

HUQ, NADIA, M.A. Ethnic Identity as a Protective Factor for Latino Youth. (2012)
Directed by Dr. Gabriela Livas Stein. pp.70

Previous studies indicate that acculturative stress is associated with greater depressive symptoms in Latino adolescents. Ethnic identity is an important cultural variable that has been linked with positive mental health outcomes. The current study examined whether different aspects of ethnic identity moderated the relation between acculturative stress and depressive symptoms among 7th - 10th graders in an emerging Latino community in North Carolina. First, the study examined the main effects of acculturative stress and ethnic identity on depressive symptoms. As hypothesized, greater acculturative stress predicted greater depressive symptoms. Similarly, as hypothesized, lower public regard predicted greater depressive symptoms. In contrast, private regard/centrality did not significantly predict depressive symptoms. It was also hypothesized that ethnic private regard, public regard, and centrality would moderate the relationship between acculturative stress and depressive symptoms such that youth with high levels of ethnic identity would report lower depressive symptoms when confronting acculturative stress. The results of this current study did not support this moderation hypothesis. Furthermore, it was hypothesized that there would be a three-way interaction in which private regard would moderate the relationship between acculturative stress and depressive symptoms only when youth endorsed high levels of ethnic centrality. Due to the strong correlation between private regard and centrality, a three-way interaction analyses could not be performed. Acculturative stress and public regard were the only factors in the current study that were associated with depressive symptoms.

ETHNIC IDENTITY AS A PROTECTIVE FACTOR FOR LATINO YOUTH

by

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A Thesis Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Arts

Greensboro
2012

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CHAPTER I

INTRODUCTION

Identity development has been recognized as one of the central developmental tasks of adolescence. For individuals of color, identity development often involves the exploration of multiple social identities including ethnic and/or racial identities (Pahl & Way, 2006). Overall, achieving a positive, strong ethnic identity is associated with psychological well-being (Shelton et al., 2005), but little is known about how ethnic identity functions to protect ethnic minority youth in the context of stress. With the growing population of ethnic minorities in the United States, it is essential to understand how cultural factors work together to impact the successful adaptation of ethnic minority youth.

According to the 2010 U.S. Census, more than half of the total U.S. population growth between 2000 and 2010 was because of the increase in the Latino population. Between 2000 and 2010, the Latino population grew by 43 percent, rising from 35.3 million in 2000 to 50.5 million in 2010. By 2010, Latinos comprised 16 percent of the total U.S. population of 308.7 million (US Census, 2010). More specifically, according to the 2010 U.S. Census, 23.1 percent of children (individuals under the age of 18) were Latinos. Existing literature acknowledges that Latino adolescents display the highest risk for depression among ethnic minority groups (Umaña-Taylor & Updegraff, 2007). For this reason, adolescence is a pivotal stage in which to examine the impact of acculturative

stress on psychological functioning and for exploring the factors that may serve as protective against these stressors in Latino youth. While the focus of this study is on Latino adolescents, this paper will review research with other ethnic minorities as well, due to the fact that there is limited research on Latinos examining this specific research question.

Acculturation and Acculturative Stress

Acculturation is a dynamic process of cultural change that occurs when individuals from two different cultural groups come into continuous contact with one another (Berry, 1998). Berry (1980) characterized the course of the acculturation process as going from contact between two cultural groups to conflict between those groups, eventually resulting in changes made by one or both of the groups. The process of adapting to different cultural values and behaviors, some of which may conflict with previously held cultural beliefs, causes stress for many ethnic minority immigrant families (Bacallao & Smokowski, 2007). For this reason, it is essential to identify factors that may serve as protective against these stressors.

Acculturative stress has been defined as, “a response by people to life events that are rooted in intercultural contact” (Berry, 2006, p.43). Factors associated with increases in acculturative stress are differences in acculturation between adolescents and their parents, language conflict, language behavior, perceived discrimination, and lack of commitment to the family and culture of origin (Vega, Zimmerman, Gil, Warheit, & Apospori, 1997). This definition of acculturative stress is supported by a substantial literature on immigrant adult populations’ perception of stress due to factors such as

prejudice, discrimination, minority status and pressure to learn English (e.g., Cervantes, Padilla, & Salgado de Snyder, 1991; Hovey, 2000; Berry, 2003).

An emerging literature with adolescents also supports this conceptualization (e.g., Romero, Carvajal, Valle & Orduna, 2007; Vega, Khoury, Zimmerman, Gil, & Warheit, 1995). Although acculturative stress is typically a term that is applied to immigrant populations, research also suggests that acculturative stress influences the lives of second and third-generation individuals (Cervantes et al., 1991). There is limited research indicating whether immigrant and U.S. born Latinos report similar levels of acculturative stress. According to Gil, Vega and Dimas (1994), acculturation and acculturative stress have differential effects among foreign- and U.S.-born Latino adolescents. In their study of sixth and seventh grade Latino males (majority Cuban-American), the researchers found that foreign-born individuals reported higher levels of acculturative stress, but the effects of the acculturative stress on self-esteem appeared to be stronger for the U.S.-born Latino male adolescents. In their study of middle school students of Mexican descent, Romero and Roberts (2003) found that immigrant youth endorsed more acculturative stressors when compared to the U.S.-born youth. On the contrary, other studies (e.g. Hovey & King, 1996) concluded that generational status was not found to be a significant predictor of acculturative stress. Thus, acculturative stress affects both first and second-generation youth, but whether the effects differ across generational status has not yet been established.

Much of the literature on acculturative stress focuses on stress experienced by minorities to acculturate to majority cultures (e.g., Carvajal, Hanson, Romero, & Coyle,

2002). However, it is important to realize that ethnic minorities (immigrants and U.S.-born), especially adolescents, may feel stress to not only acculturate to the majority culture, but to also maintain their own cultural values and practices. In fact, some acculturative stress models suggest that adolescents may receive pressure to maintain their culture of origin from family members or peers within their own group (Romero et al., 2007).

According to Williams and Berry (1991), acculturative stress may influence emotions and behaviors including depression and anxiety. Individuals who face acculturative stress may adopt adaptive or maladaptive coping strategies for dealing with this cultural tension. Hovey and King (1997) presented a conceptual framework for studying acculturative stress and its relationship to depression and suicidal ideation. These researchers extended Williams and Berry's (1991) acculturative stress model to include possible consequences of elevated levels of acculturative stress among immigrant and second-generation Latino adolescents. This revised model posits that during the acculturative process, increased levels of acculturative stress may specifically result in significant levels of depression and suicidal ideation.

Indeed, cross-sectional studies of individuals and families have linked acculturative stress to depression, anxiety, and suicidal ideation in Latino adolescents (e.g., Hovey & King, 1996; Katragadda & Tidwell, 1998). For example, in a study of 70 immigrant and second-generation Latino/a American (majority Mexican descent) adolescents in a California bilingual program, acculturative stress was positively related to depression and suicidal ideation (Hovey & King, 1996). The age range for this sample

was 14 to 20 years old (age $M = 16.76$) suggesting that acculturative stress impacts youth throughout adolescence.

A series of studies conducted by Romero and colleagues also document the relationship between acculturative stress and depressive symptoms. In a multi-ethnic sample (47% Latino), Romero et al. (2007) found that acculturative stress was associated with more depressive symptoms after accounting for ethnicity, socioeconomic status, gender, and age. These findings were replicated in a sample of Mexican/Mexican-American middle school students (ages ranged from 11 to 15 years)(Romero & Roberts, 2003), and suggested that this relationship held for both U.S.-born and immigrant youth. The researchers found that immigrant youth reported exposure to more stressors. Despite the fact that this study identified a number of elements of stress, the researchers did not identify positive coping mechanisms of the bicultural context for Latino youth. This emphasizes the importance of identifying protective factors.

One study has also found acculturative stress to predict depressive symptoms longitudinally. Smokowski, Bacallao, and Buchanan (2009) conducted a study with a sample of 288 Latino adolescents (age $M = 15$) living in metropolitan and rural areas of Arizona and North Carolina. They examined the pathways leading to internalizing symptoms and establishing self-esteem in Latino adolescents. Acculturation conflicts and perceived discrimination were risk factors for internalizing problems and parent-adolescent conflict. Baseline internalizing problems, and Time 2 variables (humiliation, parent-adolescent conflict, negative peer relationships, and changes in familism) mediated the effects of acculturative stress on Time 3 internalizing symptoms and self-

esteem. Their study was important because it was the first longitudinal, ecological model linking acculturation dynamics to internalizing problems and self-esteem in Latino adolescents. The researchers also found that Latino cultural involvement was a key cultural asset, influencing Time 3 internalizing symptoms and self-esteem because it led to decreased feelings of humiliation and promoted familism. Overall, the literature finds that there is a positive relationship between acculturative stress and depression, concurrently and longitudinally.

