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The Relationship of Acculturation and Acculturative Stress in Latina/o Youths' Psychosocial Functioning

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THE RELATIONSHIP OF ACCULTURATION AND ACCULTURATIVE STRESS

IN LATINA/O YOUTHS' PSYCHOSOCIAL FUNCTIONING

by

Marsha Tafoya

A thesis submitted in partial fulfillment
of the requirements for the degree

of

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in

Psychology

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UTAH STATE UNIVERSITY
Logan, Utah

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ABSTRACT

The Relationship of Acculturation and Acculturative Stress in Latina/o

Youths' Psychosocial Functioning

by

Marsha Tafoya, Master of Science

Utah State University, 2011

Major Professor: Renee V. Galliher, Ph.D.
Department: Psychology

This study examined relationships between acculturation and acculturative stress, as well as links to self-esteem, depression, and substance use related problems of Latina/o adolescents. Self-report data were collected from 206 Latina/o adolescents in three public high schools in a small city in the Western United States. Different patterns were observed for Latino males and females in their acculturation processes and experiences of acculturative stress as they relate to psychosocial functioning. Experiences of acculturative stress are found to be the driving force that predicts the psychosocial functioning for these Latina/o adolescents, especially for Latino males. For Latino males, experiences of acculturative stress were related to lower self-esteem and higher depression. For Latinas, experiences of acculturative stress were related to higher depression scores. Tests of moderation and mediation suggested that pathways to

psychosocial outcomes may be best understood in Latino youth by examining the

interplay between acculturation levels and acculturative stress experiences.

(114 pages)

PUBLIC ABSTRACT

The Relationship of Acculturation and Acculturative Stress in Latina/o

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This study was conducted to better understand how acculturation and acculturative stress are related to self-esteem, depression, substance use, and substance use problems in 206 Latina/o youth. Acculturation is the social and psychological process of change that occurs when an individual or group comes in contact with a different culture. The acculturation process can be positive, improving one's life chances in the new culture, or it could be negative due to the challenging nature of change and adaptation to new cultural and social expectations. This difficulty creates a type of stress, called acculturative stress that has been found to be related mental and health problems.

Acculturative stress was a critical factor in the mental health of Latina/o youth in this study. This was especially true for Latino males, where acculturative stress was a predictor of problems related to substance use, and was related to experiencing lower levels of self-esteem and higher levels of depression. However, the effect of acculturative stress was dependent on youth's level of acculturation in some ways. For example, acculturative stress has a stronger effect for young women who reported weaker connection to White American culture, and young men who reported both high acculturative stress and high orientation to White American culture were most likely to report substance use problems. Thus, it is important for those working with Latina/o youth to understand acculturation and acculturative stress and work towards interventions that help reduce the impact of this type of stress.

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<div align="right">Marsha Tafoya</div>

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CHAPTER I

INTRODUCTION

According to the 2010 U.S. Census, the U.S. population is becoming more ethnically diverse. Latinos comprise 16% of the total U.S. population, with 50.5 million counted in the 2010 U.S. Census (Cohn, Passel, & Lopez). Since 2000, the Latino population has grown by 43%, making them one of the fastest growing ethnic minority groups in the U.S. Because of the continued growth of Latina/os in the U.S., many are immigrants or children of immigrants. Over 17 million of the 50.5 million are Latina/o children under 18 years of age (Dockterman, 2011). Moreover, it is estimated that approximately 52% of Latino children are U.S. born, with at least one parent that is foreign born (Fry & Passel, 2009).

The process of acculturation is of particular interest among Latinos, since many have immigrated to the U.S. and face the task of learning to engage successfully with U.S. culture, trying to adapt while maintaining ties with their own culture. This process could create some strain on the individual and impact overall well-being. Immigration to the U.S. often occurs as a result of economic, political, and educational stressors. Moreover, moving to a new country where a person might need to learn a different language, along with a lack of opportunities or resources might create immense strain. Furthermore, people that are new to the U.S. often experience racism and discrimination once they arrive in this country, which could create additional stress while they trying to adapt to the dominant society (Berry, 2001).

In addition to being the largest ethnic minority group, Latinos face many health,

mental health, and educational disparities. In the past few years, there have been many concerns related to the immigration status of Latinos that have resulted in anti-immigration laws and a rise in discrimination against Latinos (Pew Hispanic Center, 2010). There are approximately 11.2 million undocumented immigrants in the United States (Passel & Cohn, 2010). It is estimated that 80% of undocumented immigrants are of Latino origin (Pew Hispanic Center, 2010). In addition to health disparities, Latinos experience environmental stressors. In a recent study, 1 out of 10 Latinos have been asked their immigration status by law enforcement (Pew Hispanic Center, 2010). In the past decade, harsh immigration laws against those who do not have legal documentation in the U.S. have been proposed or passed in many states. For example, Arizona AB 1070 is considered to be one of the harshest anti-immigration laws in U.S. history. More recently in Alabama, a law that is considered harsher than AB 1070 was introduced and signed by their governor (Johnson, 2011). Given the climate of immigration and anti-immigration laws, Latinos living in the U.S. might be living under higher levels of stressful conditions, and may experience unique challenges as they engage in the acculturation process.

Acculturative stress has been examined in psychology and similar fields to explore its impact on immigrant and ethnic minority groups in the U.S. Acculturative stress is usually experienced by those who are in the process of acculturating to the dominant society (e.g., United States) by adapting the dominant culture's language and norms (Berry, Kim, Minde, & Mok, 1987). Berry and colleagues described acculturative stress as "a reduction in health status (including psychological, somatic, and social

aspects) of individuals who are undergoing acculturation, and for which there is evidence that these health phenomena are related systematically to acculturation phenomena" (p. 491).

Acculturative stress can have a negative impact in the mental health of Latinos. Research has shown that Latinos who experience acculturative stress have higher rates of suicide, depression (Hovey & King, 1996), anxiety (Crockett et al., 2007), and substance abuse (Gil, Wagner, & Vega, 2000). Most of the findings in the acculturative stress literature have focused on adults and not adolescents. However, the limited research that measures the acculturative stress experience among Latino adolescents has found that high levels of acculturative stress are linked to substance abuse and depression (Gil et al., 2000; Hovey & King, 1996). Unfortunately, integration of the literature is difficult because studies are inconsistent in the way that acculturative stress is measured.

Acculturative stress stems from the process of acculturation that a person or group undergoes. There have been inconsistencies in the way that acculturation has been measured. Acculturation has been measured either unidimensionally or bidimensionally. Acculturation measured in a unidimensional way, also labeled as linear in the literature, assumes that the individual is working towards assimilation, adapting the new culture's customs and values and diminishing their own (Sam, 2006). Conceptualizing the acculturation process as bidimensional or orthogonal, the individual can be seen as being able to adapt at different levels the majority culture's customs and values, as well as maintaining their own cultural customs and values (Cuéllar, Arnold, & Maldonado, 1995; Sam, 2006). In many studies, acculturation has been measured via proxy variables, such

as language preference, language spoken at home, generational status, country of origin, and number of years in the U.S.

There are serious limitations in the studies that have been conducted regarding acculturation and acculturative stress and their relation to psychological health. There has not been a consistent way of measuring acculturation. Studies examining the relationship of acculturation and psychosocial functioning have mixed findings, suggesting that being acculturated to the dominant society can have both positive and negative outcomes (Rodríguez, 2006; Zane & Mak, 2002). In addition, there is a lack of studies examining acculturative stress in Latino adolescent samples. Acculturative stress has been discussed in studies but not necessarily measured. The current study utilized a quantitative methodology to examine the role of acculturation and acculturative stress in Latina/o adolescents' psychosocial functioning. Various indices of psychosocial functioning were examined as they relate to acculturation and acculturative stress, including self-esteem, depression, and substance use. This study sought to gain a better understanding of the relationships among acculturation levels, acculturative stress, and psychosocial functioning of Latina/o adolescents, which is a limitation in the literature. Gender differences were also examined in levels of acculturation, acculturative stress, depression, self-esteem, and substance abuse problems.

CHAPTER II

REVIEW OF THE LITERATURE

This review of the literature is divided into five sections: (a) acculturation theory definition, and measurement; (b) acculturative stress theory, definition, and measurement; (c) acculturation and acculturative stress in Latina/o identity and development; (d) discussion of links between acculturation, acculturative stress, and psychosocial functioning; (e) summary and research questions for the current study.

Acculturation

Acculturation Defined

Redfield, Linton, and Herskovits (1936) defined acculturation as a "phenomenon which results when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of each other or both groups" (p. 149). Moreover, acculturation is defined as the social and psychological process, occurring at the group or individual level, of change that occurs upon contact with a different culture (Sam, 2006). These changes occur across physical, biological, cultural, social relationship, and psychological (behavior and mental health status) domains (Berry et al., 1987). The acculturation process can be positive, improving one's life chances and mental health in majority/dominant culture, or it could be negative, due to the inherently challenging nature of change and adaptation to new cultural and social expectations (Berry, 1988; Berry et al., 1987).

Acculturation Theory

      Sam (2006) described acculturation as a process with three different levels or "blocks." Contact, reciprocal influence, and change are conceptualized as the building blocks of the acculturation process (Sam). As an individual or groups of people immigrate to the U.S., they will have contact with a majority culture that is different from their own. The acculturation process first begins with this contact between two different cultural backgrounds. After contact, there is a reciprocal influence in which both groups influence each other, although the group in power will have the most influence (Sam, 2006). In general, the group in power is more likely to have significant influence on the nondominant group, therefore it is probable that more change will occur in the nondominant group.

      Acculturation change can be seen as both a process and an outcome (Sam, 2006). As cultures have contact, we can examine how the process of change occurs when one is acculturating, or we can assess the level and type of change as an outcome of the acculturation process. The bulk of the research conducted to date has assessed acculturation as an outcome and evaluated the level or nature of acculturation at specific single time points (e.g., Capps, Bronte-Tinkew, & Horowitz, 2010; Finch, Frank, & Vega, 2004; Finch, Kolody, & Vega, 2000). Directionality and dimensionality are fundamental issues in acculturation research (Sam, 2006). Directionality has been conceptualized in two primary ways. As "unidirectional," in which acculturation creates change towards the goal of being more like the dominant culture or as bidirectional, in which both groups would have reciprocal influence and change, although not necessarily

with equal influence (Sam, 2006). With regard to dimensionality in acculturation, the emphasis is on the impact of acculturation on cultural identity. The acculturating individual or group is learning and endorsing a new culture's identity, which includes values, beliefs, traditions, and practices. It might be assumed that a person who goes through the acculturation process would lose their traditional cultural identity, as they assume a new cultural identity. From a unidimensional perspective, someone would lose their traditional cultural identity and gain a cultural identity of the dominant group, in this case U.S. majority culture. From a bidimensional perspective on acculturation, an individual or group could keep their cultural identity, as well as adopt or practice a new cultural identity (Sam, 2006). In a bidimensional conceptualization, the processes of identification with one's culture of origin and the new culture are considered to be independent; an individual can be highly identified with both, one, or neither culture.

Berry proposed that acculturation is too complex to be conceptualized as unidimensional. He suggested that when examining acculturation, it might be more accurate to assess the extent to which an individual not only identifies with his or her own cultural/ethnic orientation, but also the degree to which they identify towards other groups' (Berry, 1988, 2002). Berry suggested that the process of acculturation would be influenced by a person's value for maintaining traditional identity and customs, as well as aspirations to have "inter-ethnic contact" and deciding to what extent relations with majority society are valuable and solicited (Berry, 1988).

Based on Berry's understanding of acculturation, he proposed that a person or group's acculturation could be classified as assimilation, integration, separation, and

marginalization (Berry, 1988). Those who assimilate relinquish their own cultural identity and adopt the new society's cultural values. Someone in the integration category would maintain their cultural identity, as well as adopt mainstream cultural identity, which in the literature can be also referred to as bicultural. Berry distinguishes separation from segregation; Segregation is imposed by the dominant group, or group in power. In segregation, there would maintenance of the culture of origin and rejection of or lack of integration in to the mainstream culture. This category is also defined in the acculturation literature as "traditional." The last category that Berry proposed is marginalization. Someone in this category does not identify with mainstream/dominant cultural values and loses both "culture and psychological contact with traditional culture," which causes feelings of alienation and identity loss.

Acculturation: Identity and Development

Understanding how acculturation influences development is important. It might be especially important in understanding children and adolescents' development when they experience acculturation, as acculturation processes are so closely linked to critical identity development processes in adolescence. Development is complex for ethnic minority and immigrant youth trying to figure out how to live in two different worlds, in terms of maintaining their cultural values and adopting dominant society's values or being competent in their own culture and majority culture.

Oppedal (2006) suggested an acculturation development model that would fit immigrant and ethnic minority youth. This model is described as a framework in which aspects of culture guide development across the lifespan of these youth. The model

theorizes a "developmental niche" that is in the middle of two different sociocultural domains (own culture and majority culture). Oppedal argued that a sociocultural contextual model of development would be a better fit for understanding how youth manage multiple sociocultural influences, rather than examining development the way that traditional acculturation models conceptualize developmental processes (i.e., adaptation to majority cultural values). Furthermore, this developmental process for children and adolescents of immigrant parents can be viewed as trying to acquire competence in the dominant culture, which can result in ethnic identity difficulty for these youth growing up in the U.S.

Adolescents' difficulty with ethnic identity could be related to the struggle of maintaining connection to their traditional culture or parents, developing an identity as an American, or both. Liebkind (2006) suggested that ethnic identity is intricately linked to the acculturation process. Ethnic identity can be conceptualized similarly to the way that acculturation is presented, as either unidimensional or bidimensional in structure (Liebkind, 2006). It can be that one maintains both identities, or chooses to maintain or adapt to one identity. Furthermore, experiences of racism, discrimination, and prejudice can influence the way that someone will develop their identity, whether they will maintain strong ties to their ethnic identity or majority culture due to these experiences.

Acculturative Stress

The acculturation process can be a fairly smooth process for some, but it might be very stressful for others. The type of stress that is associated with the acculturation

process is called acculturative stress. Acculturative stress is usually experienced by those who are in the process of acculturating to a dominant society (e.g., United States), by adapting the dominant culture's language and norms. Berry and colleagues (1987) described acculturative stress as "as a reduction in health status (including psychological, somatic, and social aspects) of individuals who are undergoing acculturation, and for which there is evidence that these health phenomena are related systematically to acculturation phenomena." Berry (2006) also defined acculturative stress as "a response by people to life events that are rooted in intercultural contact."

Berry and colleagues (1987) stated:

The concept of acculturative stress refers to one kind of stress, that in which the stressors are identified as having their source in the process of acculturation; in addition, there is often a particular set of stress behaviors which occur during acculturation, such as lowered mental health status (specifically confusion, anxiety, depression), feelings of marginality and alienation, heightened psychosomatic symptom level, and identity confusion. (p. 492)

Furthermore, acculturative stress occurs with intercultural contact; people can experience cultural loss and uncertainty of how one should live in the new culture, which results in higher levels of depression and anxiety. Stress, coping, and adaptation is a main theoretical view of understanding how people deal with the acculturation process (Berry, 2006). Acculturation statuses (assimilated, traditional, bicultural, marginalized) describe an individual's current acculturation position, whereas acculturative stress captures the distress associated with achieving or attempting to achieve an acculturation position. For example, a person can desire and seek assimilation to the new culture. But not everyone will be accepted into the host group with the same ease, leading to different stress

responses in the individual. Acculturative stress would then be a stress reaction to events that occur in the acculturation process (Berry, 2006).

