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Examining the Impact of Stressors, Depressive Symptoms, and the Moderating Role of Traditional Latino Gender Norms in Miami Dade County

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Miami, Florida

THE MODERATING ROLE OF TRADITIONAL LATINO GENDER NORMS ON

STRESSORS AND DEPRESSIVE SYMPTOMS AMONG IMMIGRANT LATINO

MEN IN MIAMI-DADE COUNTY

A dissertation submitted in partial fulfillment

of the requirements for the degree in

DOCTOR OF PHILOSOPHY

in

PUBLIC HEALTH

by

Gabriella Marie Wuyke

2021

To: Dean Tomás R. Guilarte
    Robert Stempel College of Public Health and Social Work

This dissertation, written by Gabriella Marie Wuyke, and entitled The Moderating Role of Traditional Latino Gender Norms on Stressors and Depressive Symptoms Among Immigrant Latino Men in Miami-Dade County, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

_____
Mariana Sanchez

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Miguel A Cano

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Mario De La Rosa

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Patria Rojas, Major Professor

Date of Defense: June 25, 2021

The dissertation of Gabriella Marie Wuyke is approved.

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Dean Tomás R. Guilarte
Robert Stempel College of Public Health and Social Work

_____
Andrés G. Gil
Vice President for Research and Economic Development
and Dean of the University Graduate School

Florida International University, 2021

DEDICATION

To my husband and parents for their encouragement, unconditional love, support, and

patience. Thank you for always believing I can do and achieve more.

ACKNOWLEDGMENTS

ABSTRACT OF DISSERTATION

THE MODERATING ROLE OF TRADITIONAL LATINO GENDER NORMS ON

STRESSORS AND DEPRESSIVE SYMPTOMS AMONG IMMIGRANT LATINO

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by

Gabriella Marie Wuyke

Florida International University, 2021

Miami, Florida

Professor Patria Rojas, Major Professor

Latino men experience disproportionate rates of depressive symptoms, compared
to their non-Hispanic White counterparts. Factors related to immigration, culture, and the
endorsement of traditional Latino gender norms can have deleterious effects on the
mental health of Latino men. The aims of this research study were to examine the
moderating role of traditional Latino gender norms among immigration and cultural
stressors on depressive symptoms among Latino immigrant men in Miami-Dade County
using three distinct data sets.

The first study (N= 279) examined the moderating role of machismo and
caballerismo between negative context of reception (NCR) and depressive symptoms.
Moderation analysis revealed significant interaction effects with higher endorsement of
machismo exacerbating the association between NCR and depressive symptoms. The
second study (N=271) examined the moderating role of traditional Latino gender norms
among social subject status (SSS) and depressive symptoms. Findings suggest that lower
endorsement of traditional Latino gender norms moderated the association between SSS

and depressive symptoms. A third study (N=108) was conducted to examine the moderating role of machismo and caballerismo on family stressors and depressive symptoms among Latino father figures. At average and high levels of machismo, men reporting having high levels of marital stress experienced higher depressive symptoms, compared to those with no marital martial stress. Among men with high levels of machismo men with no family disengagement stress had lower levels of depressive symptoms compared to those with high levels of stress. Among men with high levels of caballerismo, those with little marital stress had lowers levels of depressive symptoms compared to those with high marital stress. Lastly, at high levels of caballerismo, men reporting a little parenting stress had higher depressive symptoms compared to those reporting high stress.

The findings of this dissertation reveal that endorsement of traditional Latino gender norms such as machismo and caballerismo can both exacerbate and attenuate depressive symptoms among Latino immigrant men in Miami-Dade County. As such, future directions of research should continue to focus on gender norms and mental health. These findings may also provide insight into the development of culturally tailored mental health interventions among Latino men.

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Background

A record number of immigrants were reported to be living in the United States in 2017, accounting for 13.6% of the U.S. population (Radford, 2019). Shifts in immigration patterns within the past decade have indicated steep increases in immigrants from Central and South America arriving in the US (Noe- Bustamante, 2019). Rates of immigrants from South American countries such as Venezuela have increased 76% to 421,000, while the number of immigrants from Central American countries such as Guatemala have increased by 37% to 1.4 million (Noe-Bustamante, 2019). Many of these recent immigrants are arriving in the US seeking asylum from unstable countries with political upheaval and devastatingly high rates of crime and poverty (Clauss-Ehlers, 2019). Immigration is already a stressful event for adults; as such, immigrant populations are likely to exhibit particularly high levels of adverse mental health outcomes such as depression (Rasmussen, Crager, Baser, Chu, & Gany 2012; Eisenman, Gelberg, Liu, & Shapiro, 2003).

The immigrant paradox generally rates the Latinx immigrant community healthier than their non-Latinx White counterparts. However, results from studies are inconsistent, showing differences based on the country of origin, access to health care, and acculturation (Teruya & Bazargan-Hejazi, 2013). Nevertheless, medical and public health literature indicate that the Latinx community is at risk for several conditions, that could be further exacerbated by mental health outcomes and socioeconomic disparities (APA, 2014; SAMHSA, 2015; HHS, 2019). Among Latino men, alcohol misuse has been

associated with anxiety and adverse health outcomes (Torres & Mata-Greve, 2017).

Focusing on variables that worsen depressive symptoms in the Latinx population as this

population is particularly important as the Latinx community has accounted for 52% of

all U.S population growth between 2010 and 2019 (Noe-Bustamante, Lopez, Krogstad,

2020) and are the largest minority group in the country (U.S. Census, 2019). In addition,

depression is the leading cause of disability worldwide and a major contributor to the

global disease burden (WHO, 2020).

The Latinx community may disproportionately suffer from under diagnosed

depressive symptoms, are less likely to have health insurance, and less likely to receive

mental health care compared to their non-Latinx White counterparts (Alarcón et al., 2016;

Limon, Lamson, Hodgson, Bowler, & Saeed, 2018; Pineros-Leano, Liechty, & Piedra,

2017). A study examining the effects of concerns of discrimination on immigrant's

overall health found that Latinx immigrants concerned with discrimination were more

likely to report depressive symptoms (Leung, LaChapelle, Scinta, & Olvera, 2014).

Extensive evidence indicates that immigrants often face numerous stressors that can lead

to anxiety or alcohol and drug misuse (Alarcón et al., 2016; Cano et al., 2017; Leung,

LaChapelle, Scinta, & Olvera, 2014). However, studies have also found inconsistent

associations between protective and risk factors related to Latinxs' mental health

outcomes (Alarcón et al., 2016). Researchers have suggested that the effect of significant

moderators examining should be examined in future research studies, particularly,

cultural variables as moderators into the development and prevention of depression

among the Latinx community. (Nicasio, Cassisi, Negy, Jentsch, 2019). Thus, additional

research is warranted to examine depression and mental health outcomes among this population.

Cultural values such as traditional gender norms should also be considered when assessing depressive symptoms of Latinx immigrants (Perrotte, Baumann, & Knight, 2018). Previous research has found that higher levels of traditional Latino male gender norms, specifically machismo, was associated with detrimental mental health outcomes such as anxiety, anger, and depression (Nuñez et al., 2016). Machismo is a traditional Latino male gender norm that encompasses hyper masculinity, aggression, and dominance while caballerismo is more strongly affiliated with family values, respect, and emotional connectedness (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008). In addition, caballerismo has been associated as a protective factor for outcomes such as self-esteem (Ojeda & Piña-Watson, 2014). Previous research underscores the importance of cultural values and has called for increased investigations that lead to the integration of variables such as traditional gender norms within interventions that target Latino men suffering from depression (González-Prendes, Hindo, & Pardo, 2011). Moreover, the current research on mental health and masculinity among Latinos is limited (Daniel-Ulloa, Sun, & Rhodes, 2017). Nevertheless, the limited existing literature suggests that Latino and Mexican American men who adhere to masculine ideologies are more likely to report higher levels of both stress and depression (Fragoso and Kashubeck, 2000; Lu &Wong, 2014).

Limited studies have examined the influence of gender-based perspectives on social subjective status (SSS) and mental health (Mutyambizi, Booyse, Stornes, Eikemo, 2019). While SSS is a significant predictor for health outcomes for both men and women,

previous studies have found that societal gender norms may influence the considerations of SSS in occupational identity because men historically are the primary breadwinners (Shaked, Williams, Evans, Zonderman, 2016; Eagly, Wood, Diekman, 2000). Similarly, men's health cannot be understood without a deeper understanding of their social, cultural, and behavioral context (Rieker, & Bird, 2005; Watkins, Johnson-Lawrence, & Griffith, 2011; Courtenay, 2000).

Like gender norms, immigration and SSS, familism may play a significant role in influencing depressive symptoms because family values are deeply esteemed in the Latinx culture (Villatoro, Morales, & Mays, 2014; Calzada, Tamis-LeMonda, Yoshikawa, 2013). Extant literature suggests that the Latinx family comprises of close-knit and interdependent relationships; as such, family cohesion has shown to protect against external stressors and promote prosocial tendencies in children while the inverse has led to increased psychological distress (Lorenzo-Blanco, Unger, Baexconde-Garbanti, Ritt-Olson, Soto, 2012; Rivera et al, 2008; Knight, Mazza, Carlo, 2018). In fact, several studies suggest that family conflict leads to an increase in depressive symptoms among both Latinx youth and adults (Lorenzo-Blanco, & Cortina, 2013; Lorenzo-Blanco, & Unger, 2015; Stein, Gonzalez, Cupito, Kiang, Supple, 2013). Similarly, a meta-analysis of 39 studies examining familism and mental health outcomes among the Latinx population suggests that stronger sense of attitudinal familism, which includes feeling supported by one's family, is related to lower rates of depressive symptoms (Valdivieso-Mora et al., 2016). Another study found that endorsement of extreme machismo characteristics hindered marital satisfaction for Mexican American men. In addition, the association in this study between machismo and lower marital

satisfaction was stronger among men who had low levels of acculturation. This suggests that machismo plays a more significant role in husbands with low acculturation because their values are more congruent with their cultural and societal expectations (Pardo, Weisfeld, Hill, Slatcher, 2013).

Aims and Method

To address the gaps in the literature, the purpose of this study is trifold and utilized three distinct data sets focusing on the Latinx population of Miami-Dade County: The first data set, *Alcohol Use Trajectories of Latino Immigrants*, focused on immigrants during their first decade in the US (Recent Latino Immigrant Study), was used to examine how traditional Latino gender norms (machismo and caballerismo) and acculturation moderation the association between NCR and depressive symptoms among established Latino immigrant men who have been residing in Miami-Dade County for ~10 years. The second data set, *Pre to Post Immigration Drinking and Driving Among Recent Latino Immigrants: Examining Opportunities for Intervention*, was used to examine the moderating role of traditional Latino gender norms on the association between SSS and depressive symptoms among young adult recent Latino immigrant men who immigrated to Miami-Dade County within the past year. The third data set, *Hombres de Familia: Hombres de Familia Manteniendo Respeto, Educacion, y Seguridad*, was used to examine how traditional Latino gender norms moderate the association between familial stressors and depressive symptoms on Latino father figures living in Miami-Dade County. All the data for this dissertation were obtained by collaborations by leading investigators from the Center for Research on U.S. Latino HIV/AIDS and Drug Abuse (CRUSADA) at Florida International University (FIU) and approved by the Florida International University

Institutional Review Board (IRB) of FIU. The following aims are addressed in the data

analysis:

Aim 1

The aim of this study was to examine the relationship between NCR and

depressive symptoms as they relate to traditional Latino gender norms among immigrant

Latino men residing in Miami-Dade County. The study was conducted using cross-

sectional data from an on-going NIH funded study examining sociocultural determinants

of alcohol use trajectories among Latino immigrants as they acculturate to the US. The

present study participants consisted of 279 Latino immigrant men ages 24-44 (M age =

34.92, SD = 4.86) that had immigrated to the US approximately 10 years earlier. The

sample composed of 40% Cuban, 39% Central American, and 21% South American

descent. The questionnaire assessed a range of constructs associated with mental health,

acculturation, and immigration. Inclusion criteria consisted of the following: (1) Being 18

years old and above, (2) having immigrated to the US from a Latin America country, (3)

self-identifying as Latinx (4), living in Miami-Dade County, (5) and having the intention

to stay in the U.S. Hierarchical multiple regression (HMR) and moderation analyses were

conducted on this cross-sectional data of adult Latino immigrant men to determine the

extent to which the selected variables predicted depressive symptoms. Predictor variables

were entered into the HMR model in the following order: (1) demographic variables (2)

perceived stress (3) acculturation and gender norms, and (4) NCR. Subsequently,

moderation analysis was conducted using PROCESS v3.2 (Hayes, 2013).

The aim of this study was to assess immigration and sociocultural stressors associated with depressive symptoms among recently arrived Latino men residing in Miami-Dade County and the moderating role of traditional Latino gender norms. The study was conducted using a secondary data analysis of data from an on-going NIH funded longitudinal study examining alcohol consumption trajectories among the Latinx community in Miami-Dade County, pre and post-migration (parent study). The present study consisted of 271 male participants from the parent study between the ages of 18 to 34 (M =27, SD 4.9) that immigrated to the US within one year of participation in the study. The questionnaire included alcohol consumption, immigration, mental health, perceived social status, and gender norms measures. Eligibility criteria included following criteria: (1) being 18 years or older, (2) having immigrated to the US from a Latin American country, (3) self-identifying as a Latino male, (4) currently living in Miami-Dade County, and (5) consenting to participate. HMR and moderation analyses were conducted on a cross sectional sample of 271 recently arrived adult Latino immigrant men. Predictor variables were entered into the HMR model in the following order: (1) demographic variables (2) immigration stress and SSS, (3) and gender norms.

Aim 3

The aim of this study was to examine the associations between marital, parenting, and family disengagement stress, and depressive symptoms among Latino fathers and examine if traditional Latino male gender norms moderate these associations. The present study was conducted using the baseline data from an on-going NIH funded clinical intervention study examining the efficacy of substance abuse, domestic violence, and

HIV/AIDS among fathers and sons from urban and semi-rural communities in south

Florida (n=244). The current study (n=108) consisted of the fathers/father figure's pre-

intervention baseline interviews who were married or in a relationship at the time of the

interview and were between the ages of 18 to 66 (M =43.5, SD= 9.8). HMR and six

moderation analyses were conducted on the baseline cross-sectional sample of Latino

fathers in Miami-Dade County. Predictor variables were entered into the HMR model in

the following order: (1) demographic variables (2) family stress, (3) and gender norms.

Subsequently, moderation analysis was conducted using PROCESS v3.2 (Hayes, 2013).

Theoretical Framework

The proposed dissertation will be guided by a theoretical framework developed by

Will H. Courtenay (Courtenay, 2000). This framework posits that men have poorer health

outcomes than women. While there are well known demographic variables that are

correlated to health outcomes (i.e. race, ethnicity, and income), within the same

demographic characteristics, income brackets, and ethnic groups, men and women have

staggeringly different health outcomes (Beltrán-Sánchez, Finch, Crimmins, 2015).

