who do not, is pervasive in all areas of life, and has negative consequences for psychological as well as physical health. Much research has been done with White women, but few have included large or diverse samples of Latinas. Latinas have complicated body experiences intertwined with their cultural identities. Some researchers have found that Latinas have different body ideals than the dominant U.S. thin body ideal, but it is not clear if or how Latinas experience weight stigma or whether

there is a relationship with their ethnic identity and acculturation into U.S. culture (Nolan & Eshleman, 2016; Savoy et al., 2012).

The results of this quantitative study can contribute to the field's limited understanding of Latinas and weight stigma. Culturally relevant research can provide data on the unique experiences of diverse groups, allowing for the identification of vulnerable populations (Annunziato et al. 2014; APA, 2002). Weight stigma has been found to contribute to women's social vulnerability as belonging to an undervalued group, contributing to deleterious psychological and physical health issues (Major et al., 2012; NBAC, 2001).

The results of this quantitative study provides the psychological, medical, and professional communities the opportunity to learn about and accurately represent the experience Latinas have with weight stigma, as well as the development of effective stigma reduction interventions (Franko et al., 2012; Jackson et al., 2014; Koball & Carels, 2015; Poloskov & Tracey, 2013). The results of this study can be used to advocate for policies that protect the human rights for victims of weight stigma (Cook et al., 2014; Mann et al., 2015; Pearl & Lebowitz, 2014; Puhl & Liu, 2015; Puhl et al., 2014; Puhl, et al., 2016; Suh et al., 2014). Results of this study can support a paradigm shift regarding cultural norms on body size and redirect the discourse on obesity to include body and weight diversity (Brewis, 2014; O'Hara & Taylor, 2014; Penney & Kirk, 2015; Pickett & Cunningham, 2017; Satinsky & Ingraham, 2014; Sikorski et al., 2015; Smith et al., 2015; Tylka et al., 2014). This study has the potential to identify vulnerable populations experiencing weight stigma (Bombak, 2014; Gurrieri & Cherrier, 2013; Puhl et al., 2017), provide the professional community with culturally relevant data on weight stigma

(Jackson, 2016; Tiggeman, 2015), inform upon weight stigma reduction interventions (Afful & Ricciardelli, 2015), and contribute to policy and paradigm changes about weight, specifically with Latinas (Nutter et al., 2016; O'Reilly & Sixsmith, 2012; Suh et al., 2014).

In the next chapter, I provide a justification of the methods proposed in this study as well as an explanation for the analyses I conducted. Some researchers have suggested Latinas born in the United States and Latinas born outside of the United States differ in areas of mental health, stigma, and body image, while other researchers have shown Latinas share similar experiences (Añez et al., 2005; Franko et al., 2012; Greenhalgh & Carney, 2014; Poloskov & Tracey, 2013; Puhl et al., 2011; Rakhkovskaya & Warren, 2016). In this quantitative study, I used a web-based approach to administer an online survey consisting of a demographic questionnaire and three psychometric scales used to measure weight stigma, ethnic identity, and acculturation in Latinas, both born in the United States of America or one of its territories and in other countries. In order to measure the relationships of each variable (correlation) and measure the strength, direction, and interaction of the relationships of the variables (multiple regression), I used a quantitative survey design to gather data to analyze weight stigma, ethnic identity, and acculturation in Latinas.

Chapter 3: Research Method

Introduction

The purpose of this study was to measure the relationships and strength, direction, and interaction of the relationships between weight stigma, ethnic identity, and acculturation in Latinas. Much research on women and weight stigma has been done using White and Black women, but research on Latinas and weight stigma has been limited and conflicting (Antin & Hunt, 2013; Capodilupo, 2015; Kronenfeld et al., 2010; Lillis et al., 2010; Pearl & Puhl, 2014; Pompper & Koenig, 2004; Puhl et al., 2011; Rakhkovskaya & Warren, 2014; Warren, 2014). It is not known how weight stigma, ethnic identity, and acculturation are related to and interact with one another in Latinas.

In this chapter, I detail the research method that was used to fill the gap in the literature on weight stigma in Latinas. I describe the study design, information on methodology, population, sampling, sampling procedures, recruitment, participation, data collection, and instrumentation. I also explore threats to validity and ethical concerns.

Research Design and Rationale

This study was conducted using a nonexperimental study design with a cross-sectional analysis of a sample of Latinas. Descriptive statistics (Gravetter & Wallnau, 2010) such as age and BMI were collected as part of the process of cleaning data to organize, simplify, and summarize the information collected. Measures of central tendency, variability, deviation, distribution, and sampling error (George & Mallery, 2011) were used to describe the data collected. Analytic statistics (Groves et al., 2009) were collected of the variables as they existed and without manipulation. The dependent variable was the level of weight stigma internalized by Latinas. The independent variable

was the level of ethnic identity in Latinas. The moderator variable was the level of acculturation into U.S. culture in Latinas. In order to measure the relationships of each variable (correlation) and measure the strength, direction, and interaction of the relationships of the variables (multiple regression), I gathered data to analyze weight stigma, ethnic identity, and acculturation in Latinas. These data provided answers to the research questions.

Developing the survey design, issuing it to online resources for distribution on the Internet for use by the population sample, receiving completed surveys, and plugging the data into analytical software was time-consuming, but necessary to gather information from a large sample population (Groves et al., 2009). Survey designs have been used in the study of weight stigma, providing data about the phenomenon of weight stigma and contributing to the advanced knowledge of the phenomenon (Pearl, White, & Grilo, 2014; Seacat et al., 2014). This study included survey questions that measured weight stigma, ethnic identity, and acculturation in Latinas.

Methodology

In this quantitative study, I used a web-based approach to administer an online survey consisting of a demographic questionnaire and three psychometric scales used to measure weight stigma, ethnic identity, and acculturation in Latinas, both born in the United States or one of its territories and in other countries. A moderator variable (acculturation) interacts with the stimulus (ethnic identification) and response (weight stigma) variables (Baron & Kenny, 1986). I applied the interaction of a moderator variable (MacKinnon, 2011) in my research design to explore the complexity of the relationship in Latinas. The WBIS-M (Hubner et al., 2016; Pearl & Puhl, 2014) was used

to measure the level of internalization of weight stigma. The MEIM-R (Phinney & Ong, 2007) and the AMAS-ZABB (Zea, Asner-Self, Birman, & Buki, 2003) were used to measure ethnic identity and acculturation.

Population, Sampling, and Sampling Procedures

The target population for this study was Latinas over the age of 18 living in the United States or one of its territories. Purposive sampling from a known group and snowball sampling from subjects within that group allows the researcher to target a sample (Baltar & Brunet, 2012). Women only were included in this research. Women who did not self-identify as Latina/Hispanic/Spanish were excluded.

The sample size provided a representation of the targeted population. A priori power analysis (Faul, Erdfelder, Lang, & Buchner, 2007; Field, 2009) was conducted using G*Power 3.1.9.2 software to determine a sample size for the study. The sample size was determined with a moderate effect size of 0.15, an alpha level of 0.05, a power level of 0.95, and two tested predictors. The minimum sample size output for a multiple regression analysis was 89 to detect significant correlations between variables. I collected a total sample size of 154 participants in this study..

Procedures for Recruitment, Participation, and Data Collection

Several online “fatshion” bloggers (Lebron, 2017; Negron, 2017) and fat activists (Berrios, 2017; Torres, 2017; Tovar, 2017) were identified for prerecruitment. Virtual snowball sampling (Baltar & Brunet, 2012) was then used to further recruit subjects from the participant’s reference base. E-mails were sent introducing the study and screening for inclusion criteria, after which the subjects were invited to participate in the web survey study. The web survey began with an informed consent form for their completion.

I used the web survey to collect descriptive and analytic data. Demographic information was collected via the web survey: gender, age, ethnic identity, state of residence, BMI, years living in the United States or one of its territories, and age moved to the United States or one of its territories. Psychometric scales were administered via the web survey to measure levels of weight stigma (dependent variable), ethnic identity (independent variable), and acculturation (moderating variable) in Latinas over the age of 18 living in the United States or one of its territories. The web survey ended with a debriefing statement, the option for a follow-up to the web survey, and resources for their reference including links to fat activist web sites and educational material on weight stigma.