In order to qualify as acculturative stress, changes in physical, psychological and social aspects should be related in a systematic way to known features of the acculturation process, as experienced by the individual (Berry et al., 1987). There are factors, such as values and cultural identity/maintenance, which could explain how this acculturation process is different for different groups of people. Moreover, not having coping skills that can help alleviate the strain of the acculturation process can result in more negative outcomes, whereas people that can cope with the stress related to the acculturation process will less likely have negative outcomes. Berry (2006) noted that when stressors are not managed well, then stress will increase even more, and the effects will be more negative. In addition, if these stressors become overwhelming, then the immediate effects are significantly negative and can be damaging, such as resulting in anxiety and depression.

The acculturation process could be the result of voluntary, involuntary, sedentary, or temporary contact with a new host culture. According to Berry and colleagues (1987), there are five types of people that are more likely to experience acculturative stress and depending on the group, this type of stress could look very different or could be experienced at different levels of distress. There are people that have involuntary contact, such as native peoples and refugees, and those who have voluntary contact such as immigrants (relatively permanent) and sojourners (temporary; Berry et al., 1987).

There are contextual factors that can influence people's style of acculturation

process and adaptation. Some of these factors include, physical appearance, voluntary contact, attitude about acculturation, the number of people in the group, and national policies in the dominant society (Berry, 2002). Additional moderating factors that influence acculturative stress, which are present before going through the acculturation process are age, gender, education, economic status, reasons for immigrating, and cultural distance (Berry, 2006). Other moderating factors arise during the acculturation process that can change over time. These factors include, learning the new language, finding employment, finding housing, as well as forming and/or having social support in the new or majority culture (Berry, 2006).

These moderating factors play a role prior to and during the process of acculturation, which can be viewed as both protective and risk factors depending on which factors people have and experience. Moderating factors can either be present prior to experiencing the acculturation process or may arise from the experience of the acculturation process (Berry, 2006).

Measurement

Acculturation Measured

There are various ways in which acculturation has been measured in previous research studies. Some studies have used self-reported language preference (Akins, Mosher, Smith, & Gauthier, 2008; Capps et al., 2010; McQueen, Getz, & Bray, 2003), language spoken at home, or language most frequently spoken at home (Plunkett & Bámaca-Gómez, 2003) as proxies for acculturation. Others have used survey measures

designed specifically to capture the acculturation construct (Schwartz, Zamboanga, & Jarvis, 2007; Thoman & Surís, 2004). Because to this, there are complications in terms of linking the available research in a cohesive way to acculturation theory (Sam, 2006).

Many studies where acculturation has been examined in Latinos have measured the construct in a unidirectional way, with Latino orientation, however defined, at one end of the scale, bicultural orientation in the middle, and White American orientation at the other end of the scale. In a study by Gil, Vega, and Dimas (1994), with a sample of 4296 Latino adolescent males, acculturation was measured using a two-item scale that asked participants' language preference (ranging from only Spanish to only English) and language used with their friends. Plunkett and Bámaca-Gómez (2003) assessed acculturation by asking which language they spoke at home and which language they spoke most frequently. Acculturation has been measured by assessing frequency of language spoken across several different contexts, or by simply asking the length of time Latino youth have lived in the U.S. (Gil et al., 2000).

Szapocznik, Scopetta, Kurtines, and Aranalde (1978) developed a 24-item acculturation scale with 334 Cubans and 251 White Americans, which assessed language, customs, culturally-linked habits, and idealized lifestyle. Subsequently, Marin, Sabogal, Marin, Otero-Sabogal, and Perez-Stable (1987) developed a 12-item short acculturation scale with a sample of 363 Hispanics and 228 non-Hispanic whites, where language use, media, and ethnic social relationships were measured.

Cuéllar and colleagues (1995) developed the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II), a revision from the original ARSMA by Cuéllar,

Harris, and Jasso (1980) specifically for Mexican-Americans. This scale was developed

to assess acculturation in an orthogonal manner, by examining cultural orientation in both

Mexican and Anglo culture by assessing language use and preference, ethnic identity and

classification, cultural heritage and ethnic behaviors, and ethnic interaction. In addition,

Burnam, Hough, Karno, Escobar, and Telles (1987) developed a 26-item scale to be used

with community samples. This study used a large community sample of 1245 Mexican

American adults in Los Angeles, which acculturation was assessed by using modified

scales from Szapocznik and colleagues (1978) and Cuéllar and colleagues (1980).

Finally, acculturation has also been measured by asking participants their

generational status. There have been various ways that generational status has been

measured in research related to Latinos. The further someone is in generational status, the

more likely it is that the individual is more acculturated. Some studies measure

generational status by whether they are U.S. or foreign-born (Gil et al., 1994). Other

studies have measured generational status by asking whether the individual, parents, and

grandparents were born in the U.S. (Cuéllar et al., 1995). Cuéllar and colleagues labeled

those whose parents were both born in another country "first generation," those whose

grandparents were born in another country as "second generation," and so on. In addition,

youth who immigrated to the U.S. as children and are being raised in essentially the same

environment as U.S. born youth are often referred to as 1.5 generation children. However,

there have been inconsistencies in the way that generational status in Latino youth has

been measured or defined across the literature. For example, some studies describe

foreign-born Latino youth as .5 generation (Gil et al., 1994), while others labeled them as

first generation (Cuéllar et al., 1995; Dennis, Basañez, & Farahmand, 2010). In support

of the assessment of generational status, however, studies have shown significant

correlations between generational status and acculturation level (Cuéllar et al., 1980;

Marin et al., 1987).

A limitation of measuring acculturation in a unidimensional form is that the

acculturation process is then seen as losing or giving up one's culture in order to gain

skill or attain success in dominant culture. For Latinos in the U.S., this "one way"

acculturation process might not be an accurate description. Many Latinos, regardless of

their English language proficiency, generational status, or length of residence in the U.S.,

remain strongly tied to their native language and to their Latino cultural values and

traditions. They can also endorse some cultural values more than others, such as being

high in Latino culture and low on mainstream cultural values, and therefore a

rudimentary and unidimensional form of measuring acculturation might not be the best

form to assess Latinos' acculturation status.

Cuéllar and colleagues (1995) revised the ARSMA and created the ARSMA-II, in

order to measure acculturation in an orthogonal and multidimensional form where an

individual can endorse both mainstream U.S. and Mexican culture at different levels.

Using a bidimensional measure of acculturation, like the ARSMA-II, researchers have

been able to explore acculturation with mainstream culture, as well as their

embeddedness in their own culture, also known as enculturation.

The original ARSMA measured acculturation in a linear form, describing five

levels of acculturation, ranging from very Mexican oriented to very Anglo oriented. In

contrast, the revised ARSMA-II assesses acculturation level at both Mexican and Anglo orientation and attempts to capture modes of acculturation such as integration (high on both Mexican and Anglo orientation), assimilation (high on Anglo orientation and low on Mexican orientation), separation (low on Anglo orientation and high on Mexican orientation), and marginalization (low on both scales) as it was proposed by Berry (1980, as cited in Cuéllar et al, 1995). Cuéllar and colleagues administered the ARSMA-II to a sample of 171 Mexican-Americans. Participants were given both the ARSMA and ARSMA-II to test validity of the revised version. The ARSMA and a composite scale calculated as the difference between the Anglo orientation scale (AOS) and the Mexican orientation scale (MOS) of the ARSMA-II were correlated at $r =. 89$. The ARSMA-II was used to measure acculturation in 472 male and 484 female Latino adults, with reliability of .87 (MOS) and .90 (AOS; Caetano, Ramisetty-Mikler, Wallisch, McGrath, & Spence, 2008).

More recently, a short version of the ARSMA-II has been used with children and adolescents, the Brief ARSMA-II. The 12-item Brief ARSMA-II is comprised of the items from the ARSMA-II that loaded most heavily on the AOS and MOS, respectively. It has been used with a sample of 292 middle school Latinos in a city and a sample of 116 third- through fifth-grade Latino children in a rural area (Bauman, 2005). Reliability for the Brief ARSMA-II for the first sample was .93 for the MOS and .69 for the AOS; for the second sample was .84 for the MOS and .75 for the AOS. In another study, the Brief ARSMA-II was administered to 347 Latino children, for which the reliability was .91 and .65 for the MOS and AOS respectively (Schwartz et al., 2007).

Acculturative Stress Measured

Research assessing acculturative stress has examined how it impacts individual's health and mental health. There are various ways that acculturative stress has been measured. Some studies have measured acculturative stress by measuring acculturation conflict, language conflict, and perceived discrimination (Smokowski, Bacallao, & Buchanan, 2009; Vega, Zimmerman, Warheit, Khoury, & Gil, 1995). Others have used acculturative stress scales, such as the Hispanic Stress Inventory (HIS; Thoman & Surís, 2004), the Acculturative Stress Scale for International Students (ASSIS; Constantine, Okazaki, & Utsey, 2004), and the Multidimensional Acculturative Stress Inventory (MASI; Torres, 2010). Moreover, many studies discuss acculturative stress when examining acculturation, as a way to explain the relationships found between acculturation and their outcomes, but do not use a scale to measure it.

The HIS has been used to measure acculturative stress in Mexican and Puerto Rican samples. Cervantes, Padilla, and Salgado de Snyder (1991) developed this scale to capture the psychosocial stresses that Hispanic/Latino adults experienced. This scale has 59-items for U.S. born respondents and 73-items for immigrants. The HSI was used in a study of 101 Latino patients at a community psychiatric clinic found that level of acculturative stress was predictive of psychological distress (Thoman & Surís, 2004).

The ASSIS was used in a sample of 320 African, Asian, and Latin American international students from 33 different countries (Constantine et al., 2004). This scale is a 36-item inventory that measures perceived hate, fear, and stress due to change/culture shock, guilt, and nonspecific concerns. This study found the higher acculturative stress

scores predicted higher levels of depressive symptoms, and also that Latin American students experience significantly greater levels of acculturative stress than Asian students.

The MASI was used in a community sample of 148 Latina/o adults, which found that acculturative stress was related to depression (Torres, 2010). This scale has 36-items, with four subscales measuring stressors that are associated with pressure for developing English competency, Spanish competency pressures, pressure to acculturate, and pressure to assimilate to American customs.

The scales that have been developed to measure acculturative stress have only used adult samples. An exception is the Social, Attitudinal, Familial, and Environmental (SAFE; Padilla, Wagatsuma, & Lindholm, 1985), which has also been used with adolescent samples (short version SAFE and SAFE.-C for children). The SAFE scale was designed to assess perceived discrimination, perceived barriers to adapting to the dominant society, negative reactions of family members to one's desire to adapt, feelings of isolation, and difficulties in communication in dominant culture. The scale was originally developed through interviews with immigrant students, during which questions about the acculturation process and sociocultural difference between their culture and the U.S. culture were asked. Through these interviews, four themes were developed to describe why acculturation stress occurred. Themes were: (a) quality of immigrants' social life in new culture; (b) immigrants' attitudes toward their former culture and country of origin; (c) immigrants' relations with family in the new culture, particularly with parents; and (d) quality of the environment in the new culture.

This SAFE was first developed with 60 items, but was revised and a shorter version was developed in a sample of 214 undergraduates with reliability of .89 (Mena, Padilla, & Maldonado, 1987). The short version of the SAFE scale has also shown good reliability in a sample of 141 Latino college students, with an alpha coefficient of .89 and for each of the subscales of .88, .73, .71, and .70, respectively (Fuertes & Westbrook, 1996).

The short version of the SAFE acculturative stress scales has shown to have good internal validity and to specifically measure acculturative stress (Joiner & Walker, 2002). The short version of the SAFE was used with a sample of 70 Latina/o adolescents, in which depression and suicide ideation were positively related to acculturative stress (Hovey & King, 1996). In this study, one fourth of these adolescents experienced high levels of depression and suicidal ideation, which were related to experiencing acculturative stress.

Many studies mention that their participants/samples experience acculturative stress but do not use a measure that would indicate that they are examining this acculturative stress; rather, authors note components of the type of stress that they might be experiencing due to the acculturation process (Gil et al., 2000). For example, Gil and colleagues measured acculturative stress by asking questions of perceived discrimination and conflicts with acculturation. Some studies that report results that acculturation is associated with negative mental health outcomes discuss how their results can be due to acculturative stress, even though that is not what they measured.

Links Among Acculturation, Acculturative Stress, and
Psychosocial Functioning

There is a mixed literature on acculturation and psychosocial health, suggesting that acculturation can be positively or negatively related to outcomes. Studies that examine acculturative stress have been more consistent, in finding that acculturative stress is reliably related to negative outcomes. However, there is a shocking shortage of studies exploring how acculturation and acculturative stress work with each other in predicting psychosocial health and adolescent outcomes. This study was designed to examine how acculturation, acculturative stress, and psychosocial outcomes work together to have a better understanding of how they are related to psychosocial functioning of Latina/o youth. I posit that acculturation and acculturative stress are linked in systematic ways, and that the acculturation and acculturative stress processes are both essential to understanding psychosocial health. See Figure 1 for a graphic depiction of links among the three central constructs in this study.

Links Between Acculturation and Acculturative Stress

Acculturation and acculturative stress are related. Someone needs to be going through the acculturation process in order to experience acculturative stress. Also, those that are going through experiences of acculturative stress can shift their acculturation status in response to the stress that they might be experiencing. However, there is limited research examining the relationship between acculturation and acculturative stress. Given that there have been many ways that acculturation has been measured and the focus in the
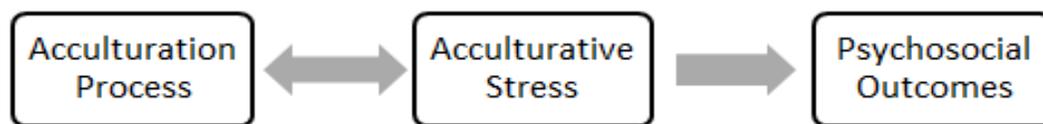
Figure 1. Acculturation, acculturative stress, and psychosocial outcomes.

acculturation literature has been to categorize people with regard to where they are in the acculturation process, it is not surprising that there is a gap in examining how acculturation and acculturative stress are related to one another. In one of few existing studies, Hovey and King (1996) found no relationship between levels of acculturation and acculturative stress in a study of 40 female and 30 male Latino adolescents from a bilingual program in California; they discussed how the acculturation process might look different for different people due to contextual factors.

When exploring links between acculturation and acculturative stress, generational status should be explored. There are studies that have found generational differences in relation to experiencing acculturative stress. Gil and colleagues (1994) found that 1.5 generation adolescent boys (foreign-born Latino youth) experienced higher levels of acculturative strain/stress than their first-generation counterparts in a sample of 4,296 sixth- and seventh-grade Latino boys in Florida. Acculturative stress was measured by assessing different domains of acculturative stress, including language conflict, perceived discrimination, perception of a closed society, and indicator of the perceived acculturation gap between the student and their parents. Furthermore, first-generation adolescent boys who were low on acculturation reported higher acculturative stress (Gil et al., 1994).

Another study examining acculturation strain with 331 Latino college students found that first- and second-generation Latinos reported that they experienced more acculturation conflicts than third-generation college students (Dennis et al., 2010). Acculturation conflicts were measured by examining the intergenerational conflicts with family members. The authors adapted some items of other acculturative stress measures such as the SAFE. Generational status was measured as first generation if they were foreign born, second generation if they were born in the U.S., and third generation if born in U.S. and had at least one parent who was born in the U.S.