Courtenay suggests that these differences can be accounted for by examining hegemonic

masculinity, the idealized form of masculinity at any given time and place (Connell,

1995; Courtenay, 2000). Similar to the well-known gender schema theory developed by

Sandra Bem, Courtenay also argues that gender is not constituted as two static categories

given at birth, but socially constructed relationships enforced by the wider culture (Bem,

1981; Courtenay, 2000). However, Courtenay's theoretical framework takes a step

further in postulating that men experience greater social pressures to conform to societal

norms of masculinity and reject feminine traits. As an example, according to Oliffe and

Phillips (2008), suggest that men seeking help during times of psychological distress may appear as "weak"; as a result, men may continue to suffer psychological distress in silence to avoid stigma and rejection from their peers (Connell, 2005). Thus, these social pressures and desire to adopt the dominant masculine traits influence health behaviors. Moreover, Courtenay argues that men who have limited access to cultural and economic resources may have exacerbated masculine characteristics as a mechanism to demonstrate power and authority (Courtenay, 2000). Exposure to some cultural stressors may affect men more negatively because they may threaten notions of masculinity and lower self-perceptions of social status and power (Gorman et al., 2010; Kulis, Marsiglia, & Nieri, 2009). Similarly, when men experience an illness or loss in status, in efforts to preserve their masculinity, they may in fact exacerbate their health condition by displaying other forms of masculinity (Courtney et al, 2000; Charmaz; 1995; Messerschmidt, 1993). This theory may provide a better understanding of the sociocultural context of how Latino men are endorsed to adopt the common traits of masculinity, such as machismo and caballerismo and how this affects depressive symptoms (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008; Perrotte, Baumann, & Knight, 2018). This theory may help underline the sociocultural context of how Latino men are endorsed to adopt the masculine characteristics of *machismo*, characterized by two dominant and competing dimensions, *traditional machismo* and *caballerismo and* how this affects depressive symptoms (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008; Perrotte, Baumann, & Knight, 2018).

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Chapter 2: Manuscript 1

Associations between negative context of reception and depressive symptoms among

immigrant Latino men: The moderating effect of machismo and Hispanicism.

Abstract

Objective: Latino men experience disproportionate rates of depressive symptoms

compared to their White counterparts. Factors related to the immigration experience, such

as NCR can have deleterious effects on the mental health of Latino men. Socio-cultural

factors including traditional Latino gender norms and levels of acculturation or

Americanism can serve as risk and protective factors for depressive symptoms among

men. The primary aims of this study were to examine (a) associations between NCR,

traditional Latino gender norms, acculturation, and depressive symptoms among adult

Latino immigrant men (b) and examine if levels of acculturation and traditional Latino

gender norms moderate associations between NCR and depressive symptoms.

Design: HMR and moderation analyses were conducted on a cross-sectional sample of

279 adult Latino immigrant men to determine the extent to which selected variables

predicted depressive symptoms. Predictor variables were entered into the HMR model in

the following order: (1) demographic variables (2) perceived stress (3) acculturation and

gender norms, and (4) NCR. Subsequently, moderation analysis was conducted using

PROCESS v3.2.

Results: Results indicated that 19.5% of the variance of depressive symptoms was

explained by all predictor variables entered in the HMR model. Standardized coefficients

from the final model indicated that perceived stress ($\beta = .255$, $p < .001$), *machismo* ($\beta =

.127$, $p < .05$), Hispanicism ($\beta = -.119$, $p < .05$), and NCR ($\beta = .151$, $p < .05$), were

significantly associated with depressive symptoms. Moderation analyses revealed

significant interaction effects with machismo (exacerbating) and Hispanicism

(attenuating) the association between NCR and depressive symptoms.

Conclusion: Study findings suggest that NCR can negatively impact the mental health of

Latino immigrant men. Our results help inform the development of culturally relevant

interventions that target identified vulnerability factors and capitalize on key protective

factors associated with mental health outcomes among Latino men.

Keywords: Depressive symptoms, gender norms, Latino, immigrants, acculturation

Introduction

A record number of immigrants were reported to be living in the United States in

2017, accounting for 13.6% of the U.S. population (Radford, 2019). While immigrants

play an integral role in American society, they have often been viewed in a negative light

and seen as a threat to national identity (Schwartz et al., 2014). Recent political rhetoric

has negatively portrayed immigrants in the US, specifically targeting Latinx

(Latino/Latina) immigrants, with administrative policies attempting to end Deferred

Action for Childhood Arrivals and funding to build a wall along the United States (US)

and Mexico border (Hsin & Ortega, 2018; Ishiwata & Muñoz, 2018; Meichsner, 2018).

The primary aim of this study is to examine if traditional Latino gender norms and

acculturation moderate the association between NCR and depressive symptoms among

Latino immigrant men.

Negative political climate and social context within the receiving community in

which immigrants reside can have deleterious effects on their levels of stress which could

in turn lead to adverse mental health outcomes (Fernandez & Loukas, 2014; Forster,

Grigsby, Soto, Schwartz, & Unger, 2015; Pascoe & Smart Richman, 2009). Inflammatory

rhetoric in the political spectrum in recent years has exacerbated discriminatory remarks

in the United States among immigrant groups, particularly the Latinx community

(Fernández, 2018). Immigrant groups that differ from the Eurocentric culture and that are

perceived as threatening to the local community often view themselves as being

discriminated against or having limited opportunities from the receiving culture

(Schwartz et al., 2014). Previous studies indicate that Latinx immigrant's perceived NCR

in their receiving communities, including discriminatory experiences, predicted

depressive symptoms among Latinx adolescents and parents (Schwartz et al., 2014).

Indeed, this exposure to consistent and negative experiences may lead to harmful

psychological effects (Fernández, 2018). Although previous mental health research

among Latinx indicates that women and adolescent girls are more susceptible to

depressive symptoms and other mental health outcomes than their male counterparts

(Lorenzo-Blanco, et al, 2012); as the largest immigrant group in the U.S. it is also

important to examine how NCR can impact depressive symptoms among Latino men and

identify socio-cultural values that may assist in mitigating these adverse effects

(Cervantes, Gattamorta, & Berger-Cardoso, 2019; Perrotte, Baumann, & Knight, 2018).

Furthermore, it is pressing to currently examine depressive symptoms and its

origins as depression is the leading cause of disability worldwide and a major contributor

to the global disease burden (WHO, 2020). The Latinx community disproportionately

suffers from depressive symptoms, are under diagnosed, are less likely to have health

insurance, and less likely to receive mental health care compared to their non-Latinx

White counterparts (Alarcón et al., 2016; Limon, Lamson, Hodgson, Bowler, & Saeed,

2018; Pineros-Leano, Liechty, & Piedra, 2017). A study examining the effects of depressive symptoms found that Latinx immigrants concerned with discrimination were twice as likely to report depressive symptoms (Leung, LaChapelle, Scinta, & Olvera, 2014). Extensive evidence indicates that immigrants often face numerous stressors that can lead to anxiety or alcohol and drug misuse (Alarcón et al., 2016; Cano et al., 2017; Leung, LaChapelle, Scinta, & Olvera, 2014). However, studies have found inconsistent associations between protective and risk factors related to mental health outcomes (Alarcón et al., 2016). Nicasio and colleagues suggested that future research should consider cultural variables as moderators into the development and prevention of depression among the Latinx community. (Nicasio, Cassisi, Negy, Jentsch, 2019). Thus, additional research is warranted to examine depression and mental health outcomes among this population.

Cultural values such as traditional gender norms should be considered when assessing depressive symptoms of Latinx immigrants (Perrotte, Baumann, & Knight, 2018). Previous research has found that higher levels of traditional Latino male gender norms, specifically machismo, was associated with detrimental mental health outcomes such as anxiety, anger, and depression (Nuñez et al., 2016). Machismo is a traditional Latino male gender norm that encompasses hyper masculinity, aggression, and dominance while caballerismo is more strongly affiliated with family values, respect, and emotional connectedness (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008). In addition, caballerismo has been associated as a protective factor for outcomes such as self-esteem (Ojeda & Piña-Watson, 2014). Previous research underscores the importance and has called for increased investigations that lead to the integration of cultural values,

such as traditional gender norms, within interventions that target Latino men suffering from depression (González-Prendes, Hindo, & Pardo, 2011). Moreover, the current research on mental health and masculinity among Latino men is limited (Daniel-Ulloa, Sun, & Rhodes, 2017).

A review of the literature evaluating the relationship between acculturation and health found extensive evidence linking higher levels of acculturation with several adverse health outcomes among multiple Latinx groups (Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005; Concha, Sanchez, Rojas, Villar, De La Rosa, 2016) . Recent studies suggest that higher levels of acculturative stress were associated with an increase in stress, anxiety, and depressive symptoms among Latinx immigrants, proposing that adopting new behaviors and losing cultural heritage can create added mental health problems to already vulnerable immigrant groups (Maldonado et al., 2018; Silva, Dillon, Verdejo, Sanchez, De La Rosa, 2017; Concha, Sanchez, Rojas, Villar, De La Rosa, 2016; Concha, Sanchez, De La Rosa, Villar, 2013).

Theoretical Framework

The proposed study will be guided a theoretical framework developed by Will H. Courtenay (Courtenay, 2000). This framework posits that men have poorer health outcomes than women. There are well known demographic variables that are correlated to health outcomes (i.e. race, ethnicity, and income). However, within the same demographic characteristics, income brackets, and ethnic groups, men and women have staggeringly different health outcomes (Beltrán-Sánchez, Finch, Crimmins, 2015). Courtenay suggests that these differences can be accounted for by examining hegemonic masculinity, the idealized form of masculinity at any given time and place (Connell,

1995; Courtenay, 2000). Similar to the well-known gender schema theory developed by

Sandra Bem, Courtenay also argues that gender is not constituted as two static categories

given at birth, but socially constructed relationships enforced by the wider culture (Bem,

1981; Courtenay, 2000). However, Courtenay's theoretical framework takes a step

further in postulating that men experience greater social pressures to conform to societal

norms of masculinity and reject feminine traits. As a result, these social pressures and

desire to adopt the dominant masculine traits influence health behaviors. Moreover,

Courtenay argues that men who have limited access to cultural and economic resources

may have exacerbated masculine characteristics as a mechanism to demonstrate power

and authority (Courtenay, 2000). Exposure to some cultural stressors (e.g., NRC) may

affect men more negatively because they may threaten notions of masculinity and lower

self-perceptions of social status and power (Gorman et al., 2010; Kulis, Marsiglia, &

Nieri, 2009). This theory may provide a better understanding of the sociocultural context

of how Latino men are endorsed to adopt the common traits of masculinity, such as

machismo and caballerismo and how this affects depressive symptoms (Arciniega,

Chicago, Tovar-Blank, & Tracey, 2008; Perrotte, Baumann, & Knight, 2018). This theory

may help underline the sociocultural context of how Latino men are endorsed to adopt the

masculine characteristics of *machismo*, characterized by two dominant and competing

dimensions, *traditional machismo* and *caballerismo and* how this affects depressive

symptoms (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008; Perrotte, Baumann, &

Knight, 2018).

Present Study

Limited research has explored the relationship between NCR and depressive symptoms as they relate to traditional Latino male gender norms and acculturation. Consequently, the overarching aims of this study were to examine (a) associations between NCR, traditional Latino gender norms, acculturation, and depressive symptoms among adult Latino immigrant men (b) if levels of acculturation and traditional Latino male gender norms moderate associations between NCR and depressive symptoms. Based on the extant literature, the study was designed to address five hypotheses: (H_1) NCR will be associated with greater depressive symptoms. (H_2) Higher levels of machismo and Americanism will be positively associated with depressive symptoms. (H_3) Higher levels of *caballerismo*, and Hispanicism will be inversely associated with depressive symptoms. (H_4) Greater levels of *machismo* and Americanism will exacerbate the association between NCR and depressive symptoms. (H_5) Greater levels of *caballerismo* and Hispanicism will attenuate the association between NCR and depressive symptoms.

Method

The present study was conducted using cross-sectional data from an on-going NIH funded study examining sociocultural determinants of alcohol use trajectories among Latino immigrants as they acculturate to the US. This study was approved by the IRB of the sponsoring academic institution. The present study participants consisted of 279 Latino immigrant men ages 24-44 (*M* age = 34.92, *SD* = 4.86) that had immigrated to the US approximately 10 years ago. The sample was 40% Cuban, 39% Central American, and 21% South American. The questionnaire assessed a range of constructs associated with mental health, acculturation, and immigration. Inclusion criteria consisted of the

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following: (1) 18 and above, (2) having immigrated to the US from a Latin America country, (3) self-identifying as Latinx (4), living in Miami-Dade County, (5) and having the intention to stay in the U.S.

Data was collected via computer assisted personal interviews. All questionnaires were administered in Spanish. Those measures that did not already have a validated Spanish translated version were translated in house. Specifically, the measures completed a process of a) translation/back translation, b) modified direct translation, c) and checks for semantic and conceptual equivalence to ensure accurate conversion from English to Spanish (Behling & Law, 2000). In an effort to account for any within-group variability, the review panel conducting the modified direct translation consisted of individuals from various Latino subgroups representative of the Miami-Dade County population. In addition to informed consent, participants were made aware that a certificate of confidentiality was obtained from the NIH to further secure confidentiality, due to the sensitive nature of some questions such as immigration status. In order to recruit from a hard to reach population, the primary recruitment method was respondent driven sampling. Participants were provided with incentives to recruit individuals within their social network that met the inclusion criteria. Each participant (i.e., the seed) was asked to refer three individuals in his/her social network who met eligibility criteria. This referral procedure was followed for three legs for each initial participant (seed), at which point a new seed would begin, thus limiting the number of participants that were socially interconnected. This process was undertaken to avoid skewing the respondent sample (Salganik & Heckathorn, 2004).

Interviews were conducted in private and comfortable locations mutually agreed on by the participant and the researcher. Each interview took approximately 1 hour to complete. The IRB of a large public university in Miami, Florida approved this study.

Measures
Demographic Variables

The following demographics were included: age, educational status, marital status, documentation status and household income. Participants were asked to report their educational status by choosing from five categories ranging from less than high school to graduate/professional studies. For the present study, educational status was recorded into dichotomous variables of (1) less than high school or (2) some college training or more. Similarly, participants were asked to report their immigration status from 11 possible categories including citizen, temporarily protected, asylum, expired visa, dependent on someone else, tourist, student, temporary work visa, undocumented, temporary resident, or permanent resident. These categories were then recoded into dichotomous variables of (1) permanent or resident status or (2) temporary or undocumented. Marital status was initially recorded using six categories including married, separated, living as married, divorced, never married or widowed. For the present study, these categories were recoded into (1) having a partner/married/living as married and (2) being single. Age and household income were coded as continuous variables.

Gender Norms

Traditional gender norms were measured using the Machismo and Caballerismo Scale, a validated 20-item bi-dimensional scale, that measures machismo and

caballerismo on two separate subscales (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008). Sample items for the *machismo* subscale include "it's important not to be the weakest man in a group" and "real men never let their guard down". Items on the *caballerismo* subscale include "men should be affectionate to their children" and "family is more important than the individual". Items were measured using a 7-point Likert scale ranging from 1 (*not at all*) to 7 (*very much so*). Subscale scores were measured by calculating mean values, with higher values indicating greater adherence to traditional gender norms. (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008). Good reliability was reported with a Cronbach's alpha of 0.80 overall. Cronbach's alpha's in the present study were 0.85 and 0.69 for the machismo and caballerismo scales respectively.

Center for Epidemiological Studies Depression Scale

An adapted version of the widely used Center for Epidemiologic Studies Depression (CES-D) was used to measure depressive symptoms. Psychometric analysis of the original 10-item CES-D scale revealed that two reverse-scored items yielded low internal consistency scores. As such, an adapted 8-item version of the scale with a substantially improved Cronbach alpha (0.73) was used in the present study. Participants were asked to rate how often they experienced specific feelings over the past week. Each item was rated on a 4-point Likert scale ranging from 0 (*Rarely or none of the time/less than 1 day*) to 3 (*Most or all of the time/5-7 days*). Sample items included "I felt lonely" and "I felt depressed." A total score was calculated with higher scores indicating greater levels of depressive symptoms (Radloff, 1977).

