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**Bicultural competence and education among Latino**


by


**Raquel Botello Zamarron**


A thesis submitted to the graduate faculty

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ABSTRACT

Latino student's educational attainment beyond a high school diploma continues to be a societal struggle and topic of research in academia.  Enrollment rates continue to increase, however, gaps between initiation and completion of higher education degrees are still prevalent (Fry, 2010). The three dimensions of educational commitment (i.e. Affective, Continuance and Normative) had not been explored among Latino college students despite noted discrepancies between their intended goal and actual persistence (Hellman & Williams-Miller, 2005; Rendon & Nora, 1997). Minority stress has been identified as one of the potential stressors that influence minority students in higher education. This study examined the relationship between minority stress and the three dimensions of educational commitment in a sample of 148 Latino community college and University students. Social connectedness to both Latino and Mainstream culture and perceived bicultural competence were postulated as possible moderators to the hypothesized negative relationship between minority stress and all dimension of educational commitment. The results indicated a significant main effect of Mainstream social connectedness and perceived bicultural competence on Affective educational commitment. Similarly, a two-way interaction indicated that perceived bicultural competence interacted with minority tress in predicting Affective educational commitment. For Continuance educational commitment, a main effect of perceived bicultural competence was also found. Finally, social connectedness to mainstream also significantly predicted Normative educational commitment. Future research directions and implications to counseling and work with Latino college students are discussed.

CHAPTER 1: INTRODUCTION

Latino student's attendance and commitment to education has been a topic of academic interests for many decades. Specifically, this has been an area of concern in higher education where the Latino population has been part of the achievement gap (NCES, 2005; as cited in Greene, Marty, & McClenney, 2008). Researches from many areas of academia have tried to understand and address this gap. An increased understanding of the factors, experiences and unique stressors that contribute to this issue have been identified but the issue continues to remain unsolved. Despite the general increase in enrollment by Latino students that account for 15% of the total higher enrollment in higher education institutions, low persistence and lack of degree attainment continue to shadow this population (Fry, 2010; Lynch & Engle, 2010).

This increased enrollment rate is especially evident in community colleges. Community colleges have recorded the highest increase of enrollment rates in comparison to all other higher education institutions (Fry, 2010). What continues to be relevant is the long history and still current trend of Latino student's prevalent tendency of attending 2-year institutions rather than 4-year schools when beginning their academic journey (Fry, 2010). Latino students continue to be the minority group with the highest representation in the community college setting compared to all other racial minority groups (Fry, 2010). Likewise, Latino students are also the minority group with fewer transfers to four year institutions compared to their Caucasian and other minority group peers (NCES, 2005). This tells us that the achievement gap (i.e., Disparity in educational performance by students of color) puzzle continues to have missing pieces. Latinos are continuing to experience uniquely different factors that are attributing to this lack of persistence and commitment to education.

There are in fact some students who remain committed to their education and achieve their academic goal. Even though several scholars have examined the factors that effect persistence or achievement (e.g. Suarez, 2003; Castillo, Conoley, Choi-Pearson, Archuleta, Phoummarath, & Ladingham, 2006; Crisp & Nora, 2009), they failed to adequately look at the role of educational commitment. Educational commitment is conceptualized as the three components of psychological bond between the individual and the academic setting (Hellman & Williams-Miller, 2005). Educational commitment uniquely taps into the individual's role obligations, investment analysis, and emotional attachment to education and the institution (Hellman & Williams-Miller, 2005). This holistic view of educational commitment can help us identify not only individual differences but also allow us to possibly look for group patterns. The types of cultural influences, roles, costs and benefits and emotive identities that are experienced by Latinos are uniquely different than majority member students.

One of the biggest influential factors that these students are facing is the stress associated to their minority status. This stress is associated with being a minority in college. For example, Latino students might experience racial discrimination or stereotype by other peers or faculty members (e.g., they are inferior or they not likely to graduate). Minority stress is related to many negative outcomes such as depressive symptoms (Wei et al., 2010). Minority stress is also associated with college retention in Latino/s (Fry, 2004) and college persistence among Latino Americans, Asian Americans, and African Americans (Wei, Ku, & Liao, 2011). There is still limited research on the association between minority stress and other educational components. For example, educational commitment and minority stress have not been studied and we have failed to identify whether there is a link between these two constructs.

Due to the lack of Latinos that attend higher education institutions in general, minority stress can be possibly salient in the predominant White academic institutions (Fry, 2010). Thus, Latino/a college students might likely face minority stress (i.e., stress related to being a minority status) when attending a higher education institution. As I address above, minority stress was positively related to mental health outcomes (e.g., depression; Wei et al., 2010) and negatively related to college retention (Fry, 2004). Taking these findings into consideration, it is likely that minority stress would be negatively associated with educational commitment. Experiencing higher minority stress can be anticipated in situation where minority status is more visible. The experience of many Latino students who are attending predominately white student colleges is likely such. The more stress inducing an educational journey is, the less commitment to the goal or institution can be anticipated. In this study, I hypothesize that minority stress would be negatively related to educational commitment in Latino students.

When trying to identify relationships between constructs in a specific minority group such as Latino/students, we should take into account the group specific factors such as culture. Latino students not only may hold different cultural factors than those of other minority groups, but they also have different population characteristic. A crucial example of this would be the newness of the Latino generations. Unlike African American students who have historical eras that continue to define their current group struggles, the Latino college student population as a whole is mainly composed of second generation or newer individuals (Fry, 2002).This generational characteristic is important because it brings to light the different sets of culture (mainstream and Latino) coming together in the individual. These current waves of Latino college students have been faced with attending the juncture of their ethnic culture and the mainstream culture in which it is nested. Previous research had been focused on models that

indicated a dichotomous view of enculturation and acculturation within individuals (Castillo, Conoley & Brossart, 2004; Cano & Castillo, 2010). These notions have been embedded on the idea that there is a mandated either/or choice when it comes to cultural acquisition. However, newer models of acculturation have challenged the dichotomous approach and established the possibility of harmoniously incorporating both cultures into a person's identity through social connectedness in the Latino community and in the mainstream society (Latino SC and Mainstream SC; Yoon, 2006) and bi-cultural competence (LaFrombroise, Coleman, & Gerton, 1993) In the present study, I propose that Latino SC, Mainstream SC, and bicultural competence would be three potential resources for Latino students to use when navigating between encountering minority stress and reaching their educational commitment.

Social connectedness is a construct based on the need for belonging in self psychology. This concept is regarding one's sense of interpersonal closeness and togetherness with the social environment they are situated in (Lee & Robbins, 1995, 1998). Feeling a sense of social connectedness is an important part of our functioning in daily life. The concept has been expanded to the connectedness to ethnic and mainstream community (Yoon, 2006). These two important sets of connectedness can be easily related to Latino students who have both cultures influence them in one way or another. It has been noted that Latino students value deep connections with their family (familismo) and many times this value also applies to their community (Rodriguez, Mira, Myers, Morris, & Cardoza, 2003). The Latino population is made up from distinct nationalities but there is an importance to connection and encouragement actively seeking unity. For example, it is not uncommon to hear "Latinos unidos, jamas seran vencidos" (*United Latinos will never be defeated*) during events that somehow link the Latino community. This common chant sends a message that "we" (Latinos) are connected with and

supporting each other. This established need for connection seems to be symbolic in Latinos. When Latino students experience minority stress, a stronger sense of Latino social connectedness is likely to serve a role of comforting when they face minority stress. Once their minority stress is able to alleviate, their educational commitment is likely to retain or even strengthened. Conversely, if Latino students have a weaker sense of Latino social connectedness, they are less likely to feel support from their Latino peers and even family. The minority stress they experiences might impact them to feel not fit in and doubt the possibility to reach their academic goals. For these reasons, it is hypothesized that having a stronger sense of social connectedness to the Latino community (Latino SC) might help regulate or moderate the negative impact of minority stress on educational commitment. Conversely, having a weaker sense of Latino SC, when minority stress increases, their educational commitment may decrease.

Similarly, having a good degree of connectedness with mainstream can also be beneficial in the education journey that Latino students might experience. It would be very helpful to continue on educational journey with a welcomed, accepted, and connected feeling. Social connectedness to mainstream or American (Mainstream SC) culture can also moderate some of the potential negative effects of minority stress on the educational commitment of Latino students. For example, students may be more likely to seek support or guidance from school official or majority culture peers if they also share a sense of connectedness with mainstream culture. Hence, it is hypothesized that a stronger sense of Mainstream SC can become alleviator/buffer of the expected negative relationship between minority stress and educational commitment. However, it is hypothesized that a weaker sense of Mainstream SC may result in magnifying the negative relationship between minority stresses on educational commitment.