Links With Psychosocial Functioning

Although measuring acculturation is complex, there have been many studies that have examined links between acculturation and psychological health and well-being. Across varying methods for assessing acculturation (e.g., language use, generational status, ARSMA), many researchers have concluded that greater acculturation is linked to poorer outcomes in many psychological and social domains. For example, higher acculturation was related to problem behavior proneness among Latino fourth through eighth graders (Dinh, Roosa, Jenn-Yun, & Lopez, 2002), and to eating disordered behavior among Mexican-American women (Cachelin, Phinney, Schug, & Striegel-Moore, 2006).

Other studies suggest the opposite, that the higher the acculturation the better mental health outcomes. Some positive outcomes that have been explored are having higher self-esteem (Valentine, 2001), and higher educational aspirations and motivation

(Plunkett & Bámaca-Gómez, 2003) among those with higher acculturation.

Moreover, the acculturation statuses have been found to have links to mental health outcomes. For example, people that are marginalized appear to be at greatest risk of mental health problems. In addition, someone that is in the integrated or bicultural category is expected to demonstrate better mental health outcomes (Tadmor, Tetlock, & Peng, 2009). This might be due to being able to navigate more successfully two different cultures, their own traditional culture, and the mainstream culture. However, Romero, Carvajal, Valle, and Orduña (2007a) have introduced the term "bicultural stress" as an alternative conceptualization of bicultural adaptation. Bicultural stress is defined as everyday stressors resulting from pressures of embracing both majority and minority cultures, including discrimination, negative stereotypes, intergenerational acculturation conflicts, and pressure to speak more than one language. Bicultural stress is related to poorer mental health outcomes relative to those who do not experience this type of stress.

Rodríguez (2006) conducted a meta-analyses examining studies that examined acculturation and outcomes for Latina/os and found similar findings. The meta-analysis found weak associations between acculturation levels and mental health. Rodríguez concluded that acculturation is not an important variable for understanding the development of mental health, and that acculturative stress was found to have a stronger association to mental health outcomes in Latina/os.

Acculturative stress could occur at a group or individual level and can be associated with lower mental health status, such as anxiety and depression, feeling alienated, identity confusion, and higher levels of psychosomatic symptoms (Berry et al.,

1987). Studies assessing acculturative stress have examined associations with mental health, but there are other studies that have examined Latino's health status more broadly. One study found that acculturative stress was significantly associated with poor health outcomes (Finch, Hummer, Kolody, & Vega, 2001), measured through self-reports of mental health, health and chronic conditions. Another study of Mexican farmworkers found that issues with regard to acculturation, language and discrimination conflict resulted in increased psychiatric symptomatology (Alderete, Vega, Kolody, & Aguilar-Gaxiola, 1999). Even though different measures of maladjustment were used, most studies indicated significant positive relationships between acculturative stress and mental and physical health problems.

The current study provides a comprehensive evaluation of psychosocial health that includes positive and negative outcomes across different psychological domains. As such, the purpose of the current study is to examine links between acculturation levels, experiences of acculturative stress and both internalizing and externalizing behaviors, specifically self-esteem, depression, and substance use and substance use problems.

Self-Esteem, Acculturation, and Acculturative Stress

Rosenberg (1965) defined self-esteem as a positive or negative attitude toward one self. Examining the relationship between acculturation and self-esteem in adolescence is important in order to understand how acculturation influences adolescent development. Having high self-esteem implies a strong sense of self-worth; whereas, low self-esteem implies self-rejection, self-dissatisfaction, and self-contempt.

Few studies have assessed acculturation, as it relates to self-esteem in Latina/o youth, especially in males. Furthermore, within this area, studies have not used an acculturation instrument that is bidimensional, in order to capture a more sophisticated sense of where an individual is in the acculturation process. Findings with various samples of adult and adolescent Latina/os have yielded mixed results regarding the association between acculturation and self-esteem.

In a study with 110 Latina/o college students, higher acculturation was positively related to self-esteem (Valentine, 2001, 2006). Valentine measured acculturation via a four-item scale that asked about language preference. In another study examining elderly Latina/os, acculturation, measured unidimensionally by asking 16 questions assessing English language use, was associated with higher levels of self-esteem (Meyler, Stimpson, & Peek, 2006).

In a study of 150 Latina/o adolescents, acculturation predicted higher levels of self-esteem (Cavazos-Rehg & DeLucia-Waack, 2009). This study measured acculturation by language use, media, and ethnic social relations, in which higher scores signaled more acculturation to the U.S. society. Another study examining 330 fourth- through eighth-grade Latina/os, found that higher levels of acculturation were related to self-esteem (Dinh et al., 2002).

In contrast, in a study of Dominican female adolescents, acculturation was not associated with self-esteem (Orshan, 1999). This study used the Dominican American Acculturation Rating Scale (DARS), which is an adaptation of the ARSMA by Cuéllar and colleagues (1980). Another study examining 63 Puerto Rican female adolescent's

self-esteem and acculturation found that there was no relationship between acculturation and self-esteem (Orshan, 1996). This study also used an adaptation of the ARSMA, the Puerto Rican American version of the Acculturation Rating Scale. To complicate the body of literature further, one study found that acculturation was negatively associated to with self-esteem among U.S. born Latino adolescents (Gil et al., 1994). Finally, one other study of 349 Latino adolescents found that increased length of time living in the U.S. was significantly related to lower self-esteem (Smokowski, Rose, & Bacallao, 2010).

When examining studies that have assessed the relationship between acculturation and self-esteem in Latina/os, there are some patterns. It seems that the studies that have used a unidimentional, language-based way to measure acculturation in Latina/o samples have found that higher levels of acculturation are related to higher self-esteem. In contrast, studies that have measured acculturation in a bidimensional form that accounts for cultural embeddedness, reported mixed findings. It may be that acculturation can be a different process in different Latina/o groups.

Research examining acculturation and self-esteem yields mixed findings. Therefore, exploring the relationship between acculturative stress and self-esteem might explain better what the relationship of acculturation and self-esteem is really like. There are limited studies examining this relationship, but in one study of 288 Latina/o adolescents, those who reported acculturation stress (measured by perceived discrimination, acculturation and language conflict) also reported lower self-esteem (Smokowski et al., 2009).

Depression, Acculturation, and
Acculturative Stress

According to the Surgeon General's report, Latina/o youth have poorer health

outcomes, including more depressive symptoms than non-Latina/o youth (U.S.

Department of Health and Human Services, 2001). Some research suggests that Latina/o

youth experience more depression problems compared to other groups (Roberts &

Sobhan, 1992). However, according to Bernal and Rosselló (2008), there are no

published national studies examining depression in Latina/o youth, therefore we do not

know what the prevalence rates of depression are for this group at this time.

Some research suggests that higher acculturation is positively related to

depression. In a study examining 850 Latina/os ages 18-23 years old in South Florida,

Rivera (2007) found that higher levels of acculturation was related to higher depression.

Torres (2010) found, in a sample of 148 Latino adults that Anglo orientation, which

would be seen as higher levels of acculturation, was positively related to depressive

symptoms. In contrast, Cuéllar and Roberts (1997) found, in a sample of 1,271 Latina/o

first-year college students, acculturation was not associated with depression. Thus,

acculturation appears to be implicated as a factor in understanding depression among

Latina/os, especially in youth, but additional research is clearly warranted.

Examining the role of acculturative stress in Latinos might give us a better

understanding of why there appear to be high prevalence rates of depression in this

population, rather than giving focus on levels of acculturation. In a study with Mexican-

American college students, higher acculturative stress was associated with higher levels

of depression and anxiety (Crockett et al., 2007). In an adult Latina/o community sample,

acculturative stress, measured by the MASI (English and Spanish competency pressure, and pressure to acculturate) was positively related to depression on all three subscales (Torres, 2010).

Moreover, the short version of the SAFE has been used with immigrant and farmworker samples. In a study of 45 adult Mexican migrant farmworkers, those with high levels of acculturative stress reported high levels of anxiety and depression (Hovey & Magaña, 2000). In another study, Hovey (2000) found that acculturative stress predicted depression and suicide ideation in a sample of 114 community adult immigrants of Mexican descent.

Substance Abuse/Use, Acculturation, and
Acculturative Stress

The literature examining the relationship between acculturation and substance abuse outcomes is mixed, but acculturative stress has consistently been shown to have a negative relationship. In a sample of 1,690 Latina/o adults, Akins and colleagues (2008) found that acculturated Latina/os were approximately 13 times more likely to report illicit drug use, almost twice likely to binge drink (five or more drinks in one day in the last 30 days), and three times more likely to bender drink (going on binges, for a couple of days without sobering up) than nonacculturated Latina/os. This study also found that higher acculturation predicted four times greater likelihood of hard drug use (Akins et al., 2008). Another study of 714 Latina/o youth found that acculturation was associated with increased risk of lifetime alcohol, marijuana, and current alcohol, cigarettes, marijuana, and hard drug use (Myers et al., 2009). Finally, with a sample of 8,200 Latina/o youth,

Saint-Jean and Crandall (2008) found that acculturation, as measured by language spoken at home, was a strong predictor of marijuana use.

There are also studies that have found a protective relationship, in which Latina/os that are more acculturated reported less substance abuse. In a study with 472 male and 484 female adults, acculturation was related to lower rates of alcohol use (Caetano et al., 2008). Another study of 288 Latino men found that being acculturated reduced the risk of drug use (Zayas, Rojas, & Malgady, 1998).

Finally, there have been studies using generational status as a proxy for measuring acculturation. For example, U.S. born-Mexican American adults (assumed to be higher on acculturation) reported higher lifetime prevalence of major depression, dysthymia, drug and alcohol abuse and dependence, and phobias than foreign-born adults (Burnam et al., 1987).

In addition, many studies examining the relationship between acculturative stress and substance abuse have established a positive relationship between acculturative stress and substance use. In order to better understand how this relationship exists, the stress that is a result from the acculturation process should be examined further. In a sample of 1,051 immigrants and 968 U.S. born sixth- through ninth-grade Latino males, acculturative stress was related to alcohol use, with U.S. born Latinos at higher rates (Gil et al., 2000). Acculturative stress was measured by English language conflict, perceived discrimination, and acculturation conflict with the family and outside the family.

Developing Models Incorporating Acculturation, Acculturative

Stress, and Psychosocial Health

The acculturation process for individuals and groups varies and is complex in nature. There is no linear model that truly captures the complexity of this process. Depending on the experiences of the individual or group when they come in contact with dominant culture, in this case U.S. mainstream culture, one can have an easy transition adapting in the new culture and might endorse the mainstream culture's values and beliefs. In contrast, this process can be difficult due to the complexity of navigating a new culture, or both cultures, as well as having experiences of discrimination and losing or changing one's cultural identity. Furthermore, experiences of acculturative stress also influence the process of acculturation. If someone is feeling alienated or is experiencing discrimination or stress related to acculturation, it can influence to what degree their might acculturate to mainstream culture and maintain their own cultural values/identity. We can understand acculturation and acculturative stress as reciprocal influences, depending on the experiences of the individual or group. Outcomes may depend on someone's experiences with the acculturation process, and whether or not, or even to what degree they experience acculturative stress. Thus, this study provides two alternative models for examining the role of acculturative stress in understanding how the acculturation levels are related to psychosocial functioning in Latina/o adolescents.

Moderating Effects of Acculturative Stress

It is important to further explore how acculturation and acculturative stress

experiences play a role in the psychosocial health of Latina/o youth. There are mixed findings of how acculturation is related to the psychosocial health of Latina/os. Studies show that acculturation to mainstream society among Latina/os is related to both positive or negative outcomes, such as substance abuse, self-esteem, and depression. Moreover, studies examining acculturative stress have found that experiencing acculturative stress for Latina/os is related to negative outcomes, although more research in this area is needed. Research has shown negative relationships when examining experiences of acculturative stress, therefore acculturative stress is likely to be a moderating variable that might help explain and understand some of the inconsistencies in the literature. Figure 2 suggests that acculturative stress moderates the effects of acculturation on psychosocial outcomes. Depending on their level of acculturation and the degree of acculturative stress, whether they are experiencing high or low levels of acculturative stress influence their psychosocial functioning.

Mediating Effects of Acculturative Stress

Given the inconsistencies in the literature on the relationship between acculturation and psychosocial outcomes, examining if acculturative stress is the mechanism that might help explain the relationship between acculturation and psychosocial functioning might provide a better understanding of how this relationship works. It might be that experiences of acculturative stress are what impact the outcome when examining the relationship between acculturation and outcomes. Figure 3 suggests that acculturative stress mediates the relationship between acculturation and acculturative stress on the psychosocial functioning of Latina/os.
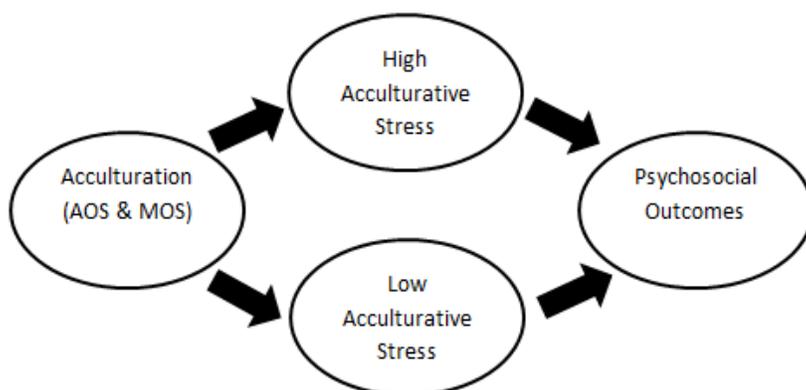
Figure 2. Moderating effects of acculturative stress in outcomes.
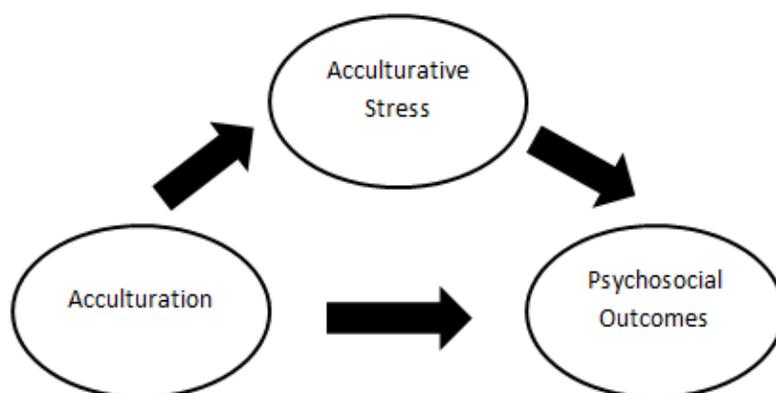
Figure 3. Mediating effects of acculturative stress on outcomes.

Summary and Research Questions

Having a better understanding of how acculturative stress is linked to the mental health of Latina/os is essential to addressing the needs of the fastest growing ethnic minority population in the U.S. The purpose of this study is to further explore how acculturative stress impacts the psychosocial functioning in Latina/o youth. Looking at

psychosocial functioning in Latina/o youth can assist in issues related to youth development, as well as their mental health status. If psychologists have a better understanding of the impact of acculturation and acculturative stress in Latina/o youth, then researchers can explore and develop preventions/interventions that can reduce acculturative stress or look further into coping skills that these youth might need to have better psychosocial functioning. This study will examine how acculturation and acculturative stress are related to substance abuse, self-esteem, and depression, in Latina/o adolescents.