Perceived Context of Reception

NCR was measured with a six-item measure developed by Schwartz et al. (2014) that has been validated and used with Latinx immigrant adults and adolescents (Lorenzo-Blanco et al., 2017; Schwartz et al., 2014). Sample items include "people from my country are not welcome here" and "people in this country often criticize people from my country". Items were summed to calculate a total scale score (Schwartz et al., 2014). Acceptable reliability was reported with a Cronbach's alpha of 0.76.

Acculturation (Hispanicism and Americanism)

The Bicultural Involvement Questionnaire (BIQ) was used to measure acculturation. The BIQ is a bi-dimensional scale assessing an individual's degree of comfort in their host-culture (Americanism) as well as their culture of origin (Hispanicism) (Szapocznik, Kurtines, & Fernandez, 1980). This 24-paired item scale measures comfort of Hispanic and English language, as well as enjoyment of cultural customs and behaviors associated with Hispanic and American culture using a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*very much*). Sample items for the Hispanicism subscale include "How much do you enjoy Hispanic T.V. programs?" A sample from the Americanism subscale is "How much do you enjoy American-oriented places". Excellent reliability was reported for the Hispanicism ($\alpha= .88$) and Americanism ($\alpha= .94$) subscales in the present study.

Stress

Stress was measured using the Perceived Stress Scale. This is a 10-item scale that is widely recognized to measure the degree to which one perceives stress. A 5-point Likert scale is used ranging from 0 (*never*) to 4 (*very often*). Sample items include "In the

last month, how often have you felt that things were going your way?" and "In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?" (Cohen & Wyilliamson, 1988). Reliability was suboptimal (α= 0.67).

Analytic Plan:

HMR was used to measure the associations of the predictor variables with depressive symptoms. Items were entered into the HMR model in a specified order to examine what each predictor contributed to the explanatory variance of dependent variable (depressive symptoms), after controlling for the variance explained by the previous variables (Cohen, Cohen, West, & Aiken, 2003). Predictor variables were grouped and entered into the HMR model in the following block order: (1) demographic variables (2) perceived stress (3) cultural factors consisting of traditional gender norms (machismo and caballerismo) and acculturation *(*Hispanicism and Americanism*)* (4) NCR was entered into the final block to determine the extent to which it distinctly predicted depressive symptoms above and beyond the other predictors.

Four moderation models were tested using the SPSS macro PROCESSv.3 (Hayes, 2013) to examine the moderating effects of traditional Latino gender norms and acculturation on the association between NCR and depression among Latino immigrant men.

Moderations analysis used 10,000 bootstrap iterations and were tested by (a) performing a multiple regression to replicate the variance explained by all the predictor variables included in the HMR model, (b) estimating interaction terms between NCR and cultural factors (e.g., NCR *x* machismo, NCR *x* caballerismo, NCR *x* Americansim, NCR *x* Hispanicism), and (c) estimating conditional effects for each respective interaction term

in relation to depressive symptoms. All moderation analyses controlled for demographic variables age, education, marital status, income, and immigration status. Missing data were treated using list-wise deletion, thus 5 only cases were deleted from the analysis.

Results

Table 1.1 presents the descriptive statistics in the study sample as well as the means and standard deviations of all key study variables. Table 1.2 presents the bivariate correlations for each study variable.

Hierarchical Multiple Regression

Table 1.3 represents the regression coefficients from the HMR model. Results indicated that 19.5% of the variance of depressive symptoms was explained by all predictor variables entered in the HMR model. The first block of the model included demographic variables and explained 4.7% of the variance of depressive symptoms ΔR^2 = 4.7, $p < 0.5$. The second block added the perceived stress variable, which explained the 9.0% of the variance ΔR^2 = 9.0, $p < .001$. The third block added the traditional gender norms and acculturation variables which accounted for 3.9% of the variance, ΔR^2 = 3.9, $p < .05$. Lastly, the fourth block added the NCR that resulted in an additional 2.0% of explained variance, ΔR^2 = 2.0, $p < .05$. Standardized coefficients from the final model indicate that perceived stress (β = .255, p <.001), *machismo* (β = .127, p <.05), Hispanicism (β = -.119, p <.05), and NCR (β = .151, p <.05), were significantly associated with depressive symptoms.

Moderation Analyses

Moderation analysis revealed that machismo moderated the association between NCR and depressive symptoms (Figure 1.1). Specifically, associations between NCR and

depressive symptoms were stronger among Latino men with higher levels of machismo

(1 SD above the mean) (B= 1.05, $p \leq .001$). No statistically significant moderation effect

was found for *caballerismo*. Figure 1.2 indicates a significant interaction for Hispanicism

(B= -1.78, p =.03), whereby associations between NCR and depressive symptoms were

stronger among Latino men with lower levels of Hispanicism (1 SD below the mean). No

significant interaction effects were found for Americanism.

Discussion

The present study examined the relationship between NCR and depressive

symptoms and how cultural risk and protective factors, specifically traditional Latino

male gender norms and levels of acculturation, moderated that association. Current

research demonstrates associations between NCR and depression among Latinx

immigrants and youth (Basáñez, Unger, Soto, Crano, & Baezconde-Garbanati, 2013;

Schwartz et al. 2015). Key findings from this study supports our first hypothesis and

current literature by indicating that a perceived NCR was associated with greater

symptoms of depression among Latino immigrant men. Higher levels of machismo also

served as a risk factor for increased depressive symptoms. Additionally, machismo

exacerbated the impact of NCR on depressive symptoms in the study sample. Prior

research supports these findings such that higher levels of machismo have been

associated with negative-cognitive emotional factors (Nuñez et al., 2016). These findings

suggest that machismo is a potential cultural risk factor that should be integrated in

interventions seeking to improve mental health outcomes among Latino immigrant men.

In addition, the Centers for Disease Control and Prevention and the World Health

Organization have highlighted a need for targeted prevention programs in communities

where strong attitudes towards gender norms are prevalent (Periago, Fescina, & Ramón-Pardo, 2004). However, contrary to our hypothesis, no statistically significant moderating effect was found for *caballerismo*.

Study findings also revealed that stronger adherence to Latinx culture (Hispanicism) was protective against depressive symptoms among Latino men. These results are in line with previous studies suggesting that maintenance of cultural values may be a protective factor, thereby decreasing the risk for depression among the Latinx community (Lorenzo-Blanco et al., 2012). It is noteworthy that Hispanicism was inversely associated with depressive symptoms and moderated the relationship between NCR and depressive symptoms. Specifically, lower level of Hispanicism strengthen the adverse association that NCR had on depressive symptoms. Contrary to our hypothesis, no statistically significant direct or moderating effects were found for Americanism.

Identifying depressive symptoms in the Latinx community is particularly difficult due to language and cultural barriers. In fact, Schamling and Hernandez reported that depression was misdiagnosed in roughly 80% of mostly Mexican immigrants suffering from depression who received care with primary care physicians (Schmaling & Hernandez, 2005). Consequently, future interventions may benefit from incorporating culturally appropriate services for Latinx immigrants, including but not limited to language and cultural proficiency.

Results from this study suggest that there is an underexplored relationship between NCR and depressive symptoms among Latino males in the literature. Similar to our findings, Lorenzo-Blanco and colleagues found an association between parental perceived cultural stressors, such as NCR, and heightened depressive symptoms by way

of family functioning (Lorenzo-Blanco et al., 2017). Schwartz and colleagues also documented the exposures of cultural stressors such as discrimination and NCR and their effects on adolescent risky behaviors. This study is consistent with previous studies and highlights the potential deleterious effects of cultural stressors on adverse mental health outcomes (Schwartz et al., 2015).

Future studies and interventions should further emphasize the identification of protective and risk factors associated with traditional cultural and gender norms that may alleviate depressive symptoms and other mental health outcomes in this population (Nuñez et al., 2016). Furthermore, the results of this study call for individual and population level interventions to help offset NCR and depressive symptoms, particularly in an era casting political and negative rhetoric over Latinx immigrants (Schwartz et al., 2015). The public health implication of this study can shed further light on the relationships between gender norms, depressive symptoms, and NCR given the cultural and societal barriers that Latinx communities often face.

Limitations

The findings from this study should be interpreted in light of certain limitations. Due to the cross-sectional nature of the design, causal or directional order of associations cannot be made. In addition, the study utilized data that was self-reported with the potential of participant misinterpretation, error, or social desirability bias. Another limitation is that the distribution of immigrants in the United States varies widely and the sampling techniques used to recruit participants limit the ability to generalize these findings. The participants in this community based, non-clinical study were recruited in South Florida, which is home to a very diverse Latinx immigrant community consisting

largely of Cubans, Central Americans and South American descent. Caution should be used when generalizing these findings to other Latinx immigrant groups such as Mexicans. Indeed, recent studies have found that prevalence of depressive symptoms may differ across Latinx subgroups (Alegria, Alvarez, & DiMarzio, 2017). Thus, further research is warranted to examine if findings from this study differ among Latino men from varying countries of origin. In addition, the internal consistency for caballerismo was marginal (α = .69), potentially addressing why there was no significant moderating effect with caballerismo. Similarly, the internal consistency for perceived stress was suboptimal (α =.67), although a significant predictor for depressive symptoms in the HMR model. Lastly, the two reversed scored statements in the CES-D measure did not perform optimally. As such, an 8-item adapted from of the original 10-item CES-D was used in the present study.

Conclusion

Study findings suggest that NCR coupled with machismo can have negative impacts on the depressive symptoms of Latino immigrant men. Moreover, findings also suggest that lower levels of acculturation were protective factors for depressive symptoms. Although modest, these results can help inform the development of culturally relevant interventions that target identified vulnerability factors and capitalize on key protective factors associated with mental health outcomes among Latino immigrant men in the U.S. In an era of heightened political tension and negative rhetoric engulfing the immigrant community in the U.S., it is of critical importance to examine factors that may exacerbate depressive symptoms among this population.

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Subjective social status, immigration stress, and depressive symptoms among recent

immigrant Latino men: The moderating effect of traditional Latino gender norms

Abstract

Introduction: In recent years, shifts in U.S. immigration patterns have indicated steep

increases in immigrants from Central and South America. Latinx immigrants are at risk

for adverse mental health outcomes as a result of immigration and sociocultural contexts.

The primary aims of this study were to examine the (a) association between immigration

stress, subjective social status (SSS), and depressive symptoms among adult Latino men

and (b) to examine if traditional Latino male gender norms moderate these associations.

Methods: HMR and moderation analyses were conducted on a cross sectional sample of

271 recently arrived adult Latino immigrant men. Predictor variables were entered into

the HMR model in the following order: (1) demographic variables (2) immigration stress

and SSS, (3) and gender norms.

Results: Results indicated that 22.2% of the variance of depressive symptoms was

explained by the predictor variables in the model. Standardized coefficients indicate that

immigration stress ($\beta = .303$, $p \leq .001$), SSS ($\beta = -3.764$, $p \leq .001$), and gender norms (β

$= 2.203$, $\leq .05$) were significantly associated with depressive symptoms. In the moderation

analysis, significant interaction effects were observed with lower endorsement of

traditional gender norms exacerbating the association between SSS and depressive

symptoms.

Conclusion: These findings suggest that SSS and lower endorsement of traditional Latino gender norms can attenuate negative mental health outcomes of recently arrived Latino immigrant men. These results have the potential to inform the development of culturally relevant interventions that target immigration and sociocultural stressors that negatively impact mental health outcomes of immigrant men.

Keywords: Depression, gender norms, immigrants, Latino

Introduction

Latinx immigrants in the United States have better physical health outcomes than their non-Hispanic White counterparts, as often demonstrated by the epidemiological paradox (Perreira et al., 2015). While literature varies on how the groups compare in respect to mental health outcomes (Fortuna, Porche, & Alegria, 2008; Salas-Wright, Vaughn, Goings, Miller, & Schwartz, 2018; Alarcon et al., 2016), some studies have demonstrated that depression is significantly higher among the Latinx community compared with other groups (Gutierrez-Vazquez, Flippen, & Parrado, 2018; Nicklett & Burgard, 2009). Factors that contribute to adverse mental health outcomes in this population include immigration stress, many times arising from persecution, violence, or political instability in their country of origin (Fortuna, Porche, & Alegria, 2008; Sangalang et al., 2019; Cervantes, Gattamorta, & Berger-Cardoso, 2019). In addition, other factors related to adverse mental health outcomes in this population include cultural stressors such as traditional gender norms (Nuñez et al., 2016; Perrotte, Baumann, Knight, 2018). Moreover, when men experience an illness or loss in status, in efforts to preserve their masculinity, they may in fact exacerbate their health condition by displaying other forms of masculinity (Courtney et al, 2000; Charmaz; 1995;

Messerschmidt, 1993). Thus, this paper will examine the impact of cultural and immigration stressors on depressive symptoms.

Immigration Stress and Mental Health

Shifts in immigration patterns within the past decade have indicated steep increases in immigrants from Central and South America arriving in the US (Noe- Bustamante, 2019). Rates of immigrants from South American countries such as Venezuela have increased 76% to 421,000, while the number of immigrants from Central American countries such as Guatemala has increased by 37% to 1.4 million (Noe- Bustamante, 2019). Many of these recent immigrants are arriving in the US seeking asylum from instable countries with political upheaval and devastatingly high rates of crime and poverty (Clauss-Ehlers, 2019). Immigration is already a stressful event for adults; as such, recent immigrant populations are likely to exhibit particularly high levels of adverse mental health outcomes such as depression (Rasmussen, Crager, Baser, Chu, & Gany 2012; Eisenman, Gelberg, Liu, & Shapiro, 2003).

Socioeconomic Inequalities

Multiple studies have demonstrated that socioeconomic inequalities are a key public health problem (Adler & Newman, 2002; WHO, 2005). Individuals reporting higher socioeconomic status (SES) generally enjoy longer and healthier lives, while those living in lower SES have a greater disease burden and have shorter life spans (Demakakos, Nazroo, Breeze, & Marmot, 2008; Adler et al., 1994). While objective SES is often measured by education, income, or occupational class, subjective social status (SSS) refers to an individual's perception of their status in society. The objective indicators of SES help constitute the basis of SSS. However, SSS also adds value in non-

objective measures such as societal prestige, perceptions of deprivation, and social

meaning (Demakakos, Nazroo, Breeze, & Marmot, 2008; Wolff, Subramanian, Acevedo-

Garcia, Weber, Kawachi, 2010; Scott et al., 2014; Nicklett, & Burgard, 2009). In fact,

Reitzel et al (2010) argues that SSS may be a stronger indicator for health than SES

because it taps into perceptions of social rank, inequalities and inequities, which are often

felt more strongly in racial and ethnic minorities.

According to a large study, Latinx immigrants reporting lower SSS in the US than

SSS in their country of origin was associated with increased depressive episodes and self-

rated poorer health (Alcantara, Chen, Alegria, 2014). Similarly, another study found that

downward SSS mobility following immigration can increase depression and other mental

health problems among Latinx communities (Nicklett & Burgard, 2009). In the same

study, Nicklett and Burgard suggest that immigrants who have suffered downward

mobility since immigration to the US are also less likely to utilize mental health services.

While increased time in the US accounted for improved social standing and has been

associated with improved mental health outcomes (Perreira et al., 2015), literature

examining SSS as an indicator of depressive symptoms in the context of health disparities

is scarce (Shaked, Williams, Evans, Zonderman, 2016).