Bi-cultural competence is the belief that one can function effectively in both of their ingrained cultures without sacrificing a strong sense of self. Specifically, it is the feeling that one can hold an active identity and role in both cultures and feel complete and satisfied with this identity. Bicultural competence has been minimally research in the Latinos population but previous findings have looked at its moderation role to other psychological constructs. Wei et al. (2010) established that bicultural competence buffered the negative impact of minority stress on depressive symptoms. This study aims to address whether bicultural competence is possibly a moderator in the relationship of minority stress and the educational commitment of Latino community college students. Because community colleges are founded in White cultural values which can be different from their native Latino culture, it is hypothesized that Latino student would benefit from perceived bicultural competence and tools.

Some of these tools can be related to being culturally competent to flexibly switch between White and Latino cultures. One can argue that anyone living within a culture has the tools to succeed. Clearly the academic gap and other disparities illustrate that this may be not the case. For example, the stereotype of Latinos with low graduation rate (Fry, 2002; Smedley, Myers, & Harrell, 1993) can influence Latinos students to perceive themselves as unable to succeed in education environments or roles. This can include the notion of being a successful college student. On top of their stress in society related to their ethnic and racial background they may feel additional stressors associated to being a minority in college. These can be identified as barriers for them to succeed in their educational goals. It can potentially be a struggle for Latino students between wanting to go to college to achieve an education goal and also wanting to remain their true to their Latino ethnic identity. Unfortunately, it is common for College academic settings to not value or give space to accommodate Latino cultures (Castillo, et al.,

2006). With this said, it can be expected that those Latino students with higher sense of bicultural competence would feel that they are more capable of succeeding in the academic setting. Believing that they can be successful would allow them to have higher educational commitment. It is expected that bicultural competence can be moderate the negative affects of minority stress on the educational commitment among Latino community college students. With higher bicultural competence, Latinos college students may feel like they truly can be a college student and not need to sacrifice their ethnic identity by doing so. In other words, they can remain true to their Latino culture and also fully experience being college student. These competencies in negotiation between cultures would give them tools in dealing with minority stress. Therefore, their educational commitment would be less likely to be impacted due to minority stress. It is expected that high bicultural competence in Latino student would moderate the relationship between minority stress and educational commitment. Additionally, Latino students with low bicultural competence would display a negative relationship between minority stress and educational commitment.

In summary, this study aims at understanding the role of minority stress on the three dimensions of educational commitment in Latinos students. It was anticipated that minority stress would have a negative relationship on all dimensions of education commitment. It was also a goal of this study to identify possible moderators (i.e., Latino SC, Mainstream SC, and bicultural competence) that could be affecting the relationship between these two constructs. It was expected that social connectedness to both Latino and Mainstream culture would encompass as positive relationship with all components of educational commitment. Similarly, perceived bicultural competence would also have a positive relationship with this construct. Additionally, Latino SC, Mainstream SC, and bicultural competence would be explored as possible buffers to

the postulated minority stress and educational commitment relationships in regards to Latino students. Specifically, it was hypothesized that a stronger (but not lower) sense of Latino SC would serve as a regulator to the anticipated negative relationship of Latino student's minority stress on their three domains of educational commitment. Similarly, it was also hypothesized that a stronger (but not weaker) sense of Mainstream SC would buffer the anticipated negative relationship between minority stress and educational commitment domains. Finally, it was hypothesized that higher (but not lower) levels of bicultural competence would regulate and potentially decrease the impact of minority stress on the three components of educational commitment.

CHAPTER 2: LITERATURE REVIEW

**Educational commitment of Latino Students**

It has been well documented that Latinos students have less probabilities to attend college or any other additional training beyond high school (Fry, 2004). Latino students are not only part of the achievement gap but also the largest lag behind White college students (Fry, 2004). This academic disparity is true when comparing equally qualified and prepared Latino students to their White counterparts (Fry, 2004). In addition, only 57% of the best prepared Latino students that entered some types of college or university actually attained a bachelor's degree compared to 81% of the their equally prepared White student peers (Fry, 2004). Despite the fact that Latino students are part of the largest and fastest growing minority population their educational attainment is notably behind their African American and Asian American student counterparts. For example, in 2005, only 16% of Latino students who started at a community college transferred to a four year institution. This was lower than both Asian American (47%) and African American (24%) students (NCES, 2005; as cited in Greene, Marty, & McClenney, 2008).

Latino students that decide to remain committed to their education beyond a high school diploma are more likely to begin their academic journey in a community college (Snyder, Tan, & Hoffman, 2006). This trend is present in areas where Latinos are not minorities by number and also in rural areas where minority status is very evident (Wassmer, Moore, & Shulock, 2004). This common route of entering a community college first has been observed to being a very ineffective one, especially for Latino students. Most of Latino students who enter postsecondary education thru a community college do reportedly intend to transfer on 4-year institution. As much as 85% of Latinos entering a community college have identified that they see their

community college as the first part of their journey to achieving a baccalaureate degree at another institution (Rendon & Nora, 1997). Indicating that achieving a 4-year degree has been intended to be the ultimate goal by a great majority of these Latino students. However, this continued lack of degree attainment might indicate that despite the enormous efforts in academics and policies, there is still a need for addressing the Latino/a population at the community college level. Latino students apparently continue to have extra barriers that affect their academic achievement in higher education institutions, including community colleges. It is likely that these factors are not present for White students and/or are uniquely different than those faced by other students from other minority groups. Because of this, it is also important to research factors that alleviate the distressing variables influencing the commitment Continuance of Latino community college students.

Much of the research has focused on external factors such as using a situation-centered approach to examine perceived university environment and social and interpersonal environment (Castillo et al., 2006; Gloria, Castellanos, Lope, & Rosales, 2005). The findings of these studies have contributed substantially in our understanding of what factors are possibly truncating the educational achievement of Latino students. However, in the literature there has been a great concentration on identifying persistence attitudes. Therefore, examining intrinsic motivators has been largely left out. As indicated previously, a vast majority of Latino students entering a community college have indicated that their ultimate academic goal is beyond their two-year institution (Rendon & Nora, 1997). Clearly, there is a disconnect between their declared intended goal and their actual continuance in higher education. Thus, it is wise to begin to look at other variables that are more inner and intrinsically driven, such as commitment.

Educational commitment defines as a multidimensional psychological bond that a person

has in a given institution (Hellman & Williams-Miller, 2005). This construct was developed as

an attempt to further understand the level of commitment students have toward their education.

To fully understand the concept of commitment, Hellman and Williams-Miller (2005) identified

three components that capture commitment of education. They identified educational

commitment "as a function of Affective, Continuance and normative psychological bonds" (p.

21). Specifically, Affective commitment indicates the emotional attachment that an individual

has to the identity of being college student. Having an emotional bond to the identity of being a

college student serves the student's social role (Hellman & Williams-Miller, 2005). Thus, those

with high emotional bond (Affective EC) would be more likely to behave in ways to strengthen

and feed their needs and social roles. The second dimension is the first dimension is Continuance

commitment (Continuance EC), referring to an individual's perception of the cost-benefit

analysis of behaving in a consistent manner. In the education setting, it is the investment of

continuing as a student (e.g. attending classes, studying). The third dimension of educational

commitment denotes the feeling of obligation to the specific valued role. Normative commitment

(Normative EC) is the conformity to one's referent group(s) values and this can include a

specific level of education or degree attainment (Hellman & Williams-Miller, 2005).

Due to the multidimensional nature the educational commitment, it is prudent to state that

it can potentially give us a better and clearer understanding of what Latino students are

experiencing in terms of their commitment to their education. Having the three distinct variables

of educational commitment can also allow us to look at potential patterns that might be present

for Latino students at community colleges. For instance, it is likely that many Latino students are

often the first or second generation students, thus Normative EC might illustrate a different

outcome.  Latino students might hold ethnic cultural values thus the reference group would demand different characteristics in regards to educational attainment. But there also might be higher expectations to achieve greater goals than their preceding generation and thus education may be viewed as continued advancement. The way in which they are connected to both of their cultures might influence their commitment to their education.

**Minority Stress and Education Commitment**

Latino students struggle not only with stressors associated to achieving an education but also with the stressors associated with their minority status. Many of the barriers can be linked to stressors associated to being a minority person, such as acculturative stress and discrimination. Minority stress (MS) is a stressor associated with having a minority status (Myer, 2003). As it was addressed by Smedley, Myer, and Harrell (1993), minority stress is made up of five factors. These included: social climate stress (e.g., systematic discrimination and multicultural unwelcoming environment), interracial stress (e.g., lack of multicultural competence from university/others), racism and discrimination stress (e.g., prejudice victimization), within-group stress (e.g., intra-racial marginalization) and achievement stress (e.g., fears of being unsuccessful and not meeting others expectations). The total of these subscales can be used to address the whole concept of minority stress.

Researchers have noticed that this minority stress contributes to negative outcomes in minority students after controlling for the general stress. Minority stress has been positively associated with depression and greater feeling of distress by ethnic minority students in such institutions (Wei et al., 2010; Smedley, Myers, & Harrell, 1993). Perceived racism and minority stress was a significant predictor of psychological symptoms in Latino university students (Alamilla, Kim, & Lam, 2010). They indicated that the minority stress accounted for the majority

part of the variance in the psychological symptoms. Wei et al. (2010) examined how minority status stress was related to depressive symptoms in minority college students, including Latino students. The research concluded that minority stress was positively related depressive symptoms in a sample of minority students.