Protective Factors

In addition to examining the main effect of acculturative stress on depressive symptoms, it is important to consider which factors may protect youth from the negative ramifications of acculturative stress. The terms “buffering factors” and “protective factors” are often used interchangeably. According to Fergus and Zimmerman (2005), protective factors are either assets or resources that can help youth avoid the negative effects of various risks. The researchers describe assets as “the positive factors that reside within the individual, such as competence, coping skills, and self-efficacy” (Fergus & Zimmerman, 2005, p. 399). Similarly, resources are “positive factors that help youth overcome risk, but they are external to the individual” (Fergus & Zimmerman, 2005, p. 399). Some examples of resources are: parental support, adult mentoring and community organizations.

The model proposed by Hovey and King (1997), described above, also included a second component, which suggested cultural and psychological protective factors that may account for high versus low levels of depression and suicidal ideation for individuals

facing high levels of acculturative stress. These factors focused primarily on external resources such as family cohesiveness, social support, socioeconomic status, motives for the move, age at immigration, generation in new community, and degree of cultural pluralism within new community. But, they also suggested personal assets such as pre-migration adaptive functioning, cognitive variables, and prior knowledge of the new language and culture. According to Hovey and King (1997) these variables may serve as buffering variables and help protect against distress during the acculturative process.

Although the Hovey & King (1997) model, as described above, explores many possible protective factors, the model does not address the possible buffering effects of ethnic identity, which is an important personal asset in adolescence (Shelton et al., 2005). In fact, existing literature supports that ethnic identity serves as a buffer of psychological adjustment when adolescents face stress (e.g. Kiang, Yip, Gonzales-Backen, Witkow, & Fuligni, 2006; Shelton et al., 2005). Identifying personal assets that serve as protective factors is necessary as these may serve as targets of interventions aimed at preventing psychopathology in youth. For these reasons, the current study will explore the protective effects of ethnic identity for Latino youth. This study will follow the framework of the “protective factor resilience model” (Fergus and Zimmerman, 2005.) Fergus and Zimmerman (2005) define the protective factor model as a model in which “assets or resources moderate or reduce the effects of a risk on a negative outcome” (p. 401). Thus, this current study will specifically examine the moderating effects of ethnic identity and its influence on the relation between acculturative stress and depressive symptoms.

Ethnic Identity

A major task during adolescence is to establish a sense of identity, which is theorized to play an essential role in development (Erikson, 1968). Theoretically, many forms of identity, including ethnic identity, become especially salient during the period of adolescence (French, Seidman, Allen & Aber, 2006). Ethnic identity refers to one's identity, or sense of self, as a member of an ethnic group and the feelings that accompany such membership (Phinney, 1990). It is an important contributor to an individual's well-being as individuals derive positive self-attitudes from belonging to groups that are meaningful to them (Phinney & Ong, 2007).

Traditionally, the study of "ethnic identity" began as the study of "racial identity" among African Americans. Racial identity focuses more on the social and political impact of visible group membership on psychological functioning whereas ethnic identity (often related to race, but does not necessarily have to be related to race) refers to a shared worldview, language, and set of behaviors that is associated with a cultural heritage (McMahon & Watts, 2002). Also, Latino is not a racial category; rather, Latinos can be from diverse racial backgrounds (Hayes-Bautista & Chapa, 1987). For these reasons, most people research ethnic identity with Latinos as opposed to racial identity. Furthermore, due to the fact that ethnic identity is a more all-inclusive term, in this literature, the term ethnic identity encompasses racial identity. In addition, according to Tajfel's (1981) social identity theory, positive feelings regarding being a part of a group (as opposed to understanding oneself in a political context) serve a protective role. The focus of this paper is ethnic identity but the literature review will also include pertinent

studies on racial identity with African Americans. Similar to the experiences of African Americans, historically, Latinos have been treated as a homogenous group in the United States, despite the fact that there are vast differences between various national origin Latino groups (Hayes-Bautista & Chapa, 1987).

The topic of ethnic and racial identity became a salient issue during the civil rights movement. Much of the earlier research on racial identity dealt with the psychological experiences of African Americans. One group of researchers emphasized the historical and cultural factors associated with the experiences of African Americans in the United States. This approach, as referred to by Gaines and Reed (1994,1995), became known as the underground approach. In 1971, Cross developed one of the first models related to racial identity, the Nigrescence model, which focused on the experiences of African Americans. In his model, Cross (1971) theorizes that African Americans progress through five stages in developing their racial identity: the pre-encounter stage, encounter stage, immersion—emersion stage, internalization stage, and the internalization-commitment. In the pre-encounter stage, the African-American individual's worldview is dominated by a European-American frame of reference, and he or she devalues blackness. In the encounter stage, the African-American experiences an event that makes him or her open and receptive to another world view. The third stage, immersion-emersion, is when the individual starts to develop a sense of pride in his or her African-American identity, but has not yet fully internalized the new identity. The next stage is the internalization stage, which is when the individual has resolved the conflict between the "old" and "new" identities. In this stage, the individual feels secure and satisfied with

his or her new identity. The last stage, internalization-commitment, is a stage that not everyone reaches, but is when the individual continues to be a social activist (Cross, 1971). Based on this Nigrescence model, Parham and Helms (1981) developed the Racial Identity Attitudes Scale (RIAS).

Another group of earlier researchers assessed racial identity within the context of African Americans being a stigmatized group in America facing discrimination and prejudice, without much consideration for the role that culture plays. This approach has been referred to as the mainstream approach of understanding racial identity (Gaines & Reed, 1994, 1995). This mainstream approach focused primarily on group identity. Luhtanen and Crocker (1992) developed a self-esteem scale which measured an individual's attitudes and feelings about a group with which they identified strongly. The group could be anything, for instance: race, gender or occupation. Another influential model, which also takes a developmental approach similar to Cross's (1971) model, is Phinney's (1989) model of ethnic identity development. Phinney's model of ethnic identity is heavily influenced by Erikson's (1968) theories of ego identity development and Marcia's (1980) operationalization of these theories. Phinney's (1989) model posits that an individual begins with a lack of awareness of his/her ethnicity, then that individual engages in a period of exploration to learn more about his/her ethnic group and eventually, the individual reaches an achieved ethnic identity characterized by a commitment to the individual's ethnicity (Roberts et al., 1999). Similar to Luhtanen and Crocker's (1992) measure, Phinney's (1992) measure, the Multi-Group Ethnic Identity Measure (MEIM), was not created for a specific group. Rather, Phinney's questionnaire,

which assessed the development of an ethnic identity, was based on the elements of ethnic identity that are common across multiple groups.

Sellers, Smith, Shelton, Rowley, and Chavous (1998) attempted to integrate both approaches (mainstream and underground) and created the Multidimensional Model of Racial Identity (MMRI).

The Multidimensional Model of Racial Identity.

The MMRI embodies a combination of existing theories on group identity and is sensitive to historical and cultural experiences. It synthesizes ideas from many of the current racial and ethnic identity models in the research literature (Sellers et al., 1998). The MMRI provides a conceptual framework for understanding both the significance of race in the self-concepts of African Americans and the qualitative meanings they attribute to being members of that racial category (Sellers et al., 1998). The MMRI defines racial identity as the part of the person's self concept that is related to his or her membership with a race (Rowley, Sellers, Chavous, & Smith, 1998). The MMRI further describes racial identity in African Americans as the significant and qualitative meaning that individuals attribute to their membership within the Black racial group within their self-concepts (Sellers et al., 1998).

There are four assumptions that underlie the MMRI (Sellers et al., 1998). The first assumption is that the MMRI assumes that identities are situationally influenced but are also stable properties of an individual. The second assumption is that individuals have multiple different identities and these identities are all hierarchically ordered. The third assumption of the MMRI is that an individual's perception of his or her racial identity is

the most valid indicator of his or her identity. Lastly, the fourth assumption is that the MMRI is primarily concerned with the current status of an individual's racial identity in contrast to its development, unlike Cross's (1971) and Phinney's (1989) model. In order to operationalize the MMRI, Sellers et al. (1998) created the Multidimensional Inventory of Black Identity (MIBI).