The research questions of this study are: (1) what are the acculturation and acculturative stress experiences of Latino adolescents?, (2) and what are the links among acculturation, acculturative stress, and psychosocial functioning in these Latina/o adolescents? Direct and bivariate associations will be assessed between acculturation and acculturative stress, acculturation and psychosocial outcomes, and acculturative stress and psychosocial outcomes to examine their relationships. In addition, moderation and mediation by acculturative stress will be explored in both male and female adolescents to further understand how these processes and experiences influence the psychosocial functioning of Latina/o adolescents.

CHAPTER III

METHOD

Design

The current study used data from a larger study that examined cultural and ethnic

identity development processes among Latino youth. This project was funded by a

National Institute of Child Health and Human Development grant (1R03HD050840) to

Renee Galliher, PhD. A correlational design was used to assess relationships among

acculturation, acculturative stress, and psychosocial health variables.

Participants

The study consisted of 206 Latina/o high school students from three high schools

in a small city in Utah. Table 1 presents a summary of demographic information for

participants. Most participants reported Mexican heritage and described themselves as

first or second generation immigrants. Participants' age ranged from 14-19, with a mean

age of 15.79 (SD = 1.30). Most of the participants are from a Catholic religious

background, and most parents had some high school education or less.

Procedures

School personnel assisted in the distribution of letters of information and informed

consent forms (see Appendix A), by U.S. mail and hand delivered to student classrooms.

All Latina/o adolescents enrolled in the participating high schools over the course of two

academic years received packets of information to take home to their parents. The

Table 1

Participant's Characteristics

Characteristic	*n*	%
Gender		
Male	85	41.3
Female	121	58.7
Ethnic background		
Mexican	123	59.7
Mexican + other Latino	22	10.7
Mexican + other non-Latino	10	4.9
Other Latino	51	24.8
Generational status		
First generation	71	34.5
Second generation	104	50.5
Third generation	20	9.7
Fourth generation or beyond	7	3.5
Religious affiliation		
Catholic	117	56.8
Latter Day Saints	40	19.4
Protestant	4	1.9
None	11	5.3
Other	33	16.0
Grade in school		
Freshman	69	33.5
Sophomore	46	22.3
Junior	56	27.2
Senior	28	13.6
Mother's educational attainment		
Some high school or less	117	56.8
Graduated high School	39	18.9
Technical/trade school	6	2.9
Some college	17	8.3
College graduate	20	9.7
Graduate school	6	2.9
Father's educational attainment		
Some high school or less	135	65.5
Graduated high School	29	14.1
Technical/trade school	3	1.5
Some college	15	7.3
College graduate	16	7.8
Graduate school	5	2.4

population of interest included approximately 500 students. Interested students brought signed consent forms to data collection sessions in their school library, either during class time (with teacher permission) or after school. The survey was administered online via a secure survey software package, and research assistants were present to answer questions and ensure confidentiality. Survey completion took about 45-60 minutes. Every participant received a $10 cash incentive for their participation.

Questionnaire Measures

The various information questionnaires are described below and copies of all measures are included in Appendix B.

Demographics Information

Participants were asked about their sex, age, race/ethnicity, religion, and parent education/SES.

Generational Status

Generational status was measured based on Cuéllar and colleagues (1995) by asking, "choose the generation that best applies to you?" The choices included: (a) "1st: you were born in Mexico or other country, but now live in the USA," (b) "2nd: you were born in the USA, but both parents born in Mexico or other country," (c) "3rd: you were born in the USA, and one parent was born in the USA, but one parent was born in Mexico or other country," (d) "4th: you were born in the USA, and both parents born in the USA, but all grandparents were born in Mexico or other country," (e) "5th: you and

both parents born in the USA, but at least one (or more) grandparent(s) was born in Mexico or other country," (f) "6th: you, both parents, and all grandparents born in the USA." For the purpose of this study, third generation and beyond were grouped together since there were a small number of participants that chose beyond third generation.

Acculturation

Acculturation was measured by using the Brief Acculturation Rating Scale for Mexican-Americans-II (ARSMA-II; Bauman, 2005). The Brief Acculturation Rating Scale was modified from Cuéllar and colleague's revised Acculturation Rating Scale (ARSMA-II) that was developed to measure acculturation in an orthogonal way (Cuéllar et al., 1995) . This scale is meant to capture four types of acculturation adaptation (assimilation, integration, separation, and marginalization). The ARSMA-II was a modification of the ARSMA (Cuéllar et al., 1980). The Brief ARSMA-II is a 12-item self-report inventory developed to assess behavioral aspects of acculturation on a Likert scale. The scale contains 6-items from the Anglo Orientation Scale (AOS) and 6-items from the Mexican Oriented Scale (MOS). It is a 5-point scale, with 1 = not at all, 2 = very little, 3 = moderately, 4 = very often, and 5 = almost always. Summed scores for each scale have a possible range from 6 to 30. To categorize participants as "high" or "low," a mid-point score of 18 was used. Participants who scored high on both AOS and MOS were categorized as bicultural. If the participant was high on MOS and low on AOS, he or she was categorized as being traditional. Participants who were high on AOS and low on MOS were categorized as being acculturated. Finally participants with low scores on both AOS and MOS were categorized as marginal.

The Brief Acculturation Scale for Mexican-Americans-II has been used with other Latino groups, such as Dominican females (Orshan, 1999) and Puerto Rican female adolescents (Orshan, 1996). Cuéllar and colleagues (1995) suggested that although the ARMSA-II is culture specific to Mexican-Americans that it has utility to be used with other Latino groups. Overall, good reliability has been shown with Latino adolescents. In a study of 2,422 12-19 age Latinos the alpha coefficients were .91 on the MOS and .79 on the AOS (Cuéllar, 2004, as cited in Bauman, 2005). Bauman found alpha coefficients of .93 on the MOS and .69 on the AOS, and their second sample the alpha coefficients was .84 on the MOS and .75 on the AOS (Bauman, 2005). The Brief Acculturation Scale for Mexican-Americans-II was reported to be correlated .89 with the original ARSMA. Cronbach's alphas were .87 on the MOS and .72 for AOS for this study.

Acculturative Stress

Based on a measure by Mena and colleagues (1987), the short version of the SAFE scale was used. This is a 24-item measure that includes question such as "Because of my ethnic background, I feel that others often exclude me from participating in their activities."

The SAFE has 24 items. These items are statements of situations that may cause stress to a person and are measured on a Likert scale. It is a 5 point scale with 1= not stressful, 2 = somewhat stressful, 3 = stressful, 4 = very stressful, 5 = extremely stressful. One total score is calculated to assess acculturative stress generally. The test can be given either by a paper copy or online, there are no specific instructions about how to administer this test and completion should take less than 5 minutes. The total score is

calculated as the mean across items, and there are no reverse scored items. Scores range from 1-5.

The SAFE scale has been used with many different groups, including international students, immigrants, U.S. born ethnic minorities, adults and adolescents. Good reliability has been shown when using this scale across these groups. For Mexican, Central and South Americans, the internal consistency reliability was .87 (Miranda & Matheny, 2000), .89 for African American participants (Joiner & Walker, 2002), and for Mexican immigrants alpha was .88 (Hovey & Magaña, 2000) and .90 (Hovey, 2000). The SAFE also has demonstrated construct validity (Padilla, Alvarez, & Lindholm, 1986). In a study by Hovey and Magaña (2000), acculturative stress was highly correlated with anxiety (PAI; $r = .64$, $p < .001$) and depression (CES-D; $r = .57$, $p < .001$), and was a significant predictor of anxiety ($\beta = .59$, $t = 4.9$, $p < .001$). Furthermore, in another study, Hovey (2000) found that acculturative stress was highly correlated to depression ($r = .40$, $p < .001$) and suicidal ideation (ASIQ; $r = .26$, $p < .01$). Some believe that the SAFE measures general life stress, but was tested and concluded that they are two different constructs (Joiner & Walker, 2002). Cronbach's alpha for this study was .94.

Self-Esteem

The Rosenberg Self-Esteem Scale (RSES) was used to measure self-esteem on a Likert scale (Rosenberg, 1965). The RSES is a 10-item self-report inventory to assess positive and negative self-image concepts that one has. It is a 4-point scale, with 1 = strongly disagree to 4 = strongly agree. This scale has been shown to be a strong indicator of adolescents' global self-esteem (Hagborg, 1993).

This scale has been used in Latino samples (Connor, Poyrazli, Ferrer-Wreder, & Grahame, 2004; Valentine, 2001, 2006), and has shown good reliability with Cronbach's alphas of .83 (Carranza, You, Chhuon, & Hudley, 2009; Connor et al., 2004), .76 (Valentine, 2001) and .87 (Umaña-Taylor & Updegraff, 2007). Furthermore, in a study examining participants from 53 different nations, including five Latino nations, good reliability was also shown across cultures (Schmitt & Allik, 2005). Cronbach's alpha for this study was .85.

Depression

The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), was used to measure depressive symptomatology emphasizing affective components. This scale is a 20-item self-report inventory that measures depressive symptomatology in clinical and general populations, which include four areas (depressed affect, lack of positive affect, psychomotor retardation, and interpersonal distress). This scale has shown good internal consistency, with coefficient alpha of .85 in the general population and .90 in a clinical sample. This scale has been used with Latino youth (Crockett et al., 2007; Umaña-Taylor & Updegraff, 2007), with good reliability (alpha = .91; Umaña-Taylor & Updegraff, 2007). Cronbach's alpha for this study was .84.

Substance Abuse/Problems

Substance use and problems associated with the use of drugs/alcohol were adapted from The National Longitudinal Study of Adolescent Health (Kelley & Peterson, 1997). Substance use history and current substance use questions asked: "on how many

occasions have you done any of the following things in the past 30 days?" which included alcoholic beverages, sniffed glue/sprays, stimulants use, hallucinogens and marijuana use. Substance usage was assessed using a 5-point scale with 1 indicating no use of the specified substance and 5 indicating more than 15 times in the past month. Total scores across the five substances were calculated and resulted in a range from 5 (no drug use of any kind) to 25 (frequent use of all five substance categories). Also, questions regarding engaging in problematic behaviors due to using substances were asked: "over the past month, how many times has each of the following things happened?" such as driving while under the influence and getting in trouble at school. Substance use problems were calculated based on the sum of endorsed problems across all types of substance use problems, ranging from 0 to 4. Cronbach's alphas were .76 for substance use and .87 for substance use problems for this study.

CHAPTER IV

RESULTS

The results section is divided into four primary sections that include, (a) descriptive analyses of acculturation, acculturative stress, depression, self-esteem, and substance use and substance use problems; (b) bivariate correlations between all variables; (c) relationship between acculturation and acculturative stress; and (d) moderation and mediation analyses. All analyses were conducted separately for males and females.

Descriptive Analyses

Table 2 presents means, standard deviations, and skewness statistics for all study variables, separately for males and females. On average, the participants reported high self-esteem, AOS, and MOS. Also, average scores were low for depression, substance use, and substance use problems. Scores were roughly normally distributed around the center of the scale for levels of acculturative stress.

Tests of skewness statistics suggested that all of the variables, except for the acculturative stress were in violation of the assumption of normality, due to the skewness statistic being greater than twice the standard error. A log base 10 transformation was performed for the CESD variable (Osborne, 2002). For the rest of the variables, an inverse transformation was used, in which the variables were reflected prior to the Log base 10 transformation due to the negative skew; re-reflection following transformation returned the variable to its original form. Transformation completely eliminated problems

Table 2

Means, Standard Deviation, and Skewness for All Measures

	Male				Female			
Measures	*M*	*SD*	Pre transform skew	Post transform skew (*SE* = .26)	*M*	*SD*	Pre transform skew	Post transform skew (*SE* = .22)
RSES	3.08	.62	-.64	.26	2.96	.61	-.38	.05
CESD	1.91	.48	.67	.46	2.12	.49	.55	.32
SA	6.34	2.62	2.17	1.84	5.84	2.22	6.02	3.18
SAP	11.66	3.49	1.95	1.42	11.72	4.48	4.58	2.46
MOS	21.42	6.12	-.62	-.08	23.48	5.35	-1.14	-.36
AOS	24.63	3.96	-.83	-.20	25.22	3.58	-1.58	-.27
SAFE	2.47	.98	.40		2.41	.77	.26	

with skewness for most variables; therefore, analyses were conducted with parametric statistics rather than non-parametric statistics. The transformed data were used for all subsequent statistical procedures for this study. Transformation procedures did not sufficiently address skewness problems for the substance use variables. The substance use frequency and substance abuse problems were converted into dichotomous variables since transforming did not solve the skewness problem. If the participants did not report any substance use or substance abuse problem in the past month, they were categorized as 0. If they reported any substance use or substance abuse problem in the past month, they were categorized as 1. Sixty-nine percent of females and 67% of males reported never experiencing a problem due to substances. Approximately 85.1% of female and 81.2% of male participants reported no use of the listed substances in the past month. Adolescent experimental use once or twice in the past month is relatively normative and likely does not represent problem use behavior. In addition, 32.9% of males and 30.6% of

females reported experiencing at least one problem related to substance use, when 18.8%

of males and 14.9% of females reporting using substances. The fact that more students

reported substance use problems (slightly over 30%) than reported use of the listed

substances (less than 20%) suggests a reporting issue. The substance of choice for many

students, for example, may not have been available on the list, making that variable a

misrepresentation of actual use. Thus, only the substance abuse problem variable was

used for primary analyses.

Gender Differences

Independent samples t tests were conducted to assess for gender differences in

self-esteem, acculturation, acculturative stress, depression, substance usage and

problems. There was a significant difference in depression, t (206) = 3.20, p = .002, d =

0.45; female participants reported significantly higher depression than males. Female

participants reported significantly higher MOS than their male counterparts, t (205) =

2.54, p = .012, d = 0.35. There were no significant gender differences in self-esteem,

t (206) = -1.43, p = .154, d = -.20; AOS, t (205) = 1.02, p = .310, d = .14; and

acculturative stress, t (205) = -0.45, p = .656, d = -.06. A chi-square analysis was

conducted to assess for significant gender differences in experiencing problems due to

using substances. There was no significant difference, X^2 (1, n = 206) = .129, p = .719, V

= .03.

Acculturation

Table 3 presents the distribution of males and females using the categorical

Table 3

Participant's Acculturation Category

Acculturation category	Male		Female	
	n	%	*n*	%
Bicultural	59	69.4	103	85.1
Acculturated	22	25.9	15	12.4
Traditional	4	4.7	1	.8
Marginalized	0	0	1	.8

scoring system for the ARSMA. Overall, the vast majority of participants were categorized as "high" on the AOS (96.6%) and "high" on MOS (81.1%), with 78.6% being bicultural. About 1/5 (18%) were acculturated and 2% were categorized as traditional. Chi-square statistical analysis were conducted and found statistically significant differences in acculturation category by gender, χ^2 (3, $n = 205$) = 10.40, $p =$ .02, $V = .23$. Although the assumption of expected values of at least five in each cell was violated, cautious interpretation suggests that the pattern of acculturation is different for males and females. Male participants were more likely to be acculturated than females, with 25.9% of males falling in that category. Female participants were more likely to be bicultural than any of the other categories and more likely than their male counterparts. Both male and female participants were very unlikely to be traditional or marginalized. The low numbers of marginalized and traditional participants precludes using categories in further analyses, therefore all subsequent analyses were based on continuous AOS and MOS scores.