The idea that minority stress negatively affects individuals' mental health is not new; however, studies indicated this stress can be moderated by the different factors. Alamilla, Kim, and Lam (2010) found enculturation was a moderator between minority stress and psychological symptoms such as anxiety, hostility, and somatization. However, studies that also contradict the effect of minority stress on Latino students. Rodriguez, Morris, Myers, and Cardoza (2000) found that minority stress did not generate incremental predictive validity on the psychological adjustment of Latino students where they represented the majority population.

Minority stress is experienced by many or most Latino community college students. In particular, most Latino college students are younger generations (e.g., 3rd generation of younger) and the first generation in college and are likely to struggle in having minority stress and wanting success in their education (Fry, 2002). Unfortunately, Latino college students have the unique stress of being a minority individual in addition to stress in daily life (Wei et al., 2010).

Because the results continue to have an edge of inconclusiveness it would be wise to continue to see if minority stress affects other areas. It is likely that minority stress might be negatively related to academic commitment. Just like persistence attitudes are negatively related to minority stress (Wei, Ku, & Liao, 2011), academic commitment may also suffer from minority stress. Therefore, it is reasonable to hypothesize that minority stress is positively associated with academic commitment in Latino community college student students.

**Latino SC and Mainstream SC as Moderators**

Social connectedness is a construct based on the need for belonging in self psychology (Lee & Robbins, 1995, 1998). This concept refers to one's sense of interpersonal closeness and togetherness with the social environment (Lee & Robbins, 1995, 1998). The concept has been expanded to the connectedness to ethnic and mainstream community (Yoon, 2006). Yoon (2008) examined the impact of minority person's social connectedness to mainstream and ethnic culture on subjective well-being. She postulated that having a connected and belonging sense with your ethnic culture or mainstream culture may be different depending on person's level of acculturation and other factors. This distinction of social connectedness to the two different communities is one that can be used with Latino college students. As stated previously, Latino students often hold both their cultures and may often feel like members of two distinct communities (i.e., Latino and Mainstream). As stated previously, due to the newness of much of the Latino population it is likely that many of these college students are very attached to their Latino roots and community.

There is a lack of research on how social connectedness fits in with Latino people and more specifically Latino community college students. However, studies indicated that the social connectedness of other ethnic minority groups can influence the relationship of other variables. For example, Wei, Wang, Heppner, and Du (2011) found that social connectedness to ethnic community moderated the positive significant relationship between perceived discrimination and posttraumatic stress symptoms in Chinese international students. In contrast, social connectedness to mainstream did not moderate that same relationship for this group. Social connectedness of Latino college students to mainstream or their Latino culture has not been looked at specifically. However, previous studies have postulated positive outcomes associated

to social connectedness in general. A qualitative study of Latino student's experience in an abroad community service program revealed that connectedness to their host community was positive and impactful to their development (Terashini, 2007).

Connectedness was studied by looking at sense of belonging by Johnson, Soldner, Leonard and Alvarez (2007) in first-year undergraduates from different ethnic groups. In theirs study, Latino students were the only anomaly group that displayed distinct interactions between sense of belonging and interactions with diverse peers. This finding was not the same for the Asian American, African American and Caucasian groups in the same study (Johnson et al., 2007). Thus how connectedness influences Latino students is not only under examined but it is also inconclusive. Despite these discrepancies and lack of research it is postulated that Latino SC can be a moderator to the expected negative relationship between minority stress and educational commitment. It is likely that being connected to their Latino community can serve as a support and inspiration to continue on their educational goals. As speculated, Latino students are more likely to be first-generation students and have to navigate thru their native Latino culture and community and also the community they live in which fosters mainstream culture (Fry, 2002). It is also important for them to posses the competence and assurance that they can be connected to mainstream culture too. That is why it is also hypothesized that hiving a high level of social connectedness to mainstream may buffer the effect of minority stress on educational commitment.

**Bi-Cultural Competence as a Moderator**

As stated previously Latino students are likely facing very distinct barriers and experiences that are different to the majority group members and other minority groups. One of these differences might be the cultural struggles that are present for Latino students. A great

portion of the Latinos in the U.S. are either 3rd generation or newer (Fry, 2002). Cultural negotiation between their ethnic culture and the mainstream culture may be one of the different struggles that Latino students uniquely face. The negotiation struggle between cultures has been analyzed in past academic work extensively (Castillo, Cano, Chen, Blucker, & Olds, 2008; Crockett, Iturbide, Torres Stone, McGinley, & Raffaelli, 2007; Longerbeam, Sedlacek, & Alatorre, 2004). Although, it has not been specifically tested in many studies, many results of research regarding cultural negotiation struggles have indicated the possibility of bicultural competence as one of the alleviators' of such issues when discussing their findings (LaFrombroise, Coleman, & Gerton, 1993; Birman, 1998)

Biculturalism has moved from the assimilation model to dimensional model (i.e., by taking into account maintaining ethnic culture and acculturating to mainstream culture (La Fromboise, Coleman, & Gerton, 1993). La Fromboise (1993) and his colleges established that maintaining active and effective competency in both cultures can be a good indicator of psychological well-being. Many studies that have looked at this claim and have in fact found positive relationships between some types of bicultural competence and psychological well being (David et al., 2009).

Some of the critics regarding the effects of bicultural competence have been due to the inconsistency of how this term has been measured and defined in past research (Birman, 1998). However, despite this inconsistency, the ability to navigate two cultures is a positive skill. This skill can benefit those that attempt to negotiate between two cultures (LaFrombroise, Coleman, & Gerton, 1993). Other studies have indicated that bicultural competence has served as a moderator to decrease depressive symptoms associated with minority stress (Wei et al., 2010).

Research studies indicated that perceiving bicultural competence is positively related to the subjective well-being of minority college students including Latino Students (David et al., 2009).

In the previous studies, bicultural competence in Latino students was related to higher academic performance. However, most of these studies were done by focusing on grade school and high school students (Buriel, Perez, De Ment, Chavez & Moran, 1998). Bicultural competence can be hypothesized to be easily related to the current college Latino students, specifically those of newer generations. Although there are numerous of studies attempted to asses' cultural identity and even different types of perceived competence, bicultural competence fails to appear in the literature. Most importantly its relationship with education commitment of Latino students is not examined in the literature. As previously stated, Latino students seem to be part of mainstream culture but also hold ethnic cultural selves. Being part of both cultures can be an inevitable thing for them to handle on a daily basis. It is precisely second generation Latino student (largest generation) that have come to enroll in higher education institutions almost equally to their majority member counterparts (Fry, 2002).

A good portion of Latinos are clearly exhibiting a high need and want for participating in mainstream culture. However, this group is also likely to be attuned to their ethnic roots and culture. Thus, it was hypothesized that high bicultural competence would buffer the expected negative relationship between minority stress and educational commitment. By being able to navigate both cultures and feel grounded in their own self, Latino students with bicultural competence can withstand higher levels of minority stress. Likewise, they also may just be able to generate higher levels of educational commitment also. However, this would not be a case for those with lower bicultural competence.

**The Present Study**

The present study aims at understanding the role of minority stress status and educational commitment of Latino community college students. We hypothesize that minority stress shares a negative relationship with Latino students' educational commitment. In attempts to further understand that relations, I propose Latino SC, mainstream SC, and bicultural competence as moderators of this relationship. Because Latinos have the highest percentage within minorities groups (Asian, African American etc.) to enter a community college first it is beneficial to learn about what factors are influencing the educational commitment of these students. Since educational goals and the view of education as an individual gain is very much a mainstream cultural norm it is also important to view the social connectedness to the mainstream and ethnic culture as possible moderators. It was hypothesized that having strong social connectedness to both mainstream and the Latino culture would also help buffer the relationship between minority stress and educational commitment. As previously stated, bicultural competence has been seen as a possible model cultural negotiation that can be experienced by many Latino students. It was expected that bicultural competence can buffer the expected negative relationship.