The MMRI proposes four dimensions of racial identity that address the significance and qualitative meaning of race in the self-concepts of African Americans. The four dimensions are: racial salience, the centrality of the identity, the regard in which the person holds the group associated with the identity, and the ideology associated with the identity (Sellers et al., 1998). Racial salience and centrality refer to the significance that individuals attach to race in defining themselves whereas racial regard and ideology refer to the individuals' perceptions of what it means to be Black. Racial salience refers to the extent to which one's race is a relevant part of one's self-concept at a particular moment or in a particular situation. It is highly sensitive to both the context of the situation and one's inclination to define oneself in terms of race. Racial centrality refers to the extent to which a person normatively defines himself or herself with regard to race. Unlike salience, centrality is relatively stable across situations. Racial regard refers to a person's affective and evaluative judgment of his or her race. This dimension is divided into private regard and public regard. The fourth dimension of the MMRI is ideology. Ideology is composed of the individual's beliefs, opinions, and attitudes with respect to the way he or she feels that the members of the race should behave (Sellers et al., 1998).

Although Sellers and his colleagues mainly focused their research on African American youth, other researchers such as Kiang et al. (2006) and Rivas-Drake, Hughes & Way (2008) have successfully used this model with other ethnic groups such as Mexican American and Chinese American adolescents. These researchers have assessed ethnic identity in these groups using a modified MIBI that examines racial centrality, private and public regard. This model of ethnic identity allows for a differential assessment of centrality, private, and public regard which is not possible using other measures of ethnic identity. Ethnic centrality and ethnic regard are more reflective of ethnic identity while ideology is more reflective of racial identity. Given that these aspects of ethnic identity are theoretically different, it is important to assess the role that these aspects of identity play in minority youth. This literature will be reviewed below. Consistent with past research, this current study will focus on the private regard, public regard and centrality aspects of the MMRI model among a sample of Latino adolescents.

Ethnic identity as a buffer.

Research on ethnic identity models have demonstrated that the variability in ethnic identity is directly and indirectly related to positive mental health outcomes (Shelton et. al., 2005). The majority of research on ethnic identity has focused on main effects such as the relation between ethnic identity and self-esteem. Umaña-Taylor and Updegraff (2007) found that Latino adolescents (majority Mexican descent, age M = 16.3) who reported higher levels of ethnic identity exploration and resolution, also tended to report higher levels of self-esteem. Phinney and Chavira (1992) explored the relation between self-esteem and ethnic identity over time in a sample of Asian American,

African American and Latino tenth grade students (Median age = 16). The study results concluded that self-esteem and ethnic identity were significantly related to each other at each time period and across the three-year time span. Similarly, Phinney, Cantu, and Kurtz (1997) examined whether ethnic and American identity served as predictors of self-esteem among African American, Latino (majority Mexican Americans) and White adolescents from ethnically diverse schools (ages 14-19). The results indicated that for all ethnic groups, ethnic identity was a significant predictor of self-esteem.

Ethnic identity may play a crucial role for one's mental health because it can affect the well-being of a young ethnic minority individual by providing a buffer against stressful experiences (Kiang et al., 2006). Theoretically, a social identity framework supports linkages between ethnic identity, race, or ethnic-related stress and well-being (Kiang et al., 2006). Tajfel (1981) defines social identity as "that part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership" (p. 255). A social identity framework posits that identity develops from both an individual's sense of belonging to a particular group and the feelings accompanying that sense of group membership (Tajfel, 1981). Therefore, social identity can be conceptualized as ethnic identity. In this model, when an individual faces discrimination or ethnicity related stressors, s/he can focus on positive aspects of their social identity to cope with these experiences.

Consistent with social identity theory, the protective stress buffering effects of ethnic identity has been recently found across several programs of research (Shelton et

al., 2005). Collectively, the work of Sellers and colleagues (Neblett, Shelton, & Sellers, 2004; Sellers & Shelton, 2003) and Wong, Eccles and Sameroff (2003) suggests that ethnic identity serves a protective function against the negative effects of discrimination for both adults and adolescents in various contexts, across time, and with regard to many different outcomes (Shelton et al., 2005). The researchers acknowledge that ethnic group membership may put individuals at risk for experiencing discrimination, but having a strong sense of ethnic identity is still protective.

Yip and Fuligni (2002) indicated that ethnic identity also buffers against the effects of daily stressors. In their study, Yip and Fuligni (2002) explored the relation between global ethnic identity and engagement in ethnic behaviors, ethnic identity salience and psychological well-being among a sample of Chinese American adolescents (age $M = 16$ years). The researchers used a daily diary method and concluded that ethnic identity served as a protective factor. More specifically, for youth who had a strong sense of ethnic identity, daily stressors were not associated with anxiety.

A recent study conducted by Iturbide, Raffaelli, and Carlo (2009) explored the moderating effects of ethnic identity on the relation between acculturative stress and psychological adjustment among Mexican American college students (age $M = 23.05$). The sample consisted of college students from three universities (two located in California and one located in Texas). As hypothesized, ethnic identity moderated the relation between acculturative stress and psychological adjustment. However, the moderation was conditional to the level of stress experienced by the participant. The protective effect of ethnic identity appeared only at low levels of acculturative stress and

not at high levels of acculturative stress (Iturbide et al., 2009). It is possible that although ethnic identity may serve as a protective factor at low levels of acculturative stress, other variables in combination with ethnic identity may be necessary to serve as protective at high levels of acculturative stress.

Private regard and buffering.

As defined above, private regard refers to the extent to which an individual feels positively or negatively towards his or her ethnic group and as well as how positively or negatively he or she feels about being in his or her ethnic group (Sellers et al., 1998). In other words, private regard refers to adolescents' personal affect toward or feelings about their ethnic group (Rivas-Drake, Hughes & Way, 2009b). From a social identity perspective, holding positive perceptions about and identifying with one's ethnic group can theoretically provide a foundation from which individuals can draw in the face of stress (Tajfel, 1981). Sellers, Copeland-Linder, Martin, & Lewis (2006) found that African American adolescents (age $M = 13.8$) with higher private regard were more likely to have positive psychological outcomes regardless of the level of discrimination that the adolescent reported. Similarly, Rowley et al. (1998) found that private regard was positively related to personal self-esteem in a college sample of African-American students.

In their study of adolescents of Mexican and Chinese descent, Kiang et al. (2006), found that adolescents with higher private regard for their ethnic group exhibited greater levels of daily happiness and less daily anxiety averaged over a 2-week study period. The sample consisted of 415 ninth graders (age $M = 14.83$ years) from the Los Angeles

metropolitan area. Ethnic private regard moderated the daily association between normative stressful demands and happiness, and between stressful demands and happiness experienced 1 day after stressors occurred. In this study, ethnic private regard was the more important aspect of ethnic identity as compared to centrality, with regard being a protective factor against daily stressors. Ethnic private regard indirectly influenced daily well-being by serving as a buffer against normative stressful demands (Kiang et al., 2006). Most importantly, Kiang et al. (2006) found that ethnic private regard played an independent role as a moderator between stressful demands and daily levels of happiness after controlling for the influence of self-esteem. This finding emphasizes the protective effects of ethnic private regard in a Latino sample.

In their study, Bynum, Best, Barnes, and Burton (2008) explored whether private regard reduces the effect of racism on symptoms of anxiety and depression in sample of adolescent African American males. The results confirmed that experiencing racism was related to greater symptoms of anxiety and depression. However, the results indicated that private regard served as a buffer for racism experiences only for symptoms of anxiety but not for symptoms of depression. Thus, males with higher private regard had less symptoms of anxiety when faced with racism.

Public regard and buffering.

As defined above, public regard refers to the extent to which an individual feels that others view his or her ethnic group positively or negatively. It is the individual's assessment of how his or her group is viewed and valued by the broader society (Sellers et al., 1998). Public regard incorporates adolescents' perceptions of others toward their

ethnic group. This component is one of the most understudied dimensions of ethnic identity, but it is potentially useful for understanding a plethora of youth outcomes because it is essentially a measure of how socially valued adolescents perceive their group to be as viewed by others (Rivas-Drake et al., 2009b). Theoretically, Berry and Kim (1988) and Berry, Kim, Minde, and Mok (1987) argue that different factors may influence acculturative stress and adaptation, and that adaptation varies across individuals. Some of the variation may depend on an individual's opinion of the host society's ethnic and racial attitudes about her/his group (i.e., public regard). Some evidence exists that mental health problems may be less among immigrants living in societies that are tolerant of cultural diversity as compared to societies that pressure others to conform to the single cultural standard of the host society (Berry et al., 1987). According to Berry et al. (1987), individuals with a positive public regard will feel more accepted in the new country and this can serve as a buffer against acculturative stress. For this reason, in the current study, the researchers hypothesize that public regard will function as protective for Latino adolescents.