Cultural Stress, Gender Norms and Mental Health

Like immigration stressors, literature has demonstrated that sociocultural stressors

also increase depressive symptoms (Cano et al, 2015). Limited studies have examined the

influence of gender-based perspectives on SSS and mental health (Mutyambizi, Booyse,

Stornes, Eikemo, 2019). While SSS is a significant predictor for health outcomes for both

men and women, previous studies have found that societal gender norms may influence

the considerations of SSS in occupational identity because men historically are the

primary breadwinners (Shaked, Williams, Evans, Zonderman, 2016; Eagly, Wood,

Diekman, 2000). Similarly, men's health cannot be understood without a deeper

understanding of their social, cultural, and behavioral context (Rieker, & Bird, 2005;

Watkins, Johnson-lawrence, & Griffith, 2011; Courtenay, 2000). Studies have shown that

traditional Latino gender norms can be a risk factor for poor mental health (Nuñez et al.,

2016; Acosta, Andrews, Canchila & Ramos, 2020). Latino male traditional gender norms

are generally characterized by the notion that men should be emotionally restrictive,

womanizing, aggressive, and the head of the household (Arciniega, Anderson, Tovar-

Blank, & Tracey, 2008). Masculine traits are often exacerbated when men are being

relegated to a lower status, have an illness, or suffer from other disadvantages such as

educational level, ethnicity, or economic status (Courtenay et al, 2000; Charmaz; 1995;

Messerschmidt, 1993). Heightened masculinity, such as high adherence to traditional

Latino gender norms, can negatively impact health outcomes among men (Courtenay et

al; 2000)

Theoretical Framework

This study is driven by a framework developed by William H. Courtenay

(Courtenay; 2000). This framework posits that on average men have worse mental health

outcomes than women for multiple reasons but are largely attributed to factors unrelated

to the biomedical models of health. Such factors include socioeconomic status, cultural

norms, and societal norms that shape masculinity. While this theory largely focuses on

men's health overall, it also points to mental health and depression (Courtenay, 2000).

This theoretical framework suggests that while it is a more feminine notion to seek

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mental health care, there are symptoms related to depression and other mental health illnesses that are higher among males such as suicide. Consequently, this framework highlights that certain masculine traits such as emotional restrictiveness can be deleterious for mental health in men (Courtenay, 2000) and are further reinforced by societal and cultural norms (Oliffe and Phillips, 2008). Moreover, high adherence to traditional gender norms in the Latinx culture heavily emphasizes social status and male dominance of men, while simultaneously restricting emotionality. (Acosta, Andrews, Canchila & Ramos, 2020; Arciniega, Anderson, Tovar-Blank, & Tracey, 2008)

The Present Study

The present study is unique in that these South and Central American Latino men were interviewed within a year of having immigrated to Miami-Dade County. Historically, a large number of immigrants residing in Miami have been from the Caribbean, particularly from Cuba. Given the political instability in Central and South America in recent years, Miami is experiencing a shift in new immigrant arrivals. Consequently, immigrants fleeing violence, persecution, or poverty are expected to have adverse mental health outcomes. As a result, this study aims to assess immigration and.

This study assessed the moderating role of gender norms in the association between immigration stress and depressive symptoms among young adult recent Latino immigrants. We hypothesized that stronger adherence to traditional Latino male gender roles would exacerbate this association. Secondly, we assessed the moderating role of gender norms in the association between SSS and depressive symptoms. We also hypothesized that stronger adherence to traditional Latino male gender norms would exacerbate this association. This is the first study to examine whether Latino gender

norms moderate the association between SSS and depressive symptoms among recently

arrived Latino male immigrants in Miami-Dade County. Only one other study, to our

knowledge, has examined the moderating role of gender norms on the association

between stress and depressive symptoms in the Latino population among farm working

men in the Midwest (Acosta, Andrews, Canchila & Ramos, 2020).

Method

The present study is a secondary data analysis of data from an on-going NIH

funded longitudinal study examining alcohol consumption trajectories among the Latinx

community in Miami-Dade County, pre and post-migration. The present study consisted

of 271 male participants from the parent study between the ages of 18 to 34 (M =27, SD

4.9) that immigrated to the US within one year of participation in the study. The

questionnaire included alcohol consumption, immigration, mental health, perceived

social status, and gender norms measures. Eligibility criteria included following criteria:

(1) being 18 years or older, (2) having immigrated to the US from a Latin American

country, (3) self-identifying as a Latino male, (4) currently living in Miami-Dade County,

and (5) consenting to participate.

Data was collected using computer assisted personal interviews (CAPI) with

trained bilingual staff. Interviews took place in areas well known to the Latinx

community, in their homes, or where participants felt most comfortable, taking

approximately one hour to complete. As participants represented a hard to reach

population, respondent driven sampling was used for recruitment. This study was

approved by the IRB of a large public university in Miami, Florida.

All questionnaires were administered in Spanish. Any scales that did not have a previously validated Spanish translation were translated and back translated by bilingual staff working as part of the research team.

Demographic Variables

Participants were asked about their age, marital status, educational status, household income, and documentation status. For the present study, marital status was recoded into a dichotomous variable of (1) married or (2) single. Similarly, participants were asked to report their highest level of education from five options and then recoded into (1) high school diploma or less, (2) some training after high school, (3) or bachelor's degree or greater. Another demographic variable assessed was documentation status. Participants were asked to choose between 10 options. This variable was recoded into (1) documented and (2) undocumented. Lastly, participants were asked to choose from eight categories of monthly income. The variable was then re-coded into (1) $999 or less, (2) between $1,000 - $2,999, and (3) over $3,000. Age was kept as a continuous variable.

Gender Norms

A five-item subscale of the Mexican American Cultural Values Scale was used to measure traditional gender norms. Sample items of this subscale include "in the family, it is important for men to have more power than women" or "a wife should always support her husband's decision, even if she does not agree". Participants responded using a 5-point Likert scale ranging from 1 (not at all) to 5 (completely). Higher scores are attributed to higher adherence to more traditional cultural values (Knight et al., 2010). Optimal Cronbach's alpha was reported at 0.82 on the current sample.

Depressive Symptoms

Depressive symptoms were measured using the widely recognized CES-D. Using a 4-point Likert scale ranging from 0 (*Rare or none of the time/less than 1 day*) to 3 (*Most or all of the time/5-7 days*), sample items included "I could not get going" or "everything I did was an effort." A sum scale score was calculated with higher scores indicating greater levels of depressive symptoms (Radloff et al., 1977). Good Cronbach's alpha was reported at 0.80 (*M* = 18.1, *SD* = 5.4).

Hispanic Stress Inventory 2

HSI 2 evolved from the original HSI, an instrument created to measure psychosocial stress among the Latinx community (Cervantes, Padilla, & Salgado de Synder, 1991). However, as a result of political and demographic shifts, a revised version of the HSI was developed. Of the nine subscales that make up the HSI 2, this study used one subscale: immigration stress. A 5-point Likert scale was used to measure cultural stressors ranging from 1 (*not at all worried/tense*) to 5 (*extremely worried/tense*). Sum and appraisal scores were calculated (Cervantes, Fisher, Padilla, & Napper, 2016). Good Cronbach's alpha was reported 0.91.

MacArthur Scale of Subjective Social Status

Subjective social status was measured using the MacArthur Scale of Subjective Social status that uses a ladder to identify a person's perceived rank in society. In the instructions, respondents are asked to place an X on the rung of the ladder that best represents where they think they stand. There are 10 rungs on the ladder. The top rung of the ladder represents people who are the most educated, wealthy, and better off in society. The bottom of the latter represents the opposite such as those with the least

education, worst jobs/unemployment, and those with the least wealth. In addition, a second item in the scale asks participants to respond how they perceive themselves on the ladder relative to others within their community (Adler, Epel, Castellazzo, & Ickovics, 2000). In this study, the ladder measured perceived social status pre and post migration. The score on the rung pre-migration was compared with the post migration score and subtracted, such that a negative value would indicate decreases in subjective social status after immigration and positive value would indicate increases in subjective social status. A value of 0 would suggest no change in perceived subjective social status.

Analytical Plan:

HMR was used to measure the associations of the predictor variables with depressive symptoms. Items were entered into the HMR model in a specified order so that each predictor contributed to the explanatory variance of dependent variable (depressive symptoms), after controlling for the variance explained by the previous variables (Cohen, Cohen, West, & Aiken, 2003). Predictor variables were grouped and entered into the HMR model in the following block order: (1) demographic variables (2) stress and subjective social status (3) and traditional gender norms were entered into the final block to determine the extent to which it predicted depressive symptoms above and beyond the other predictors.

Two moderation models were tested using the SPSS PROCESSv.3 (Hayes, 2013) to examine the moderating effects of traditional Latino gender norms on the association between subjective social status, stress, and depression among Latino immigrant men.

Moderations analysis used 10,000 bootstrap iterations and were tested by (a) performing a multiple regression to replicate the variance explained by all the predictor

variables included in the HMR model, (b) estimating interaction terms between subjective social status and gender norms, (c) estimating interaction terms between stress and gender norms, (c) and estimating conditional effects for each respective interaction term in relation to depressive symptoms. All moderation analyses controlled for demographic variables age, education, marital status, income, and immigration status. Missing data were treated using list-wise deletion; thus, three cases were deleted from the analysis.

Results

Table 2.1 presents the descriptive statistics in the study sample. Table 2.2 presents the bivariate correlations for each study variable.

Findings revealed significant differences by income on depressive symptoms $[F(2,170) = 5.97, p=.003]$ with post-hoc comparisons indicated lower levels of depressive symptoms among those who earn \$3,000 a month or more compared to their counterparts who earn between \$,1000-\$,2999 (M = 18.23, SD = 5.36), and less than \$999 a month (M = 19.11, SD = 5.77). Similarly, participants who reported lower levels of education reported more depressive symptoms $[F(2, 231) =3.99, p=.019]$. More specifically, individuals reporting a high school diploma or less endorsed greater depressive symptoms compared to those with some training after high school. No significant differences on depressive symptoms were found by country of origin $[F(2, 9.02) =.153, p=.859)$.

Hierarchical Multiple Regression

Table 2.3 represents the regression coefficients from the HMR model. Results from the HMR indicated that 22.2 % of the variance of depressive symptoms was

explained by three predictor variables entered in the HMR model. The first block of the model included demographic variables and explained 10.7 % of the variance of depressive symptoms $\Delta R^2 = 10.7$, $p \leq 0.001$. The second block added immigration stressors including stress and subjective social status that accounted for 23.4 % of the variance, $\Delta R^2 = 12.7$, $p \leq .001$. The third block added the traditional gender norms variable, which explained the 24.8 of the variance $\Delta R^2 = 1.4$, $p \leq .05$.

Moderation Analyses

Figure 2.1 depicts lower endorsement of traditional Latino gender norms moderated the association between subjective social status and depressive symptoms ($\beta = $ *0.239, p $\leq$ .05*). More specifically, men who reported endorsing lower levels of traditional gender norms and higher SSS also reported fewer depressive symptoms (1 SD below the mean) ($M = 1.4$, $\beta = -0.882$, $p \leq .001$). No interaction effects were found for men who endorse higher levels of traditional Latino gender norms ($M = 3.8$, $\beta = -0.309$, $p=.079$). In addition, there were no significant interaction effects between immigration stress, negative context or reception, and depressive symptoms with traditional Latino gender norms as a moderator.

Discussion

Historically, immigrants in Miami have migrated from the Caribbean, particularly from Cuba. Due to the political instability in Central and South America, Miami is experiencing a shift in new immigrant arrivals. As a result, immigrants fleeing violence, persecution, or poverty are expected to have negative mental health outcomes. This study represents a unique sample of recently arrived Latino immigrants and therefore aimed to examine immigration and sociocultural stressors associated with depressive symptoms.

The current study examined the moderating role of traditional Latino gender norms in which higher adherence to traditional values related were hypothesized to exacerbate the association between immigration stress, SSS, and depressive symptoms. The results from this study partially supported the hypotheses. Decreases in SSS were associated with higher levels of depressive symptoms. In addition, lower endorsement of traditional Latino gender norms attenuated the association between SSS and depressive symptoms. These findings suggest that lower levels of traditional Latino gender norms are a culturally protective factor for depressive symptoms and other mental health outcomes, as supported in previous literature (Nunez et al., 2016). Similarly, as suggested by the theoretical framework, lower adherence to cultural masculinity indicates better health outcomes as a result of healthier health seeking behaviors (Courtenay; 2000).

Existing literature has shown that greater adherence to traditional gender norms serves as a risk factor for poorer mental health outcomes (Nuñez et al, 2016); however, not all studies have been consistent in these findings (Perrotte et al., 2018). The findings from this study showed that adherence to stronger values of traditional Latino gender norms did not have any significant associations in moderating the role between immigration stress, SSS, and depressive symptoms, while lower adherence to traditional gender norms attenuated these relationships. While more research is warranted in this area, a possible explanation for this outcome is that men who endorse stronger traditional gender norms may not express depressive symptoms adequately captured by existing scales (Addis, 2008). According to a study that included male-type symptoms of depression, men were more likely to report depressive symptoms in scales that included anger attacks, aggression, workaholism, irritability, substance abuse, risk taking and risk

destructive self-behaviors (Martin, Neighbors, Griffith, 2013; Addis 2008; Diamond, 2005) . Current scales, such as the one used in the present study, focus on depressive symptoms that encompass sadness, restless sleep and feeling lonely (Radloff et al., 1977). Consequently, commonly used depressive scales fail to acknowledge the heterogeneity that exists to express depression (Martin, Neighbors, Griffith, 2013).

Findings from this study suggest that SSS and lower levels of traditional Latino gender norms are clinically relevant factors associated with depressive symptoms among recently arrived Latinx immigrants. Thus, future interventions may benefit from incorporating these immigration and sociocultural stressors into better managing adverse mental health outcomes. More specifically, future implications for intervention development and delivery include programs focused on coping with downward mobility or a loss in SSS for immigrants particularly for political asylee and violence driven immigration. The mixed findings from these studies warrants further research to examine the role of gender norms, a more culturally tailored depression scale, and SSS in mental health.

Limitations

The present study should be interpreted considering its limitations. First, the study is cross sectional in nature and therefore causal or directional order of associations cannot be made. Second, this study examines the Latino male population in the United States, specifically in Miami-Dade County. The Latinx population is highly diverse and sociocultural differences exist among this population and additional variability occurs between US cities of residence. Therefore, caution should be used when comparing this study to other Latinx immigrants.

Moreover, literature suggests that the prevalence of depressive symptoms may differ across Latinx subgroups (Alegria, Alvarez, & DiMarzio, 2017). As a result, future research should consider comparing results among Latino men from varying countries of origin. It is also important to note that there is not a consistent tool to measure traditional gender norms among the Latinx population, limiting the ability to interpret findings across studies (Nuñez et al., 2016).

Conclusion

Despite these limitations, the present study is unique in that it addresses both gender norm constructs and SSS among recent Latino immigrant men. Changes in SSS, particularly downward mobility, appears to serve as a risk factor on depressive symptoms. Conversely, lower adherence to traditional Latino gender norms serve as a protective factor. In sum, the findings of this study suggest that both sociocultural and immigration stressors are pertinent to mental health among recent Latino immigrant men. As a result, these findings may be relevant to preventing health disparities among this population.

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Chapter 4: Manuscript 3

Family stress and depressive symptoms among Latino fathers: The moderating role of

traditional Latino gender norms

Abstract

Introduction: Familism is a core value in the Latinx culture. As such, disruptions to family cohesion can lead to stress among the Latinx population. Current literature suggests that stronger emphasis on family values serves as a protective factor against psychological distress. With rising divorce rates, the balance between family cohesion and traditional Latinx gender roles is disrupted. As such, the primary aims of this study were to examine (a) the association between marital, parenting, and family disengagement stress, and depressive symptoms among Latino fathers and (b) examine if traditional Latino male gender norms, machismo and caballerismo, moderate these associations.

Methods: HMR and six moderation analyses were conducted on a cross-sectional sample of 108 Latino fathers in Miami-Dade County. Predictor variables were entered into the HMR model in the following order: (1) demographic variables (2) family stress, (3) and gender norms.