CHAPTER 3: METHODS

**Power Analysis**

The current study aims to obtain a small to medium effect size for the results as this is typical for most social science research projects. The power and precision program (Borenstein, Rothstein, & Cohen, 2001) is used to estimate the number of participants needed to obtain this small and medium effect size. This program is used to calculate power, which is a function of effective size, sample size and alpha level. To determine the sample size needed for the desired effect, each predictor variable (i.e., minority stress, Latino SC, Mainstream SC, and bicultural competence) was assigned an effect size of either $R^2$ = .01, .09, or .25 (i.e., $r$ = .10, .30, or .50 for small, medium, or large effect size, respectively), which is recommended by Cohen and Cohen (1983). This procedure generated five sets of possible effect size combinations: .01/.01, .01/.09, .09/.09, .09/.25, and .25/.25. These combinations indicated that a sample size of 470, 90, 47, 22 or 14, respectively, was needed for a power of .80 or higher at $p < .05$

**Participants** A total of 175 students participated in the study and completed the survey. We obtained 148 usable responses after removing students that did not correctly answer two checking items included in the survey. The items asked the student to select a specific response for that item such as "please select 'strongly agree' for this item." Of these 148 participants, t half were from a four year university ($n$ = 74) and half from a community college ($n$ = 74). The mean age for participants was 23.04 ($SD$ = 6.74). The sample consisted of 41 males and 106 females. One participant did not indicate their sex. Most participants were second generation ($n$=66). Twenty six identified as first generation (i.e. born outside of the U.S.), twenty identified as 1.5 generation which indicated that they were born outside the U.S. but moved here as a child or adolescent. Finally, thirty four indicated that they were third generation or older and two

participants did not indicate their generational statues. Close to two third of this sample identified as Mexican American ($n = 94$; 64%), followed by Puerto Rican-American ($n=23$; 16%) and the rest identified as descending from Caribbean Islands (i.e. Cuban and Dominican), Central and South American countries.

**Procedure**

The participants were currently enrolled in a community college and four year public university in the rural Midwest areas (e.g., Marshalltown Community College, Des Moines Area Community Colleges and Iowa State University) and have self-identified themselves as Latino/a or Hispanic. Participants' names were obtained from the institution directors and registrar's office that agreed to provide a list including name, email, and phone number of all self-identified Latino/a or Hispanic students. A total pool of about 1570 Latino students were registered at these colleges and part of this list. Participants were invited to participate via email invitation and/or phone call invitation.

Upon agreeing to participate in the study they were directed to an online survey, where they read the informed consent and proceeded to the survey if they agree to participate. This document explicitly verbalized the volunteer nature of their participation and allowed them to exit out if they wished not continue. The online survey asked for demographic information including generational status and other basic demographic information. The remainder of the survey contained all measures indicated for this study and took less than 20 minutes to complete. It is assumed that all college enrolled students would have the adequate English skills to complete these measures thus all surveys were administered in English. Those students were offered a chance to be in a drawing for a $25 gift card to Best Buy or Target (odds of winning would be 1 out of about 100).

**Minority Stress**. The Minority Status Stress Scale (MSS; Smedley et al, 1993) was used to measure minority stress. This instrument includes 37-items and five subscales. The five subscales included Social Climate Stresses ("The university lacks concern and support for the needs of students of my race)", Interracial Stresses ("Difficulties with having White friends"), Racism and Discrimination ("Being treated rudely or unfairly because of my race"), Within-group Stresses ("People close to me thinking I'm acting White") and Achievement stress ("Doubts about my ability to succeed in college"). The scale items are measured by a 6-point likert scale ranging from the lowest (0) *does not apply* to the highest (5) *extremely stressful*. Higher total scores indicated higher levels of minority stress where the range of total scores is from 0 to 185. The coefficient alpha was .92 among ethnic minorities including Latino college students (Wei et al., 2010). The coefficient alpha for this study was .96. Construct validity has been established by associations found with general stress and depressive symptoms among ethnic minority including Latino college students (Wei et al., 2010).

**Educational Commitment**. Multi-dimensional Educational Commitment Scale (MECS; Hellman, 2005) was used to measure educational commitment. Commitment to education or academics has been measured in many past studies by simply asking the level of degree aspiration that the students are committed to (Laanan, 2003) (i.e., achieving an A.A or B.A). Looking at commitment in this manner has limited our understanding of educational commitment in students because this construct has more complexities than simply reporting the desired degree attainment. In the past, some studies have also attempted to look at commitment of education by reporting institutional commitment or goal commitment (Pascarella & Terenzini, 1980). However, the equity of these constructs to educational commitment has been challenged (Hellman, 2005).

Because it has been noted that educational commitment is a multi-faceted construct, the Multi-dimensional Educational Commitment Scale (MECS; Hellman, 2005) has been selected for this study. This 13-item instrument aims at looking at the "psychological bond students have toward education", (Hellman, 2005, p. 21). Along with providing an overall theoretical measure of what degree of commitment a student has toward education, it also distinguishes between the three types of psychological commitment. The MECS contains three subscales that include Affective, Continuance and Normative (Hellman, 2005). Affective EC is the emotional bond associated with the identity generated from being a student (e.g., "Being a college student has great deal of personal meaning to me"). Continuance EC implies commitment to specific behavior patterns and investments such as attending class (e.g., "If I could find another way to achieve my goals, I would not go to college"). Finally, Normative EC refers to the commitment generated by fulfilling social norms (e.g., "In my family, going to college is highly valued."). The combined three scores of these subscales can give an overall idea of educational commitment. In the present study, three components of educational commitment would be used and analyzed separately. The scale is measured on a 5-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. Higher scores indicate higher levels of educational commitment. The coefficient alphas in the original study were .73 for Affective EC, .89 for Continuance EC and .81 for Normative EC. In this study similar coefficient alphas were found such as .82 for Affective EC, .85 for Continuance EC and .78 for Normative EC.

**Social Connectedness.** In our study social connectedness to both mainstream and ethnic cultures was measured the Social Connectedness in the Ethnic Community (Latino SC) Scales and the Social Connectedness in Mainstream Society (Mainstream SC) (Yoon, 2006). The Latino SC (5 items- "I feel a sense of belonging to the Latino community") and Mainstream SC (5

items-"I feel a sense of belonging to U.S. society") are parallel scales. Bothe scales are based on a 7-point Likert scale ranging from (1) *strongly disagree* to (7) *strongly agree*. In this study the ethnic community was social connectedness to Latino/Hispanic community (i.e., Latino SC). The coefficient Alpha was .95 for Ethnic SC and .92 for Mainstream SC in a sample of Mexican Americans (Yoon, Jung, Lee, & Felix-Mora, 2012). Similar internal consistency of .95 for Latino SC and .94 for Mainstream SC resulted in this study. Validity for social connectedness with ethnic community was supported by negative associations with acculturation and positive associations with enculturation in a sample of Mexican American college student (Yoon et al., 2012). In contrast, social connectedness to mainstream culture was positively associated with acculturation and negatively related to enculturation in a sample of Mexican American college student (Yoon et al., 2012).

**Perceived Bicultural Competence.** The Perceived Bicultural Competence scale (PBC; David et al., 2009) was used to assess perceived competence to mainstream and ethnic culture. This 26-item scale consists of six subscales. These subscales are: social groundedness, ("I can develop relationships with both mainstream and my ethnic culture") communication ability ("I can switch easily between standard English and my cultural language" ), positive view toward both groups ("I take pride in both the mainstream and the heritage culture"), knowledge of cultural beliefs and values ("I am knowledgeable about history of both Mainstream America and my ethnic cultural group"), role repertoire (" An individual can alter their behavior to fit in a particular social context") and bi-cultural beliefs ("Being bicultural does not mean I have to compromise my sense of cultural identity"). The individual items are measured on a 9-point Likert-type scale, ranging from (1) strongly disagree to (9) strongly agree. The coefficient alpha was reported to be .92 among African American, Asian American and Latino/Hispanic American

students (Wei et al., 2010). For the present study the coefficient alpha was .93. Construct validity has been established by positive relationships with ethnic identity, self-esteem and enculturation among a pool undergraduate ethnic minority students that included Latino students (David et al., 2009). This same study indicated evidence of high internal consistency and reliability.

**Data Analysis Plan**

The first step in the data analysis was to determine whether the data collected would meet the regression assumptions of linearity, homoscedasticity, and normality (see Cohen, Cohen, West, & Aiken, 2003). If the data departs from normality, then transformations (e.g., square root transformation or log transformation) was imposed on the data until the linearity, homoscedasticity, and normality was met.

A hierarchical regression (Baron & Kenny, 1986) was conducted in SPSS 21 to examine the hypothesized moderation model (see Figure 1). In order to minimize possible multicollinearity among the predictor variables they were standardized prior to conducting the regression analysis. First, the hierarchical regression was analyzed using minority stress as a predictor variable to three components of educational commitment. Secondly, the moderator variables were introduced to determine whether interaction effects were present. If moderation effects were significant, I followed the recommendation of J. Cohen, P. Cohen, West, and Aiken (2003) for plotting the interaction at points one standard deviation below and above the mean of the predictor variable (i.e., minority stress) and the moderator variable (i.e., Latino SC, Mainstream SC, or perceived bicultural competence). A simple effect analysis was used to examine each of the simple slopes (Aiken & West, 1991; J. Cohen et al., 2003).

CHAPTER FOUR: RESULTS

**Preliminary Analyses and Descriptive**

Our sample ($N = 148$) was examined and compared with the study population that was

invited to participate ($N = 1570$) to address whether the sample obtained is comparable to the

population. The split between community college students ($n = 74$) and university students ($n = 74$) was precisely half of the sample. A chi-square test was used to determine whether the

proportions of females and males were significantly different to those from the study population.