Research with immigrant ethnic minority groups partially supports this notion. For example, Rivas-Drake et al. (2008) found that higher public regard was associated with fewer depressive symptoms among Chinese American sixth graders (age $M = 11.32$) in New York City. In the same study, among the Chinese American youth, higher public regard weakened the relationship between peer ethnic discrimination and depressive symptoms. Similarly, positive public ethnic regard was associated with fewer somatic symptoms in a sample of 6th and 7th grade Dominican youth (Rivas-Drake, Hughes &

Way, 2009a). Additionally, Spencer-Rodgers and Collins (2006) explored perceptions of group disadvantage in a sample of Latino undergraduate and graduate students (age $M = 21$ years) living on the West Coast. The researchers limited their study to only U.S-born Latinos and those who immigrated at a young age (immigration age $M = 5.7$ years). In their study, Latino perceived group disadvantage was strongly related with negative public regard (as expected considering that the two constructs are conceptually similar.) More specifically, low public regard, was related to a negative evaluations of the self, due to decreased group attachment.

However, research with African American youth documents a different pattern of mixed results. In research with African American adolescents (age $M = 17$), Chavous et al., (2003) found that higher public regard was associated with more positive academic achievement. Yet, in the study conducted by Rivas-Drake et al. (2008), in contrast to the Chinese American youth, higher public regard did not serve as protective for the African American youth. In Sellers et al., (2006) study, low public regard buffered the impact of racial discrimination on psychological functioning for African American adolescents.

In their study, Rivas-Drake et al. (2009a) found that for African American youth, in contrast to Dominican youth, lower public regard was associated with higher self-esteem. Also, Rivas-Drake et al. (2009b) found that African American youth reported lower public regard than all other ethnic groups in the study, even after accounting for demographic variables (socioeconomic status, immigrant status, and gender) and Chinese Americans reported lower public regard than Dominican and White youth. These findings

imply that public regard may function differently among various ethnic groups and depend on context.

Centrality and buffering.

As defined above, racial centrality refers to the extent to which a person normatively defines himself or herself with regard to race. The unit of analysis for centrality is not a particular event; rather, it is the individual's normative perceptions of self with respect to race across a number of difference situations (Sellers et al., 1998). It is a measure of whether race is a core part of an individual's self-concept. Thus, racial centrality is indicative of the extent to which the individual affirms race to be an important defining characteristic in his or her identity (Rowley et al., 1998).

Inherent in the conceptualization of racial centrality is a hierarchical ranking of different identities with regard to their closeness to the individual's core definition of self (Banaji & Prentice, 1994). Personal construct theory (Kelly, 1955) argues that people define the world and themselves based on different constructs that are distinctive to them. This theory argues that central identities are those constructs that are more relevant while noncentral identities are those constructs that are less relevant to how a person views the world and themselves (Kelly, 1955 & Ingram, 1989). An integral feature of both the conceptualization of centrality and personal construct theory is its reliance on a phenomenological perspective in determining whether race or ethnicity is central to a person's identity (Sellers et al., 1998). Thus, racial and ethnic centrality is a guide for determining whether the individual's beliefs and attitudes regarding race or ethnicity are likely to influence aspects of the individual's self-concept such as self-esteem. According

to Rowley et al. (1998), attitudes and beliefs about race should only predict behavior to the extent that race is a central component of the self.

Although private regard and centrality may be correlated, it is important to note that conceptually, these constructs are very different. Private regard refers to how an individual feels about his/her ethnic group and how an individual feels about being a part of his/her ethnic group whereas centrality addresses how important one's ethnicity is in defining his or her identity. For instance, a young Latino male may have high centrality in that being Latino is a significant part of who he is but his private regard can be low in that he feels as though all Latino boys drop out of high school. Or, a Latino male may have low centrality in that being Latino is not a significant part of his identity but his private regard can be high in that he thinks being Latino means having high family values and good morals. In other words, a person may have high private regard but low centrality thus their ethnic/racial identity may not influence their emotional well-being since it is not important to them. Instead, their emotional well-being will be comprised of other aspects of identity that are more central (e.g., gender, social class, profession, family status). Therefore, for this individual, private regard would not be protective in the face of stress. There is limited research to support whether there is a hierarchical nature of the various ethnic identity elements. One of the purposes of this study is to address whether, to some extent, centrality is hierarchical to private regard in that high centrality must be present in order for private regard to be protective. As mentioned above, some literature suggests that different minority ethnic groups may experience different protective effects on outcomes with regards to ethnic identity.

The majority of research on racial centrality in African Americans has focused on the role centrality plays in the experience of discrimination. Shelton and Sellers (2000) found evidence that African American college students with higher levels of racial centrality are more likely to interpret racially ambiguous derogatory events as being the result of racism. Similarly, later studies have also found that racial centrality was associated with greater reports of experiencing racial discrimination (e.g., Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). However, although centrality does appear to predict a greater perception of discrimination, it also serves a protective function. In their study of African American older adolescents (age $M = 17.8$), Sellers et al. (2003) found that the association between racial discrimination and perceived stress was weaker for individuals for whom race was a more central identity. Overall, one of the main findings of this study was that individuals who have high centrality were more likely to report lower levels of subsequent psychological distress. This is consistent with the theory stated above because it is possible that the individuals with high centrality also have higher self-esteem and a more positive self-concept.

As suggested by the theory above, some studies support the notion that centrality interacts with private regard in predicting psychological outcome. For example, Rowley et al., (1998) found that centrality moderated the relationship between private regard and personal self-esteem in a sample of African American high school and college students, such that the relationship was significant for those with high levels of centrality but not significant for those with low levels. However, in a study with Mexican and Chinese adolescent youth (age $M = 14.83$) living in the Los Angeles metropolitan area, Kiang et

al., (2006) found no buffering effects of ethnic centrality. Kiang et al., (2006) state that developmental differences could account for the lack of effects found with ethnic centrality. It is possible that centrality does not play as powerful of a role in early adolescent development as it does in later adolescence and adulthood.

The existing literature on the protective function of ethnic identity against the negative effects of discrimination is relatively robust, while the literature on ethnic identity as a protective factor against acculturative stress is very limited (e.g. Iturbide et al., 2009). Although discrimination is a component of acculturative stress, as mentioned above, acculturative stress is also comprised of other stressors such as having a minority status and pressure to learn English (Cervantes et al., 1991). Similarly, much of the literature on minorities surrounds African Americans and minorities living in populated urban cities, and very few studies have examined Latino youth.

The majority of the researchers conducted their studies with Latinos living in established Latino communities on the West Coast (California and Arizona), with only one of the studies having a portion of their participants from North Carolina. Experiences of acculturation and acculturative stress for Latino adolescents growing up in an emerging community is likely to be quite different when compared to Latino adolescents growing up in a community where Latinos are more established. Emerging communities are defined as areas (not including New York, Chicago, Miami, and Los Angeles) that have seen an influx of Latino immigrants in recent years (Stamps & Bohon, 2006.) For instance, the Latino population in Raleigh, North Carolina increased by 1,180 percent between 1980 and 2000; 70 percent of that population are immigrants (Suro & Singer,

2002.) In an established community, Latino individuals may be 2nd, 3rd, or 4th generation whereas in an emerging community, it is more likely that the majority of Latino individuals are immigrants or second generation. Furthermore, the areas in which Latinos have been settling for generations, (e.g. New York, Florida), are more prepared for interacting with populations that speak Spanish. On the other hand, in an area that has an emerging Latino community (e.g. North Carolina), and that is unaccustomed to populations that speak a different language, the limited availability of bilingual professionals can be challenging for Latino individuals. The communication barriers may lead to challenges in multiple settings, such as school, health care facilities and social services (Torres, 2000). This highlights the need to examine acculturative stress among Latino adolescents growing up in emerging communities like North Carolina

Overall, the literature is limited in how ethnic identity may serve as protective in a variety of situations and among a diverse sample of ethnic minorities. For this reason, the current study will explore the protective nature of different aspects of ethnic identity as moderating the relationship between acculturative stress and depressive symptoms among a sample of Latino adolescents living in an emerging Latino community.