Instrumentation and Operationalization of Constructs

Subjects participating in this study were screened for inclusion criteria—gender, ethnic identity, and age. They were linked to a survey packet with a demographic form and questionnaires that measured the variables. The demographic form was a self-made questionnaire that collected information about state of residence, BMI, years living in the United States or one of its territories, and age moved to the United States or one of its territories. The analytic questionnaire consisted of three psychometric tools to measure levels of weight stigma, ethnic identity, and acculturation in Latinas. The WBIS-M, MEIM-R, and AMAS-ZABB were the best fit to measure the variables (Pearl & Puhl, 2014; Phinney & Ong, 2007; Zea et al., 2003). Permission was not needed.

Ethnic identity. The 2010 United States census collected self-reported data on ethnicity and race, using Hispanic and Latino interchangeably to describe ethnicity (2010). It followed the guidelines set forth by the 1997 ruling of the US Office of

Management and Budget (2017). Race and ethnicity are defined as separate concepts. A Hispanic or Latino person is categorized as of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term Spanish origin can be used in addition to Hispanic or Latino (National Institutes of Health [NIH] 2017). People who identify as Hispanic, Latino, or Spanish may be of any race.

Body mass index. The BMI was used as a screening tool to measure obesity. BMI is the ratio of a person's weight and his or her height, falling into four categories: underweight, normal, overweight, and obese (CDC, 2018; WHO, 2017). Seacat et al. (2014) found that BMI was the most influential factor associated with all forms of mental health stigma.

Modified Weight Bias Internalization Scale. The WBIS-M was the best tool for this study because it measures the degree to which people have accepted, internalized, and applied weight stigmatizing stereotypes to themselves (Durso & Latner, 2008; Pearl & Puhl, 2014). It measures the level of stigma a person believes about him or herself based on his or her weight. The 11-item measure is rated on a 7-point Likert scale and can be used with participants of diverse body types, not just people with overweight or obesity. This allows for the inclusion of individuals of diverse body types. Pearl and Puhl (2014) validated a modified bias internalization scale for use when measuring internalization of weight stigmatization in both men and women across diverse body weights and found it to have exceeded the excellent psychometrics of the original scale.

Reliability and validity. The WBIS-M was found to have high internal consistency and strong construct validity (Pearl & Puhl, 2014). Cronbach's alpha was

reported at .94 and was comparable to the original scale (Durso & Latner, 2008). This scale has been used in other studies on eating disorders and psychological distress, as well as on exercise behavior and mental health (O'Brien et al., 2016; Pearl & Dovidio, 2015).

Multigroup Ethnic Identity Measure-Revised. The MEIM-R is a revision of the original MEIM created in 1992 (Phinney) to measure ethnic identity in adolescents and young adults. The original 14-item scale assessed attachment, achieved identity, and ethnic involvement. The revised 6-item version includes content specific to values and beliefs—three items reflecting an exploration of identity factor and three items reflecting a commitment to identity factor (Phinney & Ong, 2007). Sample items include, “I feel a strong attachment towards my own ethnic group” and “I have a strong sense of belonging to my own ethnic group.”

Reliability and validity. Reliability and validity were established for the MEIM-R in the exploratory and confirmatory factor analyses conducted by Phinney and Ong (2007) in their revision of the original scale. Cronbach's alpha was reported at .83 for the exploration and .89 for the commitment subscales (author, year). Other studies using MEIM-R have further supported the scales' psychometric properties (Herrington, Smith, Feinauer, & Griner, 2016). It has been used in a diverse set of studies including with college students, pregnant women, and Asian and Latino populations (Brown et al., 2013; Mills & Murray, 2017).

Abbreviated Multidimensional Acculturation Scale. The AMAS-ZABB scale was appropriate for this study because it measures acculturation to both Anglo-American culture and culture of origin (Zea et al., 2003). The bi-dimensional 42-item scale

assesses identity, language competence, and cultural competence along two dimensions—U.S. dimension and culture of origin dimension. The corresponding subscales along the two dimensions provide information about adherence to the host culture and maintenance of a native culture (Davis & Engel, 2011). It can be self-administered in English.

Reliability and validity. The AMAS-ZABB has demonstrated good internal consistency with adequate concurrent, convergent, divergent, and constructs validity (Davis & Engel, 2011). Both reliability and validity were established in the initial studies examining its psychometric properties with a sample of Latino/a participants. Reliability and validity has been supported in other studies with this population in diverse areas of study such as sexual health, parent-child communication, HIV status, beauty practices, psychotherapy, and breast cancer (Davidson & Cardemil, 2009; Flores, 2015; Gallardo, 2013; Morandi & Risco, 2006; Schiffner & Buki, 2006; Yanez, Maggard Gibbons, Moreno, Jorge, & Stanton, 2016; Zea, Reisen, Poppen, Echeverry, & Bianchi, 2004).

Threats to Validity

Confidence in the relationship between the variables and generalization of the results from this study were subject to selection, volunteer, and response bias. The participants were chosen by a combination of two nonprobability sampling techniques—purposive and snowball. The sample was homogenous and dependent upon women self-identifying as Latinas. The participants could have been hard to reach because of the stigma of overweight and obesity; snowball sampling allowed for the recruitment of participants from the reference base of several targeted online bloggers and activists. Participants were selected based on their self-identification. The assumption was that they would have access to computers. There was also the possibility that participants

would be aware of weight stigma because of their participation in the online communities related to fat activism and body positivity. In addition, their responses may have been skewed based on how thought they should respond.

Ethical Procedures

Ethical procedures were applied to protect the participants of this study. Participants were prescreened for inclusion/exclusion criteria with the details on the study. They were given an informed consent form including information on voluntary participation and anonymity/confidentiality. All data were collected electronically, were secured on my computer, and will be saved via encryption for up to 5 years-at which point data will be destroyed. Potential for psychological, physiological, legal, economic, or professional harm were anticipated to be low, but resources for the participants' reference, including links to fat activist web sites and educational material on weight stigma, were provided at the end of the survey.

Summary

The purpose of this cross-sectional, nonexperimental quantitative study was to identify relationships between weight stigma, ethnic identity, and acculturation in Latinas. A correlational analysis and multiple regression analysis were used to measure the relationships and strength, direction, and interaction of those relationships between weight stigma, ethnic identity, and acculturation in Latinas over the age of 18 and living in the United States or one of its territories. Data were collected using descriptive (gender, age, ethnic identity, state of residence, BMI, years living in the United States or one of its territories, and age moved to the United States or one of its territories) and analytic statistics (WBIS-M, MEIM-R, and AMAS-ZABB). The data were inputted into

SPSS software. Potential threats to validity were identified and ethical standards were applied. In the next chapter, I provide a detailed description of the research study results.

Chapter 4: Research Method

Introduction

The purpose of this quantitative study was to explore the relationships between weight stigma, ethnic identity, and acculturation among Latinas. I also explored whether an ethnic culture of origin or acculturation to the U.S. culture interacted with facets of ethnic identity and weight stigma. The WBIS-M (Hubner et al., 2016; Pearl & Puhl, 2014) was used to measure the level of internalization of weight stigma. The MEIM-R (Phinney & Ong, 2007), composed of two subscales measuring exploration of and commitment to ethnic identity, was used to measure ethnic identity. The AMAS-ZABB (Zea et al., 2003) was used to measure acculturation to either U.S. culture or a person's ethnic culture of origin. In order to measure the basic relationships of each variable (correlation) and measure the unique strength, direction, and interaction of these constructs (multiple regression), I gathered data to analyze weight stigma, ethnic identity, and acculturation in Latinas. Data were analyzed with SPSS Version 24.0. These data were expected to provide answers to the research questions and hypotheses.

Research Question #1: Is ethnic identity as measured by the MEIM-R related to weight stigma reported by Latinas in the WBIS-M?

H_0 1: Ethnic identity as measured by the MEIM-R is not related to weight stigma reported by Latinas in the WBIS-M.

H_1 1: Ethnic identity as measured by the MEIM-R is related to weight stigma reported by Latinas in the WBIS-M.

Research Question #2: Does acculturation as measured by the AMAS-ZABB moderate the relationship between weight stigma and ethnic identity in Latinas?

*H*₀2: Acculturation as measured by the AMAS-ZABB does not moderate the relationship between weight stigma and ethnic identity (MEIM-R) in Latinas.

*H*₁2: Acculturation as measured by the AMAS-ZABB moderates the relationship between weight stigma and ethnic identity (MEIM-R) in Latinas.