For community college students, the significant chi-square test, $\chi^2$ (1, $n = 74$) $= 4.5$, $p = .03$

indicated that females (72%) in this sample were overrepresented compared to the population

(60%) from the population. Similarly, for university students, the chi-square test indicated a

significant $\chi^2$ (1, $n = 74$) $= 15.63$, $p < .001$ over representation of females (72%) in our sample

compared to females in the sample pool (48%).

Then, I proceeded to identify whether there was any significant difference for all seven

measured variables between male and female students in this sample. Seven t-tests were used to

examine these differences. The seven measured variables were one independent variable (i.e.,

minority stress), three moderating variables (i.e., Latino SC, Mainstream SC and Perceived

bicultural competence) and the three outcome variables capturing educational commitment (i.e.,

Affective, Continuance and Normative). Using the Boneferroni adjustment to our alpha levels

(i.e., $p = .05/7 = .007$), only one variable was found to be significantly different.  That is, the

results indicated only Affective EC revealed a significant difference between males and females,

$t$ (145) $= -3.60$ $p < .001$. Females scored significantly higher ($M = 4.62, SD = 0.45$) than males

($M = 4.23, SD = 0.87$). The effect of sex on Affective EC was a medium effect (Cohen's $d = .60$).

Next, I also conducted a series of t-test to observe whether these participants from the two separate institutions (Community college and University) scored significantly different for all seven measured variables. Again after a Boneferroni adjustment, a *p* value of .007 was used for the significant level. Students in the University setting (*M* = 4.51, *SD* = 0.56) indicated significantly (*t* (146) = -4.02 *p* < .001) higher on scores for Normative EC than those from the community college (*M* = 4.51, *SD* = 0.56). This also indicated a medium effect size (Cohen's *d* = -.66). No other significant differences were found between students of the two distinct institutions. Therefore, data from females and males, as well as two different institutes were collapsed in the remaining analyses.

The means, standard deviations and correlations were present in Table 1. Latino SC was positively related to minority stress (*p* = .001) and Affective EC (*p* = .005). Likewise, Mainstream SC was negatively related to minority stress (*p* < .001) and positively correlated with Affective EC (*p* = .001) and Normative EC (*p* = .04). Perceived bicultural competence was significantly positively correlated with Affective EC and both Latino SC and Mainstream SC (all *p* < .001). Additionally, perceived bicultural competence was negatively correlated with Continuance EC (*p* < .001). The dependent variables Affective EC and Continuance EC were also negatively related with each other (*p* = .002). However, minority stress had no significant correlations with perceived bicultural competence and the three educational commitment dependent variables.

**Main Analysis**

      **Testing the normality assumption.** Compliance to the normality assumption was first assessed. The data indicated a failure to meet the normality assumption for all three educational commitment subscales. The skewness and kurtosis was -1.50 and 4.37 for Affective EC, .61 and .26 for Continuance EC, and -1.13 and .96 for Normative EC, respectively. A natural log transformation was computed for all the dependent variables. The transformed variable yielded a decrease in skeweness and kurtosis of the residuals in all three variables to meet the normality assumption. The skewness and kurtosis of the transformed variables was .57 ($Z=2.85$ $p=.004$) and .30 ($Z=.75$ $p= .45$) for Affective EC, -.13($Z= 0.65$$p= .52$) and -.48 ($Z=1.21$ $p= .23$) for Continuance EC, and finally .509 ($Z=2.56$ $p=.01$) and -.693 ($Z=1.75$ $p= .08$) for Normative EC. After using the transformed dependent variables to conduct the regression analyses it was found that the pattern of results was identical to that found using the untransformed dependent variables. Thus, the untransformed dependant variables were used in the present study for easier interpretation of the results.

      A hierarchical regression was used to examine the moderation effects for the association between minority stress and three components of educational commitment (i.e., Affective, Normative, and Continuance). The predictor variables and all three moderators were standardized to enable interaction effects to be easily plotted (Frazer, Tix, & Barron, 2004). According to Frazer et al. (2004), standardizing these variables reduces multicollinearity among the variables. Interaction terms were created by the multiplication of minority stress and each one of the moderating variables (i.e., Latino SC, Mainstream SC and Perceived Bicultural Competence). Next, three separate hierarchical regressions were conducted for each of the educational commitment dimension variables. These three regressions all followed the same

steps with only changing the dependent variable for each regression. Minority stress was entered in the first step of the regression. This was followed by all three of the moderating variables entered in step two. Thirdly, the three interaction terms were entered in the final block.

**Affective EC**. The results indicated that minority stress did not account for a significant portion of variance for Affective EC. There were two significant main effects that resulted in step 2. Mainstream SC (*b*= .13, *B* = .20, *p = .02*) and perceived bicultural competence (*b* = .15, *B* = .24, *p = .02*) both had significant main effects on Affective EC. Also, the interaction effect of minority stress and perceived bicultural competence (*b*= .14, *B* = .23, *p*=.02) was also significant. This indicated that the relationship of minority stress on Affective EC was moderated by the levels of perceived bicultural competence. To interpret this interaction further, a simple effect analysis was conducted to examine the significant level of simple slopes. Aiken and West's (1991) suggestion was used to plot these two slopes in one standard deviation above and below the mean of the predictor (i.e., minority stress) and moderator (i.e., perceived bicultural competence) to plot the interaction figure (see Figure 1). The results indicated that for a higher level of bicultural competence, the association between minority stress and Affective EC was positive (*b* = .15, *p* = .08). Conversely, for a lower level of perceived bicultural competence, the association between minority stress and Affective EC is negative (*b* = -.14, *p* = .07). These two slopes did not reach statistical significant, but the direction of these slopes was in the opposite direction.

**Continuance EC**. The result indicated a significant main effect of perceived bicultural competence ($b= -.48$, $B= -.47$, $p < .001$) on Continuance EC in step 2. Thus, perceived bicultural competence negatively predicted educational commitment in the Continuance domain. No other main effects were indicated as significant for Continuance EC. Similarly, no interaction terms were significant for this domain in educational commitment.

**Normative EC**. The result indicated a significant main effect of Mainstream SC ($b = .17$, $B = .21$, $p = .02$) on Normative EC. Mainstream social connectedness significantly predicted the Normative EC for students. Main effects for Latino SC and perceived bicultural competence were not significant. No significant interactions were found in predicting Normative EC.

## CHAPTER FIVE: DISCUSSION

There were three main purposes for this study. First, it was to identify whether there were relationships between minority stress and three components of educational commitment (i.e., Affective EC, Continuance EC, and Normative EC) in Latino students at post-secondary institutions (i.e., Community college and University). Second, it was to examine whether Latino SC, Mainstream SC, and perceived bicultural competence would predict the three components of educational commitment (i.e., Affective, Continuance, and Normative EC). Third, it was hypothesized that Latino SC, mainstream SC and perceived bicultural competence served as moderating variables for the associations between the minority stress and the three components of educational commitment.

For Affective EC, the results did not support the first hypothesis and this domain was not predicted by minority stress. This contradicts our expected results that postulated that minority stress would have a negative relationship with Affective EC. Previous research indicates that minority stress had a negative relationship with college persistence attitudes in a sample including Latino students (Wei, Ku & Liao, 2011). Some speculations can be made in order to understand this null finding. As indicated previously, Latino students are attending higher education institutions at different persistence rates compared other minority student groups (Fry, 2004). Due to the demographical location of our study, we suspect that Latino students attending college maybe new to the setting (freshman and sophomores) and may have not yet processed the stress associated to their minority status. Thus a restriction of range might have influenced the null findings. Although, the achievement gap and persistence issues that Latino students face across the nation the location of our study might generate a distinct sample of Latino students. On one end the lack of diversity in rural areas maybe something people grow up with and thus

are more resilient to its effects thus not reaching their Affective EC. Another possibility is that

students with higher levels of minority stress would not attend higher education. Alternatively,

having or experiencing minority stress is likely to produce an emotive reaction about what it

means to the individual. Thus, the relationship with how it relates to educational commitment is

more complicated than a direct correlation or can be reduced and canceled out by other factors

associated in that relationship. Perhaps, it implies that possible moderators for this direct

associations.

Moreover, for the main effects of Latino SC, Mainstream SC, and perceived bicultural

competence on Affective EC, the results partially supported our expected results. There were

significant main effects of Mainstream SC and perceived bicultural competence on Affective EC,

but no significance was found for Latino SC. Latino SC did not seem to have a significant

relationship with Affective EC, which was contrary to our predictions. Perhaps, Latino college

students are distant from their Latino culture because college institutions are nested in the

mainstream culture. However, there was a significant zero-order correlation between Latino SC

and Affective EC. Despite the insignificant results for the main effect, this significant zero-order

correlation may warn us to be cautious about the possible significant association of this variable

with Affective EC.