Goals and Hypotheses of the Proposed Study

One aim of this study is to investigate whether acculturative stress is associated with depressive symptoms among 7th - 10th grade Latino students in an emerging Latino community in North Carolina. Another aim of this study is to explore the main effect of ethnic identity on depressive symptoms. The primary goal of this study is to increase our understanding of how ethnic identity serves as a protective factor against depressive

symptoms when an adolescent experiences acculturative stress. More specifically, this study will examine how different aspects of ethnicity moderate the relation between acculturative stress and depression. The aspects of ethnic identity included in this study are: ethnic private regard, public regard, and centrality.

It is hypothesized that acculturative stress will be positively related to depressive symptoms while ethnic identity will be correlated with fewer depressive symptoms. It is also hypothesized that ethnic private regard, ethnic public regard, and ethnic centrality will moderate the relation between acculturative stress and symptoms of depression. It is predicted that each aspect of ethnic identity (*private regard*, *public regard*, and *centrality*) serves a buffering role such that the relation between acculturative stress and depressive symptoms will be attenuated at high levels of ethnic identity (private regard, public regard, and centrality). It is also hypothesized that the findings will display a three-way interaction of acculturative stress with private regard and centrality. It is predicted that ethnic centrality moderates the relation between private regard, acculturative stress, and depressive symptoms such that, when high levels of centrality are present, the buffering effect of high private regard on depression is greatest

CHAPTER II

METHOD

Participants

The sample consists of 7th- 10th graders (n=187). The mean age of the participants is 14.02 years. The sample consists of 52.9 % females and 47.1 % males. The sample consists of adolescents from Mexican (78%), Latino mixed (parents from different countries of origin; 8%), Nicaraguan (2%), Dominican (2%) and Salvadorian (2%) backgrounds. Other individuals identified being from Guatemalan, Columbian, Costa Rican and Cuban backgrounds. In terms of nativity, the majority of the students in this sample were born in the US (58.6%.)

Measures

Demographics. Demographic information was collected from all participants. The individuals were asked to self-report on their age, grade level in school, name of school, gender, nativity status (if foreign-born, they were asked to indicate county of birth and age of immigration), and ethnic group label.

Acculturative stress. The 20-item Bicultural Stress Scale (Romero & Roberts, 2003) assesses adolescents' bicultural stressors in the school, peer and family context (See Appendix for all measures). This scale was derived from the Cuellar and Roberts (1997) Adult Stress Scale and modified for relevance to adolescents. Adolescents report

on 20 different stressors or experiences based on a Likert-type scale ranging from 1 (never happened to me) to 5 (very stressful). A sample item on the scale is, “I have been treated badly because of my accent.” The scale provides information about the number of stressors that adolescents experience, as well as the degree of stress adolescents perceive from experiencing each stressor. This scale has high internal consistency, with a Cronbach’s Alpha of .93 for immigrant Mexican adolescents and a Cronbach’s Alpha of .93 for U.S.-born Mexican adolescents. For the current sample, the Cronbach’s Alpha was .90. Results from a focus group suggested that the items in this measure have good face validity (Romero & Roberts, 2003.) In the current study, for the regression analyses, this scale was calculated and used as a dichotomous sum (0 = never having experienced the stressor; 1 = having experienced the stressor) in order to measure the number of different stressors that the adolescents experienced, regardless of intensity. A dichotomous sum was used in the regression analyses due to the lack of endorsement at the full range of this scale in the mean scores but mean scores were calculated for the descriptives.

Ethnic identity. The researchers used the measure that was adapted by Kiang et al., (2006) for a Latino sample. Two subscales were adapted from the Multidimensional Inventory of Black Identity (MIBI; Sellers, Rowley, Chavous, Shelton, & Smith, 1997) to measure ethnic identity. Scales were shortened and items modified so that they could be relevant to and completed by members of any ethnic group. All items were scored on a 5-point scale ranging from strongly disagree to strongly agree, with higher scores reflecting higher levels of regard and centrality. The Regard subscale, consisting of nine items,

measured the extent to which students had positive feelings toward their ethnic group. Sample items read, “I feel good about being a member of my ethnic group,” (private regard) and “In general, others respect members of my ethnic group” (public regard). Internal consistencies were acceptable across both ethnic groups: Mexican, $\alpha = .72$; Chinese, $\alpha = .65$. The Centrality subscale, consisting of four items, assessed the extent to which individuals felt their ethnicity to be central to their self-concept. Sample items read, “In general, being a member of my ethnic group is an important part of my self-image,” and “Being a part of my ethnic group is an important reflection of who I am.” This subscale was also fairly reliable across both ethnic groups; Mexican, $\alpha = .64$; Chinese, $\alpha = .76$. This measure has been used with samples of diverse ethnic backgrounds including a Latino sample, with a Cronbach’s alpha of .84 in a sample of 222 young adults (Kiang, Yip, & Fuligni, 2008). In the current study, the Cronbach’s alphas for the subscales were: Private regard (.93), Public regard (.88) and Centrality (.88). Interscale correlations suggest that the MIBI is internally valid. Also relationships among the MIBI subscales and race-related behavior suggest that this measure has external validity (Sellers et al., 1997.)

Depressive symptoms. The 33-item Mood and Feeling Questionnaire (MFQ) (Angold, Costello, Pickles, Winder, & Silver, 1987) assesses adolescents’ depressive symptoms. Adolescents report on symptoms for the past two weeks based on a three-point scale ranging from 0 (not true) to 2 (true). A sample item on the questionnaire is “I felt miserable or unhappy.” Cronbach’s alpha was .95 in a sample of 470 clinic and non-clinic children and adolescents (Daviss, et al., 2006). For the current sample, the

Cronbach's Alpha was .94. This measure had moderate to high criterion validity (Daviss, et al., 2006). Overall the MFQ has acceptable reliability (Wood, Kroll, Moore, & Harrington, 1995) and validity (Angold et al., 1987; Kent, Vostanis, & Feehan, 1997.)

Procedure

Latino youth were recruited in all 7th - 10th grade classrooms from three schools in North Carolina (two middle schools and one high school). Recruitment occurred in three ways. First, parents and families were approached at an open-house event at the high school. Second, the schools each provided the research team with the phone numbers of all the Latino students at their respective schools. The research team called each family to obtain consent. The phone call consents were mainly done in Spanish. Third, along with the phone call recruitment, all of the Latino parents received a recruitment letter and consent form that was sent home with their child from school. The recruitment letters and consent forms were in English and in Spanish. The students were asked to take the forms home and bring them back to the main office at their school. The research team collected the forms from the schools.

There were 442 students total among the three schools. Of the 442 students' families, 425 were called on the phone while 17 families were approached at the open house. Of the 17 students that were consented at the open house, 14 students eventually participated in the study. Of the parents that were contacted over the phone, 221 parents consented to have their child participant (79% of those reached; 50% of total) and 40 parents declined to have their child participate (14% of those reached; 9% of total). Seven parents consented their child through the letter that was sent home through the school.

The researchers were unable to contact 164 families (37% of total) due to disconnected numbers and inability to reach the parent. One student withdrew from the study. In total, 190 students (68% of those reached; 43% of total) assented and participated in the current study.

All survey administration was completed in the participating school's cafeteria in the fall of 2010, during periods determined by the principal and the teachers. The children were given a child assent form which reminded them that the questionnaire was voluntary and confidential. The participants had the option to have an English or Spanish version of the survey. One student chose to take the survey in Spanish. Measures not available in Spanish were translated and back translated, and then the research team resolved discrepancies jointly. The team encouraged participants to ask for assistance at any point during the survey and checked each questionnaire to ensure the quality of the data. The research team went to each of the two middle schools twice for data collection and went to the high school once for data collection.

Data Analyses

Preliminary analyses. Means and standard deviations for all major study variables will be examined to ensure that the ethnic identity sub-scales are not highly correlated signifying that they may be measuring the same construct (If measures correlate more than .7). If any two subscales are highly correlated, they will be combined and analyzed as one subscale. Prior to conducting the planned regression analyses, demographic variables will be tested to see if they have high correlations with the

independent and dependent variables, and need to be included in the model (i.e., age, gender, nativity) as covariates.

Primary analyses. The researcher will conduct a regression analyses on acculturative stress and symptoms of depression. Similarly, analyses will be conducted to test whether private regard, public regard and centrality serve as moderators for acculturative stress and depression. Lastly, a three-way interaction will be conducted for private regard and centrality.