Results: Results indicated that 24.4% of the variance of depressive symptoms was explained by the predictor variables in the model. Standardized coefficients indicate that parenting stress, marital stress, or family disengagement at no stress or little stress were not significantly associated with depressive symptoms when compared to their referent group of high stress. In addition, caballerismo was not significantly associated with depressive symptoms while machismo was (β =.231, p=.028) was. The moderation

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analysis revealed multiple findings. At average ($M = 4.53$, $\beta = 2.33$, $p \leq .05$) and high

levels ($M = 4.87$, $\beta = 4.36$, $p \leq .001$) of machismo, men reporting higher levels of marital

stress experienced higher depressive symptoms, compared to those with no marital stress.

Among men with high levels of machismo ($M=4.87$, $\beta =-3.58$, $p \leq .01$) men with no

family disengagement stress had significantly lower levels of depressive symptoms

compared to those with high levels of stress. Among men with high levels of

caballerismo, those with little marital stress reported significantly lower levels of

depressive symptoms compared to those with high marital stress ($M=5.4$, $\beta =- 4.83$, $p \leq$

.05). Lastly, at high levels of caballerismo, men reporting a little parenting stress ($M =$

6.7, $\beta =3.74$, $p \leq .05$) had higher depressive symptoms compared to those reporting high

stress.

Conclusion: Study findings suggest that machismo moderates respective associations

between marital and family disengagement stress in relation to depressive symptoms. and

caballerismo moderates respective associations between marital and parenting stress in

relation to depressive symptoms. As such, future directions of research should focus on

this at-risk group and the development of culturally tailored intervention strategies in

these familial settings, particularly for men who are not likely to seek mental health care.

Keywords: Depression, gender norms, machismo, caballerismo, Latino

Introduction

Family values are deeply esteemed in the Latinx culture (Villatoro, Morales, &

Mays, 2014; Calzada, Tamis-LeMonda, Yoshikawa, 2013). Extant literature suggests that

the Latinx family comprises of close-knit and interdependent relationships; as such,

family cohesion has shown to protect against external stressors and promote prosocial

tendencies in children while the inverse has led to increased psychological distress

(Lorenzo-Blanco, Unger, Baexconde-Garbanti, Ritt-Olson, Soto, 2012; Rivera et al,

2008; Knight, Mazza, Carlo, 2018). In fact, several studies suggest that family conflict

leads to an increase in depressive symptoms among both Latinx youth and adults

(Lorenzo-Blanco, & Cortina, 2013; Lorenzo-Blanco, & Unger, 2015; Stein, Gonzalez,

Cupito, Kiang, Supple, 2013). Similarly, a meta-analysis of 39 studies examining

familism and mental health outcomes among the Latinx population suggests that stronger

sense of attitudinal familism, which includes feeling supported by one's family, is related

to lower rates of depressive symptoms (Valdivieso-Mora et al., 2016).

The immigrant paradox generally places the Latinx immigrant community in a

healthier position than their non-Hispanic White counterparts, although inconsistent

depending on the country of origin, access to health care, and acculturation (Teruya &

Bazargan-Hejazi, 2013). Nevertheless, medical and public health organizations indicate

that the Latinx community is at risk for several conditions, that could be further

exacerbated by mental health outcomes (APA, 2014; SAMHSA, 2015; HHS, 2019). It is

particularly important to focus on variables that worsen depressive symptoms in the

Latinx population as this population accounted for 52% of all U.S population growth

between 2010 and 2019 (Bustamante, Lopez, Krogstad, 2020). In addition, depression is

the leading cause of morbidity in the US and can lead to various other serious and chronic

health outcomes (CDC, 2011).

Traditional male gender norms and depressive symptoms

In recent literature, traditional Latino male gender norms are described to have

both positive and negative characteristics as two separate dimensions on a spectrum. In

these dimensions, *machismo* is a traditional Latino male gender norm that encompasses hyper-masculinity, aggression, and dominance. Conversely, *caballerismo* focuses on emotional connectedness, familial cohesion, and social responsibility (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008) and has been associated as a protective factor for outcomes such as self-esteem (Ojeda & Piña-Watson, 2014). Existing literature has emphasized the significance of cultural values on mental health outcomes on the Latinx immigrant community (Silva, Dillon, Verdejo, Sanchez, De La Rosa, 2017; Maldonado et al., 2018). More specifically, studies have found that Latino and Mexican American men who adhere to masculine ideologies are more likely to report higher levels of both stress and depression (Fragoso and Kashubeck, 2000; Lu &Wong, 2014). Current research suggests that higher endorsement of Latino male gender norms, such as machismo, was associated with negative mental health outcomes including anger, anxiety, and depression (Nuñez et al., 2016). Previous research has called for increased investigations that lead to further integration of cultural values, such as traditional gender norms, with interventions that specifically target Latino men suffering from depression (González-Prendes, Hindo, & Pardo, 2011). Moreover, research on mental health and masculinity among Latino men is growing but remains sparse and inconsistent (Daniel-Ulloa, Sun, & Rhodes, 2017; Walters, Valenzuela, 2019; Walters, Valenzuela, 2020).

Marital Stress and gender norms

Family conflicts such as marital shifts and rising divorce rates have negative implications for mental health among Latinx families (Darghouth, Brody, & Alegría, 2015). Previous literature has examined the relationship between mental health and family conflict. However, scarce literature exists on the relationship between depressive

symptoms, family conflict, and traditional gender roles among Latino men. In addition to limited or non-existent research into these relationships, Nicasio and colleagues suggested future research should be conducted on cultural variables as moderators into the development and prevention of mental illness among Latinx as it relates to family stress, familism, and depression (Nicasio, Cassisi, Negy, Jentsch, 2019).

Some literature suggests that marriage is a form for men to demonstrate their traditional masculine ideologies (Nock, 1998; Catlett, McKenry, Fathering, 2004). According to Pardo and colleagues, the way in which couples negotiate dimensions of caballerismo and machismo may affect how stress is managed, conflict regulation, and sharing of responsibilities. An example is that excessive dominance or emotional toughness traditionally seen in machismo can be psychologically demanding for the husband and present challenges in the marriage. On the contrary, exhibiting more characteristics of caballerismo, such as emotional availability and respect, may increase positive behaviors in a marriage that lead to greater levels of respect and appreciation (Pardo, Weisfeld, Hill, Slatcher, 2013). When divorce occurs, the established gender-based division of labor, authority, and financial decision-making in families is broken down (Furstenberg and Cherlin, 1991; Catlett, McKenry, Fathering, 2004). Thus, divorce or conversations about divorce may limit the ability for men to uphold the masculine ideologies such as emotional and physical control and therefore may cause additional distress (Courtenay, 2000). From a viewpoint of traditional Latino gender norms, a man who embraces more machismo characteristics may find himself with a loss of authority and less financial control after divorce which are principal pillars of machismo ideology (Catlett, McKenry, Fathering, 2004; Arciniega, Chicago, Tovar-Blank, & Tracey, 2008).

Conversely, a man who exhibits greater caballerismo characteristics may experience less distress due to their ability to empathize with other family members rather than feeling a loss of control over the marriage (Pardo, Weisfeld, Hill, & Slatcher, 2013; Arciniega, Chicago, Tovar-Blank, & Tracey, 2008).

Parenting Stress and Family Disengagement

Although parents from all backgrounds may experience stress, Latino immigrant parents may experience additional stressors as a result of cultural norms, belonging to an ethnic minority group, and the emphasis the Latinx community places on family. (Lorenzo-Blanco et al, 2017; Conger et al, 2012; Marsiglia, Parsai, Kulis, 2009; Dillon, De La Rosa, Ibañez, 2013). In a study with Mexican families, depressive symptoms in parents were associated with poor child management as reported by the mothers and fathers in the study (Conger et al, 2012). Similarly, existing literature suggests that family cohesion in Latinx families is particularly significant and any disruptions to family cohesion, such as disengagement, may lead to negative health outcomes (Dillon, De La Rosa, Ibañez, 2013; Marsiglia, Parsai, Kulis, 2009). Cultural norms may also influence parenting stress and disengagement in Latinx families. According to Nuñez et al., stronger adherence to traditional gender norms in women, particularly in the family caregiving role, was associated with higher levels of negative cognitions and emotions, suggesting that demanding gender roles may exacerbate psychological distress among Latina mothers (Nuñez et al., 2016).

Theoretical Framework

The present study is guided by a theoretical framework developed by William H. Courtenay. This framework posits that many sociocultural factors influence health

behaviors; gender being one of the most important factors that influence health. While women seek more care for mental health issues, men have worse mental health outcomes largely due to societal and cultural norms that shape the ideology of masculinity, also referred to as hegemonic masculinity. As such, the more men exhibit or attempt to portray their masculinity, the more likely men are to have adverse health outcomes, including psychological distress (Courtenay, 2000). In line with this theory, the present study's hypothesis suggests that men who endorse higher levels of machismo, or hegemonic masculinity, will experience higher levels of depressive symptoms. Similarly, it is hypothesized that men who exhibit higher levels of caballerismo, or lower levels of hegemonic masculinity, will experience fewer depressive symptoms.

Present Study

Limited research has explored the relationship between family stress and depressive symptoms as it relates to traditional Latino gender norms. The scarce research available that examines these constructs are principally studied among university students (Fragoso & Kashubeck, 2000; Corona, Rodríguez, Mcdonald, Velazquez, Rodríguez, Fuentes, 2017; Lu and Wong, 2014). This study is unique in that the sample comprises of married Latinx father figures in both semi-rural and urban areas of Miami-Dade County. The overarching aim of this study was to examine the associations between family stress, traditional Latino gender norms, and depressive symptoms among Latino father figures in Miami-Dade County. The study addressed the following hypotheses: (H_1) greater levels of marital, parenting, and family disengagement stress will be associated with greater depressive symptoms. (H_2) Higher levels of machismo will exacerbate the relationship between marital, parenting, and family disengagement stress and depressive symptoms.

(H₃) Higher levels of caballerismo will attenuate the association with between marital, parenting, and family disengagement stress and depressive symptoms.

Method

The present study was conducted using the baseline data from an on-going NIH funded clinical intervention study examining the efficacy of substance abuse, domestic violence, and HIV/AIDs among fathers and sons from urban and semi-rural communities in south Florida (N=122). The current study (N=108) consisted of the fathers and father figure's pre-intervention baseline interviews who were in a relationship at the time of the interview. Participants were between the ages of 18 and 66 (*M* =43.5, *SD*= 9.8) were recruited using conventional recruitment approaches such as placing fliers in community-based organizations, places of work, local business and having radio ads on radio stations that targeted Latino families. Since this is a hard to reach population, we also used a snowball sampling approach and provided incentives for up to three referrals from each participant. These approaches proved effective recruitment strategies. The present study includes constructs associated with gender norms, family stressors, and depressive symptoms. Inclusion criteria for the fathers consisted of (1) being a biological, adoptive or father figure of an adolescent son between the ages of 11-17 years old (2) living in Miami-Dade County, and (3) self-identifying as Latino/Hispanic.

Trained bilingual interviewers collected data using Research Electronic Data Capture software (RedCap) and used response cards sent via text messages to participants to accommodate any literacy barriers (Harris et al., 2009). Staff directed participants to find a place where participants felt most comfortable and with privacy, such as in their homes, taking approximately one hour to complete. Participants had the option of having

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the questionnaire administered in Spanish or English. Due to the sensitive nature of the questions being asked, participants were made aware of the certificate of confidentiality from the NIH, in addition to the informed consent. Participants received incentives for their and their son's participation in the study. The present study was approved by the IRB of a large public university in Miami, Florida.

Measures

The questionnaire was administered in both Spanish and English, depending on the participants preferred language. Most interviews were done by telephone (11 participants completed in-person interviews) and in Spanish. Those measures that did not already have a validated Spanish translated version were translated in-house. Specifically, the measures went through a process of a) translation/back translation, b) modified direct translation, c) and checks for semantic and conceptual equivalence to ensure accurate conversion from English to Spanish (Behling & Law, 2000). In an effort to account for any within-group variability, the review panel conducting the modified direct translation consisted of individuals from various Latino subgroups representative of the Miami-Dade County population.

Demographics

Participants were asked about their age, marital status, educational status, monthly income, number of children living with them, number of household members, semi-rural versus urban settings, and documentation status. For the present study, participants who were married or in a domestic relationship were included. Any participant who was divorced, separated, or single was excluded (n=14). Similarly, participants were asked to report their highest level of education from seven options and then recoded into (1) less

than high school, (2) high school diploma or GED, (3) some college, or (4) college/university degree. Another demographic variable assessed was documentation status. Participants were asked to choose between 11 options including but not limited to protected status, asylee, student visa, US citizen, and tourist visa. This variable was recoded into (1) authorized and (2) unauthorized. The number of children living with the father figures was on a continuous scale and recoded into (1) one or less, (2), two, (3) or three or more. Similarly, number of people living at home was also recorded on a continuous scale and subsequently recoded into (1) 3 or less, (2) four, (3), five, (4) or six or more. Lastly, participants were asked to choose from five categories of monthly income ranging from less than $200 a month to more than $2,000. The variable was then re-coded into (1) $999 or less, (2) between $1,000 - $1,999, and (3) over $2,000. Age was kept as a continuous variable.

Family Stress

Three items related to family stress from an adapted version of the Hispanic Stress Inventory 2 were used to assess family in the present study (Cervantes et al., 2016). Participants were asked to report how worried they were about each of the following stressors: Marital stress - *My spouse and I have talked about divorce*: Parenting stress - *My children have not respected my authority the way they should*; Family disengagement stress - *Due to the lack of family unity I have felt isolated and alone*. Responses were measured on a 5-point Likert scale ranging from *1*=not worried, 2= a little worried, *3*=moderately worried, *4*= very worried, to *5*=extremely worried. For the purposes of the present study the family stressors were recoded to a 3-level categorical

variable [1=not worried (no stress), 2=a little worried (a little stress), 3=moderately

worried or higher (high stress)].

Depressive Symptoms

Depressive symptoms were measured using the widely recognized Patient Health

Questionnaire (PHQ-9). This measure consists of 9 items that use a 4-point Likert scale

ranging from *0* = not at all to *3* = nearly every day, sample items included "feeling tired

or having little energy" and "little interest or pleasure in doing things" in the past two

weeks. The mean score of the scale was calculated with higher levels indicated greater

depressive symptoms. Good reliability was reported (α= 0.79) (Kroenke, Spitzer, &

Williams, 2001).

Gender Norms

Traditional gender norms were measured using a reliable and widely used

Machismo and Caballerismo Scale developed by Arciniega and colleagues. (2008). This

measure consists of 20 items on a bi-dimensional scale that evaluates two constructs of

traditional Latino gender norms, machismo and caballerismo (Arciniega, Chicago, Tovar-

Blank, & Tracey, 2008). Psychometric analysis of the original scale revealed one item in

the Machismo subscale that led to low levels of internal consistency in the subscale. As a

result, an adapted 9 item version of the scale was used in order to reach acceptable levels

of reliability(α=.84). As such, this adapted version of this subscale was used in the

present study. The original Caballerismo subscale demonstrated good internal

consistency in the present sample (α =.83).

All analyses were performed using SPSS v.25. Descriptive statistics were computed, and bivariate associations were assessed, for all variables used in primary analyses. We examined the assumption of normality for continuous variables by following suggested cut-offs of absolute values of 3.0 and 8.0 for skewness and kurtosis (Kline 2005). Bivariate analysis was used to determine the correlation between the exposure (family stressors) and outcome (depressive symptoms), as well as potential confounders including age, documentation status, semi-rural vs. urban setting, education level, income, number of children living at home, and number of people living at home.