Bivariate Relationships Among Variables

Pearson's *r* correlations were conducted to assess the relationships among all the variables for both males and females (see Table 4). For males, Anglo-orientation was positively related to self-esteem, whereas Mexican orientation was negatively associated with self-esteem. There were no significant findings for MOS and AOS in females. Self-esteem was found to be negatively related to depression for males and females. Acculturative stress was positively associated with depression for both male and female participants. Furthermore, in males acculturative stress was negatively associated with self-esteem and Anglo orientation, while it was positively associated with Mexican orientation.

Table 4

Correlations for Self-esteem, Depression, MOS, AOS, and SAFE

		Males			
Measures	RSES	CESD	MOS	AOS	SAFE
Females					
RSES	-	-.47**	-.33**	.27*	-.42**
CESD	-.33**	-	.28**	-.01	.45**
MOS	-.00	.06	-	-.21	.28**
AOS	.16	-.02	.09	-	-.32**
SAFE	-.13	.42**	.09	-.08	-

*Correlation is significant at the .05 level (2-tailed).

**Correlation is significant at the .01 level (2-tailed).

RSES = Rosenberg Self-Esteem Scale
CESD = Center for Epidemiologic Studies Depression Scale
MOS = Mexican Orientation Scale
AOS = Anglo Orientation Scale
SAFE= Societal, Attitudinal, Familial, and Environmental Scale.

Independent samples *t* tests were conducted to assess for differences between those that reported having substance related problems and those that did not as it relates to their self-esteem, acculturation (MOS and AOS), acculturative stress and depression. There was only one significant finding for Latina females, where there was a significant difference between those who reported substance use problems and those who did not on Anglo orientation, t (118) = 2.837, p = .005, d = .551. Latina females who reported problems related to substance use also reported lower Anglo orientation scores. There were no significant differences based on substance use problems for either male or female participants for any of the remaining study variables (*t* values ranged from -1.672 to .518; *p* values ranged from .098 to .845).

Chi square statistics were conducted to examine associations between generational status and substance use problems in both males and females. There were no significant differences between generational status categories on the likelihood of reported problems related to substance abuse in either males, χ^2 (2, n = 83) = 2.637, p = .268, V = .178, or females, χ^2 (2, n = 119) = 3.180, p = .204, V = .163. One-way ANOVAs were conducted to examine differences in depression and self-esteem based on generational status. Three groups were developed—first, second, and third or beyond generations. The only significant difference among generational status categories was for males' self-esteem. Third generation or beyond students reported higher self-esteem than second generation students (see Table 5 for means and standard deviations).

Table 5

Means and Standard Deviations for All Study Variables Based on Generational Status and Biological Sex

Outcome	First generation		Second generation		Third generation	
	M	*SD*	*M*	*SD*	*M*	*SD*
Males						
Self-esteem	-1.375	.228	-1.398	.199	-1.208	.199
Depression	1.384	.203	1.393	.160	1.271	.127
Anglo orientation	-2.650	.778	-2.349	.734	-2.050	.109
Mexican orientation	-2.457	.959	-2.802	.876	-4.097	.553
Acculturative stress	2.683	1.087	2.466	.947	2.053	.824
Females						
Self-esteem	-1.424	.206	-1.402	.231	-1.380	.194
Depression	1.458	.183	1.437	.153	1.441	.184
Anglo orientation	-2.325	.776	-2.253	.729	-2.316	.664
Mexican orientation	-2.401	.895	-2.5387	.850	-3.146	1.334
Acculturative stress	2.591	.897	2.279	.670	2.360	.643

Links Between Acculturation and Acculturative Stress

Pearson's *r* correlations were conducted to assess the relationship between acculturation and acculturative stress for males and females (see Table 4). Acculturation was found to be significantly related to acculturative stress in males. Anglo orientation is negatively associated with acculturative stress, while Mexican orientation was positively associated with acculturative stress. For female participants, there were no significant relationships between level of acculturation and acculturative stress.

One Way ANOVAs also examined generational status differences in the ARSMA scales and acculturative stress (see Tables 6 through 8). Mexican orientation was significantly different in first generation and third generation and beyond for females,

Table 6

Summary of ANOVAs for Generational Status of Females and Males

Generational status		Sum of squares	df	Mean square	F	sig.
Female						
Depression:	Between groups	.011	2	.006	.201	.818
	Within groups	3.295	116	.028		
	Total	3.307	118			
Self-esteem:	Between groups	.025	2	.012	.258	.773
	Within groups	5.507	116	.047		
	Total	5.532	118			
Anglo orientation:	Between groups	.147	2	.074	.134	.875
	Within groups	63.313	115	.551		
	Total	105.067	117			
Mexican orientation:	Between groups	5.666	2	2.833	3.278	.041
	Within groups	99.401	115	.864		
	Total	105.067	117			
Acculturative stress:	Between groups	2.585	2	1.293	2.206	.115
	Within groups	67.962	116	.586		
	Total	70.548	118			
Male						
Depression:	Between groups	.168	2	.084	2.934	.059
	Within groups	2.291	80	.029		
	Total	2.459	82			
Self-esteem:	Between groups	.392	2	.196	4.538	.014
	Within groups	3.456	80	.043		
	Total	3.848	82			
Anglo orientation:	Between groups	3.318	2	1.659	2.776	.068
	Within groups	47.817	80	.598		
	Total	51.136	82			
Mexican orientation:	Between groups	25.182	2	12.591	17.104	< .001
	Within groups	58.892	80	.736		
	Total	84.075	82			
Acculturative stress:	Between groups	3.466	2	1.733	1.842	.165
	Within groups	74.331	79	.941		
	Total	77.796	81			

Table 7

Summary of Pairwise Comparisons from Post Hoc Scheffe Analysis for Females

Variables		Mean difference	Std. error	*p* value
Self-esteem				
1st generation	2nd generation	-.022	.043	.873
	3rd generation or beyond	-.044	.068	.812
2nd generation	1st generation	.022	.043	.873
	3rd generation or beyond	-.022	.067	.948
3rd generation or beyond	1st generation	.044	.068	.812
	2nd generation	.022	.067	.948
Depression				
1st generation	2nd generation	.021	.033	.824
	3rd generation or beyond	.017	.053	.950
2nd generation	1st generation	-.021	.033	.824
	3rd generation or beyond	-.004	.052	.998
3rd generation or beyond	1st generation	-.017	.053	.950
	2nd generation	.004	.052	.998
Anglo orientation				
1st generation	2nd generation	-.072	.146	.884
	3rd generation or beyond	-.009	.233	.999
2nd generation	1st generation	.072	.146	.884
	3rd generation or beyond	.063	.228	.962
3rd generation or beyond	1st generation	.009	.233	.999
	2nd generation	-.067	.285	.109
Mexican orientation				
1st generation	2nd generation	.138	.182	.752
	3rd generation or beyond	.745*	.291	.042
2nd generation	1st generation	-.138	.182	.752
	3rd generation or beyond	.607	.285	.109
3rd generation or beyond	1st generation	-.745*	.291	.042
	2nd generation	-.607	.285	.109
Acculturative stress				
1st generation	2nd generation	.312	.150	.118
	3rd generation or beyond	.231	.240	.629
2nd generation	1st generation	-.312	.150	.118
	3rd generation or beyond	-.081	.235	.943
3rd generation or beyond	1st generation	-.231	.240	.629
	2nd generation	.081	.235	.943

* Indicates the mean difference is significant at the .05 level

Table 8

Summary of Pairwise Comparisons from Post Hoc Scheffe Analysis for Males

Variables		Mean difference	Std. error	*p* value
Self-esteem				
1st generation	2nd generation	.023	.053	.908
	3rd generation or beyond	-.167	.070	.064
2nd generation	1st generation	-.023	.053	.908
	3rd generation or beyond	-.190*	.064	.015
3rd generation or beyond	1st generation	.167	.070	.064
	2nd generation	.190*	.064	.015
Depression				
1st generation	2nd generation	-.009	.043	.978
	3rd generation or beyond	.114	.057	.142
2nd generation	1st generation	.009	. 043	.978
	3rd generation or beyond	.123	.052	.066
3rd generation or beyond	1st generation	-.114	.057	.142
	2nd generation	-.123	.052	.066
Anglo orientation				
1st generation	2nd generation	-.301	.195	.310
	3rd generation or beyond	-.600	.260	.076
2nd generation	1st generation	.301	.195	.310
	3rd generation or beyond	-.299	.237	.453
3rd generation or beyond	1st generation	.600	.260	.076
	2nd generation	.299	.237	.453
Mexican orientation				
1st generation	2nd generation	.345	.217	.288
	3rd generation or beyond	1.640*	.289	< .001
2nd generation	1st generation	-.345	.217	.288
	3rd generation or beyond	1.296*	.263	< .001
3rd generation or beyond	1st generation	-1.640*	.289	< .001
	2nd generation	-1.296*	.263	< .001
Acculturative stress				
1st generation	2nd generation	.216	.249	.686
	3rd generation or beyond	.630	.329	.166
2nd generation	1st generation	-.216	.249	.686
	3rd generation or beyond	.414	.297	.383
3rd generation or beyond	1st generation	-.630	.329	.166
	2nd generation	-.414	.297	.383

* Indicates the mean difference is significant at the .05 level

Tests of Moderation: Direct and Interacting Effects of

Acculturation and Acculturative Stress

Tables 9 and 10 present hierarchical multiple regressions for male and females examining whether the effects of AOS and MOS were moderated by acculturative stress (Baron & Kenny, 1986). Based on the steps proposed by Baron and Kenny for moderation, the AOS, MOS, and SAFE scores were first centered around the mean. In a first step of the regression, either the MOS or AOS scores, along with the SAFE score, were entered. In a second step, the interaction between the acculturation score and the SAFE score were entered. A significant interaction in the second step indicates that the effect of the acculturation variables depends on the level of the acculturative stress variable. Separate regressions were calculated for males and females, and for MOS and AOS. For males, the MOS scores were significantly related to lower self-esteem. Main effects for acculturative stress were significant for both self-esteem (negative) and depression (positive). For females, no measures of acculturation predicted psychosocial functioning, but acculturative stress was related to higher depression scores. There was one marginally significant interaction between Anglo orientation and acculturative stress predicting depression for females (see Figure 4). Interpretation of the graph suggests that females who were both lower on AOS and lower on acculturative stress (SAFE) reported the least depression. Those that reported lower AOS and higher acculturative stress reported the most depression. Among those who were higher on AOS, experiences of acculturative stress did not appear to play as large a role in predicting depression scores.

Table 9

Hierarchical Regressions Assessing Moderating Effects of Acculturative Stress for Females (N = 120)

Outcome	Predictors	Adj. R^2	F change	P	Beta	t	p
Depression							
Step 1	Anglo orientation	.156	12.036	< .001	.019	0.226	.821
	Acculturative stress				.414	4.903	< .001
Step 2	Interaction	.174	3.437	.066	-.156	-1.854	.066
Step 1	Mexican orientation	.156	12.035	< .001	.019	.224	.824
	Acculturative stress				.411	4.858	< .001
Step 2	Interaction	.151	0.219	.641	-.040	-.468	.641
Self-esteem							
Step 1	Anglo orientation	.023	2.376	.097	.150	1.647	.102
	Acculturative stress				-.117	-1.286	.201
Step 2	Interaction	.016	0.264	.608	.047	.514	.608
Step 1	Mexican orientation	.000	1.004	.370	.010	.113	.910
	Acculturative stress				-.130	-1.417	.159
Step 2	Interaction	-.007	0.133	.716	.034	.364	.716

Table 10

Hierarchical Regressions Assessing Moderating Effects of Acculturative Stress for Males (N = 84)

Outcome	Predictors	Adj. R^2	F change	P	Beta	t	p
Depression							
Step 1	Anglo orientation	.202	11.537	<.001	.158	1.529	.130
	Acculturative stress				.496	4.804	<.001
Step 2	Interaction	.206	1.319	.254	.115	1.149	.254
Step 1	Mexican orientation	.203	11.584	<.001	.159	1.554	.124
	Acculturative stress				.402	3.935	<.001
Step 2	Interaction	.220	2.728	.103	.171	1.652	.103
Self-esteem							
Step 1	Anglo orientation	.170	9.487	<.001	.134	1.269	.208
	Acculturative stress				-.374	-3.551	.001
Step 2	Interaction	.160	.096	.757	-.032	-.310	.757
Step 1	Mexican orientation	.197	11.164	<.001	-.215	-2.093	.039
	Acculturative stress				-.356	-3.477	.001
Step 2	Interaction	.189	.222	.639	.050	.471	.639
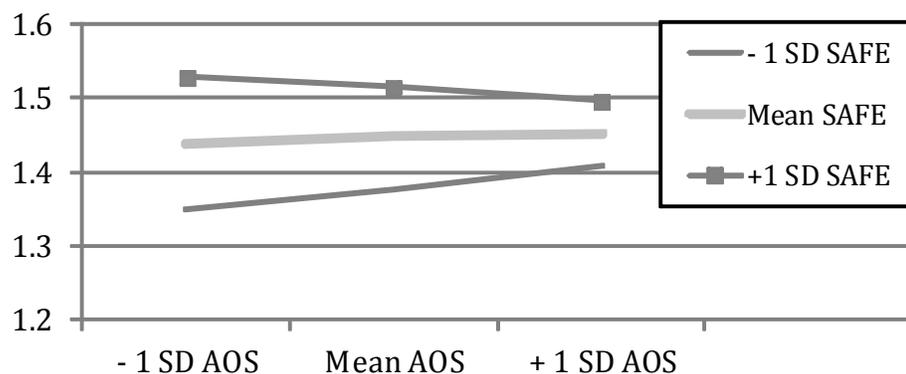
Figure 4. Marginally significant interaction between AOS and SAFE for females' depression.

Logistic regressions were conducted to test moderating effects of acculturative stress on substance use problems (Tables 11 and 12). Only significant main effects were observed. Higher Anglo orientation scores were related to less likelihood of reporting substance use problems for females, and higher levels of acculturative stress were related to a greater likelihood of reporting substance use problems for males. For females, those who score higher on the AOS are .46 times as likely to report at least one substance use problems as those who scored lower on the AOS. For males, those who reported high on acculturative stress were 1.7 more times likely to report experiencing at least one substance use problem.