CHAPTER III

RESULTS

Descriptive Results

The results indicate that overall, this sample of students did not report high levels of acculturative stress. The sample had an average acculturative stress score of 2.00 (SD = .70), which indicates that most participants described the majority of stressors as “Not at all stressful.” In order to understand how many stressors the adolescent reported, for the regression analyses, the acculturative stress variable was dichotomized such that those who endorsed experiencing the stressor were coded as 1, regardless of their level of endorsed stress. These scores were then summed to represent the total number of acculturative stressors experienced by each individual. When acculturative stress was analyzed dichotomously, the results showed that although the sample does not appear to be highly stressed, the participants reported having experienced a number of different stressors ($m= 9.28$, $SD = 5.23$). Of the twenty stressors, nine of the stressors were experienced by more than 50% of the sample. For example, 81% of the sample reported having to translate and interpret for his or her parents. Similarly, 76% reported not being able to do what he or she wants because of family obligations. A large percentage of the sample, 74%, has worried about family members or friends having problems with immigration. Also, 65% of the sample reported feeling uncomfortable when others have made jokes about or put down people from their ethnic background. These results

indicate that the individuals are experiencing multiple stressors but not reporting these experiences as highly stressful.

Similarly, overall the sample did not appear to be exhibiting many depressive symptoms ($m=.29$, $SD = .31$). In order to further explore the depressive symptoms in this sample, an additive approach was taken and a total sum score was computed. A cut-off of 27 was used to determine clinically-elevated depressive symptoms (Woods et. al., 1995). Furthermore, a cut-off at the median score of 6 (See Table 1) was used to determine sub-clinical symptoms. Three groups were created based off of these cut-off points: No/Minimal depressive symptoms, Sub-clinical depressive symptoms, and Clinically-elevated depressive symptoms. These results show that more than 50% of the sample is experiencing at least sub-clinical symptoms of depression. Additionally, approximately 11% of the sample is experiencing clinically-elevated symptoms of depression.

Preliminary Analyses

Correlations were conducted on all the major variables (See Table 2.) Acculturative stress was significantly related to public regard ($r=-.22$, $p<.01$) and to depressive symptoms ($r=.24$, $p<.01$). Public regard was also related to private regard ($r=.53$, $p<.01$), centrality ($r=.46$, $p<.01$) and depressive symptoms ($r=-.16$, $p<.05$). Private regard and centrality were highly correlated ($r=.87$, $p<.01$). Given that this correlation is higher than .7, these two sub-scales were combined to create one variable and analyzed as one subscale. Means and standard deviations for all major variables are presented in Table 3.

Demographic variables were tested to determine which variables should be included in the model as covariates. Age was significantly related to the independent variable, acculturative stress ($r=.20$, $p<.01$); therefore age was included in the analyses as a covariate. Similarly, gender was related to the moderator variable, private regard/centrality ($t = 3.86$, $p<.001$); therefore, it was also included in the analyses as a covariate. Nativity status (foreign born or native born) was not significantly related to the independent and dependent variables so this variable was not included in the analyses (t 's $=.17- .61$).

Primary Analyses

A regression analyses was conducted including the covariates and acculturative stress (measured as a dichotomous sum) predicting depressive symptoms. While controlling for age and gender, acculturative stress was significantly related to depressive symptoms ($\beta= .23$, $p<.01$). Similarly, a regression analyses was conducted with the covariates, private regard/centrality and depressive symptoms but private regard/centrality was only related to depressive symptoms by a trend level significance ($\beta= -.13$, $p=.081$). A similar model was conducted with public regard. While controlling for age and gender, public regard was significantly related to depressive symptoms ($\beta= -.15$, $p<.05$).

A hierarchical regression model estimated whether private regard/centrality moderated the relation between acculturative stress and depressive symptoms (See Table 4). All predictor variables were centered and then a product term was created for private regard/centrality and acculturative stress (Aiken & West, 1991). In step 1, the covariates

(age and gender) were entered. In step 2, acculturative stress and private regard/centrality were entered. In step 3, the interaction of acculturative stress and private regard/centrality was entered. The interaction term was not significant ($\beta = -.01$, $p = .904$). Thus, these results indicate that private regard/centrality does not serve as a moderator for acculturative stress and depressive symptoms ($r^2 = .00$; change in $F = .015$, $p = .904$).

Similarly, another hierarchical regression model, including public regard estimated whether this variable serves as a moderator (See Table 5). Again, all predictor variables were centered and then a product term was created for public regard and acculturative stress (Aiken & West, 1991). In step 1, the covariates (age and gender) were entered. In step 2, acculturative stress and public regard were entered. In the final step, the interaction term of acculturative stress and public regard was entered. The interaction term was not significant and did not account for any additional variance in the model ($\beta = -.04$, $p = .630$). Thus, these results indicate that public regard did not serve as a moderator for acculturative stress and depressive symptoms ($r^2 = .00$; change in $F = .232$, $p = .630$).

Due to the strong correlation between private regard and centrality, a three-way interaction analyses could not be performed.

Post-Hoc Analyses

Another consideration was that middle school participants and high school participants may differ on the ethnic identity scales due to their different developmental stages. For this reason, an independent samples t-test was conducted. The results indicate that there were no significant differences on the ethnic identity scales between the middle

and high school participants on public regard ($t = 1.63, p = .105$) or private regard/centrality ($t = 1.53, p = .128$).

An independent samples t-test was conducted to determine whether middle school participants and high school participants differ on depressive symptoms. Similar to ethnic identity, the results indicate that there were no significant differences on the level of depressive symptoms between the middle and high school participants ($t = -1.16, p = .247$). Lastly, an independent samples t-test was conducted to determine whether middle school participants and high school participants differ on number of acculturative stressors experienced. In contrast to ethnic identity and depressive symptoms, the results indicate that there were significant differences on acculturative stress between the middle and high school students, where high school students reported more acculturative stressors ($t = -2.50, p < .05$). See Table 6 for descriptives.

Post Hoc analyses were conducted to explore the relationship between public regard and private regard/centrality, especially to examine whether as hypothesized, there were adolescents who had different levels of private/centrality and public regard. First, cases were categorized as falling within Quartile I, II, III, or IV on the Public Regard and Private Regard/Centrality scales. The frequency of individuals within each quartile is displayed in Table 7. About 50% of individuals whose scores fell within Quartile I on Public Regard, also fell in the 1st quartile on the Private Regard/Centrality scale. Similarly, 50% of individuals whose score fell in the 4th Quartile on Public Regard also fell in Quartile IV on Private Regard/Centrality. The largest group consists of the individuals who scored in the 4th quartile range on both scales. Interestingly, the second

largest group consists of the individuals who scored in the 3rd quartile for public regard and the 2nd quartile for private regard/centrality.

The proportion of individuals in quartiles I, II, III, and IV on public regard are significantly different from each other with regards to private regard/centrality: $\chi^2(9,190) = 64.71, p < .001$. These results also indicate a large effect size, signifying that there is a strong association between the two variables in this sample.

CHAPTER IV

DISCUSSION

This study found that greater acculturative stress predicts greater depressive symptoms in a sample of Latino adolescents in an emerging Latino community. Furthermore, greater public regard predicted fewer depressive symptoms. In contrast, private regard/centrality was only related to depressive symptoms at a trend-level significance. Lastly, ethnic identity did not moderate the relationship between acculturative stress and depressive symptoms.

As predicted, and as existing literature supports, the results of this current study suggest that greater acculturative stress predicts greater depressive symptoms. At a descriptive level, when an average of acculturative stress was calculated for this sample, the sample appeared to be mildly stressed. Surprisingly, when a dichotomous sum was created to explore the number of stressors each individual faced, the students endorsed experiencing many different stressors. Despite experiencing a number of stressors of mild intensity, the greater exposure to various stressors still predicted greater depressive symptoms. The sample in this current study endorsed less stressors than the youth in the original study by Romero and Roberts (2003). There were similarities in the percentage of individuals who endorsed particular stressors among the sample in the current study and the foreign-born individuals from the original study. For instance, 74% of the youth in the current sample endorsed being worried about family members or friends having

problems with immigration. Interestingly enough, the percentages for the current study sample more closely reflect the percentages of the immigrant youth in the original study sample, despite the fact that 58.6% of the current study sample is US Born. This suggests that the individuals in the current study endorsed a number of items, which is more consistent with the response pattern of the immigrant sub-sample as opposed to a US born sub-sample in the original study. This is most likely due to the fact that the adolescents in our sample live in an emerging Latino community and therefore have more similarities with the immigrant youth in the original study. The original study was conducted in an established Latino community (e.g. Arizona or Texas). Thus, the U.S born students in the original sample may have been 2nd, 3rd or 4th generation Mexican; whereas, the majority of the U.S born adolescents in the current sample were 2nd generation Mexican. This comparison highlights the importance of context and the differences that may occur in an established versus emerging Latino community. For individuals in the original study and the current study, higher acculturative stress was associated with more depressive symptoms.