In this chapter, I describe the data collection procedures, time frame, recruitment, and response rates, discrepancies, descriptive and demographic sample characteristics, and external validity. The results are then presented including descriptive statistics, a report of statistical analyses, and other statistical findings that emerged.

Data Collection Procedures

Data collection procedures followed the steps in the research proposal. The survey was created in and posted through Survey Monkey. The survey commenced with an informed consent and proceeded to inclusion criteria questions asking about gender, age, ethnic background, and current state of residence. The questionnaire then continued with demographic questions concerning BMI, whether the participant was from the United States or foreign-born, and the age at which the participant moved to the United States if they were foreign-born. The three psychometric measures followed with 11 questions on weight stigma using the WBIS-M (Pearl & Puhl, 2014), six questions for ethnic identity using the MEIM-R (Phinney & Ong, 2007), and 42 questions for acculturation using the AMAS-ZABB (Zea et al., 2003). These scales are freely available for researchers to use.. The study concluded with a debriefing statement.

Recruitment and Response Rates

A public post was created on my Facebook and Instagram accounts with an introduction to the study followed by a link to the survey. Online “fatshion” bloggers

(Lebron, 2017; Negron, 2017), fat activists (Torres, 2017; Tovar, 2017), and Latinas (Berrios, 2017) were identified for prerecruitment. A link to the post about the study was sent to each potential participant privately via Facebook messenger or Instagram direct message. The introduction and link to the study were also sent to the National Association to Advance Fat Acceptance (NAAFA, 2017) for distribution to their membership and was posted in the Walden Participant Research Pool. Virtual snowball sampling (Baltar & Brunet, 2012) was used to recruit subjects from the participants' personal reference pool.

The survey was released on May 20, 2018 and closed on July 18, 2018. A total of 281 respondents started the survey. Of that total, 55% of the responses were complete. Some participants were excluded because they did not meet the inclusion criteria (Latina women over the age of 18 living within the United States or one of its territories). For example, 4.5% of the 281 respondents were male and were excluded from the study via logic functions used within the survey. Of the total participants, 154 complete responses were collected for this study.

Demographic Characteristics

The sample consisted of 154 Latina participants over the age of 18 living within the United States or one of its territories. The participants reported being between 18-25-years-old (5.8%), 26-39-years-old (53.2%), 40-55-years-old (32.5%), 56-65-years-old (7.8%), and over 65 (.6%). All of the participants self-identified as being Cuban (11%), Mexican (23.4%), Puerto Rican (37.7%), or Central or South American (24.7%). Participants were allowed to check off as many Hispanic/Latino/Spanish identifying

categories as were applicable, and 13.6% answered more than one item for ethnic identity.

Participants were asked to calculate and report their BMI. Upon clicking on the Calculate BMI link, they were redirected to the NIH (2018) webpage to calculate their BMI. They reported their BMI as below 18.5 (.6%), 18.5-24.9 (19.5%), 25-29.9 (33.8%), and over 30 (42.2%). Six (3.9%) participants chose not to answer the question.

The participants reported having been born in (77.9%) or born outside (22.1%) of the United States or one of its territories. Those born outside of the United States or one of its territories were asked the age they moved to the United States. They self-reported having moved by the age of 10-years-old (25.3%), between the ages of 11-19 years of age (3.2%), between the ages of 20-29 years of age (5.2%), and 30-39 years of age (1.3%). There was a discrepancy in the responses for these two self-reported demographic questions. Although 34 participants reported having been foreign born, 54 answered the age that they moved to the United States or one of its territories. The participants self-reported living in one of the states or one of the territories of the U.S. The states with the most respondents were reported as California and Texas (7.8%), Florida (22.7%), and New York (24.7%).

Demographic characteristics of the sample are reported in Tables 1 and 2.

Table 1
Demographic Characteristics of Study Participants (N=154)

Variable		Frequency	Percentage
Age	18-25	9	5.8%
	26-39	82	53.2%
	40-55	50	32.5%
	56-65	12	7.8%
	over 65	1	0.6%
Ethnicity	Cuban	17	11.0%
	Mexican	36	23.4%
	Puerto Rican	58	37.7%
	Central/South American	38	24.7%
	Mixed	21	13.6%
BMI	below 18.5	1	0.6%
	18.5-24.9	30	19.5%
	25-29.9	52	33.8%
	over 30	65	42.2%
	no answer	6	3.9%
Place of Birth	U.S. born	120	77.9%
	Foreign born	34	22.1%
Age of Immigration	by the age of 10	39	25.3%
	11-19 years old	5	3.2%
	20-29 years old	8	5.2%
	30-39 years old	2	1.3%

Table 2
Demographic Characteristics of Study Participants (N=154)

Variable	Frequency	Percentage
Residence		
Arizona	1	.6%
California	12	7.8%
Colorado	8	5.2%
Delaware	1	.6%
Florida	35	22.7%
Georgia	1	.6%
Illinois	1	.6%
Iowa	1	.6%
Louisiana	2	1.3%
Massachusetts	4	2.6%
Michigan	2	1.3%
Minnesota	2	1.3%
Nevada	1	.6%
New Jersey	9	5.8%
New Mexico	1	.6%
New York	38	24.7%
North Carolina	6	3.9%
Pennsylvania	3	1.9%
South Carolina	1	.6%
Tennessee	1	.6%
Texas	12	7.8%
Virginia	2	1.3%
Washington	3	1.9%
Wisconsin	1	.6%
Puerto Rico	6	3.9%

Data Cleaning

Prior to conducting the data analysis in SPSS, data cleaning was completed. Disqualified respondents were removed from the data set (male; under 18-years-old; non-Latina; living outside of the United States or one of its territories). For age, respondents under the age of 18 were removed and the age categories were rescaled. For ethnicity, a category of mixed ethnicity was created for anyone who chose more than one ethnic identifier. For BMI, missing data indicators were made for those who did not provide a response. Headings were adjusted.

Coding was necessary to produce numerical values that could be inputted into SPSS and used for data analyses. Ordered categories for age were coded as the following: age 18-25 = 1, age 25-39 = 2, age 40-55 = 3, age 56-65 = 4, over 65 = 5. Ordered categories for ethnicity were coded as the following: Cuban = 1, Mexican = 2, Puerto Rican = 3, South or Central American = 4, mixed = 5. Ordered categories for BMI were coded as the following: below 18.5 = 1, 18.5-24.9 = 2, 25-29.9 = 3, 30 and above = 4, prefer not to say = 5. Ordered categories for U.S. or foreign born were coded as the following: U.S. born = 1, foreign born = 2. Ordered categories for age of immigration were coded as the following: by the age of 10 = 1, over the age of 10 = 2.

The average per item of participant responses for each psychometric measure (WBIS-M, MEIM-R, AMAS-ZABB) was calculated and used to analyze these measures in all analyses. For the WBIS-M, Questions 1 and 9 were reverse-scored per scale instructions prior to being included in the average. Subscale scores were also calculated for the MEIM-R, in which Questions 1, 4, and 5 assess exploration and Questions 2, 3, and 6 assess commitment. In the AMAS-ZABB, questions were separated by whether

they measured acculturation to U.S. culture or the participant's ethnic culture of origin. These subscores were averaged separately.

Reliability and Validity Analyses

The participants were chosen by a combination of two nonprobability sampling techniques-purposive and snowball. The sample was homogenous and targeted toward women who self-identified as Latinas over 18-years-old living in the United States or one of its territories. The three psychometric scales employed in this study have been used in various studies including in research on body image, eating disorders, psychological distress, mental and physical health, and in Latino populations (Brown et al., 2013; Davidson & Cardemil, 2009; Flores, 2015; Gallardo, 2013; Mills & Murray, 2017; Morandi & Risco, 2006; O'Brien et al., 2016; Pearl & Dovidio, 2015; Schiffner & Buki, 2006; Yanez et al., 2016; Zea et al., 2004).

Reliability analyses were conducted to assess the internal consistency of each of the psychometric measures and to ensure that the integral items each measured a unitary construct. For the WBIS-M, Pearl and Puhl (2014) validated it for use when measuring internalization of weight stigmatization in both men and women across diverse body weights and found it to have exceeded the excellent psychometrics of the original scale. This scale was found to have high internal consistency and strong construct validity (Pearl & Puhl, 2014). Their Cronbach's alpha was reported at .94 and was comparable to the original, unmodified scale (Durso & Latner, 2008). In this study, Cronbach's alpha was reported at .918, similar to the original paper.