During the primary analyses, HMR was used to determine the extent to which the selected variables influence the outcome (depressive symptoms). Predictor variables were entered into the HMR model in a specific order so that each predictor contributed to the explanatory variance in the severity of depressive symptoms after controlling for the variance explained by the previous variables (Cohen, Cohen, West, & Aiken 2003). Predictor variables were grouped and entered into the HMR model in the following order: (1) demographic variables were entered in the first block, (2) family stressors were entered in the second block as categorical variables, no stress and little stress, with high stress as the referent group, and (3) gender norms were entered into the third block to determine the extent to which they uniquely predicted depressive symptoms above and beyond the other predictors.

Six multi-categorical moderation models were tested using the SPSS v.25 macro PROCESS v.3.2 (Hayes 2013) to examine the relative interaction effects of machismo and caballerismo on the association between each family stress variable (marital stress *x* machismo, marital stress *x* caballerismo, parenting stress *x* machismo, parenting stress *x*

caballerismo, family disengagement stress x machismo, and family disengagement *x*

caballerismo) and depressive symptoms among Latino fathers/father figure.

Moderation analyses used 10,000 bootstrap iterations and were tested by (a)

performing a multiple regression to replicate the variance explained by all the predictor

variables included in the HMR model, (b) estimating interaction (product) terms between

each of the three family stressors and *machismo* and each of the three family stressors

with caballerismo and (c) estimating conditional effects for each respective interaction

term in relation to depressive symptoms. No missing data were evident in the present

sample consisting of total a of *n* =108.

Results

Table 3.1 presents the descriptive statistics of the study sample and Table 3.2

represents bivariate correlations for each variable. Findings revealed no significant

differences in covariates including education [$F(3,6.86) = 0.45$, *p*=.715], income

[$F(2,4.27) = 0.28$), *p*=.754], number of children living at home [$F(2, 36.20) = 2.36$, *p* =

0.10], number of people living at home [$F(3, 13.71) = 0.87$, *p* = .46], financial stress in

the past 12 months [$F(2, 14.80) = 0.94$, *p* =.40], family disengagement $F(2, 35.87) = 2.33$,

p =.102) or parenting stress $F(2, 16.83) = 1.07$, *p* =.347) on depressive symptoms.

Findings revealed significant differences in covariates including marital stress $F(2, 50.24)$

$= 3.33$, *p* =.040).

Hierarchical Multiple Regression

The HMR model and regression coefficients are represented in Table 3.3. Results

from the model indicate that 24.4% of the variance was explained by three predictor

variables. The first block of the model included demographic variables which explained

variance of depressive symptoms $R^2 = 12.2$, $p = 0.78$.   The second block added family

stressors (family disengagement, marital and parental stress) that accounted for 19.3% of

the variance, $\Delta R2 = 7.1$, $p = .254$. The third block added machismo and caballerismo

which explained 24.4% of the variance $\Delta R2 = 5.1$, $p =. 057$. However, the blocks did not

significantly predict depressive symptoms.

Moderation Analyses

Six moderation models were tested using the multi-categorical predictor option on

SPSS v.25 macro PROCESS v.3.2 (Hayes 2013) to examine the interaction effects of

gender norms (i.e., *machismo* and *caballerismo*) and family stress. To calculate

machismo and caballerismo levels, simple slopes were calculated using the "pick-a-

point" approach with 16th, 50th and 84th percentiles representing "low", "average" and

"high" levels of machismo and caballerismo. Relative significant interaction effects were

found between machismo and men with high marital stress compared to those with no

marital stress ($\beta = -5.9$, $p \leq .05$) and little marital stress ($\beta = - 9.47$, $p \leq .05$) (see Figure

3.1). Conditional effects revealed that at average ($M = 4.53$, $\beta = 2.33$, $p \leq .05$) and high

levels (1 SD above the mean) ($M = 4.87$, $\beta = 4.36$, $p \leq .001$) of machismo, men reporting

having high levels of marital stress experienced higher depressive symptoms, compared

to those with no marital martial stress. Additionally, among men endorsing high levels of

machismo those with levels of high marital stress experienced higher depressive

symptoms compared to those with little marital stress ($\beta = 3.80$, $p \leq .05$). No differences

in depressive symptoms were found between these two groups at low and average levels

of machismo. Among men that endorsed low machismo no differences in depressive

symptoms were found between men reporting high stress and no marital stress. In regard

to family disengagement, relative significant interaction effects were found between machismo and men with high family disengagement compared to those with no disengagement stress ($\beta = $ *-5.49, p* ≤ .05) (see Figure 3.2). Conditional effects revealed that at high levels of machismo (*M*=4.87, β =-3.58, *p* ≤ .01) men with no family disengagement stress had significantly lower levels of depressive symptoms compared to those with high levels of stress. Among men that endorsed low and average levels of machismo, no differences in depressive symptoms were found between men reporting average and low family disengagement stress. No significant differences were found between men experiencing parenting stress and depressive symptoms among men endorsing any levels of machismo.

With regards to caballerismo, relative significant interaction effects were found between caballerismo and men with little marital stress compared with high marital stress ($\beta = $ *-7.55, p* ≤ .05). Among men with high levels of caballerismo, those with little marital stress had significantly lower levels of depressive symptoms compared to those with high marital stress (*M*=5.4, β =- 4.83, *p* ≤ .05) (see Figure 3.3). No significant differences were found between men experiencing little or no marital stress on depressive symptoms at low and average levels of caballerismo. In addition, relative significant interactions were found between caballerismo and high parenting stress ($\beta = 5.49$, *p* ≤ .05). Conditional effects revealed that at high levels of caballerismo, men reporting a little parenting stress (*M* = 6.7, β =3.74, *p* ≤ .05) had higher depressive symptoms compared to those reporting high stress. Furthermore, high endorsement of caballerismo served as a protective factor for fathers experiencing high parenting stress (see Figure 3.4).

Discussion

      This study examined the moderating role of traditional Latino gender norms on respective relationships among marital, parenting, and family disengagement stress with depressive symptoms among Latino father figures in Miami-Dade County. The findings from this study supported the hypothesis that machismo exacerbated the relationships between marital stress and depressive symptoms at high and average levels of machismo.

      Similarly, the relationship between family disengagement and depressive symptoms was exacerbated at high levels of machismo. High levels of caballerismo served as a protective factor between marital stress and depressive symptoms at little levels of stress. However, contrary to our expectations, caballerismo served as a risk factor for marital stress and depressive symptoms at levels of high marital stress. The relationship between parenting stress and depressive symptoms was attenuated at high levels of caballerismo for men experiencing high levels of parenting stress. No significant relationships were found between machismo and parenting stress nor caballerismo on family disengagement.

      These findings are of particular importance to add to the literature as they add more detailed information about specific components of traditional Latino gender norms, particularly regarding how machismo and caballerismo affect the relationship between family stressors and mental health. In regards to marital stress, current studies have suggested that women may have higher levels of distress in separation or divorce as a result of traditional gender roles; women who have separated may have a higher burden of household chores and face pressures of higher family obligation (Darghouth, Brody, & Alegría, 2015; Raffaelli & Ontai, 2004). A similar explanation may be used in this

instance where machismo characteristics exacerbate the relationship between separation

stress and depressive symptoms. A man exhibiting machismo characteristics may begin

to experience a loss of family control although the final product of divorce may not yet be

fully realized. This relates to a significant construct in machismo where the man should

be in control of his wife (Arciniega, Chicago, Tovar-Blank, & Tracey, 2008). Previous

research also suggests that threats to masculinity may re-enforce masculine norms (de

Visser & McDonnell, 2013). Talks of divorce may therefore enhance the loss of control a

husband has over his wife and family and therefore threaten a man's sense of

masculinity. When divorce occurs, the established gender-based division of labor,

authority, and financial decision-making in families is broken down (Furstenberg and

Cherlin, 1991; Catlett, McKenry, Fathering, 2004). This loss of control over the family

may also explain the finding where men who endorse high levels of machismo and also

experienced high disengagement stress had higher depressive symptoms compared to

those with little no disengagement stress. Similarly, those who endorse higher levels of

caballerismo and experience high levels of marital stress may be exhibiting higher levels

of depressive symptoms because talks of divorce could signify that men are losing the

ability to defend and keep their families together (Arciniega, Chicago, Tovar-Blank, &

Tracey, 2008). No differences were found between men experiencing little or no marital

stress on depressive symptoms at average and high levels of caballerismo. However,

caballerismo served as a protective factor against depressive symptoms at little marital

stress. These findings may be attributed to adherence of caballerismo ideologies where

men might resolve issues through family support or through spirituality, before

experiencing high levels of psychological distress (Davis & Liang, 2015).

Contrary to our expectations, caballerismo served as a risk factor for depressive symptoms among men who reported experiencing little parenting stress compared to those with high parenting stress. This finding may be attributed to psychological distress as a result of attempting to uphold societal expectations on maintaining family cohesion (Nuñez et al., 2016; Arciniega, Chicago, Tovar-Blank, & Tracey, 2008). Existing literature has documented varying findings with caballerismo as it relates to mental health and help-seeking attitudes (Herrera, Owens, Mallinckrodt, 2013; Davis & Liang, 2015; Nuñez et al., 2016). Thus, further research is warranted in this area.

The findings from this study relate to the existing literature as it may bridge the gap between pre and post-divorce mental health, family disengagement, and parenting stress as it relates to traditional Latinx gender norms. As such, future directions of research should continue to focus on this at-risk group and find effective interventions in these pre-divorce and family disengagement settings, particularly for men who are not likely to seek mental health care (Courtenay, 2000). Moreover, a deeper examination of how ethnicity and culture interact with masculinity of health is warranted, especially among minority populations and men of color (Daniel-Ulloa, Sun, Rhodes, 2017). Mental health professionals working in Latinx communities can use the present study to drive solution-focused discussions and interventions on the constructs of traditional gender norms by focusing on the values described in caballerismo as cultural strengths. Similarly, interventions and mental health professionals can redirect and offer an alternative but culturally acceptable values to machismo such as responsibility and honor (Herrera, Owens, Mallinckrodt, 2013).

Limitations

This study has several limitations. Due to the cross-sectional nature of the study, casual or directional order of associations cannot be made. In addition, the study sample is a small convenience sample. The participants in the study are Latino and are not stratified by country of origin due to the small sample size. This study sample is diverse, and participants come from South and Central America and the Caribbean; however, no significant differences can be found among the different nationalities. Thus, the generalization of findings should be done with caution when comparing other groups with the Latinx population. Similarly, the distribution of the Latinx population varies widely across the United States. Participants were recruited from Miami-Dade County, a unique enclave where the Latinx population makes up 69.4% of the population (U.S. Census Bureau, 2019). In addition, secondary data analysis was used. As a result, the family stress items used in the present study were limited to those available in the adapted version of the HSI-2 used in the parent study. Lastly, the internal consistency for machismo was less than optimal. As a result, an adapted 9 item version of the scale was used in order to reach acceptable levels of reliability. Despite the limitations, the current study modestly suggest that cultural norms may relate to family stress.

Conclusion

Although there are several limitations, the present study is unique in that it examines traditional Latino gender norms as it relates to marital, parenting, and family disengagement stress and depressive symptoms. Moreover, the present study addresses gaps in research regarding both positive and negative relationships between masculinity and mental health among Latino men. While modest, these results can help inform the

development of culturally tailored interventions that capitalize on family stressors among

Latino fathers. In a country where mental health is a leading cause of morbidity (CDC,

2011), it is critically important to examine factors that exacerbate mental health.

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Chapter 5: Conclusion

This dissertation examined the moderating role of traditional Latino gender norms on depressive symptoms among Latino male immigrants living in Miami-Dade County. This study was guided by the theoretical framework developed by William H. Courtenay positing that men have worse health outcomes than women as a result of socially constructed gender norms that promote hegemonic masculinity and negative health behaviors. As a result, this dissertation addressed gaps in the literature that examines how caballerismo and machismo moderate depressive symptoms among Latino males.

Through its three principle aims, multiple significant findings were found. The aim of the first study (chapter two) was to examine how traditional Latino gender norms and acculturation moderate the association between NCR and depressive symptoms among established Latino immigrant men who have been residing in Miami-Dade County for ~10 years. Findings from this chapter suggest that NCR coupled with machismo can have negative impacts on the depressive symptoms of Latino immigrant men. Moreover, findings also suggest that lower levels of acculturation were protective factors for depressive symptoms. These results have public health implications as they suggest that

interventions addressing cultural factors and immigration stressors may strengthen mental health resilience among Latino immigrants.

The second study (chapter three) examined the moderating role of traditional Latino gender norms in which higher adherence to traditional values were hypothesized to exacerbate the association between immigration stress, SSS, and depressive symptoms. Findings from this chapter suggest that decreases in SSS were associated with higher levels of depressive symptoms. In addition, lower endorsement of traditional Latino gender norms attenuated the association between SSS and depressive symptoms. These findings also suggest that lower levels of traditional Latino gender norms are a culturally protective factor for depressive symptoms and other mental health outcomes, as supported in previous literature (Nuñez et al., 2016). Similarly, as suggested by the theoretical framework, lower adherence to hegemonic masculinity indicates better health outcomes as a result of healthier health seeking behaviors (Courtenay; 2000). Findings suggest that adherence to stronger values of traditional Latino gender norms did not have any significant associations in moderating the role between immigration stress, SSS, and depressive symptoms, while lower adherence to traditional gender norms attenuated these relationships.

The third study (chapter four) examined the associations between marital, parenting, family disengagement stress, and depressive symptoms among Latino fathers and if traditional Latino male gender norms moderate these associations. The findings from this study suggest that machismo exacerbated the relationships between marital stress, family disengagement and depressive symptoms at high and average levels (for marital stress only) of machismo. High levels of caballerismo were suggested to be a

protective factor between marital stress and depressive symptoms at little levels of stress. However, contrary to our expectations, caballerismo served as a risk factor for marital stress and depressive symptoms at levels of high marital stress. The relationship between parenting stress and depressive symptoms was attenuated at high levels of caballerismo for men experiencing high levels of parenting stress. Previous research suggests that fathers playing central roles in their children's lives is what it means to be a man (Chant, 2002). As such, depressive symptoms may be attenuated at high levels of parenting stress and high caballerismo because of more parental involvement and family cohesion.

Although modest, these results can help inform the development of culturally relevant interventions that target identified vulnerability factors and capitalize on key protective factors, such as the findings presented in this dissertation, associated with mental health outcomes among Latino immigrant men in the U.S. The public health significance of identifying how gender norms moderate depressive symptoms will allow for gendered approached interventions that address the wider context of masculinity and mental health (Keohane & Richardson, 2018). More specifically, interventions and practices should recognize that masculinity is a fluid construct, where men may exhibit varying level of machismo and caballerismo and enact these characteristics differently in distinct settings (Courtenay, 2000; Arciniega, Chicago, Tovar-Blank, & Tracey, 2008). Much of the previous literature examines gender and mental health as binary (men vs. women) rather than within-gender differences. As such, measurements and clinician bias may influence the current findings (Smith, Mouzon, Elliott, 2018). According to a systematic review on masculinity and depression, depression in men was often atypical and went undetected by existing diagnostic tools. Such atypical depressive symptoms include aggression, substance

abuse, violence, and irritability (Seidler, Dawes, Rice, Oliffe, Dhillon, 2016). Therefore, more research is warranted into how traditional Latino gender norms moderate depressive symptoms to further examine the wider spectrum of masculinity (i.e. the fluidity between machismo and caballerismo) and adequate diagnostic tools for how depressive symptoms manifest in men.