Connectedness to Mainstream seemed to have a greater impact on Affective EC. This

relationship indicated students with higher social connectedness to mainstream society reported

higher levels of Affective EC. Students with a higher mainstream connection may have the tools

to strengthen affective bond to their education. Similar to Castillo et al.'s (2006) findings, they

found the positive association between perception of university environment and college

persistence. In this study, those with a stronger sense of belonging in the mainstream society

reported a higher level of Affective EC. This finding seems to resonate with the idea that students who feel comfortable in a surrounding or the venue of their goal (i.e. college graduate) are more likely to declare higher commitment to those goals. Educational institutes are embedded in the mainstream culture thus it serves as a venue for Latino students to connect with the culture. One speculation for this finding is that students have more connection with the mainstream culture maybe actively seeking settings where this connection can occur, such as a college setting. Consequently, the opposite side of the coin would indicate that those with a lack connection with mainstream may potentially not choose to go college for fears of not belonging.

A similar result was found with perceived bicultural competence. Perceived bicultural competence was positively related to Affective EC. This positive relationship strengthens our expectation that perceiving competence in both cultures can allow students to pursue roles embedded in both cultures. Thus, students with higher perceived bicultural competence can also exhibit greater Affective EC and continue on their educational track by attending higher education. Students with perceived bicultural competence may also seek settings where these skills can be utilized. Or students with this perceived bicultural competence skill set or belief system can be able to continue higher education as it can be used as a possible tool. Being able to survive the many pressures of college can potentially semi-alleviated by navigating the two cultures that Latino students are part of. As anticipated our sample consisted of younger generation participants (Fry, 2004), most of which were second generation or younger. These younger generations might be paving the road to education. Because of this, having perceived bicultural competence would benefit their experience in college and be related to the emotional bond of their educational commitment, which became evident in the results.

Perceived bi-cultural competence indicated having a significant interaction effect on the relationship between the minority stress and Affective EC. The two slopes for those with higher and lower perceived bicultural competence were significantly different from each other. Specifically, the slope was negative for those with higher perceived bicultural competence but the slope was positive for those with lower perceived bicultural competence. Therefore, for those with higher perceived bicultural competence, their Affective EC was higher in the face of minority stress. Conversely, for those with lower perceived bicultural competence, their Affective EC went up in the face of minority stress. Even though two slopes were significantly different from each other and in fact going in opposite directions, the simple slopes were not reaching the significant level. This may be due to the limited sample size. The direction of the relationships differences between those of high and low perceived bicultural competence was in opposing directions is a worth notice because the perceived bicultural competence significantly moderated the relationship between minority stress and Affective EC.

For Continuance EC, only one significant relationship was found in the analysis. The main effect of perceived bicultural competence had a significant relationship with minority stress. The result indicated a negative association between perceived bicultural competence and Continuance EC. These findings were not expected and were contrary to our hypothesis that indicated that perceived bicultural competence would have a positive association with all three educational commitment domains. Looking specifically at the Continuance domain, it indicates that commitment is driven by lack of a better choice. Because students with higher perceived bicultural competence might have more available choices for career and making a living, education may or may not be seen as the only or even the best choice. Those students with competence in both cultures can have a broader view educational attainment and see attending

college as only one of many ways to go about their life. Alternatively, students who are the 2nd or 3rd generations are likely to have parents who work blue collards jobs. Their view of adult career life paths is wider when bicultural views are present and two cultures are taken into consideration. It is not only based on the American view of education but also the path they grew up in with having laborious working parents.

No interaction terms appeared to be significant with Continuance EC domain. As mentioned already, this relationship may be missing because of the nature of Commitment EC domain. Continuance EC takes education as an option of gaining some sort of future. These students have chosen this option but with this study we cannot tell whether they would continue. Continuance EC maybe a better predictor or construct to be studied before students are in the higher education institution such as college or even in between community college and a four year University. How culture interacts with whether students see this as a better choice may be a more complicated relationship than this study examines. Also, because we are not looking at students who did not go on to college our range of responses are limited to those that made a choice. Again, this can attenuate or eliminate how social connectedness to both Latino and Mainstream culture and perceived bicultural competence relate to Continuance EC.

The last finding indicated that Normative EC was significantly predicted by Mainstream SC. This finding partly supported our hypothesis that indicated the mainstream SC would be positively related to all the domains of educational commitment. In essence, feeling grounded and a sense of belonging in American mainstream culture indicated that they were expected to continue to higher education. Thus in our study, the relationship between these two constructs is not surprising as those with more connected to American culture are likely to hold values and norms close to American values and norms, including the attainment of a college education.

Flores, Ojeda, Huang, Gee and Lee (2006) found a similar construct trend with Mexican American high school students. In their study, Anglo-oriented acculturation significantly was related to educational goals but not Mexican-oriented acculturation. Although, they used a different construct it is evident that social connectedness to culture and culture orientation acculturation are likely related. Students with strong mainstream connection are likely to internalize the American norms such as gaining a higher education degree. Yoon, Jung and Felix-Mora (2011) found a positive correlation between social connectedness to mainstream society and assimilation in a sample of Mexican American students. No interaction terms appeared to be significant with this educational commitment domain. Similar to the speculations of Continuance EC, this study is looking at students who are already in college thus it is expected that the norms of education are already being played out by pursuing education. Thus how connection to culture and being biculturally competent may be embedded in a more complex relationship.

The findings indicate that being connected to mainstream society had a positive impact on two domains of educational commitment (Affective EC and Normative EC). There may be a small connection between having a strong wish to be a college student and the outside expectation to be one. However, no significant correlation was found in between these two constructs. Many of these students come from migrant families thus a general feeling of moving up in the social economic statues latter might be a driving force to attaining education. Wanting to continue their parents dream for a better life can create Affective bond and Mainstream SC can be tool or opportunity to achieve these goals. If Mainstream SC is a tool then the relationship with Normative SC or feeling like it is a norm to continue to school would be expected. Assimilation may part of Mainstream SC and the strong linkage with Normative EC. Taking into

account the demographic makeup of our sample, it is likely the process of assimilating or integrating the American culture can produce many emotive reaction or need for being accepted or belonging. Getting an education or being affectively committed to that goal can further strengthen the feeling of belonging to the American culture that highly values education. If education is seen as an expected step or track that is set from a source outside the individual (parents, society). Minority stress would likely impact the individual intrinsically so it seems reasonable that Affective EC is the domain that has been significantly influenced the most.

Other relationships between the variable also served as indirect support of the rational of the hypothesis. Minority stress had a significant negative relationship with mainstream EC and a positive relationship with being connected to their Latino culture. This fortifies the proposed belief that mainstream SC can help coping with minority stress. However, being connected with the Latino community has a positive significant relationship with stress associated with their minority status.

**Limitations**

There are many limitations to the present study. First of all, the location and sample used restricts the generalizability of our findings. Specifically, the sample was obtained in a rural area of the Midwest thus its implication to other areas such as the east and west coast might not be applicable. The experience of being a minority person in a rural area is likely to be significantly different than in more diverse areas. Also, there are many urban areas such as the west coast and the south regions where Latinos are not minority by numbers.

Second, our sample included students who were already enrolled in community college and universities which can indicate these groups are already ahead in their commitment and self-selected in some sense. Because we did not incorporate students who didn't go to college it is

hard to generalize these findings without having the full spectrum in our sample. This could have attenuated our findings and maybe downplay the main effect of minority stress and the moderation effects. It is possible that those students might be pursuing other paths such as technical school or apprentice program. This became specifically evident when discovering the negative relationship between perceived bicultural competence and Continuance EC. Additionally, our sample was over represented by women. This trend seems to be very typical in research work where women often are more willing to take time in to complete studies than man

Third, about sixty-four percentage of this sample was Mexican-American students. Although this high representation is probably related to the general population in the area, I analyzed all groups together in the analyses. There is a benefit to analyzing data with a specific subgroup of Latino. However, it would require a large sample size of this specific ethic group. Because research with minority groups is a challenge to begin with, analyzing Latino students inclusively is the dominating force in research. This trend is probably due to the small number of participants that can be actually recruited into academic studies such as this one. Since the different ethnic background still are nested in a global cultural umbrella of Latino culture, gaining information about how these broader spectrums intersect with psychological constructs is still beneficial. In a more diverse setting, where there is larger representation of specific Latino sub-groups (Florida-Cuban, New York-Puerto Rican, California-Mexican) a breakdown of the findings would be highly beneficial and useful.

Fourth, another limitation to this study relates to the type of students that participated in our study. Students were asked for to participate via email and phone call thus those that decided to participate may have exhibited self-selection bias. This would mean that our sample might include students whom are already at higher levels of educational commitment because they are

more willing to participate in a study related to academics. Also, those that are struggling with their commitment or experience in college might not have wanted to address their negative experience. If that is the case the minority stress reports indicated by our sample maybe misleading and highly underrepresented in our results. As mentioned earlier, half of the students are attending a 2-year college. Limitations also include that this was a one point study thus predictability of these constructs is greatly limited. Additionally, the construct of educational commitment and the three dimensions have not been tested for validity due to the newness of the scale construct.