For the MEIM-R, reliability and validity were established in the exploratory and confirmatory factor analyses conducted by Phinney and Ong (2007) in their revision of

the original scale. Cronbach's alpha was reported at .83 for the exploration and .89 for the commitment subscales (Phinney & Ong, 2007). In this study, Cronbach's alpha was reported at .847 for the total score, .815 for the exploration subscale, and .823 for the commitment subscale.

The AMAS-ZABB scale has demonstrated good internal consistency with adequate concurrent, convergent, divergent, and constructs validity (Davis & Engel, 2011). Both reliability and validity were established in the initial studies examining its psychometric properties with a sample of Latino/a participants (Davis & Engel, 2011). In this study, Cronbach's alpha was reported at .924 for the U.S. culture and .944 for the ethnic culture of origin.

Results

Descriptive Statistics

The Shapiro-Wilk test of normality showed that the data for weight stigma were not normally distributed. Transformation with the square root did not make the distribution normal (they do not pass above $p < .05$). If the significance is above $p < .05$, the distribution of the variable does not significantly deviate from normality. If it is $p < .05$ or below, it does deviate from normality. Table 3 shows the results for the test of normality.

Table 3

Shapiro-Wilk test of normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
WBISM average	.078	154	.022	.968	154	.001
MEIM average	.110	154	.000	.929	154	.000
MEIM explore	.122	154	.000	.915	154	.000
MEIM commit	.164	154	.000	.870	154	.000
AMAS U.S.	.090	154	.004	.955	154	.000
AMAS origin	.061	154	.200*	.970	154	.002

Note. *. This is a lower bound of the true significance.

a. Lilliefors Significance Correlation.

Figure 1 shows the mean ($M=3.43$) and standard deviation (1.40) for average weight stigma in the total ($N=154$) sample. The distribution is somewhat bimodal. It is not clearly right-or-left skewed.

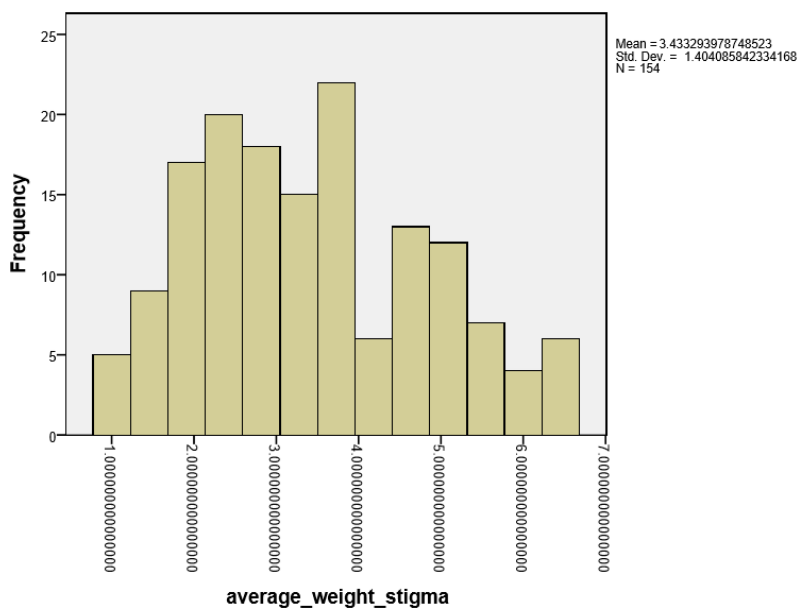


Figure 1. Histogram of average WBIS-M.

Figures 2 and 3 show the mean ($M=3.81$) and standard deviation (.99) for multigroup ethnic identity-explore and the mean ($M=4.11$) and standard deviation (.91) for multigroup ethnic identity-commit in the total ($N=154$) sample.

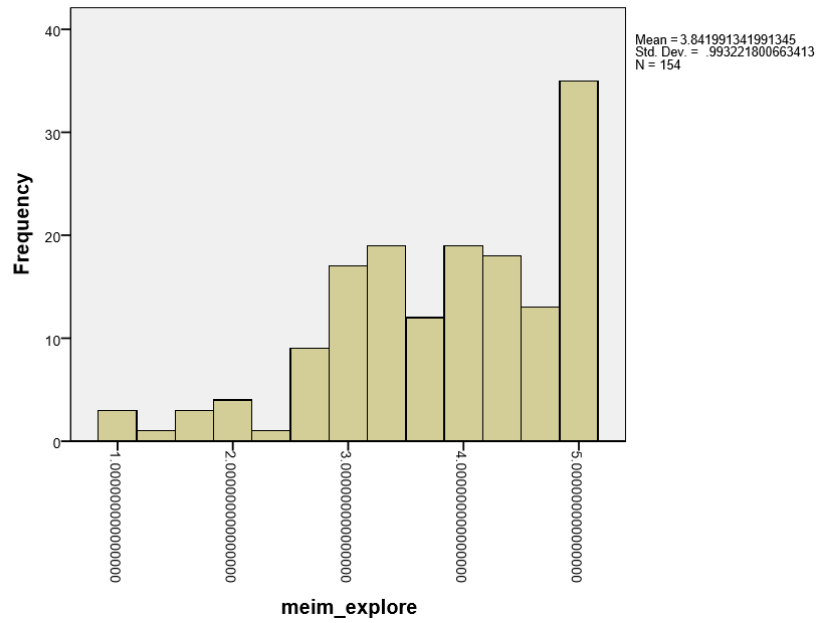


Figure 2. Histogram of average MEIM-explore.

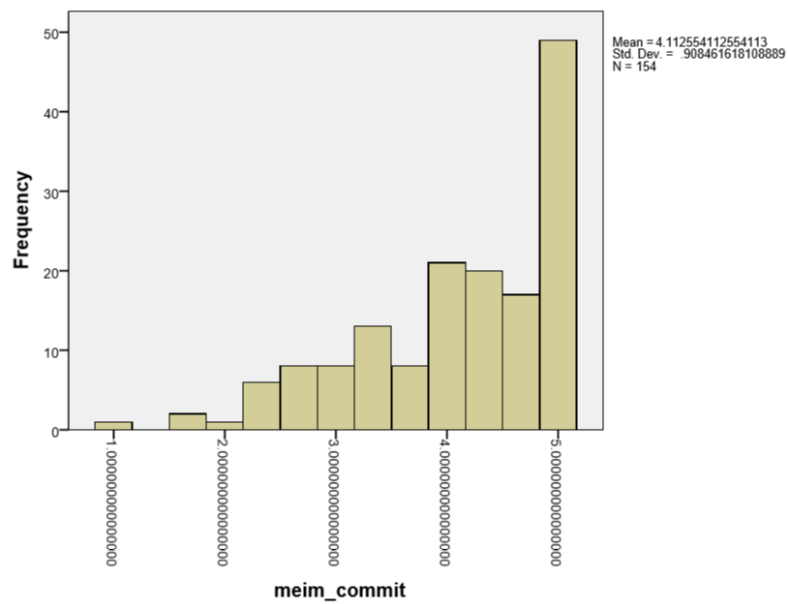


Figure 3. Histogram of average MEIM-commit.

Figures 4 and 5 show the mean ($M=3.39$) and standard deviation (.41) for abbreviated multidimensional acculturation scale-U.S. origin and the mean ($M=3.08$) and

standard deviation (.59) for abbreviated multidimensional acculturation scale-culture of origin in the total (N=154) sample.

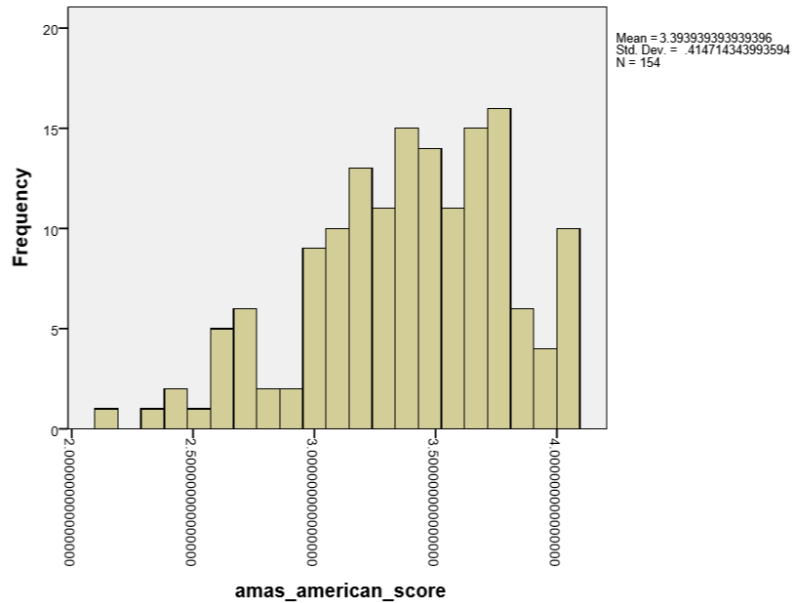


Figure 4. Histogram of AMAS-ZAAB-U.S. origin.