Marginally significant interactions between Anglo orientation and acculturative stress emerged for both Latino male and females on reported substance abuse problems. In order to interpret the interactions, participants were categorized as high (above the median) or low (below the median) for both variables. Four groups were created: (a) those who were high on both AOS and SAFE, (b) those who were high on AOS and low

Table 11

Logistic Regression Testing Moderation of Effects of Acculturation on Substance Use Problems for Females

Predictors		Chi-square	*B*	Wald	*p*	Nagelkerke R^2	Odds ratios
Block 1	Step	9.547			.008	.108	
	Anglo orientation		-.768	6.516	.011		.464
	Acculturative stress		.351	1.674	.196		1.421
Block 2	Step	3.888			.049		
	Model	13.435			.004	.149	
	Anglo orientation		-.978	8.234	.004		.376
	Acculturative stress		.472	2.746	.097		1.603
	Interaction		.753	3.573	.059		2.124
Block 1	Step	2.322			.313	.027	
	Mexican orientation		.012	.003	.956		1.1012
	Acculturative stress		.395	2.232	.135		1.484
Block 2	Step	.554			.457		
	Model	2.876			.411	.033	
	Mexican orientation		.396	2.242	.134		1.486
	Acculturative stress		.053	.057	.811		1.054
	Interaction		-.220	.545	.461		.803

Table 12

Logistic Regression Testing Moderation of Effects of Acculturation on Substance Use Problems for Males

Predictors		Chi-square	*B*	Wald	*p*	Nagelkerke R^2	Odds ratios
Block 1	Step	4.900			.086	.079	
	Anglo orientation		.469	2.069	.150		1.599
	Acculturative stress		.532	3.957	.047		1.703
Block 2	Step	3.301			.069		
	Model	8.201			.042	.129	
	Anglo orientation		.367	1.137	.286		1.443
	Acculturative stress		.584	4.404	.036		1.794
	Interaction		.596	2.797	.094		1.814
Block 1	Step	2.795			.247	.045	
	Mexican orientation		-.043	.030	.863		.958
	Acculturative stress		.413	2.592	.107		1.511
Block 2	Step	.618			.432		
	Model	3.413			.332	.055	
	Mexican orientation		-.071	.079	.778		.932
	Acculturative stress		.483	3.128	.077		1.621
	Interaction		-.182	.600	.439		.834

on SAFE, (c) those who were low on AOS and high on SAFE, and (d) those who were

low on both scales. Crosstabs were conducted to identify the percentage of each group

who reported at least one substance use problem (see Table13). For males, of those who

reported high Anglo orientation and high acculturative stress, 50% reported experiencing

at least having a substance use problem in the last month. In contrast, of those who were

low on both AOS and SAFE, only 22.2% reported substance use problems. In the other

two groups of male participants, approximately one third reported substance use

problems. Thus, a combination of high Anglo orientation and high acculturative stress

appeared to generate the highest risk for young men. For females, the group at lowest risk

for substance use problems was those with high Anglo orientation and low acculturative

stress (16.7%). Those who reported low Anglo orientation and high acculturative stress

were at highest risk for substance use problems (38.7%). Approximately, one third of the

other two group reported substance use problems.

Table 13

Crosstabs for Marginally Significant Interactions

	Males				Females			
	Low AOS		High AOS		Low AOS		High AOS	
Categories	Ratio	%	Ratio	%	Ratio	%	Ratio	%
Low SAFE	4/18	22.2	7/24	29.2	9/27	33.3	5/30	16.7
High SAFE	8/24	33.3	9/18	50.0	12/31	38.7	11/32	34.4

Note. Ratios represent the proportion of participants in that category who reported substance use problems.

Tests of Mediation: Acculturative Stress as a Pathway From

Acculturation to Psychosocial Outcomes

Mediation effects were tested using recommendations by Baron and Kenny (1986). According to Baron and Kenny, the first step would be to show that the independent variable correlates with the outcome, therefore regress the dependent variable on the independent variable to see if there is an effect that can be mediated. The next step is to then regress the mediator on the independent variable, and finally regress the dependent variable on both the independent variable and the mediator. In order to establish that the variable mediates the relationship, three conditions are required: (a) there must be a direct effect from the independent variable (acculturation) to the dependent variable (e.g., self-esteem), (b) there must be a direct effect from the independent variable to the meditator (acculturative stress), and (c) the effect of the independent variable on the dependent variable must be reduced to nonsignificant when the effect of the mediator is added in to the model in the last step. Partial mediation is demonstrated if the effect of the independent variable is diminished when the mediator is added to the model, but not eliminated.

Bivariate correlations (Table 4) demonstrated no significant relationships for Latina females between the independent variables (AOS or MOS) and dependent variables (depression or self-esteem). Thus, the first criterion for mediation was not met for females. Therefore, no further mediation analyses were conducted for females. Only one positive direct effect emerged between acculturative stress and depression for females.

For males, bivariate correlations suggested possible mediation pathways from MOS to both self-esteem and depression, and from AOS to self-esteem (see Table 4). Table 14 presents hierarchical regressions assessing mediating effects of acculturative stress for males. Acculturative stress was found to fully mediate the relationships between MOS scores and depression and between AOS scores and self-esteem. Acculturative stress was also found to partially mediate the effect of MOS on self-esteem. The effect of MOS was reduced in the second step of the model, but was still significant, suggesting both mediated and direct effects of MOS on self-esteem for young men.

Table 14

Hierarchical Regressions Assessing Mediating Effects of Acculturative Stress for Males (N = 84)

Step	Predictor	Adj. R^2	F change	p	Beta	t	p
Self-esteem							
1	Anglo orientation	.052	5.577	.021	.252	2.362	.021
2	Anglo orientation	.170	12.607	.001	.134	1.269	.208
	Acculturative stress				-..374	-3.551	.001
Self-esteem							
1	Mexican orientation	.088	9.020	.004	-.315	-3.003	.004
2	Mexican orientation	.216	12.089	.001	-.215	-2.093	.039
	Acculturative stress				-.356	-3.477	.001
Depression							
1	Mexican orientation	.062	6.529	.012	.272	2.555	.012
2	Mexican orientation	.203	15.486	< .001	.159	1.554	.124
	Acculturative stress				.402	3.935	< .001

CHAPTER V

DISCUSSION

The purpose of this thesis study was to examine acculturation levels and

acculturative stress in Latina/o adolescents as they relate to psychosocial functioning.

This study examined Anglo orientation, Mexican orientation, and acculturative stress,

linked to self-esteem, depression, substance use, and problems related to substance use.

This study was conducted in order to increase our understanding of how acculturation

levels and experiences of acculturative stress correlate to the psychosocial health of

Latina/o adolescents. In order to achieve the purpose of the study, data were collected

from Latino high school students in three high schools in a small city in Utah. A

discussion of the findings of this study will be presented, as well as limitations, future

directions, and implications for researchers, educators, and clinicians.

Summary

Overall, the present study represents a healthy community sample. Latina/o

adolescents in this sample were functioning fairly well. On average, participants reported

high self-esteem, relatively low levels of depression, and limited or no substance use. In

addition, students reported high average levels of both Anglo and Mexican orientation,

making this sample mostly bicultural. It seems that most of them feel highly connected to

and embrace both Mexican or Latina/o culture as well as mainstream U.S. culture.

Acculturative stress experiences were roughly normally distributed, with scores across

the continuum of the acculturative stress scale. Thus, while relatively few students fell in

to "high risk" ranges on any of the study measures, additional analyses focused on identifying factors associated with poorer psychosocial functioning and higher acculturative stress, in order to identify patterns of risk and resilience in this population.

This study found no significant differences between males and females in self-esteem, Anglo orientation, and acculturative stress. There were significant differences in Mexican orientation and depression, where female participants reported higher levels of depression and higher Mexican orientation than their male counterparts. This is consistent with other literature noting that women in general report higher levels of depression than their male counterparts (Hovey & King, 1996). Latina females also reported higher levels of Mexican orientation than Latino males. In a study by Schwartz and colleagues (2007), the authors reported similar findings where their female participants reported significant higher levels of "Hispanic" orientation than males. It might be that Latina females are able to maintain both their Latina/o culture and mainstream U.S. culture to a greater extent than Latino males or even have a preference to endorse values and traditions from both cultures. Those that are able to navigate both cultures are more likely to be bicultural and have better psychosocial functioning (Schwartz & Unger, 2010). Schwartz and Unger (2010) discussed that the best way that someone can adapt to being bicultural is by valuing both cultures and through parental socialization, where parents encourage their children to learn and engage in their own culture. In general, experiences of acculturative stress were negative and detrimental to the mental health of Latina/o adolescents, especially for Latino males, which is also consistent with the literature (Crockett et al., 2007; Gil et al., 2000; Hovey, 2000; Smokowski et al., 2009).

Acculturation

When participants were placed into acculturation categories, Latinas were more likely to be bicultural than any other category and more likely than their male counterparts. Both Latinas and Latinos were very unlikely to be traditional or marginalized; given that this sample was comprised mostly of fairly new immigrants (first and second generation), this should be explored further to gain a better understanding of how first and second generation Latinos are able to adapt to a new culture, navigate a culture that is different than theirs, and stay connected to their own culture. It might be that this sample has been able to navigate both U.S. mainstream culture and be able to continue to feel connected to their Latino culture, and possibly not experience negative outcomes as they navigate a new culture. Moreover, these participants seem to have acculturated fairly quickly to mainstream U.S. society—it may be that when examining .5 generation/first generation youth (not U.S. born) in future studies, inclusion of the assessment of acculturation gaps with their parents might be particularly relevant.

Research suggests that those that are bicultural are able to navigate their own culture and the new culture more successfully, which contributes to better mental health outcomes (Tadmor et al., 2009). Although it seems that having a bicultural identity is linked with better outcomes, newer studies have examined how being bicultural can also create stress that is negatively related to psychosocial outcomes (Romero et al., 2007a; Romero, Martinez, & Carvajal, 2007b). This can be the case for some of Latina/os who experience acculturative stress even when they are bicultural in their acculturation level.

Given that adolescent's acculturation level or identification can be closely related to their ethnic identity (Liebkind, 2006), exploring ethnic identity when examining acculturation levels might be important to see how that is related to acculturative stress and their psychosocial functioning, as well as their identity development for these Latina/o adolescents. Experiences with acculturation are complex, always changing with their experiences living in the U.S. and their adaptation of U.S. mainstream cultural values and maintenance of their own culture.

Generational Status

Most of the study's sample was first and second generation, making the Latina/o participants a relatively newer immigrant population. As might be expected, there were significant differences among generational status categories on ARSMA-II scores for both males and females. In Latinas, there was a significant difference between 1st and 3rd and beyond generation in their reported Mexican orientation. First generation Latinas reported having a stronger connection to their Latino culture than 3rd generation and beyond Latinas. This is consistent with the literature suggesting that as generations increase, acculturation towards Anglo or mainstream culture increases while Mexican or Latino orientation decreases (Cuéllar et al., 1995). It might be that first generation Latinas have more access to their Latino culture because they are more likely to have ties in their country of origin than those that have been in the U.S. for more generations. It can also be that these young women and their families still maintain their culture and traditions in their everyday lives given that they might not have adopted new U.S. mainstream values

and traditions. Another possible explanation can be the way that Latinas experience gender socialization by their parents, such that parents might expect and teach their daughters to act more traditionally, especially in first and second generations. Raffaelli and Ontai (2004) found that gender socialization in Latinas was more traditional when it came from mothers who were low on acculturation (had higher traditional gender roles). Moreover, Kaplan, Erickson, and Juarez-Reyes (2002) found that acculturation was related to gender role orientation for Latinas, where the more acculturated the less traditional her gender role was.

Significant difference in generational status also emerged among Latino males. There were significant differences in first and third and beyond generation, as well as between second and third and beyond generation. It might be that Latino males tend to adapt more quickly to U.S. mainstream culture and are less likely to maintain their Latino culture and traditions. This could be due to wanting to be successful in mainstream society as it relates to their traditional gender roles of being the able to be providers to their families. Feeling pressure to adapt quicker than their female counterparts can be also due to possibly experiencing higher levels of discrimination as young men of color in the U.S.

Generational status is often used as a proxy for acculturation. The links between generational status and acculturation levels, as measured by the brief ARSMA, suggest that the use of this crude measure of acculturation levels may be warranted. While more refined and complex measures of acculturation levels and processes likely provide a more sophisticated picture of the acculturation experience, generational status appears to be

closely linked to the language use and cultural immersion variables typically measured in the more developed acculturation measures, such as the ARSMA.

Links between Acculturation and Acculturative Stress

There were significant relationships between acculturation and acculturative stress in Latino males only. Mexican orientation was positively associated with acculturative stress, whereas Anglo orientation was negatively associated with acculturative stress. The more acculturated these Latino males were, the more it might serve as a protective factor to experiencing acculturative stress. It might be that being able to navigate in mainstream U.S. culture can assist and alleviate some of the stress that they otherwise might be experiencing. Being less acculturated might create stress for the Latino adolescents since they might be having a hard time navigating the U.S. mainstream White-American culture. Interestingly, however, generational status was not linked to acculturative stress experiences for either males or females. This was surprising, given the relatively strong links between generational status and the ARSMA measures of acculturation. The acculturative stress measure used in this study captures experiences of alienation from both Latino and White American cultures, as well as discrimination experiences. Those types of experiences are likely not captured simply by assessing generational level.

Acculturation, Acculturative Stress, and Psychosocial Functioning

Acculturation was found to have some significant relationships with psychosocial outcomes for both male and female participants. For males, high Anglo orientation serves

as a protective factor with regard to self-esteem. Perhaps being able to navigate and adapt

to mainstream U.S. culture helps them feel more confident in who they are in this society.

In contrast, Latino males that reported high levels of Mexican orientation also reported

lower self-esteem. It might be that having a strong sense of their Mexican or Latino

culture and endorsing those cultural practices and traditions places them at risk of being

targeted for experiences of discrimination to a greater extent than if they were endorsing

U.S. mainstream cultural values and traditions. If this were the case for these adolescent

males, it would be difficult to promote for Latino male adolescents to adapt to more

mainstream U.S. culture and not maintain their Latino culture. Yet, we can explore ways

to be able to support them in maintaining their Latino culture in a way that does not put

them in a place where they are more at risk. This brings up issues of identity development

for these young males as they are growing up in the U.S.

In addition, having experiences of acculturative stress was related to having

higher levels of depression for males and females. Having feelings of stress related to the

acculturation process, of feeling alienated, feelings of discrimination and not belonging

can make people feel disconnected and depressed. For Latino males, acculturative stress

was shown to be more consistently detrimental to their mental health than females.

Experiences of acculturative stress were associated with poorer outcomes on all three

measures of psychosocial functioning. In addition, Latino males who reported having a

high level of Anglo orientation reported lower levels of acculturative stress. It might be

that being able to endorse and adapt to mainstream U.S. culture serves as a protective

factor of experiencing elements of acculturative stress, such as not having experiences of

discrimination and not feeling alienated in this society that encourages independence and discrimination continues to exist. Moreover, Latino males that reported high levels of Mexican orientation reported higher levels of acculturative stress. It might be that being connected to and engaging in your Latino cultural values and traditions might create more conflict for these males as they are trying to engage in mainstream U.S. culture if they are trying to maintain a strong sense of their Latino culture and identity.

Finally, the tests of mediation suggested that the experience of acculturative stress served as the mediating mechanism by which Mexican orientation scores were linked to negative outcomes for boys. This finding has implications for researchers, educators, and clinicians, as we all work to facilitate optimal developmental outcomes for Latino youth. Future research should aim at developing coping strategies and support systems for Latino youth (most importantly males) in their efforts to navigate mainstream U.S. culture while retaining traditional connections and values. In addition, systemic interventions with schools and communities are necessary to alter the conditions of discrimination and alienation that characterize the lives of Latino youth.

For Latina females, acculturative stress was a strong correlate of depression, although the marginally significant interaction with Anglo orientation suggested that the effect of acculturative stress was exacerbated for girls who were low on Anglo orientation. It might be that they experience conflict and stress related to managing and navigating these two cultures, which create distress and feelings of depression. It seems that for Latinas, acculturative stress is what influences their depression, but not acculturation levels. Furthermore, acculturative stress and acculturation levels are not

related to their self-esteem or substance use problems. It might be that for Latinas, further exploring how the experiences of acculturative stress are different for Latina females than Latino males might be beneficial for treatment and interventions than actually examining their acculturation levels. Furthermore, knowing that acculturative stress is different for male and females, it is important to examine why this is the case for exploring interventions that are specific for males and females.