The quantitative literature in this field is limited largely to cross sectional studies with small and convenient sample sizes. In addition, quantitative studies use varying instruments to measure gender norms and depression constructs while not appropriately addressing the theoretical frameworks of the studies in choosing the measures (Seidler, Dawes, Rice, Oliffe, Dhillon, 2016). Future research should aim to focus on longitudinal and randomized studies with sample sizes large enough for statistical power, in addition to a consistency and quality of instruments to measure constructs aligned with theoretical frameworks (Seidler, Dawes, Rice, Oliffe, Dhillon, 2016).

In addition to improving the quality of quantitative studies in this field, additional focus should be placed on qualitative studies where masculinity has been described as fluid, holistic and evolving with social, psychological, and cultural norms (Arciniega, Chicago, Tovar-Blank, Tracey, 2008; Seidler, Dawes, Rice, Oliffe, Dhillon, 2016; Walters, Valenzuela, 2020). In a recent qualitative study, men rejected the traditional stereotypes of machismo and negative masculinity seeing these portrayals as disrespectful to women (Walters, Valenzuela, 2020). Nevertheless, the majority of the men in this qualitative study had witnessed machismo in their families or communities (Walters, Valenzuela, 2020). While hegemonic masculinity is still prevalent among Latinx communities, extant qualitative literature suggests that masculinity is not only fluid but

that there are more contemporary ideologies of masculinity than what have been

described in quantitative constructs (Walters, Valenzuela, 2020).

In the Latinx community, in addition to traditional Latino gender norms, various

other factors also contribute to attenuating or exacerbating depressive symptoms such as

family values, SSS, immigration stressors, and acculturation. However, the findings from

this dissertation serve as a contribution to the ongoing cross-cultural research to

understand the nature of machismo and caballerismo and their correlation in mental

health and depression. These findings highlight the complexity in understanding the

multifaceted approach to understanding mental health in this growing US population.

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Tables and Figures for Manuscript 1

Table 1.1 *Demographic Characteristics (n = 280)*

	n	*%*
Partner Status (280)		
Single	93	33.2
Has Partner	187	66.8
Documentation Status (277)		
Permanent or Resident	174	62.1
Temporary or Undocumented	103	36.8
Country of Origin (275)		
Cuba	109	38.9
South America	60	21.4
Central America	106	37.9
Education Level (278)		
High School Diploma or Less	161	57.9
Some college training or more	117	42.1
	M	*SD*
Age	34.9	4.9
Annual Household Income	66,649.0	3,054.2

Table 1.2 *Bivariate Correlations for Study Variables*

	Variable	1	2	3	4	5	6	7	8	9	10	11	12
1.	Age	1.00											
2.	Documentation Status	-.086	1.00										
3.	Marital Status	.475**	-.114	1.00									
4.	Income	.094	.104	.128*	1.00								
5.	Education Level	.136*	.244**	-.106	.105	1.00							
6.	Hispanicism	.022	-.065	.026	.137*	-.118*	1.00						
7.	Acculturation	.119*	.139*	-.163**	.117	.187**	.071	1.00					
8.	Perceived Stress	-.141*	.042	-.016	-.086	.025	-.193**	.037	1.00				
9.	Depression (CES-D)	.005	-.024	.053	-.132*	.181**	-.239**	-.034	.304**	1.00			
10.	Caballerismo	-.005	.100	-.026	-.055	.121*	-.040	-.060	-.118*	.012	1.00		
11.	Machismo	.041	-.233**	-.005	-.206**	-.156**	.006	-.287**	.065	.157**	.110	1.00	
12.	Negative Perceived Context of the Receiving Community	-.060	.028	-.064	-.223**	0.79	-.222**	-.087	.140*	.253**	.120*	.195**	1.00

$* p < .05, ** p < .01$

Table 1.3 *Hierarchical Multiple Regression Model for Predicting Depressive Symptoms (n =279)*

Variable	Model 1			Model 2			Model 3			Model 4		
	b	*SE*	β	*b*	*SE*	β	*b*	*SE*	β	*b*	*SE*	β
Block 1												
Age	10.01	.050	.025	.055	.048	.075	.039	.048	.054	.040	.047	.054
Documentation Status	-.241	.457	-.033	-.160	.436	-.022	.025	.440	.003	-.027	.436	-.004
Marital Status	.240	.516	.032	.181	.492	.024	.317	.491	.042	.365	.486	.048
Household Income	-.018	.007	-.157*	-.015	.007	-.131*	-.010	.007	-.084	-.007	.007	-.060
Educational Level	1.262	.451	.175**	1.259	.430	.174**	1.112	.443	.154*	1.067	.439	.148*
Block 2												
Perceived Stress				.190	.036	.306**	.167	.037	.269**	.159	.036	.255**
Block 3												
Machismo							.392	.158	.153*	.324	.159	.127*
Caballerismo							.041	.329	.007	-.029	.327	-.005
Hispanicism							-1.080	.446	-.145*	.887	.448	-.119*
Acculturation							.043	.199	.013	.050	.197	.015
Block 4												
Negative Perceived Context of Reception										1.027	.407	.151*

Note: b = unstandardized coefficient, *SE* = standard error, β = standardized coefficient, * $p \le .05$, ** $p \le .01$, *** $\le .001$
ΔR^2 = 14.6 for Block 1, ΔR^2 change = 2.4 for Block 2, ΔR^2 change = 2.9 for Block 3.
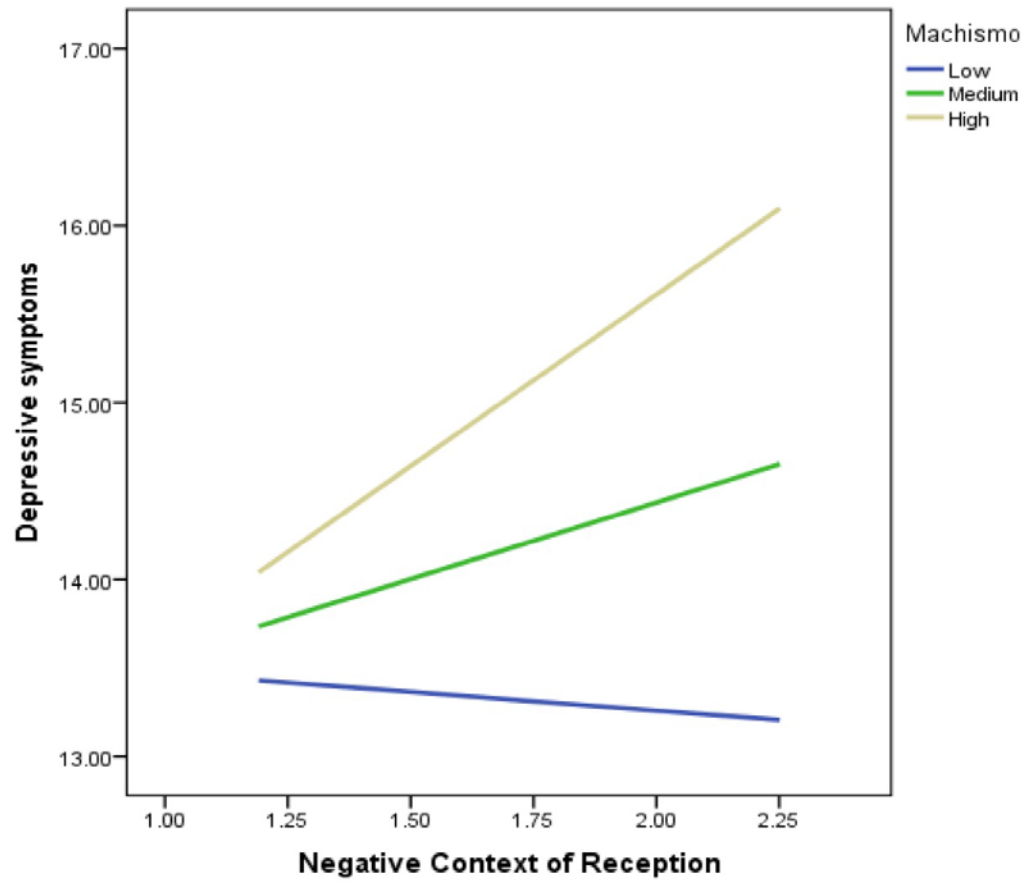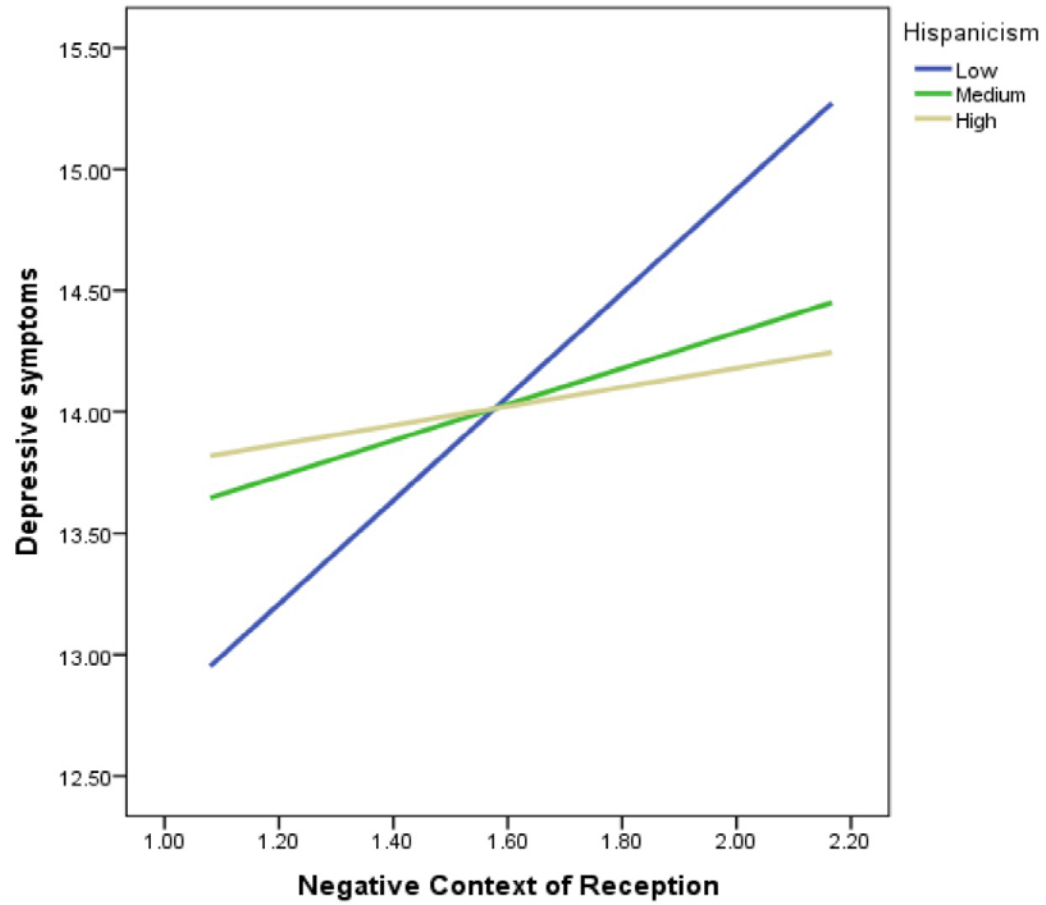
Figure 1.1

Figure 1.2

Table 2.1. *Demographic Characteristics (n = 271)*

	n	*%*
Marital Status (270)		
Single	141	52.0
Married	129	47.6
Documentation Status (271)		
Documented	228	84.1
Undocumented	43	15.9
Country of Origin (271)		
Other South American	155	57.2
Central America	82	30.3
Other	33	12.2
Education Level (271)		
High School Diploma or Less	115	42.4
Some Training After High School	63	23.3
Bachelor's Degree or Greater	93	34.3
Monthly Household Income (269)		
Less than $999	66	24.4
$1,000-$2,999	164	60.5
$3,000 or more	39	14.4
	M	*SD*
Age	27.7	4.9

Table 2.2. *Bivariate Correlations for Study Variables*

| Variable	1	2	3	4	5	6	7
13. Age	1.00						
14. Documentation Status	-.190**	1.00					
15. Marital Status	.428**	-.050	1.00				
16. Depressive Symptoms	.061	-.065	-.153*	1.00			
17. Traditional Latino Gender Norms	.211**	-.040	-.001	.134*	1.00		
18. HSI 2 Stress Subscale	.185**	-.310**	.100	.347**	.065	1.00	
19. Subjective Social Status	-.099	.000	-.096	-.134*	.197**	-.154*	1.00

* $p < .05$, ** $p < .01$

Table 2.3 *Hierarchical Multiple Regression Model for Predicting Depressive Symptoms (n =267)*

Variable	Model 1			Model 2			Model 3		
	b	SE	β	b	SE	β	b	SE	β
Block 1									
Age	.085	.078	.077	.093	.073	.084	.051	.075	.046
Documentation Status	-.1.031	.908	-.070	.838	.904	.057	.727	.899	.049
Marital Status	-2.828	.720	-.261***	-.2.883	-.671	-.266***	-2.767	.668	-.255**
Monthly Income	-1.537	.526	-.176**	-1.027	-.516	-.117*	-.935	.513	-.107
Educational Level	1.037	.409	.167*	.191	.409	.031	.337	.412	.054
Country of Origin	-.266	.471	-.035	-.085	.440	-.011	-.166	.438	-.022
Block 2									
HSI2 Stress Subscale				.521	.102	.317***	.499	.102	.229***
MacArthur Scale				-.401	.117	-.208***	-.441	.117	-.229***
Block 3									
MACVS							.643	.292	.130*

Note: b = unstandardized coefficient, *SE* = standard error, β = standardized coefficient, * $p \le .05$, ** $p \le .01$, *** $p \le .001$
$\Delta R^2 = 10.7$ for Block 1, ΔR^2 change $= 12.7$ for Block 2, ΔR^2 change $= 1.4$ for Block 3.