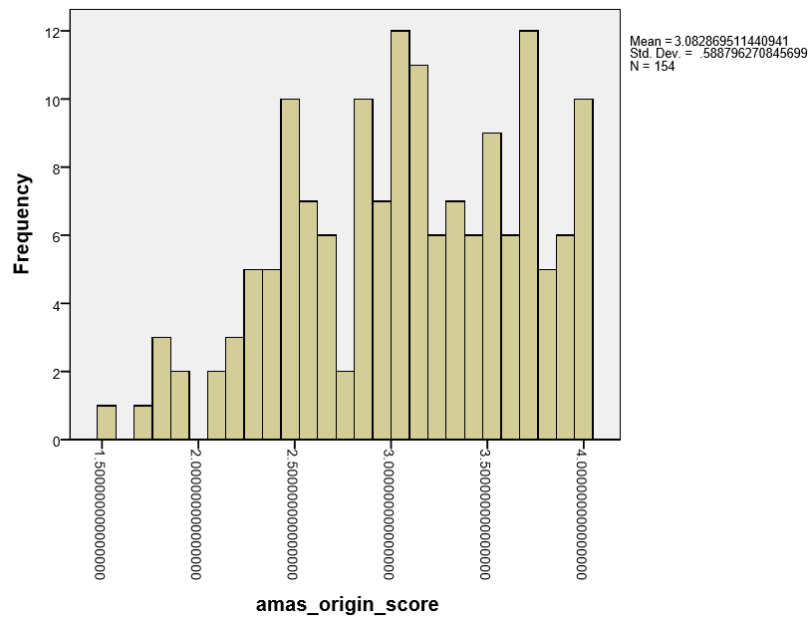


Figure 5. Histogram of AMAS-ZAAB-culture of origin

Correlation Analyses

I ran correlation analyses to identify any relationships between the dependent (weight stigma), independent (ethnic identity), and moderator variables (acculturation). I ran a Pearson's correlation test to indicate if there were any relationships between the variables. The variables would have been correlated if the probability value of significance was less than or equal to a significance level of 0.05 for a two-tailed test. Information about the strength and direction of the relationships between the variables was obtained from the results of the correlational analysis.

There was no statistically significant relationship between weight stigma and self-reported exploration of ethnic identity ($r[154] = .025, p = .756$), nor self-reported commitment to ethnic identity ($r[154] = -.096, p = 0.237$). There was also no statistically significant relationship between weight stigma and the U.S. dimension for acculturation ($r[154] = -.049, p = .547$), nor for the culture of origin dimension ($r[154] = -.147, p = .068$), which correlated only at the level of a non-significant trend.

I also ran a correlation analysis to further explore and identify any relationships between the dependent variable (weight stigma) and covariates (BMI, age). There was a significant, positive relationship between weight stigma and BMI, such that individuals reporting higher BMIs also reported higher weight stigma ($r[148] = 0.221, p = .007$). Conversely, there was a significant, negative relationship between weight stigma and age, such that Latinas reporting a higher age also reported lower weight stigma. Pearson's r -value was negative ($r[148] = -.173, p = .032$).

Pearson correlation results are presented in Table 4 and 5.

Table 4

Pearson's Correlation Coefficients of Study Variables (N=154)

		WBISM average	MEIM average	MEIM explore	MEIM commit	AMAS U.S.	AMAS origin
WBISM average	Pearson Correlation	1	-.037	.025	-.096	-.049	-.147
	Sig. (2-tailed)		.648	.756	.237	.547	.068
	N	154	154	154	154	154	154
MEIM average	Pearson Correlation	-.037	1	.888**	.865**	-.002	.352**
	Sig. (2-tailed)	.648		.000	.000	.985	.000
	N	154	154	154	154	154	154
MEIM explore	Pearson Correlation	.025	.888**	1	.538**	-.050	.169*
	Sig. (2-tailed)	.756	.000		.000	.535	.036
	N	154	154	154	154	154	154
MEIM commit	Pearson Correlation	-.096	.865**	.538**	1	.052	.461**
	Sig. (2-tailed)	.237	.000	.000		.520	.000
	N	154	154	154	154	154	154
AMAS U.S.	Pearson Correlation	-.049	-.002	-.050	.052	1	.049
	Sig. (2-tailed)	.547	.985	.535	.520		.547
	N	154	154	154	154	154	154
AMAS origin	Pearson Correlation	-.147	.352**	.169*	.461**	.049	1
	Sig. (2-tailed)	.068	.000	.036	.000	.547	
	N	154	154	154	154	154	154

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

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

Table 5

Pearson's Correlation Coefficients of Study CoVariates (N=154)

		BMI	Age	WBISM average
BMI	Pearson Correlation	1	.104	.221**
	Sig. (2-tailed)		.208	.007
	N	148	148	148
Age	Pearson Correlation	.104	1	-.173*
	Sig. (2-tailed)	.208		.032
	N	148	154	154
WBISM average	Pearson Correlation	.221**	-.173*	1
	Sig. (2-tailed)	.007	.032	
	N	148	154	154

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

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

Main Effects Linear Regression Analysis

I conducted a main effects linear regression analysis to test the first hypothesis- ethnic identity as measured by each MEIM-R subscale (exploration and commitment) would be related to weight stigma reported by Latinas in the WBIS-M. As both BMI and age significantly related to reports of weight stigma, these variables were included in the model as control covariates.

There was no statistically significant relationship between weight stigma and self-reported exploration of ethnic identity ($B = .067$ [95%: $-.198, .331$], $t[143] = .497$, $p = .620$, $sr = .039$), nor between weight stigma and self-reported commitment to ethnic identity ($B = -.196$ [95%: $-.480, .088$], $t[143] = -1.367$, $p = .174$, $sr = -.108$). These regression results are presented in Table 6.

Table 6

Summary of regression analysis for weight stigma and multigroup ethnic identity.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	3.485	.779		4.475	.000	1.946	5.024			
MEIM explore	.067	.134	.047	.497	.620	-.198	.331	.050	.042	.039
MEIM commit	-.196	.144	-.128	-1.367	.174	-.480	.088	-.067	-.114	-.108
Age	-.391	.152	-.209	-2.565	.011	-.692	-.090	-.187	-.210	-.203
BMI	.445	.142	.251	3.126	.002	.163	.726	.221	.253	.247

a. Dependent Variable WBISM average

I also conducted linear regression analyses to further explore and identify relationships between the dependent variable (weight stigma) and both ethnic group and age of immigration, in separate regressions.

I conducted a separate exploration of each ethnic identity as participants were allowed to identify with more than one group, such that an ANOVA would not be appropriate. There was no statistically significant relationship between weight stigma and Cuban identity ($B = .362$ [95%: $-.524, 1.247$], $t[141] = .807$, $p = .421$, $sr = .064$), Mexican identity ($B = -.008$ [95%: $-.782, .765$], $t[141] = -.021$, $p = .983$, $sr = -.002$), Puerto Rican identity ($B = -.016$ [95%: $-.764, .732$], $t[141] = -.042$, $p = .967$, $sr = -.003$), or Central/South American identity ($B = -.299$ [95%: $-1.083, .486$], $t[141] = .453$, $p = .620$, $sr = -.060$). Overall, culture of origin was not a significant influence on self-reported weight stigma.

In addition, among individuals who reported being born outside of the United States, there was no statistically significant relationship between weight stigma and having immigrated to U.S. at a relatively young age (by age 10) ($B = .590$ [95%: $-.271, 1.450$], $t[51] = 1.376$, $p = .175$, $sr = .180$). Overall, immigration to U.S. was not a significant influence on self-reported weight stigma.

Results for these two secondary regression analyses are presented in Table 7 and 8.