**Future Research**

There are several future research directions. Future studies could continue to explore variables that affect educational commitment but utilize a longitudinal study format. In this way we can look at the trends that might present and changes in both predicting and moderating variables and their relation to the outcomes. Additionally, tracking success rates among these students could further address predictability variance in the constructs.

Participants' ethnic identity was not addressed in this study but this component might explain some of the results indicated. It would be very beneficial to address how Latino students' ethnic development or stages influence their educational commitment and how minority stress influences this. Based on ethnic identity development model, those who are in the different stage of ethnic identity development may have different responses or reactions to minority stressors (Helms, 1984; Sue & Sue, 2008). Similarly, Latino students at different stages of development would not only report different levels of social connectedness to mainstream and Latino SC but also how their identity fits into a bicultural framework. For example, in early stages of ethnic identity development individuals go through an anger stage where they retract to their ethnic

culture (Sue & Sue, 2008). During this time a lot of emotional reactions take place against the dominant culture and active seeking of their ethnic culture is sought. By identifying Latino students' ethnic identity, it can better understand and identify what moderators, such as connection with their ethnic culture, may impact their Affective EC.

It would also be important to possibly look at younger participants that have not yet been enrolled in college. Because the decision to attend college occur prior to enrollment it would be useful to understand the educational commitment first exhibited by students at a pre-enrollment stage such as in high school. This might help clarify the relationships between educational commitment and the moderators presented. By taking this approach and possibly making the study longitudinal, it can also detect how these constructs relate to students that take non-college routes (e.g., technical schools, apprentice programs, military or entering directly into the work force). It is a possibility that minority stress may present in the lives of these students prior to coming to college and thus may impact the direction being taken after their postsecondary education is completed. Additionally, these constructs of minority stress and perceived bicultural competence may have another connotation in areas where Latinos are the majority such the west/east coasts and the southern region of the country.

**Implications**

Clinical implications can be derived from these results and would be potentially beneficial to incorporate when working with Latino college students. First and foremost, even though there were no significant main effects of minority stress on any of three educational commitment outcomes, it might imply the complex relationships for this association. Therefore, it would be highly beneficial to openly discuss the experience of the student as a minority person on campus. This open invitation would generate the opportunity for the student to share his

experience. It has been noted that even in campuses where Latino's outnumber other ethnic background stressors associated to being a Latino will still prevail (Rodriguez, Myers, Morris & Cardoza, 2000).  Given this, it is importance to open the discussion of how being a minority affects Latino students in rural areas where this status is highlighted. Therapists' ability to express concerns or importance would validate their experience and normalize it as a common phenomenon.

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Table 1

*Means, Standard Deviations, and Correlations among Variables*

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Minority Stress | ------ |  |  |  |  |  |  |
| 2. Latino Social Connectedness | .26*** | ------ |  |  |  |  |  |
| 3. Mainstream Social Connectedness | -.39*** | -.12 | ------ |  |  |  |  |
| 4. Perceived Bicultural Competence | -.12 | .53*** | .28** | ------ |  |  |  |
| 5. Affective EC | -.05 | .23*** | .27*** | .35** | ------ |  |  |
| 6. Continuance EC | .15 | -.11 | -.10 | -.39** | -.25** | ------ |  |
| 7. Normative EC | -.02 | -.08 | .17* | -.04 | -.05 | -.01 |  |
| *Mean* | 2.99 | 4.82 | 5.12 | 5.39 | 4.50 | 2.36 | 4.26 |
| *SD* | 0.97 | 1.64 | 1.49 | 0.90 | 0.65 | 1.02 | 0.80 |

*Note.* $N = 148$.   EC = Educational Commitment.   * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

*A Hierarchical Multiple Regressions Analysis Predicting Affective Educational Commitment*

*from Minority Stress, Latino SC, Mainstream SC, Perceived Bicultural Competence, and Their*

*Interactions*

| Variable | $B$ | $SE\ B$ | $\beta$ | $\Delta R^2$ | $\Delta F$ |
|---|---|---|---|---|---|
| Step 1 | | | | .004 | .63 |
| Minority Stress | -0.04 | .05 | -.06 | | |
| Step 2 | | | | .19*** | 11.24 |
| Latino SC | 0.11 | .06 | .17 | | |
| Mainstream SC | 0.13 | .05 | .20** | | |
| Perceived Bicultural Competence | 0.15 | .06 | .24** | | |
| Step 3 | | | | .07*** | 4.27 |
| Minority Stress × Latino SC | 0.04 | .06 | .07 | | |
| Minority Stress × Mainstream SC | -0.07 | .05 | -.11 | | |
| Minority Stress × PBC | .14 | .06 | .23* | | |

*Note.* $N = 148$. SC = Social Connectedness. $R^2$ for final model = .26, $F(3, 140) = 4.27$, $p = .006$.
 *$p < .05$ ** $p < .01$. *** $p < .001$.

Table 3

*A Hierarchical Multiple Regressions Analysis Predicting Continuance Educational Commitment*

*from Minority Stress, Latino SC, Mainstream SC, Perceived Bicultural Competence, and Their*

*Interactions*

| Variable | $B$ | $SE\ B$ | $\beta$ | $\Delta R^2$ | $\Delta F$ |
|---|---|---|---|---|---|
| Step 1 | | | | .02 | 3.51 |
| Minority Stress | .16 | .08 | .15 | | |
| Step 2 | | | | .15*** | 8.81 |
| Latino SC | 0.13 | .10 | .13 | | |
| Mainstream SC | 0.09 | .09 | .09 | | |
| Perceived Bicultural Competence | -.48 | .10 | -.47*** | | |
| Step 3 | | | | .01 | .77 |
| Minority Stress × Latino SC | 0.07 | .10 | .07 | | |
| Minority Stress × Mainstream SC | 0.13 | .09 | .13 | | |
| Minority Stress × PBC | -0.05 | .10 | -.05 | | |

*Note.* $N = 148$. SC = Social Connectedness. $R^2$ for second model = .18, $F(3,143) = 8.81$, $p$
< .001.

 *** $p < .001$.

Table 4

*A Hierarchical Multiple Regressions Analysis Predicting Normative Educational Commitment*

*from Minority Stress, Latino SC, Mainstream SC, Perceived Bicultural Competence, and Their*

*Interactions*

| Variable | $B$ | $SE\ B$ | $\beta$ | $\Delta R^2$ | $\Delta F$ |
|---|---|---|---|---|---|
| Step 1 | | | | .00 | .82 |
| Minority Stress | -.02 | .07 | -.02 | | |
| Step 2 | | | | .04 | .11 |
| Latino SC | -0.03 | .09 | -.03 | | |
| Mainstream SC | 0.17 | .08 | .21* | | |
| Perceived Bicultural Competence | -0.06 | .09 | -.07 | | |
| Step 3 | | | | .02 | .38 |
| Minority Stress $\times$ Latino SC | -0.09 | .08 | - .11 | | |
| Minority Stress $\times$ Mainstream SC | -0.12 | .07 | -.16 | | |
| Minority Stress $\times$ PBC | .07 | .09 | .08 | | |

*Note.* $N = 148$. SC = Social Connectedness. $R^2$ for second model = .04, $F(3,143) = 2.02$, $p = .11$.

*p < .05

FIGURE

*Figure 1*. The Two-Way Interaction Effect of Minority Stress and Bicultural Competence on Affective Educational Commitment.
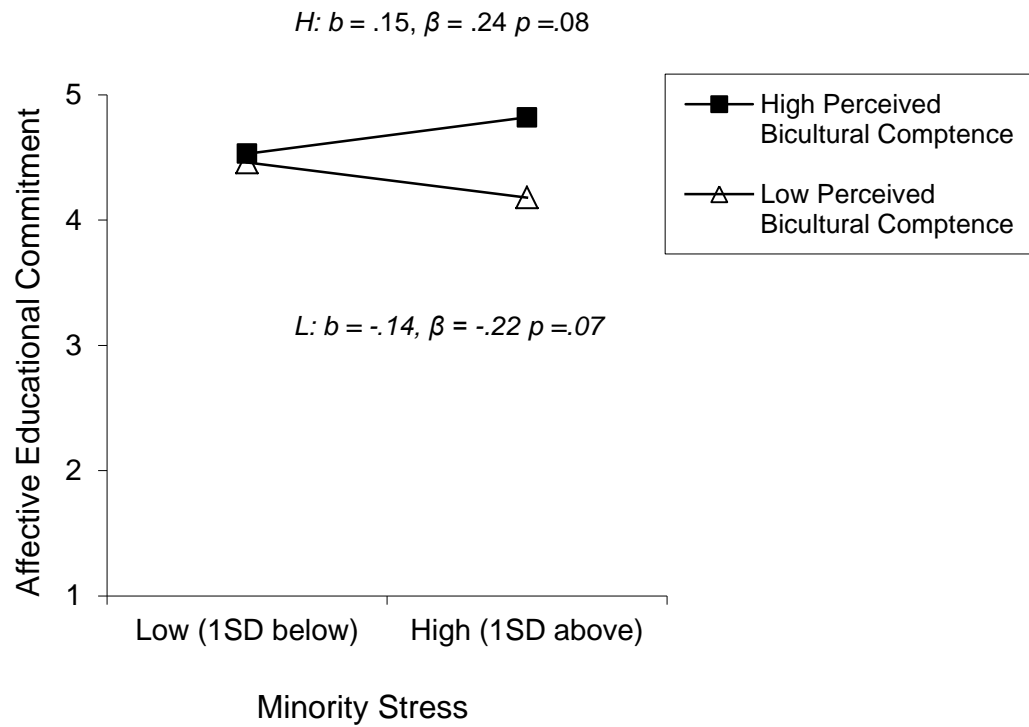
APPENDIX: MEASURES