For Latino males, acculturative stress was what influenced their mental health outcomes. For males, it was not levels of acculturation, but rather the experiences of acculturative stress that were associated with more depression, less self-esteem, and more probably of experiencing substance use problems. It is important to explore why this acculturative stress is detrimental to the psychosocial functioning of Latino males and not continue to study acculturation levels when this study is supporting acculturative stress as the mechanism which it impacts their psychosocial functioning.

Moreover, there were marginally significant interactions between Anglo orientation and acculturative stress on reported substance use problems for both males and females. For Latinos, among those that reported high Anglo orientation and high acculturative stress, 50% reported experiencing at least having a substance use problem in the last month. In contrast, of those who were low on both AOS and SAFE, only 22.2% reported substance use problems. This suggests that experiencing high acculturative stress as well as having a stronger identification with mainstream U.S. culture becomes problematic for these males. Intuitively, it makes sense that a strong desire to connect with White American culture, in combination with higher levels of

struggle in the acculturation process, would be linked to worse outcomes. Moreover, for Latinas the group at lowest risk for substance use problems was those with high Anglo orientation and low acculturative stress (16.7%). Those who reported low Anglo orientation and high acculturative stress were at highest risk for substance use problems (38.7%). It might be that for Latinas that have a higher identification with U.S. mainstream culture and have lower acculturative stress might not be experiencing the same conflicts that Latino males might be experiencing.

Almost all females in this study were classified as bicultural, suggesting that their experiences of acculturative stress may be best investigated in the context of bicultural stress, which very few studies have examined (Romero et al., 2007a). Romero and colleagues examined bicultural stress in Latinos, Asians and European American youth, and found that bicultural stress predicted depressive symptoms in these adolescents. Bicultural stress is the stress that is a result from experiences of discrimination, acculturation, and immigration. Moreover, Romero and colleagues (2007b) found that for Latinos, bicultural stress was significantly related to substance abuse and engaging in violent behavior.

Although acculturative stress includes the experience of discrimination, further examination of discrimination should be explored as it relates to their level of acculturation and acculturative stress. Experiences of discrimination, racism, and prejudice can influence the way that someone will develop their identity, such as maintaining strong ties to their ethnic identity or mainstream culture due to these experiences (Liebkind, 2006). Therefore examining these experiences can better help us

understand this acculturative stress process better. For example, if Latino males are experiencing higher levels of discrimination it might be that these experiences of acculturative stress are more impactful on their psychosocial functioning.

Araújo and Borrell (2006) conducted a literature review and critique to examine studies that have looked at discrimination and mental health of Latinos. They found that there were limited studies examining the relationship between discrimination and mental health of Latinos. Based on their findings, they found phenotype/skin color was related to more experiences of discrimination. Even though they suggested that there were a limited number of studies examining gender differences in these studies, they found that when Latinas reported experiences of discrimination it was not as strongly related to poorer mental health outcomes as it was for their male counterparts. The authors suggested that experiences of discrimination in Latinas might look different, and they might have different coping strategies and different support systems than Latino males. These findings might suggest that exploring discrimination experiences, social supports, and coping strategies might be important to help us understand how these experiences of acculturative stress are more detrimental to the mental health of Latino males.

Finally, recall that acculturation, as measured by the ARSMA-II and generational status, was not found to have a direct relationship with acculturative stress for Latinas, but only for Latinos. These findings would suggest that examining acculturative stress might be a better pathway/direction to understanding how the acculturation process impacts the psychosocial functioning of Latina/o adolescents. It might be that as the field continues to make advances in studying acculturation, it begins to move away from

examining acculturation levels, especially acculturation through proxy measures, and finds different ways to examine acculturation processes and the psychosocial functioning of these youth. This study supports this more comprehensive way of understanding acculturation processes as it relates to the psychosocial functioning of Latina/o adolescents. In conclusion, Latinas were found to be exhibit fewer links between acculturative processes and poor psychosocial health than their male counterparts.

Limitations and Directions for Future Research

There were various limitations in the present study that should be noted. First of all, this study was conducted in a small city that is majority Caucasian/White and majority of The Church of Jesus Christ of Latter-day Saints (LDS). Given that more Latina/os are settling in communities like the one from the study, it might be important to further examine and understand how youth from small cities and rural communities are experiencing and managing the acculturation process. This sample's findings might be unique given the demographic characteristics of their environment. Conducting a study and collecting data where there is more ethnic and religious diversity, as well as a more urban area would likely influence findings in this type of study. Given that there are not many Latina/os in this community, Latinos might have to learn how to adapt quicker to mainstream U.S. culture than if someone immigrated to a location where there are many Latinos, which might be one of the explanations of why the sample is highly bicultural.

Self-report data collected only from adolescents themselves represents only a beginning to this vein of research. Future research would benefit from including parent

reports of both adolescent functioning, parent-child acculturation conflict, and from

obtaining data from other sources (school, direct observation, etc.). Furthermore, it will

be important to examine intergeneration stress/conflict in their families that can be

contributing to their experiences of acculturative stress and mental health (Smokowski et

al., 2009). It might be that there is conflict that is created as adolescents tend to adapt at a

much faster pace than their parents (i.e., language) and are able to adapt to the U.S.

mainstream culture better than their parents. If these adolescents are adapting quicker and

even possibly leaving some of their cultural values and traditions and endorsing U.S.

mainstream values, parents might feel that they are becoming acculturated or

"Americanized" and therefore rejecting their Latino background. In a sample of Chinese

immigrants in Canada, Cheung, Chudek, and Heine (2011) found that those who

immigrated at an early age were more likely to acculturate at a faster rate than

immigrants who came at a later age, regardless of the amount of time living in new

country. These findings might suggest that the developmental stage at which some of

these adolescents immigrated might contribute to the difference in the acculturation

stages than their parents. Also, given that this study has a large 1st generation sample, we

should consider how length in the U.S. and immigration experiences may influence their

mental health and identity. There are many different types of experiences when

adolescent/youth immigrate to the U.S. that can result in issues related to their

psychosocial functioning (Suárez-Orozco & Suárez-Orozco, 2002). Further, they stated

that many children are at greater risk when they are immigrating to the U.S., often

reporting their experiences as "traumatic" with greater risk of being robbed, raped,

beaten, or other traumatic events. These authors acknowledge that not all immigrant youth report these types of traumatic experience, but do suggest that some stress arises from living in a new environment, with loss of family members and culture. Furthermore, depending on their environmental context, acculturation patterns will most likely look different (Berry, 1988; Weigers & Sherraden, 2001).

Acculturation has been measured in many ways, which becomes problematic when the field is trying to understand how these acculturation processes or levels impact the mental health of Latina/os. Research examining the relationship between acculturation and mental health outcomes has mixed findings, which might be due to inconsistencies in the way that acculturation has been measured (Balls, Organista, & Kurasaki, 2002; Rodríguez, 2006). Acculturation has been measured at times through measures such as the ARSMA-II, generational status, language spoken at home, and others. It is important that new advances be made in order to address this issue and possibly measure acculturation as a social change process (Trimble, 2002). In a qualitative study with first and second generation Mexican mothers, Weigers and Sherraden (2001) found that acculturation was difficult to assess in women of Mexican descent, mainly due to depending on their environment and social pressures to adapt to mainstream values; these authors suggested that using proxy measure of acculturation can misclassify acculturation level. Someone who immigrates or lives in an area where there are many Latinos or access to the Latino culture might have a different acculturation process than someone who immigrates or lives in a mainly Caucasian area. In addition, a study by Ahern (2009) found that acculturation increases over time in a sample of 85 first

generation Latina immigrant mothers.

There is a lack of studies examining acculturative stress in Latino adolescent samples. Acculturative stress has been discussed in studies but not necessarily measured. Because there is a lack of studies using ways to assess acculturative stress, this is a need in future research. It might be that it is important to understand further how this acculturative stress plays out with different individuals or groups, how people deal with it differently, and what would be best practices for service providers to help their clients that are dealing with this type of stress. Maybe another direction that research should go is having a better understanding of bicultural stress. There has been some research that has looked at bicultural stress in ethnic minority youth (Romero et al., 2007a).

Implications for Educators, Counselors and Researchers

Understanding the complexity of acculturation in Latina/o youth is important for educators, counselors, and researchers to understand. For researchers conducting studies of Latina/o adolescents, it critical that acculturative processes are explored due to where a person might be in the acculturative process which can impact the way they function in U.S. society. Given that there are gender differences among different levels of acculturation, it is important that these be explored carefully when examining Latinos in general. It is also important to explore intergenerational conflict in Latino families and explore how that contributes to their experiences of acculturative stress and their psychosocial functioning. Future studies should not only focus on acculturation, but should focus on the process of acculturative stress and its implications to the mental

health of Latina/o adolescents, with a focus on sex differences.

It's important for educators working with Latina/o adolescents to really understand how their students functioning may be related to their acculturation processes while in school. It might be that some students have a much easier time learning and adapting to mainstream U.S. customs and values, while others might be struggling or having difficulties endorsing them. School personnel might see that those that are struggling might not be as involved with school activities and might not know how to navigate the school system, compared to their counterparts that are being more successful. Students that are experiencing acculturative stress might not be as involved, feel disconnected to their schools, and be more at risk of dropping out due to not feeling like they belong (Sánchez, Colón, & Esparza, 2005). Feelings of school belonging are important for Latina/o adolescent school achievement.

Clinicians and counselors working with Latina/o adolescents should assess where their clients are in the acculturation process and assess if their clients are experiencing acculturative stress. Acculturative stress has been shown to be a predictor and detrimental to the mental health of Latina/os, especially of Latino adolescent males. It is important to assess for acculturation in order to provide treatment approaches and treatments that are culturally appropriate for their clients. It is also important to know if their clients are experiencing acculturative stress and be able to work with their clients and helped them to find ways to reduce some of those stressors related to the acculturation process. If a client comes in with depression, and the clinician does not access for acculturative stress, it might be that the treatment modality that is being used with the client is not effective

since it is not targeting what is causing the depression in their client. It is also important

that we understand that putting the sole responsibility on the client that is experiencing

acculturative stress might not solve the real issue and might be unrealistic. It is through

systematic changes that schools and systems in our society that will help reduce some of

the acculturative stress that Latina/o youth are experiencing. For example, staff trainings

and systematic interventions in education systems to make schools and their staff more

inclusive and address discrimination might help alleviate some of the stressors of the

acculturation process of Latina/o adolescents.

Conclusions

In conclusion, this study examined acculturation and experiences of acculturative

stress in Latina/o youth. Acculturative stress was found to be the mechanism that impacts

the mental health of Latina/o adolescents, especially of Latino males. For Latino males,

acculturative stress was a predictor for experiencing problems related to substance use,

and was related to experiencing lower levels of self-esteem and higher levels of

depression. It was also found that having more Mexican/Latino orientation was a risk

factor for experiences of acculturative stress. Having high Anglo orientation seemed to

serve as a protective factor for experiencing acculturative stress.

For Latina females, acculturative stress was related to higher levels of depression,

but not self-esteem. It might be that Latina females experience bicultural stress given that

they are mostly bicultural, which has been shown to impact the mental health of ethnic

minority youth (Romero et al., 2007a).

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APPENDICES

Appendix A

Informed Consent Forms

UtahState
U N I V E R S I T Y.

2810 Old Main Hill
Logan UT 84322-2810
Teléfono: (435) 797-1460
Fax: (435) 797-1448

CONSENTIMIENTO
Cultura y Desarrollo en Adolescentes Latinos

Introducción/propósito: La profesora Reneé Galliher del departamento de psicología de la Universidad Estatal de Utah (Utah State University) está a cargo de este estudio. Le hemos pedido a su adolescente que participe en este estudio. Deseamos aprender más acerca de las opiniones que los estudiantes latinos tengan sobre su cultura, relaciones y metas en la vida. Cerca de 300 adolescentes latinos participarán en este estudio.

Procedimientos: Los adolescentes contestarán preguntas sobre cómo se sienten acerca de su escuela, sus relaciones, y otros comportamientos. También describirán su experiencia de ser latino. El cuestionario se completará en aproximadamente 45 minutos. Un año después, les pediremos a los estudiantes que completen el mismo cuestionario otra vez. Queremos ver cómo sus respuestas cambian a través del tiempo. También, usted y su adolesecente tienen la opción de ser contactados para otros estudios en el futuro si así lo desean.

Riesgos: Los riesgos por participar en este proyecto son mínimos. Algunos adolescentes no querrán ser compartir información personal con los investigadores. Por lo tanto, los adolescentes se pueden negar a contestar preguntas de temas sensibles o de naturaleza privada. También pueden detener el cuestionario en cualquier momento.

Beneficios: Esperamos que su adolescente se divierta al participar en este estudio. La información que obtendremos nos ayudará a aprender más sobre las vidas y las relaciones de los adolescentes latinos. También ayudará a maestros, a padres, y a consejeros en su trabajo con los adolescentes.

Explicación y oferta para contestar a preguntas: Si usted tiene más preguntas, usted puede preguntar al investigador primario, la profesora Renee Galliher, al (435) 797-3391. Ella habla un poco de español, pero le podemos contactar con alguien que hable completamente español**.**
Pago: Los estudiantes que llenen el cuestionario recibirán $10 por su participación, y recibirán $15 si llenan el cuestionario un año después.

Participación voluntaria y derecho de retirarse sin consecuencias: Su hijo puede escoger participar en este estudio. El/ella puede retirar su participación en cualquier momento y sin penalidad alguna.

Confidencialidad: La información obtenida en este estudio se mantendrá privada (confidencial) y bajo llave de acuerdo con reglas estatales y federales**.** Solamente el equipo de investigación tendrá acceso y verá los datos. La información se identificará con un número y no con su nombre. El estudio durará tres años al cabo del cual se destruirá toda la información.

Utah State UNIVERSITY.

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CONSENTIMIENTO
Cultura y Desarrollo en Adolescentes Latinos

Declaración de la aprobación de IRB: El comité institucional para la protección de participantes humanos (Institutional Review Board) en la Universidad Estatal de Utah ha aprobado esta investigación. Si usted tiene preguntas sobre la aprobación de este estudio, puede comunicarse con True Rubal-Fox al (435) 797-1821. Ella habla español.

Copia del consentimiento: Le han dado dos copias de la hoja de consentimiento. Por favor firme ambas copias y guarde una para sus archivos.

Declaración del investigador: Certifico que se le ha explicado el estudio al participante y su padre, madre, y/o guardián. El participante entiende la naturaleza y el propósito, los riesgos posibles y los beneficios asociados con la participación en el estudio. Se han contestado las preguntas acerca del estudio.

_____
Reneé V. Galliher, Ph.D., Investigadora Principal

Al firmar abajo, doy mi consentimiento para participar.

Consentimiento del adolescente:
Entiendo que mi padre y/o madre tienen conocimiento de este estudio y que han dado permiso para que yo participe. También entiendo que la decisión final es mía, aún cuando mi padre/madre esté de acuerdo. Nadie se molestará si no participo o si cambio de parecer y decido no continuar el estudio depués de haber dicho que sí. Entiendo que puedo hacer preguntas ahora o luego. Con mi firma abajo, expreso mi aprobación para participar.

_____
Firma del Participante   Fecha

_____
Nombre en letra de molde

Consentimiento del padre/madre:
He leído la descripción del estudio y doy permiso a mi hijo a que participe.