Table 7

Summary of regression analysis for weight stigma and ethnic group.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	3.072	.651		4.719	.000	1.785	4.359			
Age	-.413	.153	-.222	-2.706	.008	-.715	-.111	-.187	-.222	-.215
BMI	.430	.142	.243	3.033	.003	.150	.711	.221	.248	.241
Cuban	.362	.448	.083	.807	.421	-.524	1.247	.102	.068	.064
Mexican	-.008	.391	-.002	-.021	.983	-.782	.765	.008	-.002	-.002
Puerto Rican	-.016	.378	-.005	-.042	.967	-.764	.732	-.005	-.003	-.003
C/S American	-.299	.397	-.092	-.753	.453	-1.083	.486	-.086	-.063	-.060

a. Dependent Variable WBISM average

Table 8

Summary of regression analysis for weight stigma and age of immigration.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	4.452	.715		6.225	.000	3.016	5.888			
Move by 10 yo	.590	.429	.181	1.376	.175	-.271	1.450	.215	.189	.180
Age	-.514	.237	-.286	-2.167	.035	-.991	-.038	-.307	-.290	-.283

a. Dependent Variable WBISM average

Moderation Regression Analysis

I performed a moderation regression analysis to test the second hypothesis, which stated that acculturation as measured by the AMAS-ZABB would moderate the relationship between weight stigma and ethnic identity in Latinas. I examined the interaction of each MEIM-R subscale with both AMAS-ZABB subscales (acculturation to the U.S. culture vs. one's culture of origin). Interaction terms were calculated via the cross-product of each scale score and all constituent main effects were included in the model.

There was no significant interaction between self-reported exploration of one's ethnic identity and acculturation to the United States culture in predicting weight stigma ($B = .182$ [95%: $-.441, .804$], $t[140] = .577$, $p = .565$, $sr = .046$). Similarly, there was no significant interaction between self-reported exploration of one's ethnic identity and acculturation to one's culture of origin in predicting weight stigma ($B = .221$ [95%: $-.195, .638$], $t[140] = 1.050$, $p = .296$, $sr = .083$). Moderation regression results are presented in Table 9.

Table 9.

Summary of moderation regression results.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	9.442	4.804		1.965	.051	-.057	18.940			
Age	-.368	.155	-.197	-2.375	.019	-.674	-.062	-.187	-.197	-.188
BMI	.469	.143	.265	3.284	.001	.187	.751	.221	.267	.259
MEIM explore	-1.319	1.183	-.942	-1.115	.267	-3.659	1.020	.050	-.094	-.088
AMAS U.S.	-.880	1.277	-.262	-.689	.492	-3.405	1.646	-.053	-.058	-.054
AMAS origin	-1.165	.789	-.492	-1.478	.142	-2.724	.394	-.150	-.124	-.117
Explore_U.S.	.182	.315	.481	.577	.565	-.441	.804	.024	.049	.046
Explore_origin	.221	.211	.656	1.050	.296	-.195	.638	-.031	.088	.083

a. Dependent Variable WBISM average

Likewise, there was no significant interaction between self-reported commitment to one's ethnic identity and acculturation to the U.S. culture in predicting weight stigma ($B = .238$ [95%: $-.501, .978$], $t[140] = .638$, $p = .525$, $sr = .050$). Finally, there was no significant interaction between self-reported commitment to one's ethnic identity and acculturation to one's culture of origin in predicting weight stigma ($B = .218$ [95%: $-.240, .676$], $t[140] = .942$, $p = .348$, $sr = .074$). Moderation regression results are presented in Table 10.

Table 10.

Summary of moderation regression results.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	10.635	6.434		1.653	.101	-2.086	23.356			
Age	-.372	.152	-.200	-2.449	.016	-.673	-.072	-.187	-.203	-.194
BMI	.443	.142	.250	3.111	.002	.161	.725	.221	.254	.246
MEIM commit	-1.504	1.457	-.978	-1.033	.304	-4.384	1.376	-.067	-.087	-.082
AMAS U.S.	-1.179	1.652	-.351	-.714	.476	-4.445	2.086	-.053	-.060	-.056
AMAS origin	-1.203	.962	-.508	-1.251	.213	-3.105	.699	-.150	-.105	-.099
Commit_U.S.	.238	.374	.622	.638	.525	-.501	.978	-.080	.054	.050
Commit_origin	.218	.232	.686	.942	.348	-.240	.676	-.113	.079	.074

a. Dependent Variable WBISM average

I also conducted a moderation regression analysis to further explore and identify interactions between the dependent variable (weight stigma), acculturation, and BMI.

However, there was no significant interaction between BMI and acculturation to the United States culture in predicting weight stigma ($B = .213$ [95%: $-.452, .878$], $t[142] = .633$, $p = .527$, $sr = .051$), nor for acculturation to one's culture of origin ($B = .065$ [95%: $-.195, .638$], $t[142] = .258$, $p = .796$, $sr = .021$). Moderation regression results are presented in Table 11.

Table 11.

Summary of moderation regression results.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	7.071	4.797		1.474	.143	-2.412	16.554			
BMI	-.490	1.382	-.277	-.355	.723	-3.222	2.242	.221	-.030	-.028
AMAS U.S.	-.915	1.130	-.273	-.810	.419	-3.149	1.318	-.053	-.068	-.065
AMAS origin	-.635	.864	-.269	-.735	.463	-2.344	1.073	-.150	-.062	-.059
BMI_U.S.	.213	.337	.468	.633	.527	-.452	.878	.171	.053	.051
BMI_origin	.065	.251	.152	.258	.796	-.432	.561	.073	.022	.021

a. Dependent Variable WBISM average

Summary

The purpose of this quantitative study was to explore the relationships between weight stigma, ethnic identity, and acculturation in Latinas (H1) and the interaction of variables (H2). The total sample consisted of 154 self-identifying Latina participants over the age of 18 living within the United States or one of its territories. Data were collected via a web survey and analyzed with SPSS Version 24. Data were cleaned and coding was performed to transform data into numerical data appropriate for use in SPSS. Reliability, correlation, main effects linear regression, and moderation linear regression analyses were performed to test whether ethnic identity was related to weight stigma in Latinas and whether acculturation moderated the relationship between weight stigma and ethnic identity in Latinas. Results suggest that ethnic identity is not significantly related to weight stigma and that acculturation to either the U.S. or culture of origin does not significantly interact with ethnic identity to predict weight stigma.

I present further interpretation of the study findings in Chapter 5. I also discuss limitations of the study, social change implications, and recommendations for future research.

Chapter 5: Discussion

Introduction

The purpose of this quantitative study was to explore the relationships between weight stigma, ethnic identity, and acculturation in Latinas over the age of 18 living within the United States or one of its territories. I also explored whether acculturation to U.S. culture or acculturation to an ethnic culture of origin interacted with facets of ethnic identity and weight stigma. Latinas have different body ideals than the dominant U.S. thin body ideal, but it is not clear if or how Latinas experience weight stigma or whether there is a relationship with their ethnic identity and acculturation into U.S. culture (Nolan & Eshleman, 2016; Savoy et al., 2012). In this chapter, I provide a summary of the study results, interpretation of the results, limitations of the study, recommendations for further research, and implications for social change.

Summary of Results

Over half of the participants (53.0%) were between 25-39-years-old. Over half of the participants (76%) had a BMI in the overweight or obese category. Average weight stigma scores were bimodal, but most of the sample endorsed some degree of weight stigma. Exploration of and commitment to ethnic identity skewed to the right, indicating an endorsement of ethnic identity. Acculturation to the U.S. culture skewed to the right as well, and most of the sample endorsed relatively high acculturation to the U.S. culture. Acculturation to an ethnic culture of origin also appeared bimodal, but most participants endorsed meaningful levels of acculturation to their ethnic cultures of origin.

In correlation analyses, I found that there was no statistically significant relationship between weight stigma and self-reported exploration of ethnic identity, nor

with self-reported commitment to ethnic identity. There was also no statistically significant relationship between weight stigma and the U.S. dimension for acculturation, nor for the culture of origin dimension. Covariate analyses did demonstrate a significant, positive relationship between weight stigma and BMI, and a significant, negative relationship between weight stigma and age.

Contrary to the hypotheses, in main effect regression analyses, I found there were no significant relationships between weight stigma and the variables, controlling for BMI and age. There was no statistically significant relationship between weight stigma and self-reported exploration of ethnic identity, nor between weight stigma and self-reported commitment to ethnic identity.