1. Age:_____

2. Gender:     1=Female     2=Male

3. Please indicate the years you have attended this college:

   1= First year in this College
   2= Second year in this College
   3= Third year in this College
   4= Four or more years in this college

4. What generation are you?

   **1=** 1$^{st}$ generation
        (You were born in a country other than the USA)
   **2=** 1.5 generation
        (You were not born in the USA but moved here as a child or adolescent)
   **3=** 2$^{nd}$ generation
        (You were born in the USA and but one or both of your parents were born in
        another country)
   **4=** 3$^{rd}$ generation
        (You were born in the USA and both of your parents were born in the USA but all
        your grandparents was born in another country)
   **5=** 4$^{th}$ generation
        (You and your parents were born in the USA but at least one of your grandparents
        was born in another country)
   **6=** International Student
        (You entered the USA for educational purposes and you are not a permanent
        resident of the USA)

5. What Ethnic Identification best describes you?

   1= Caucasian/White
   2= African American
   3= Latino/a American
   4= Asian American
   5= Native American
   6= Multi-racial American
   7= Other: (please specify)

6. If you are 1st through 5th generation (i.e., not an international student), please mark the ethnic subgroup to which you most readily identify. *If you are an international student please do not answer this question.*

    1=Mexican-American
    2= Puerto Rican-American
    3= Cuban American
    4= Salvadorian-American
    5= Guatemalan-American
    6= Other: (please specify)_____

7. If you are an **international student**, please write your country of origin. *Please skip this question if you are not an international student.*

    1= Mexico
    2= Puerto Rico
    3= Cuba
    4= El Salvador
    5= Guatemala
    6= Other: (please specify)_____

### **Multidimensional Educational Commitment Scale (13 Items)**

INSTRUCTIONS: **Using the following 5-point scale, select the most accurate response:**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree |

1. I am proud to be a college student.
2. Being a college student has a great deal of person meaning for me.
3. I really enjoy talking to other people about my college experiences.
4. Being enrolled in college has made me happy.
5. I have always dreamed of going to college.
6. In my family, going to college is highly valued.
7. My family would be disappointed if I did not go to college.
8. For the most part, it was expected that I would go to college.
9. It would really disappoint people who are close to me if I decided to drop out of school.
10. I am going to college because I don't have any practical options to do anything else.
11. If I could make a decent income doing something else, I would not have enrolled in college.
12. If I could find another way to achieve my goals, I could not go to college.
13. If I had a better alternative, I probably would not have enrolled in college.

**Social Connectedness in Mainstream Society** (5 Items)
**Social Connectedness in the Ethnic Community** (5 Items)

INSTRUCTIONS: **Using the following 7-point scale, select the most accurate response:**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Disagree | Disagree | Slightly Disagree | Neither Agree Nor Disagree | Slightly Agree | Agree | Strongly Agree |

1. I feel a sense of closeness with U.S. Americans.
2. I feel a sense of belonging to U.S. society.
3. I feel accepted by U.S. Americans.
4. I feel like I fit into U.S. society.
5. I feel connected with U.S. society.


1. I feel a sense of closeness with Latino/as.
2. I feel a sense of belonging to the Latino community.
3. I feel accepted by Latino/as.
4. I feel like I fit into the Latino community.
5. I feel connected with the Latino community.

## Bicultural Self-Efficacy Scale (26 Items)

INSTRUCTIONS: **Using the following 9-point scale, please answer each question as carefully as possible by choosing the number that corresponds best to your degree of agreement or disagreement with each statement.**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| Strongly Disagree | ------- | Disagree | ------- | Neutral/ Depends | ------- | Agree | ------- | Strongly Agree |

1. An individual can alter his or her behavior to fit a particular social context.
2. I can communicate my feelings effectively to both mainstream Americans and people from the same heritage culture as myself.
3. I have generally positive feelings about both my heritage culture and mainstream American culture.
4. I can develop new relationships with both mainstream Americans as well as people from the same heritage culture as myself.
5. It is possible for an individual to have a sense of belonging in two cultures without compromising his or her sense of cultural identity

6. I am knowledgeable about the holidays celebrated both by mainstream Americans and by my cultural group.

7. I can count on both mainstream Americans and people from the same heritage culture as myself.

8. I have strong ties with mainstream Americans as well as people from the same heritage culture as myself.

9. I can switch easily between Standard English and the language of my heritage culture.

10. It is acceptable for a mainstream American individual to participate in two different cultures.

11. I am knowledgeable about the values important to mainstream America as well as to my cultural group

12. I feel comfortable attending a gathering of mostly mainstream Americans as well as a gathering of mostly people from the same heritage culture as myself.

13. Being bicultural does not mean I have to compromise my sense of cultural identity.

14. I have an extensive network of mainstream Americans as well as an extensive network of people from the same heritage culture as myself.

15. I have a generally positive attitude toward both mainstream Americans and my cultural group.

16. It is acceptable for an individual from my heritage culture to participate in two different cultures.

17. I feel at ease around both mainstream Americans and people from the same heritage culture as myself.

18. I feel like I fit in when I am with mainstream Americans as well as people from the same heritage culture as myself.

19. I am confident that I can learn new aspects of both the mainstream American culture and my heritage culture.

20. I can choose the degree and manner by which I affiliate with each culture.

21. I take pride in both the mainstream American culture and my heritage culture.

22. I am knowledgeable about the history of both mainstream America and my cultural group.

23. I can communicate my ideas effectively to both mainstream Americans and people from the same heritage culture as myself.

24. I am knowledgeable about the gender roles and expectations of both mainstream Americans and my cultural group.

25. I am proficient in both Standard English and the language of my heritage culture (e.g., Spanish, etc.).

26. I have respect for both mainstream American culture and my heritage culture.

**Minority Status Stress Scale (37 items)**

**INSTRUCTIONS**: Below is a list of statements that describe situation that may be stressful for some students. By "stressful" we mean that it bothers you or cause you problems in any way. Please circle the response that best indicates how stressful each situation have been for you since you have been at your college. *Circle "N/A if you DO NOT EXPERIENCE THE SITUATION AT ALL. Circle "1" if you DO experience or recognize the situation but YOU DO NOT EXPERIENCE IT AS STRESSFUL AT ALL*

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| N/A Does Not Apply | Not at all stressful | A little stressful for me | Somewhat stressful for me | Very stressful for me | Extremely stressful for me |

1. My family does not understand the pressures of college (e.g. amount of time or quiet needed to study).
2. My family discourages me from spending my time going to college.
3. Being the first in my family to attend a major university.
4. Doubts about my ability to succeed in college.
5. My academic background preparation for college being inadequate.
6. White people expecting me to be a certain way because of my race (i.e. stereotyping).
7. Language-related problems (i.e., having an "accent" or "speaking non-standard English").
8. Maintaining my ethnic identity while attending the university.
9. The lack of unity/supportiveness among members of my race at the university.
10. Being treated rudely or unfairly because of my race.
11. Being discriminated against.
12. Others lacking respect for people of my race.
13. Attitudes/treatment of faculty toward students of my race.
14. Having to "prove" my abilities to others (i.e. working twice as hard).
15. Pressures to show loyalty to my race (e.g. giving back to my ethnic group community).
16. White students and faculty expect poor academic performance from students of my race.
17. Pressures from people of my same race (e.g. how to act, what to believe).
18. People close to me thinking I'm acting "White."
19. Feeling others do not respect my intelligence.
20. Having White friends.
21. Relationships between different ethnic groups at my university.
22. Having to always be aware of what White people might do.
23. White-oriented campus culture at my university.
24. Wealthy campus culture at my university.
25. The university is an unfriendly place.
26. Having to live around mostly White people.
27. Tense relationships between Whites and minorities at the university.

28. Few courses involve issues relevant to my ethnic group.
29. Racist policies and practices of the university.
30. My university lacks concern and support for the needs of students of my race.
31. The university does not have enough professors of my race.
32. Few students of my race are in my classes.
33. Seeing members of my race doing low status jobs and Whites in high status jobs on campus.
34. My family having very expectations for my college success.
35. Pressure that what "I" do is representative of my ethnic group's abilities, behavior, and so on.
36. Feeling less intelligent or less capable than others.
37. Relationships between males and females of my race (e.g. lack of available dating partners).