Figure 2.1
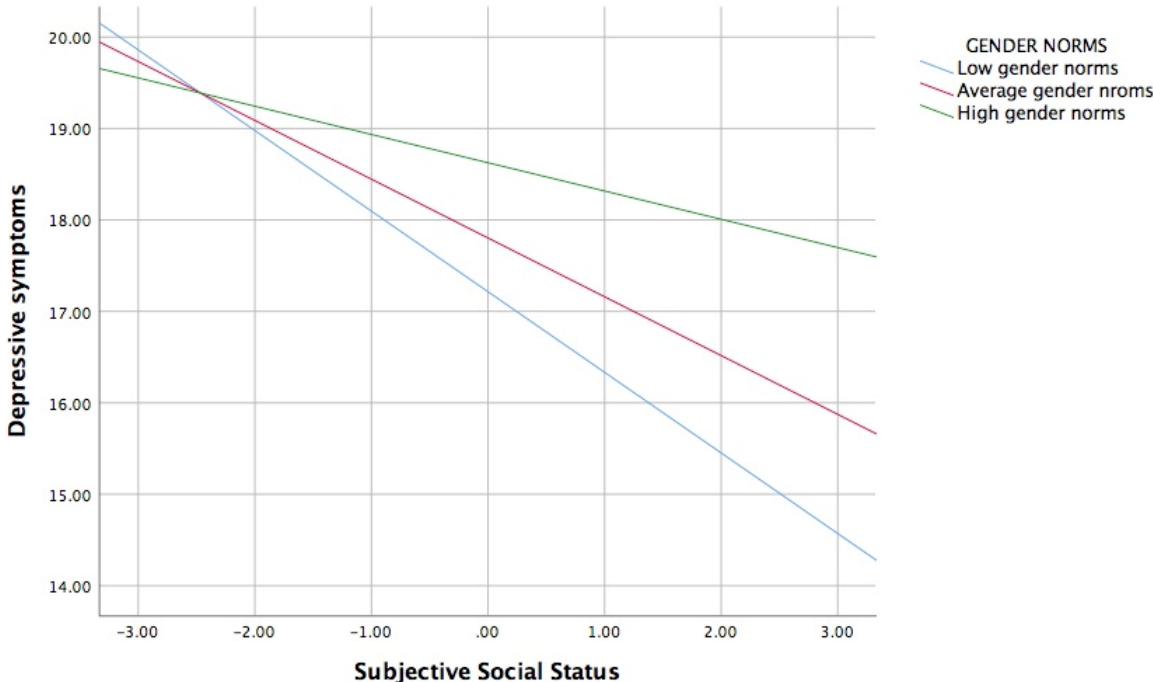
Tables and Figures for Manuscript 3

Table 3.1. *Demographic Characteristics (n = 108)*

	n	*%*
Semi-rural Vs Urban (108)		
Semi-rural	61	56.5
Urban	47	43.5
Documentation Status (104)		
Unauthorized	21	19.4
Authorized	83	76.9
Number of children living at home (108)		
1 or less	18	16.7
2	51	47.2
3 or more	39	36.1
Number of people living at home (108)		
3 or less	12	11.1
4	45	41.7
5	27	25
6 or more	24	22.2
Education Level (108)		
Less than High School	30	27.8
High School Diploma or GED	21	19.4
Some College	23	21.3
College/University Degree	34	31.5
Monthly Household Income (108)		
Less than $999	17	15.7
$1,000-$1,999	37	34.3
$2,000 or more	54	50
	M	*SD*
Age	43.5	9.8
Years in the US, if not US born (102)	14.4	12

Table 3.2 *Bivariate Correlations for Study Variables*

Variable	1	2	3	4	5	6
20. Age	1.00					
21. Documentation Status	.164	1.00				
22. Semi-rural vs. urban	.128	.032	1.00			
23. Machismo	-.017	.074	-.407**	1.00		
24. Caballerismo	.158	.204*	.393**	-.297**	1.00	
25. Depressive Symptoms	.043	.004	.158	.136	.036	1.00

*p < .05, ** p < .01

Table 3.3 *Hierarchical Multiple Regression Model for Predicting Depressive Symptoms (n=104)*

	Model 1			Model 2			Model 3		
Variable	*b*	*SE*	β	*b*	*SE*	β	*b*	*SE*	β
Block 1									
Age	.012	.047	.025	.016	.047	.035	-.001	.047	-.001
Documentation Status	.873	1.121	.088	.471	1.152	.048	.373	1.131	.038
Income	-.356	.563	-.066	-.156	.566	-.029	-.113	.555	-.021
Educational Level	.319	.447	.095	.211	.451	.063	.329	.445	.098
Semi-rural vs. urban	.272	1.014	.034	.409	1.035	.051	.827	1.040	.103
Number of children living at home	2.034	.569	.487***	1.912	.577	.458***	1.852	.567	.443**
Number of people living at home	-.817	.380	-.283*	-.819	.380	-.283*	-.869	.375	-.301*
Block 2 (Ref = High Stress)									
Family disengagement									
No stress				-1.488	.994	-.179	-1.450	.974	-.175
Little stress				-.912	1.371	-.081	-.699	1.369	-.062
Marital stress							-	-	
No stress				-2.031	1.202	-.221	-1.992	1.179	-.217
Little stress				-1.089	1.639	-.088	-1.482	1.615	-.119
Parenting stress							-	-	
No stress				.232	1.106	.027	.694	1.118	.082
Little stress				1.005	1.376	.091	1.731	1.402	.157
Block 3									
Machismo							1.047	.431	.260*
Caballerismo							.198	.614	.034

Note: b = unstandardized coefficient, *SE* = standard error, β = standardized coefficient, * $p \le .05$, ** $p \le .01$, *** $p \le .001$
$\Delta R^2 = 13.1$ for Block 1, ΔR^2 change = 6.3 for Block 2, ΔR^2 change = 2.3 for Block 3.

Table 3.4.

Relative conditional effects of machismo on depressive symptoms by level of stress (*n*=108).

Marital Stress Ref.=High stress		B	SE	LLCI	ULCI	P
Low machismo						
	No stress (x2)	.467	1.662	-2.830	3.765	.779
	A little stressed (x1)	3.947	2.933	-1.870	9.764	.181
Average machismo						
	No stress	-2.328	1.099	**-4.509**	**-.146**	**.037**
	A little stressed	-.537	1.576	-3.663	2.590	.734
High machismo						
	No stress (x2)	-4.365	1.339	**-7.021**	**-1.709**	**.002**
	A little stressed (x1)	-3.805	1.788	**-7.352**	**-.2586**	**.036**
Family Disengagement Ref = High Stress		B	SE	LLCI	ULCI	P
Low machismo						
	No stress (x2)	.913	1.468	-1.997	3.824	.535
	A little stressed (x1)	1.779	1.751	-1.693	5.251	.312
Average machismo						
	No stress	-1.685	.940	-3.549	.179	.076
	A little stressed	-.700	1.288	-3.254	1.854	.588
High machismo						
	No stress (x2)	-3.579	1.164	**-5.889**	**-1.270**	**.003**
	A little stressed (x1)	-2.507	1.659	-5.797	.783	.134

Note. Ref.=referent group; LLCC=lower level confidence interval; ULCI=upper level confidence intervals.

Table 3.5.

Relative conditional effects of caballerismo on depressive symptoms by level of stress (*n*=108).

Marital Stress Ref.=High stress		B	SE	LLCI	ULCI	P
Low caballerismo						
	No stress (x2)	.2141	2.486	-4.717	5.145	.932
	A little stressed (x1)	4.989	3.029	-1.019	10.998	.103
Average caballerismo						
	No stress	-2.156	1.180	-4.497	.185	.071
	A little stressed	-.298	1.568	-3.408	2.813	.849
High caballerismo						
	No stress (x2)	-4.187	1.613	**-7.387**	**-.988**	**.011**
	A little stressed (x1)	-4.830	2.073	**-8.942**	**-.7179**	**.022**
Parental Stress Ref.=High Stress		B	SE	LLCI	ULCI	P
Low caballerismo						
	No stress (x2)	-3.732	1.821	-7.343	-.120	.043
	A little stressed (x1)	-3.402	2.090	-7.547	.746	.107
Average caballerismo						
	No stress	-1.329	1.064	-3.439	.780	.214
	A little stressed	.4434	1.361	-2.256	3.143	.7453
High caballerismo						
	No stress	.730	1.325	-1.898	3.358	.583
	A little stressed	3.738	1.800	**.167**	**7.309**	**.040**

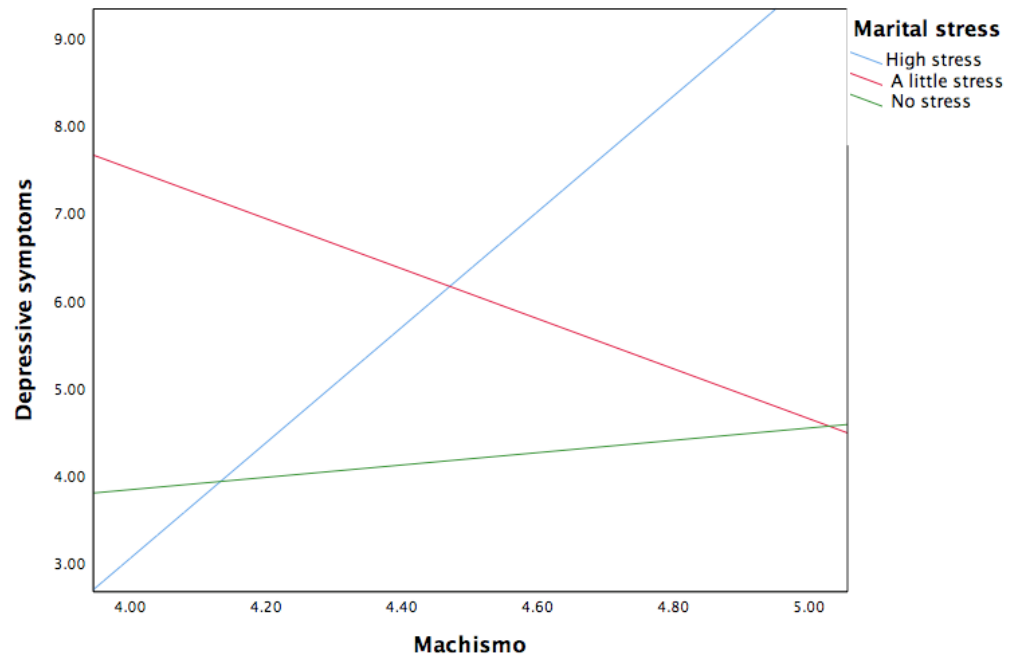Note. Ref.=referent group; LLCC=lower level confidence interval; ULCI=upper level confidence intervals.
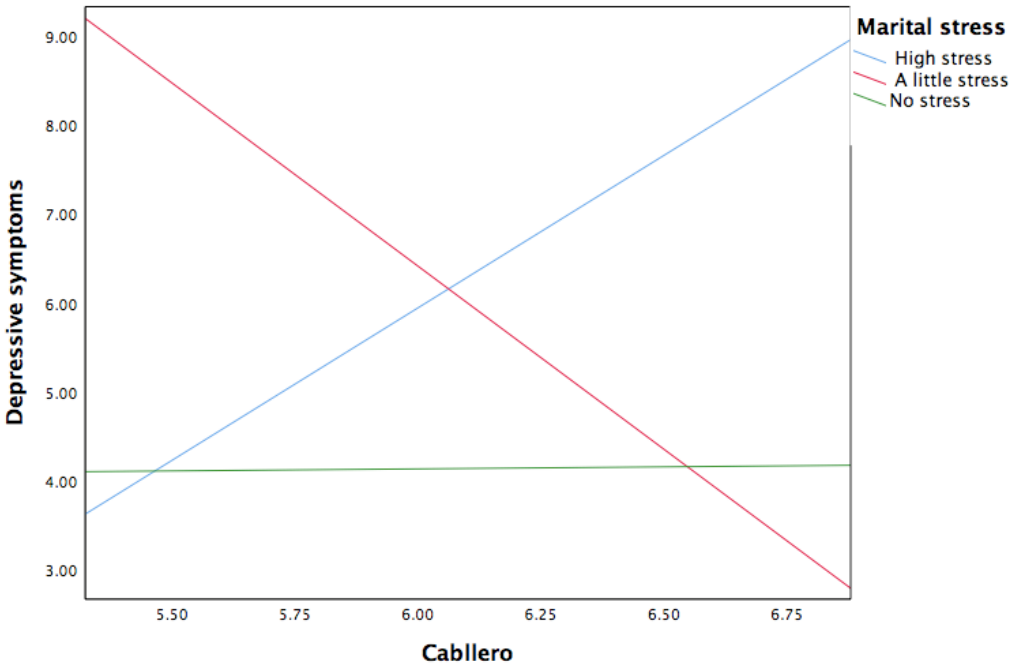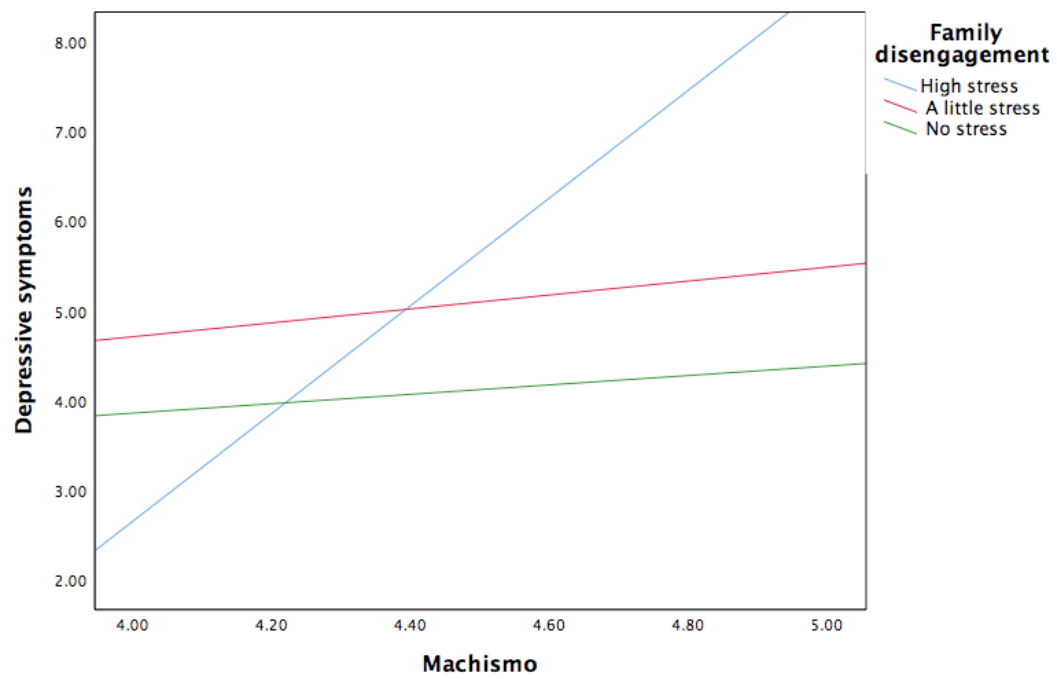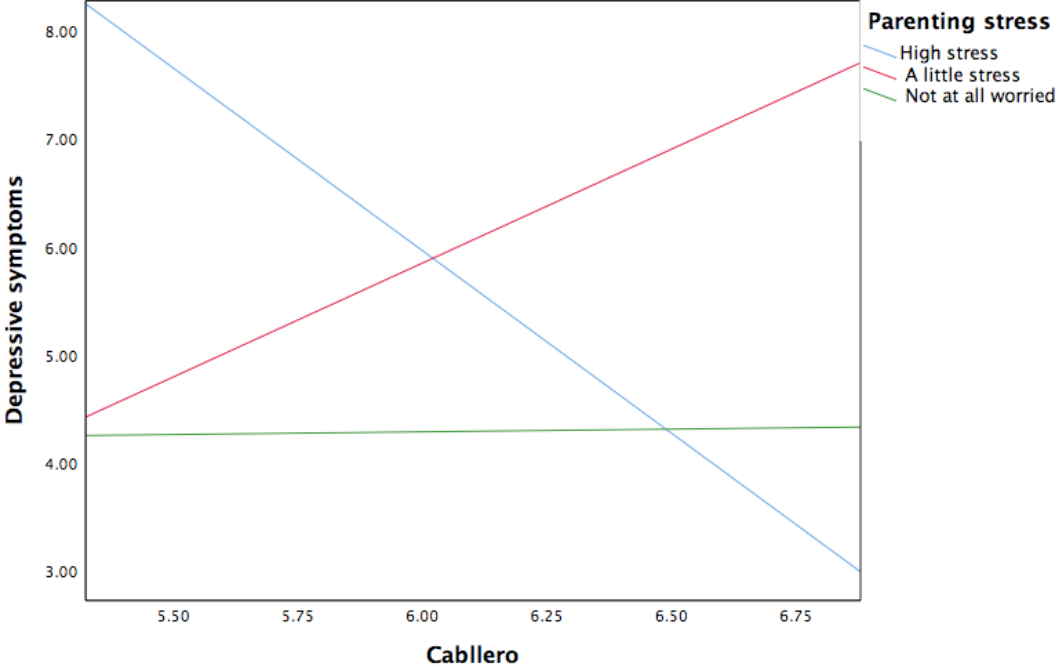
Figure 3.1

Figure 3.2

Figure 3.3

Figure 3.4

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