In secondary analyses, I found that there was no statistically significant relationship between weight stigma and identification with any particular Latina identity. There was also no statistically significant relationship between weight stigma and having immigrated to the U.S. at a relatively young age (by the age of 10) versus a relatively older age (older than 10).

Contrary to the hypotheses, in moderation regression analyses, I found that there was no significant interaction between self-reported exploration of a person's ethnic identity and acculturation to the U.S. culture nor a person's culture of origin. Likewise, there was no significant interaction between self-reported commitment to a person's ethnic identity and acculturation to the U.S. culture nor a person's culture of origin. In further moderation regression analyses, I also found that there was no significant interaction between BMI and acculturation to the U.S. culture nor to a person's culture of origin.

Interpretation

I failed to reject either null hypothesis. Ethnic identity was not found to be significantly related to weight stigma. Acculturation was not found to significantly moderate any relationship between ethnic identity and weight stigma.

Weight Stigma and Ethnic Identity

Exploration of or commitment to a person's ethnic identity was not significantly related to weight stigma. This finding is consistent with researchers who indicated that ethnic identity does not protect against the experience of weight stigma, suggesting women from diverse groups are experiencing weight stigma (Himmelstein et al., 2017; Puhl et al., 2015). Latinas hold similar attitudes about weight that White women do (Puhl et al., 2011), are not immune to messages about body ideals (Franko et al., 2012), are vulnerable to weight stigma (Rakhkovskaya & Warren, 2016), and its consequences (Rodgers et al., 2016).

A separate examination of the relationship between weight stigma and each ethnic identity was conducted, as participants were allowed to identify with more than one group. However, weight stigma was equivalent among people endorsing a Cuban identity, Mexican identity, Puerto Rican identity, or Central/South American identity. Overall, culture of origin was not a significant influence on differences in self-reported weight stigma. These results converge with research indicating that diverse samples of Latinas are receiving messages about beauty and body ideals, experiencing weight stigma, and suffering the consequences of this stigma (Agne et al., 2012; Bojorquez-Chapela et al., 2014; Cheney, 2011; Romo et al., 2015; Masterson Creber et al., 2016; Viladrich et al., 2009).

Weight stigma was, however, related to age and BMI among this study's participants. Older participants generally endorsed lower weight stigma. In addition, participants reporting higher BMIs endorsed a higher weight stigma. These findings are consistent with results with Puhl, Himmelstein, and Quinn's (2018) study with men and women with and without obesity and across several sociodemographic factors. Puhl et al. (2018) found that older adults endorsed lower internalization of weight stigma and that adults with higher BMI endorsed higher weight stigma.

Acculturation as a Moderator

Acculturation was examined as a moderator variable in interaction with ethnic identity to examine if there was any interaction with weight stigma and ethnic identity. Neither acculturation to the U.S. culture nor acculturation to a Latin culture of origin moderated the relationship between weight stigma and ethnicity. Most of the participants (77.9%) in this study were born in the United States or one of its territories, indicating that growing up in the United States exposes Latinas to stigmatizing messages about beauty and body ideals, even if they do not share the majority ethnic identity and origin (Marquez et al., 2015; New et al., 2013; Poloskov & Tracey, 2013; Rogers Wood & Petrie, 2010; Sabik et al., 2010; Warren, 2014). Acculturation may be related to other factors in Latinas such as obesity, internalization of U.S. beauty ideals, dieting behaviors, disordered eating, and body dissatisfaction (Isasi et al., 2015; Marquez et al., 2015; Poloskov & Tracey, 2013; Rogers Wood & Petrie, 2010; Sabik et al., 2010; Warren, 2014). I found no significant relationship between acculturation and weight stigma or ethnic identity, indicating that strong affiliation to either the U.S. culture or a Latin

culture of origin had no interaction with the experience of weight stigma or identification with her ethnic culture.

Intersectional Feminist Theory

The feminist theory of intersectionality informed the lens of this study in examining the intersection of weight stigma, ethnic identity, and acculturation among Latinas. According to intersectional theory, identities are multilayered, and people belong to more than one social group at a time, leading to prejudice and discrimination becoming multilayered across different identities (Nash & Warin, 2017). Latinas are marginalized by their gender, their ethnicity, and their size. Multiple oppressed identities intersect in women of color, producing stress, physical and mental disease, and shared injustice (Hill Collins, 2009).

Participants in this study were assessed on ethnicity, age, BMI status, and age of immigration to the United States or one of its territories. Latinas experienced weight stigma in younger age ranges and higher BMI statuses. However, there was no significant relationship between weight stigma and age of immigration to this country. Fat is a social category of identity that intersected with other axes such as gender, race, sexuality, social class, and age (van Amsterdam, 2013).

Limitations

The scope of this study was limited to a quantitative study using data taken from participants who self-identified as Latinas, who were over the age of 18, who lived in the United States or one of its territories, who were fluent in English, and who had access to the Internet. This limits my understanding of weight stigma, ethnic identity, and acculturation in Latinas of different ages, who speak a language other than English, who

live outside of this country, or who could have verbally told their story. The participants were obtained from a purposive and snowball sampling, which limits the generalizability of the results because these participants may have had greater awareness of weight stigma than those who did not agree to or were not targeted to participate, as well as an awareness of body positivity that might not be representative of the general public. This study was also limited by the measurement of only three points composing an intersectional view of identity—ethnicity, age, and BMI status—and did not take into account other points of intersection that could broaden our understanding of the complex interaction of the experience of weight stigma among Latina women.

Future

Understanding how a Latina may experience weight stigma requires an exploration of the cultural context and intersecting identities through which she experiences her body (Mills et al., 2012). I found that Latinas were experiencing weight stigma. Identification with her ethnic culture of origin was not related to her experience of weight stigma. It does not appear to protect her from weight stigma, nor does it increase it. Acculturation to either the U.S. or her ethnic culture of origin also did not interact with the relationship between her experience of weight stigma and her identification with her ethnic culture of origin.

Age and BMI status, however, were related to weight stigma. Future studies can build upon and enhance the knowledge of Latinas and weight stigma by measuring multiple intersecting points of identity (Grzanka et al., 2017; Hill Collins, 2009; Himmelstein et al., 2017; Keane, 2014). While this study was conducted with Latinas, it did not explore racial identity as an intersecting factor related to weight stigma (Warren,

2014). Other points of identity intersection to explore include: education, income, relationship status, parental status, sexual identity, social status, and ability (Ciciurkaite & Perry, 2018; Fah, 2017; Pearl, Wadden, Tronieri, Chao, Alamuddin, & Berkowitz, 2017; Puhl, Himmelstein, & Quinn, 2017; Reesor, Canales, Alonso, Kamdar, & Hernandez, 2018). This would provide more information and contribute to the existing knowledge on Latinas and weight stigma.

Future researchers could explore which body ideals Latinas are subscribing to and if weight stigma they are experiencing is based on the U.S. thin body ideal (Romo et al., 2016). This would inform upon Latinas' unique experiences with their bodies and how to intervene to reduce weight stigma.

Future researchers could also explore coping/resiliency and its relationship with weight stigma and ethnic identity (Murakami & Latner, 2015). Latinas are experiencing weight stigma, but research that examines how they cope with and express resiliency against weight stigma could also inform upon her unique experience with her body and how to intervene to address the needs of this demographic.

Implications

The results of this quantitative study contribute to the field's limited understanding of Latinas' experiences with weight stigma. Identification with a person's ethnic culture of origin or affiliation with the U.S. culture was not significantly related to weight stigma in this sample. Results indicate that Latinas are experiencing weight stigma, but that ethnic background does not appear to play a role in that experience—either to protect from weight stigma or to increase its incidence. Culturally relevant research can provide data on the unique experiences of diverse groups, allowing for the

identification of vulnerable populations (Annunziato et al., 2014; APA, 2002). Research that relies solely on ethnic background may be missing out on different ways Latinas are experiencing weight stigma.

Age and BMI, however, do appear to influence weight stigma. This implies that younger Latinas and Latinas with higher BMI experience weight stigma at higher rates than Latinas who are older or have a lower BMI. Interventions that address weight stigma need to consider age and BMI when developing weight stigma reduction programs for Latinas. Future researchers examining other points of intersection of identity would better capture the phenomenon of weight stigma in this population, which is socially vulnerable and constitutes an undervalued group, contributing to deleterious psychological and physical health issues (Major et al., 2012; NBAC, 2001).