Firma del padre o madre

_____Fecha_____

Nombre en letra de molde _____

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Cuando el estudio se haya terminado, nos gustaría enviarle una carta explicando los resultados. Además, estaremos llevando a cabo dos estudios adicionales acerca de las relaciones de noviazgo para el cual tal vez le contactemos en el futuro. A los que participen en los otros dos estudios, se les pagarán $15 por hora por su tiempo. Si desea recibir un resumen de los resultados del estudio, o si esta dispuesto a que le hablemos para futuras participaciones, por favor provea su nombre, dirección electrónica y residencial, y su número de teléfono.

☐ Me gustaría recibir un resumen de los resultados de este estudio.

☐ Me gustaría que se me contactara en el futuro para poder participar en otros estudios si así lo deseo.

Nombre: _____

Dirección electrónica: _____

Dirección residencial: _____

                         _____

                         _____

Número de teléfono: _____

page 1 of 2
Amendment #1 Approved 01/24/2008
Amendment #2 Approved 4/8/2009
USU Original IRB Approval: 09/10/2007
Approval terminates 9/9/2010; Protocol Number 1803
IRB Password Protected per IRB Administrator

Utah State UNIVERSITY.

2810 Old Main Hill
Logan UT 84322-9530
Telephone: (435) 797-1821
Fax: (435) 797-3769

INFORMED CONSENT/ASSENT (survey)
Culture and Development among Latino Adolescents

Introduction/Purpose: Professor Renee Galliher in the Department of Psychology at Utah State University is in charge of this research study. We have asked your teenager to participate. We want to learn Latino students' opinions about their culture, relationships, and goals. About 300 Latino teenagers will participate.

Procedures: The teenagers will fill out a survey about their feelings about school, relationships, and behaviors. They will also describe their beliefs and attitudes about being Latino. The survey should take about 45 minutes. One year later, students will be asked to fill out the same survey again. We want to see how their answers change over time. You and your teenager can also choose whether you want to be contacted later about being in other studies.

Risks: This study is minimal risk. Some people may not want to share private information with the researchers. Students can choose not to answer sensitive questions, and can stop any time they want.

Benefits: We hope that your teenager has fun in this study. The information will help us learn more about Latino teenagers' lives and relationships. It will also help teachers, parents, and counselors in their work with teenagers.

Explanation and Offer to Answer Questions: If you have more questions, you can contact the Primary Investigator, Professor Renee Galliher, at (435)797-3391.

Payment: Students who complete the questionnaire will be paid $10 the first time and $15 if they complete it again one year later.

Voluntary Participation and Right to Leave the Study: It is your teenager's choice to be in this study. He or she can refuse or stop at any time.

Confidentiality: The information from this study will be kept private, in agreement with federal and state rules**.** Only the research team will see the data. All information will be locked in a filing cabinet in a locked room. Your answers will only have an ID number and not your name. Data from this study may be used for three years by our research team before it is destroyed.

IRB Approval Statement: The Institutional Review Board for the protection of human subjects at Utah State University has approved this research. If you have any questions about IRB approval of this study, contact the IRB administrator at (435)797-1821.

Copy of Consent: You have been given two copies of this form. Please sign both copies and keep one for your files.

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Logan UT 84322-9530
Telephone: (435) 797-1821
Fax: (435) 797-3769

INFORMED CONSENT/ASSENT (survey)
Culture and Development among Latino Adolescents

Investigator Statement: I certify that the research study has been explained to the student and his/her father, mother, or guardian. The individual understands the nature and purpose, the possible risks and benefits associated with participation in the study. Any questions have been answered.

_____
Renee V. Galliher, Ph.D., Principal Investigator

By signing below, you agree to participate.

Youth Assent:
I understand that my parent(s)/guardian is/are aware of this research and have given permission for me to participate. I understand that the final decision is mine, even if my parents say yes. No one will be upset if I say no or if I change my mind later and want to stop. I can ask questions now or later. By signing below, I agree to participate.

_____
Signature of Participant   Date

_____
Print Name

Parent Consent:
I have read the above description of the study and I consent for my teenager to participate.

Parent's Signature/Date_____ Print
name_____

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INFORMED CONSENT/ASSENT (survey)
Culture and Development among Latino Adolescents

When the study is done, we would like to send you a newsletter with the results. Also, we may wish to contact you in the future to be in two other studies on dating relationships. Participants in the two other studies will be paid $15 per hour for their time. If you would like to receive a summary of the results of the study or if you are willing to be contacted for further research, please write your name, email, address, and phone number below.

☐ I would like to receive a summary of the results of the study.

☐ I would like to be contacted in the future to be asked about participating in other studies

Name: _____

Email address: _____

Address: _____

                 _____

                 _____

Phone Number: _____

Appendix B

Measures

Demographic Information

Directions: This form asks questions about you and your background. Please answer as honestly as you can.

1.Gender: Male   Female

2.Age:

3.Which category or categories best describes your racial or ethnic background?
        Mexican
        Mexican and other Latino background
        Other ethnic background (please describe)
        Mexican and other race/ethnicity (e.g., White, Black, Asian)
        Other (please describe)

4.Which country does your family consider themselves to be from originally?

   _____

5.Religious Affiliation:
        LDS
        Catholic
        Protestant (ex. Baptist, Episcopalian, Methodist, etc.)
        Jewish
        Other (please specify)
        None

6.Are you currently enrolled in school?
        Yes, full time   Yes, part time   No

7.What grade are you currently in?
        9th   10th   11th   12th

8.Your grade point average (GPA) is approximately:
        0-1.0
        1.1-2.0
        2.1-3.0
        3.1-4.0

9. Are you currently employed?
        Yes*   No

  *IF YES, how many hours per week?
        1-10   11-20
        21-30   31/more

10. What do you plan to do in the future?
    Graduate high school only
    Some college courses
    College degree (BA/BS)
    Graduate School (MA/MS/PhD/JD/MD)
    Technical School
    Military (Army, Navy, Marines, Air Force)
    Other (please specify)
    Don't know

11. With whom do you live? (check all that apply)
    Both parents   Mother only
    Father only   Mother & Stepfather
    Father & Stepmother   Mother & Boyfriend
    Father & Girlfriend   Brother(s)/Sister(s)
    Boyfriend/Girlfriend   Auntie(s)
    Male friend(s)   Grandmother
    Female friend(s)   Grandfather
    Non-related adults(s)   Other adult relatives

12. How long have you lived in your current residence?

13. What is your parents' marital status?
    Married to each other
    Divorced or separated from each other*
    Never married to each other
    Widowed
    Other
  *If divorced or separated, how long have they been divorced? _____ yrs.

14. How far in school did your father go?
    Some High School
    High School Graduate
    Technical School
    Some college
    College Graduate
    Graduate School

15. How far in school did you mother go?
    Some High School
    High School Graduate
    Technical School
    Some college
    College Graduate
    Graduate School

16. What does your mother do for a living?

17. What does your father do for a living?

Brief Acculturation Rating Scale for Mexican-Americans - II

30. Circle the generation that best applies to you. Circle only one.

1. 1st generation: you were born in this country
2. 2nd generation: you were born in the USA; either parent born in Mexico or other country.
3. 3rd generation: you were born in USA; both parents born in USA and all grandparents born in Mexico or other country
4. 4th generation: you and your parents born in USA and at least one grandparent born in Mexico or other country with remainder born in USA.
5. 5th generation: you and your parents born in USA and all grandparents born in the USA.

SCALE 1: Circle a number between 1 and 5 next to each item that best applies.

Response Alternatives:

1 = Not at all
2 = very little or not very much.
3 = Moderately
4 = Much or very often
5 = Entirely, often, or almost always

31. I speak Spanish.
32. I speak English.
33. I enjoy speaking Spanish.
34. I associate with Anglos.
35. I enjoy English language movies.
36. I enjoy Spanish language TV.
37. I enjoy Spanish language movies.
38. I enjoy reading (e.g., books) in Spanish.
39. I write (e.g., letters) in English.
40. My thinking is done in the English language.
41. My thinking is done in the Spanish language.
42. My friends are of Anglo origin.

S.A.F.E.

Below are 24 statements of situations that may cause you no stress to extreme stress. Using the 5 point scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. The 5 point scale is: 1 = not stressful, 2 = somewhat stressful, 3 = stressful, 4 = very stressful, and 5 = extremely stressful.

____ 93. Because I am different, I do not get enough credit for the work I do.
____ 94. I often feel ignored by people who are supposed to assist me.
____ 95. I often feel that people actively try to stop me from advancing.
____ 96. Many people have stereotypes about my culture or ethnic group and treat me as if they are true.
____ 97. In looking for a job, I sometimes feel that my ethnicity is a limitation.
____ 98. I feel uncomfortable when others make jokes about or put down people of my ethnic background.
____ 99. Because of my ethnic background, I feel that others often exclude me from participating in their activities.
____ 100. It bothers me when people pressure me to assimilate.
____ 101. People look down upon me if I practice the customs of my culture.
____ 102. Loosening the ties with my country is difficult.
____ 103. It bothers me that I cannot be with my family.
____ 104. I often think about my cultural background.
____ 105. It is hard to express to my friends how I really feel.
____ 106. I often think about my cultural background.
____ 107. I have trouble understanding others when they speak.
____ 108. I don't have any close friends.
____ 109. People think I am unsociable when in fact I have trouble communicating in English.
____ 110. I don't feel at home.
____ 111. It bothers me that family members I am close to do not understand my new values.
____ 112. Close family members and I have conflicting expectations about my future.
____ 113. My family does not want me to move away but I would like to.
____ 114. It bothers me to think that so many people use drugs.
____ 115. It bothers me that I have an accent.
____ 116. It is difficult for me to "show off" my family.

Rosenberg Self-Esteem Scale

Please use the scale below to respond to the following statements.

A	B	C		D
Strongly				Strongly
Agree				Disagree

163. I feel that I am a person of worth, at least on an equal plane with others.   A   B   C   D

164. All in all, I am inclined to feel that I am a failure.   A   B   C   D

165. I feel that I have a number of good qualities.   A   B   C   D

166. I feel I do not have much to be proud of.   A   B   C   D

167. I am able to do things as well as most other people.   A   B   C   D

168. I wish I could have more respect for myself.   A   B   C   D

169. I take a positive attitude towards myself.   A   B   C   D

170. I certainly feel useless at times.   A   B   C   D

171. On the whole, I am satisfied with myself.   A   B   C   D

172. At times I think I am no good at all.   A   B   C   D

Center for Epidemiology Studies – Depression

Directions: Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt or behaved this way during the past week.

During the past week:	A Never	B 1-2 days	C 3-4 days	D 5-7 days
173. I was bothered by things that usually don't bother me.	A	B	C	D
174. I did not feel like eating; my appetite was poor.	A	B	C	D
175. I felt that I could not shake off the blues even with the help of my family and friends.	A	B	C	D
176. I felt that I was just as good as other people.	A	B	C	D
177. I had trouble keeping my mind on what I was doing.	A	B	C	D
178. I felt depressed.	A	B	C	D
179. I felt that everything I did was an effort.	A	B	C	D
180. I felt hopeful about the future.	A	B	C	D
181. I thought my life had been a failure.	A	B	C	D
182. I felt fearful.	A	B	C	D
183. My sleep was restless.	A	B	C	D
184. I was happy.	A	B	C	D
185. I talked less than usual.	A	B	C	D
186. I felt lonely.	A	B	C	D
187. People were unfriendly.	A	B	C	D
188. I enjoyed life.	A	B	C	D
189. I had crying spells.	A	B	C	D
190. I felt sad.	A	B	C	D
191. I felt that people disliked me.	A	B	C	D
192. I could not get "going."	A	B	C	D

Substance Use History

On how many occasions have you done any of the following things in the past 30 days?

204. Had an alcoholic beverage to drink (beer, wine, or liquor) (circle only one)
   a. 0 times
   b. 1-3 times
   c. 4-7 times
   d. 8-15 times
   e. more than 15

205. Used marijuana or hashish (circle only one)
   a. 0 times
   b. 1-3 times
   c. 4-7 times
   d. 8-15 times
   e. more than 15

206. Used stimulants (cocaine, methamphetamine, "uppers") (circle only one)
   a. 0 times
   b. 1-3 times
   c. 4-7 times
   d. 8-15 times
   e. more than 15

207. Used hallucinogens (LSD, mushrooms) (circle only one)
   a. 0 times
   b. 1-3 times
   c. 4-7 times
   d. 8-15 times
   e. more than 15

208. Sniffed glue, gases, or sprays to get high (circle only one)
   a. 0 times
   b. 1-3 times
   c. 4-7 times
   d. 8-15 times
   e. more than 15

Over the past month, how many times has each of the following things happened?

209. *You got in trouble with your parents because you had been drinking or using drugs.*
   a. Never
   b. Once
   c. Twice
   d. 3 to 4 times
   e. 5 or more times

210. *You had problems at school because you had been drinking or using drugs.*
   a. Never
   b. Once
   c. Twice
   d. 3 to 4 times
   e. 5 or more times

211. *You had problems with your friends because you had been drinking or using drugs.*
   a. Never
   b. Once
   c. Twice
   d. 3 to 4 times
   e. 5 or more times

212. *You had problems with someone you were dating because you had been drinking or using drugs.*
   a. Never
   b. Once
   c. Twice
   d. 3 to 4 times
   e. 5 or more times

213. *You did something you later regretted because you had been drinking or using drugs.*
   a. Never
   b. Once
   c. Twice
   d. 3 to 4 times
   e. 5 or more times

214. *You got in to a sexual situation that you later regretted because you had been drinking or using drugs.*
   a. Never
   b. Once
   c. Twice
   d. 3 to 4 times
   e. 5 or more times

215. *You got in to a physical fight because you had been drinking or using drugs.*
   a. Never
   b. Once
   c. Twice
   d. 3 to 4 times
   e. 5 or more times

You were hung over.
- f. Never
- g. Once
- h. Twice
- i. 3 to 4 times
- j. 5 or more times

216. *You were sick to your stomach or threw up after drinking or using drugs.*
- a. Never
- b. Once
- c. Twice
- d. 3 to 4 times
- e. 5 or more times

217. *You drove an automobile while under the influence of alcohol or drugs?*
- a. Never
- b. Once
- c. Twice
- d. 3 to 4 times
- e. 5 or more times

Psychological Sense of School Membership

Directions: Please read the following statements about your experience at _____ High School. Choose the answer that most closely relates to how you feel.

	A Not At True	B Rarely True	C Sometimes True	D Frequently True	E Completely True

219. I feel like a real part of _____ High School.	A	B	C	D	E
220. People around here notice when I'm good at something.	A	B	C	D	E
221. It is hard for people like me to be accepted here.	A	B	C	D	E
222. Other students in this school take my opinions seriously.	A	B	C	D	E
223. Most teachers at _____ High School are interested in me.	A	B	C	D	E
224. Sometimes I feel as if I don't belong here.	A	B	C	D	E
225. There's at least one teacher or other adult in this school I can talk to if I have a problem.	A	B	C	D	E
226. People at this school are friendly to me.	A	B	C	D	E
227. Teachers here are not interested in people like me.	A	B	C	D	E
228. I am included in lots of activities at _____ High School.	A	B	C	D	E
229. I am treated with as much respect as other students.	A	B	C	D	E
230. I feel very different from most other students here.	A	B	C	D	E
231. I can really be myself at this school.	A	B	C	D	E
232. The teachers here respect me.	A	B	C	D	E
233. People here know I can do good work.	A	B	C	D	E

234. I wish I were in a different school.   A   B   C   D   E

235. I feel proud of belonging to _____   A   B   C   D   E
High School.

236. Other students here like me the   A   B   C   D   E
way I am.