In contrast to my hypothesis, private regard/centrality was only related to depressive symptoms by a trend level significance. This finding is likely due to restricted range as the sample uniformly endorsed high levels of private regard/centrality, thus limiting the ability to detect a statistical effect. Also, this result highlights that at this developmental stage, it is possible that how others view you and youth ethnic group is more salient than how you view yourself. The sample included individuals ranging from 7-10th graders, which are still considered early/mid adolescence. Kiang et al. (2006),

found that ethnic centrality did not buffer against normative stressful demands in a sample of 9th graders of Mexican and Chinese descent. Due to existing literature with adults and older adolescents (ages 16-18) that supports the main effects of centrality, Kiang et al. (2006) suggest that their lack of effects found with ethnic centrality may be accounted for by developmental differences. In addition, in the present study, there was no association between private regard/centrality and acculturative stress as there was for public regard. This finding is inconsistent with some existing literature. Sellers and Shelton (2003) found that racial centrality was positively associated with the amount of discrimination an individual indicated that they experienced. In other words, individuals who had a stronger racial centrality also reported experiencing greater discrimination.

As hypothesized, greater public regard predicted fewer depressive symptoms. This result suggests that Latino youth, who felt that others viewed their group more positively, were less likely to endorse depressive symptoms. This finding is consistent with existing literature and Berry et al.'s (1987) concept of feeling accepted in the host society as a protective factor. It is important to consider the influence of discrimination on one's ethnic public regard. A few of the items in the acculturative stress measure used in our study (Romero & Roberts, 2003) address experiences of discrimination. It is likely that there is some relation between how much discrimination one experiences, and their sense of public regard. In fact, as mentioned in the results, in this current study, public regard was significantly correlated with acculturative stress, such that individuals who endorsed more acculturative stress also endorsed less public regard. Thus, those who faced more stressors felt that other's viewed their group more negatively. Research shows

the link between greater discrimination and greater depressive symptoms in Latino youth (Greene, Way, & Pahl, 2006.) Both public regard and acculturative stress were associated with depressive symptoms; but, when both acculturative stress and public regard were included in the model, only acculturative stress was predictive of depressive symptoms. One possibility is that acculturative stress, public regard, and discrimination are all reflective of one latent construct in our data, which is mapping onto depressive symptoms. In other words, it is possible that each of these different scales is tapping into an overall latent construct of ethnic discrimination. Another possibility is that the measurement of these distinct constructs may overlap. Acculturative stress, public regard, and discrimination measures typically include items involving the adolescent's perceptions about how other ethnic groups view them.

Furthermore, contrary to hypotheses, ethnic identity did not serve as a protective factor for Latino youth who faced acculturative stressors. Tajfel's (1981) social identity theory would suggest that having positive perceptions about one's ethnic group could provide support when an individual is faced with stress. However, inconsistent with this theory and the current researcher's hypothesis, neither public regard nor private regard/centrality moderated the relation between acculturative stress and depressive symptoms in our sample. As mentioned above, a possible explanation for this finding is that overall, this sample had limited variability and was high on ethnic identity. It is also possible that a buffering effect of ethnic identity does not apply to adolescents in all contexts.

Existing literature about the protective nature of ethnic identity is mixed. According to Pascoe and Smart Richman (2009), it is possible that in certain situations, a higher level of ethnic identity may lead to a higher vigilance with respect to discriminatory experiences. Noh, Beiser, Kaspar, Hou, & Rummens (1999) found that a stronger ethnic identity actually exacerbated the relation between perceived discrimination and depression. In their meta-analysis, Pascoe and Smart Richman (2009) discussed twelve articles (with a total of 68 effects), which studied the relation between perceived discrimination and mental health. In their meta-analysis, the researchers found that 18% of the total analyses reported that group identification (defined as racial group, gender, sexual orientation etc.) had a buffering effect, 12% of the total analyses showed that higher levels of identification predicted worse mental health outcomes, and 78% of the total analyses found no buffering effect of identification on the relation between perceived discrimination and mental health outcomes (Pascoe & Smart Richman, 2009.) Sellers et al. (2006) found that African Americans with low public regard were at greater risk for experiencing racial discrimination but, low public regard also buffered the influence of racial discrimination on perceived stress, depressive symptoms and psychological well-being. These findings highlight that ethnic identity may serve various roles for individuals of different ethnic groups and in different contexts. Similarly, McCoy and Major (2003) found that Latinos who identified more strongly with their ethnic group were more likely to report depressed affect when reading an article about prejudice towards Latinos. In other words, Latinos who identified more strongly with their ethnic group felt more personally threatened by racism and prejudice. This is yet

another example of how ethnic identity may be harmful as opposed to buffering the relation between perceived discrimination and mental health outcomes.

It is possible that other mechanisms, as opposed to ethnic identity, are more protective for this particular sample in this emerging Latino community context. For instance, having strong social support such as supportive peers, family and school environment may be important protective factors. Analyses conducted with this sample displayed that a sense of school belonging was significantly related to less discrimination and depressive symptoms (Huq, Stein, & Gonzalez, 2011.) Furthermore, in this sample, a sense of school belonging was found to mediate the relation between discrimination and perception of educational barriers such that, greater discrimination predicted significantly lower school belonging, and less school belonging significantly predicted a perception of more barriers (Huq, Stein, & Gonzalez, 2011.) A similar mediation was also found between depressive symptoms and perception of educational barriers (Huq, Stein, & Gonzalez, 2011.) Taken together, these findings suggest that school belonging may be an important protective factor for the Latino adolescents in this sample.

Additionally, another possibility is that, due to the lack of variability and the restricted range of the ethnic identity variables in this sample, even if theoretically a relationship were present for ethnic identity as a moderator between acculturative stress and depressive symptoms, in this particular context, the relationship could not be observed. According to McClelland and Judd (1993), when testing for interaction effects, problems with restricted ranges are magnified.

Much of the existing literature supports a developmental framework in ethnic identity development (Cross, 1971; Phinney, 1989.) For this reason, post hoc analyses were conducted for this current sample to determine whether there were differences in the level of ethnic identity endorsed by the middle school and the high school students. Surprisingly, the findings showed that there were no differences in ethnic identity between the two groups. Existing research would have suggested that the ethnic identity of the high school students would be more positive than the ethnic identity of the middle school students, but that was not the case in this sample. One possible explanation for this is that despite the different ages of the individuals, they may share other important factors in common such as having immigrated to this country at a young age. Thus, another consideration is that generational status might be an important variable to consider as opposed to age when studying the developmental perspective of ethnic identity for Latino in an emerging community. Post-hoc analyses did not find a significant correlation between generational status and ethnic identity.

Similarly, there were also no differences in the amount of depressive symptoms between the two groups. However, the high school students endorsed having experienced more stressors than the middle school students. A possible explanation for this is that as individuals gets older, they may assume more responsibilities for the family and may be exposed to other contexts that make them vulnerable to experiencing acculturative stress. This finding is important because it further suggests that there may be different coping protective mechanisms taking place in the older youth. This finding also suggests that stress for the older youth may manifest in other ways.

To further understand the function of ethnic identity, post hoc analyses were conducted to determine if the presence of one aspect of ethnic identity (public regard and private regard/centrality) influences the presence of the other. The results showed that for individuals who had low public regard, the majority of them also had low private regard/centrality. Similarly, the majority of individuals who endorsed high public regard also endorsed high private regard/centrality. Thus, this suggests that in this sample, it is more likely for an individual to either be low or high in both aspects of ethnic identity as opposed to being high in one and low in the other. However, this finding still does not speak to whether one aspect of ethnic identity is more salient than other aspects of ethnic identity.

Limitations and Future Directions

One of the main limitations of this current study is that it was not longitudinal and therefore a temporal precedent could not be established. Longitudinal analyses would have provided empirical evidence about the causal relations between acculturative stress, ethnic identity and depressive symptoms. Similarly, a larger sample size would have allowed the researchers to look at sub ethnic groups and would have increased the external validity and generalizability of the study findings. Moreover, a larger sample may have also solved some of the restricted range problems.