Conclusion

Pathology-focused and weight-centered attention to body size promotes personal responsibility, supporting the dominant U.S. thin body ideal (Guthman, 2013; Kwan, 2009; Lindly, Nario-Redmond, & Noel, 2014; Mears, 2009; Peralta, 2003; Saguy & Riley, 2005; Puhl, Latner, King, & Luedicke, 2014; Puhl, Luedicke, & Grilo, 2014; Sikorski, Luppia, Glaesmer, Braehler, Konig, & Riedel-Heller, 2012). Framed against the thin body ideal, obesity and overweight have been rejected as un-American (Crandall, 1994). This perspective puts the blame on people for their weight, effectively shaming them for their different bodies and non-adherence to what is socially/culturally expected (Colls & Evans, 2014; Magallares, 2014).

Alternative perspectives on obesity include the critical attention of fat studies researchers, bloggers, and activists who promote size diversity, social justice, and civil

rights protection (ASDAH, 2017; Bacon & Aphramor, 2011; Brewis et al., 2018; NAAFA, 2016; Nutter et al., 2018; Pausé, 2018; Tovar, 2017). The researchers, bloggers, and activists address the impact of the war on obesity, challenge weight stigma and discrimination, and advocate for weight-neutral approaches to health (Hunger & Tomiyama, 2015; Kirkland, 2008; Latner, Puhl, Murakami, & O'Brien, 2014; LeBesco, 2011; Lindly et al., 2014; Monaghan, 2016; O'Hara & Gregg, 2012; O'Reilly & Sixsmith, 2012).

Feminist scholars and researchers have discussed the pressure on women to conform to unrealistic and narrowly defined body ideals (Wolf, 1991). Scholars and researchers suggest that women are expected to conform to mainstream body ideals that are homogenized - removing racial, ethnic, and sexual differences that disturb Anglo-Saxon, heterosexual expectations and identity (Bordo, 2004; Gill, 2007; Gurrieri, Previte, & Brace-Govan, 2012; Kwan, 2014). Nonconformity is equal to failure, subject to rejection, and deemed as deviant. The current thin body ideal has been shaped by social context via mass media (television, internet, movies, and magazines (Derenne & Beresin, 2006). This ideal successfully reaches people across the world, dictating what is acceptable and what is not, designating obesity as deviant from the dominant thin body ideal – representing U.S. values of self-control, self-discipline, and competitiveness that reinforce the rejection of fatness (Puhl and Heuer, 2009). Although the thin body ideal is unrealistic for most women, it is often accepted, internalized, and used as a reference for comparison and self-evaluation, contributing to body dissatisfaction, disordered eating, and psychological distress (O'Brien et al., 2016; Vartanian & Hopkinson, 2010; Warren, Holland, Billings, & Parker, 2012).

The obesity epidemic has become big news, inciting moral panic and value-laden discourses of proper U.S. bio-citizenship based on the cultural meaning of ideal body size (Greenhalgh & Carney, 2014; Kirkland, 2008). Researchers who have challenged the obesity epidemic suggest that medical science and news reporting help shape obesity as a social problem, using selective reporting while blaming the individual and creating stigmatization against people with obesity (Boero, 2013; Major et al., 2014; O'Reilly & Sixsmith, 2012; Saguy & Almeling, 2008). The war on obesity uses the social construct of fatness as a bad trait to shame individuals with obesity into adhering to normative sociocultural attitudes about body size, contributing to weight stigma and its negative consequences (Dickson, 2015; Greenhalgh & Carney, 2014; Herndon, 2005; Rich, 2011; Tischner & Malson, 2011).

These social constructs help keep Latinas out of acceptable mainstream U.S. society. Latinas are receiving and internalizing messages about acceptable bodies. They are aware that the female body has currency. Weight stigma is another way for mainstream U.S. society to marginalize women of color - ostracizing them for not fitting in, for not subscribing to the thin ideal, for not being American enough (Greenhalgh & Carney, 2014; Morey, 2018).

Latinas are experiencing weight stigma, regardless of their identification with their ethnic culture of origin, suggesting that their identity as women of color is not protecting them against the experience and the consequences of weight stigma. Latinas' vulnerability as being members of an undervalued group is confounded by the stigma of size. Research that invites women of color to participate, that makes it safe for them to share, and that includes their stories will enhance the psychological community's

understanding of the phenomenon of weight stigma so that professionals in turn can effectively advocate on their behalf and provide resources that benefit the communities that are in need (Kahan & Puhl, 2017; Munro, 2018; Romano, 2018).

The results of this quantitative study provides the psychological, medical, and professional communities the opportunity to learn about and accurately represent the experience Latinas have with weight stigma, as well as the development of effective stigma reduction interventions (Franko et al., 2012; Jackson et al., 2014; Koball & Carels, 2015; Poloskov & Tracey, 2013). The results of this study can be used to advocate for policies that protect the human rights for victims of weight stigma (Cook et al., 2014; Mann et al., 2015; Pearl & Lebowitz, 2014; Puhl & Liu, 2015; Puhl et al., 2014; Puhl, et al., 2016; Suh et al., 2014). Results of this study can support a paradigm shift regarding cultural norms on body size and redirect the discourse on obesity to include body and weight diversity (Brewis, 2014; O'Hara & Taylor, 2014; Penney & Kirk, 2015; Pickett & Cunningham, 2017; Satinsky & Ingraham, 2014; Sikorski et al., 2015; Smith et al., 2015; Tylka et al., 2014). This study identified a vulnerable population experiencing weight stigma (Bombak, 2014; Gurrieri & Cherrier, 2013; Puhl et al., 2017), provides the professional community with culturally relevant data on weight stigma (Jackson, 2016; Tiggeman, 2015), informs upon weight stigma reduction interventions (Afful & Ricciardelli, 2015), and can contribute to policy and paradigm changes about weight, specifically with Latinas (Nutter et al., 2016; O'Reilly & Sixsmith, 2012; Suh et al., 2014).

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Appendix A: Participants Needed for Survey

I am a social psychology doctoral candidate at Walden University. In fulfillment of my degree, I am conducting a survey with Latinas currently living in the United States or Puerto Rico over the age of 18 on the topic of weight stigma. This study is proposed to identify relationships between weight stigma, ethnic identity, and acculturation in Latinas. It will be guided by the theory of intersectionality - based on the principle that the intersection of multiple oppressed identities influences a Latina's experience with weight stigma. The purpose of this study is to represent Latinas in psychological research in the area of weight stigma and to add culturally relevant data to this field of study. The data from this study has the opportunity to contribute to the literature, identify vulnerable populations, advocate for policy changes, and support a paradigm shift in the current discourse on body diversity.

Research is voluntary and all participants will remain anonymous. If you decide to participate in this study, you will complete an online survey that will take approximately 30 minutes of your time.

If you are a Latina over the age of 18 currently living in the United States or one of its territories and are interested in participating in this study or would like to learn more about this study, please contact Catherine via email at Catherine.Rodriguez@waldenu.edu or follow this **(link)** to the survey.

Thank you for your consideration and taking the time to provide insight into the issue of weight stigma, ethnic identity, and acculturation, contributing towards greater social change for body diversity.

Appendix B: Inclusion Criteria

This survey is being conducted with participants who self-identify as women over the age of 18 of Hispanic/Latino/Spanish or Hispanic/Latino/Spanish-mix ethnic origin and currently living in the United States, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, or the Virgin Islands.

1. Which gender do you identify with?

Female
Male
Non Binary

2. What is your age?

Under 18
18-25
26-39
40-55
55-65
Over 65

3. The US Census Bureau categorizes Hispanic/Latino/Spanish in the below group(s). Which ethnicity do you identify with? Check all that apply.

Cuban
Mexican
Puerto Rican
South or Central American
Other
Non-Hispanic/Latino/Spanish

4. If you answered “other” above, please share information related to your ethnic identity here.

5. What is your current state of residence?

Appendix C: Demographic Form

- 1. What is your Body Mass Index (BMI)? Clicking on the link will take you to another internet window. Please come back to this question to answer and proceed. Calculate BMI**
- 2. Were you born OUTSIDE of the United States of America, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, or the US Virgin Islands?**
- 3. At what age did you MOVE TO the United States of America, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, or the US Virgin Islands?**