For the future, it would be important to observe the relationship between acculturative stress, depressive symptoms and ethnic identity longitudinally. Also, another consideration is to take a structural equation modeling (SEM) approach to understanding how acculturative stress, public regard and discrimination may load

together to form a latent construct, which then predicts depressive symptoms. In addition, future research should look at various cultural and non-culture specific variables to further understand other mechanisms that are protective for Latino youth in an emerging community. An exploration of differences among generational status could also provide better insight to the protective nature of ethnic identity. Overall, it is hopeful to see that despite facing the various challenges of being a Latino adolescent in an emerging Latino community, the students in this sample endorsed high ethnic identity. It is promising to know that there are other variables that may be serving as protective for these youth in the face of acculturative stress.

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APPENDIX A

TABLES

Table 1

Descriptive Statistics for Depressive Symptoms Using Additive Approach

Mean	Median	Mode	Standard Deviation
9.51	6.00	.00	10.21

Note. N=187.

Table 2

Correlations of Major Variables

Variables	1	2	3	4	5
1. Acculturative Stress	1.00				
2. Public Regard	-.22	1.00			
3. Private Regard	-.14	.53	1.00		
4. Centrality	-.09	.46	.87	1.00	
5. Depressive Symptoms	.24	-.16	-.09	-.10	1.00

Note. N=187. Correlations in bold are statistically significant at $p < .05$.

Table 3

Descriptive Statistics of Major Variables

Variables	Mean	SD	Potential Range	Actual Range
Acculturative Stress	9.19	5.19	0-20	0-20
Public Regard	3.70	0.94	1-5	1.0-5.0
Private/Centrality	4.28	0.82	1-5	1.0-5.0
Depressive Symptoms	0.29	0.31	0-2	0.0-1.41

Note. N=187.

Table 4

Results of Regression Analyses of Private Regard/Centrality Predicting Depressive Symptoms

Predictors	Step 1	Step 2	Step 3
	β	β	β
Step 1			
Age	0.09	0.04	0.04
Gender	-0.13	-0.16	-0.16
	$R^2=.02$		
Step 2			
Acculturative Stress		.22**	0.22**
Priv/Central.		-0.11	-0.11
		$\Delta R^2=.06$	
Step 3			
Priv/Central.*			-0.01
AS			$\Delta R^2=.00$

Note. N=187. †p < .10, *p<.05, **p<.01

Table 5

Results of Regression Analyses of Public Regard Predicting Depressive Symptoms

Predictor	Step 1	Step 2	Step 3
	β	β	β
Step 1			
Age	0.09	0.04	0.03
Gender	-0.13	-0.13	-0.13
	$R^2=.02$		
Step 2			
Acculturative Stress		.21**	0.21**
Public Regard		-.10	-0.11
		$\Delta R^2=.06$	
Step 3			
Public Regard*AS			-0.04
			$\Delta R^2=.00$

Note. N=187. †p < .10, *p<.05, **p<.01

Table 6

Descriptives for Major Study Variables by Middle and High School

	Mean	Std. Deviation	t	Sig.
Public Regard				
Middle School	3.81	.82		
High School	3.59	1.02		
			1.63	.12
Private/Centrality				
Middle School	4.37	.74		
High School	4.19	.88		
			1.53	.13
Depressive Symptoms				
Middle School	.26	.26		
High School	.31	.35		
			-1.16	.25
Acculturative Stress				
Middle School	8.18	4.75		
High School	10.06	5.41		
			-2.50	.01*

Note. N=187. †p < .10, *p<.05, **p<.01.

Table 7

Crosstabulation of Public Regard and Private Regard/Centrality

		Private Regard/Centrality			
		I	II	III	IV
Public Regard		(Scores below 3.8)	(Scores 3.8-4.5)	(Scores 4.6-4.9)	(Scores = 5.0)
I	(Scores below 3.0)	15	3	5	6
II	(Scores 3.0-3.74)	17	13	18	3
III	(Scores 3.75-4.49)	7	22	14	14
IV	(Scores above 4.5)	0	7	18	25

Note. N=187.

APPENDIX B

MEASURES

Bicultural Stress Scale

	Never happened to me	Not at all stressful	A little bit stressful	Quite a bit stressful	Very stressful
I have been treated badly because of my accent.	1	2	3	4	5
Because of family obligations, I can't always do what I want.	1	2	3	4	5
I have worried about family members or friends having problems with immigration.	1	2	3	4	5
I have had problems in school because of my poor English.	1	2	3	4	5
I do not feel comfortable with people whose culture is different from mine.	1	2	3	4	5
I have felt pressured to learn Spanish.	1	2	3	4	5
I have felt that I need to speak Spanish better.	1	2	3	4	5
I have argued with my boyfriend/girlfriend over being too traditional.	1	2	3	4	5
My friends think I am acting "White".	1	2	3	4	5
My parents feel I do not respect older people the way I should.	1	2	3	4	5
I feel uncomfortable when others make jokes about or put down people of my ethnic	1	2	3	4	5

background.					
I have argued with family members because I do not want to do some traditions.	1	2	3	4	5
I have had to translate/interpret for my parents.	1	2	3	4	5
I have felt lonely and isolated because my family does not stick together.	1	2	3	4	5
I have felt that others do not accept me because of my ethnic group.	1	2	3	4	5
I have had to help my parents by explaining how to do things in the U.S.	1	2	3	4	5
I feel like I can't do what most American kids do because of my parents' culture.	1	2	3	4	5
I feel like belonging to a gang is part of representing my ethnic group.	1	2	3	4	5
Sometimes I do not understand why people from a different ethnic background act a certain way.	1	2	3	4	5
Sometimes I feel like it will be harder to succeed because of my ethnic background.	1	2	3	4	5

Ethnic Identity Scale

Private Regard subscale

	Strongly Disagree		Neither		Strongly Agree
I feel good about being a member of my ethnic group.	1	2	3	4	5
I am happy that I am a member of my ethnic group.	1	2	3	4	5
I have a lot of pride in my ethnic group and its accomplishments.	1	2	3	4	5
I feel that my ethnic group has made valuable contributions to this society.	1	2	3	4	5
I am proud to be a member of my ethnic group.	1	2	3	4	5

Public Regard subscale

	Strongly Disagree		Neither		Strongly Agree
Overall, my ethnic group is considered good by others.	1	2	3	4	5
In general, others respect members of my ethnic group.	1	2	3	4	5
In general, other groups view my ethnic group in a positive manner.	1	2	3	4	5
Society views members of my ethnic group as an asset.	1	2	3	4	5

Centrality subscale

	Strongly Disagree		Neither		Strongly Agree
I have a strong sense of belonging to my ethnic group.	1	2	3	4	5
I have a strong attachment to other people in my ethnic group.	1	2	3	4	5
In general, being a member of my ethnic group is an important part of my self-image.	1	2	3	4	5
Being a member of my ethnic group is an important reflection of who I am.	1	2	3	4	5

Mood and Feelings Questionnaire

	Not True	Sometimes True	Mostly True
I felt miserable or unhappy	0	1	2
I didn't enjoy anything at all	0	1	2
I was less hungry than usual	0	1	2
I ate more than usual	0	1	2
I felt so tired I just sat around and did nothing	0	1	2
I was moving and walking more slowly than usual	0	1	2
I was very restless	0	1	2
I felt I was no good anymore	0	1	2
I blamed myself for things that weren't my fault	0	1	2
It was hard for me to make up my mind	0	1	2
I felt grumpy and cross with my parents	0	1	2
I felt like talking less than usual	0	1	2
I was talking more slowly than usual	0	1	2
I cried a lot	0	1	2
I thought there was nothing good for me in the future	0	1	2
I thought that life wasn't worth living	0	1	2
I thought about death or dying	0	1	2
I thought my family would be better off without me	0	1	2
I thought about killing myself	0	1	2
I didn't want to see my friends	0	1	2
I found it hard to think properly or concentrate	0	1	2
I thought bad things would happen to me	0	1	2
I hated myself	0	1	2
I felt I was a bad person	0	1	2
I thought I looked ugly	0	1	2
I worried about aches and pains	0	1	2
I felt lonely	0	1	2
I thought nobody really loved me	0	1	2
I didn't have any fun at school	0	1	2
I thought I could never be as good as other kids	0	1	2
I did everything wrong	0	1	2
I didn't sleep as well as I usually sleep	0	1	2
I slept a lot more than usual	0	1	2