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Additionally, other hindering factors for Latina female college students often involve the lack of Latina female faculty role models, resulting in feelings of isolation and disappointment (Yosso, 2002). Latina female students may also have to contend with stressors associated with overt discrimination, the imposter syndrome, interracial conflicts, and a perception that the campus climate is hostile (Fisk, 1988; Hurtado, Carter, & Spuler, 1996; Padilla, 1995; Priest & McPhee, 2000; Rendon, 1996; Gonzales, 2006). As discriminatory hiring methods perpetuate already low numbers of Latina female professors, “the conditions leading up to the doctorate and the doctoral process itself also contribute to the very small number of Chicana/Latina academics” (Yosso, 2002, p. 327).

Research by Calasanti and Smith (2002) asserted that when comparing Latina women to every other ethnic group, including men, Latina women were the most underrepresented ethnic group in regard to doctoral production. Fewer doctorates translates into fewer Latina female faculty, leading to fewer mentors for Latina female graduate students and less research regarding Latina female undergraduate and graduate student needs in post-secondary education (Solorzano, 1995). The need for an increase in the number of women of color, specifically Latina women, in academe is a widely recognized goal within post-secondary education (Arrendondo & Castellanos, 2003; Blackwell, 1996; Cross, 1996; Nakanishi, 1996; Olivas, 1996) as continuing shifts in the student demographic change the education paradigm of the 20<sup>th</sup> century (Halm, 2010).

## **Demographic Characteristics**

Latinos are defined as individuals living in the United States whose nationality, group, or country of origin is related to the Latin American descent of an individual's parents or ancestors (Hayes-Baustista & Chapa, 1987). Significant racial and ethnic differences stemming from diverse national origins, history and demographic locations exist within the Latino population (del Pinal & Singer, 1997; Guarnaccia, Martinez, & Acosta, 2005). As of 2007, the Latino population totaled 13 % of Latinos in higher education and represented the largest minority population in our country (United States Census, 2000; National Center for Education Statistics Integrated Postsecondary Education Data System Enrollment Survey, 2006-2007). Further compounding the issue of the Latino population growth is the fact that between 2006 and 2017, Latino enrollment in post-secondary education is expected to increase from 13% to 39% of the total college enrollment (Projections of Education Statistics to 2010 in the National Center for Education Statistics of 2008; National Center for Education Statistics Integrated Postsecondary Education Data System, Enrollment Surveys, 2006-2007). Although Latino enrollment is expected to grow, the number of Latina women earning a terminal degree is minimal. For example, of the women earning a terminal degree in 2008, 4 % were Latina women who completed the doctorate in comparison to 62.2 % of Anglo women (National Center for Education Statistics, 2009c). These low numbers result in a minimal representation of Latina women in the final stages of the academic pipeline.

## **Enrollment Characteristics**

Research conducted by Contreras and Gandara (2006) noted two primary avenues in regard to Latina female enrollment in higher education. The first consists of attending nonselective campuses, primarily consisting of community colleges. Thus, as these students have limited degree opportunities through community colleges, many transfer to four-year campuses as opposed to being recruited directly from high school. Further, nearly half of all Latina female college students are enrolled in one of the 230 Hispanic Serving Institutions (Santiago, Andrade, & Brown, 2004).

Second, according to Carnevale and Rose (2003), the other avenue is to attend a more selective, four-year institution. Moreover, throughout the 1980s the proportion of Latina women between the ages of eighteen and twenty-four enrolled in college remained at nearly 16% despite significant increases in the Latina female population. Noticeable growth occurred for Latina women during the 1990s with 25.4 % enrolled in post-secondary education by the end of the decade (Gonzalez, Jovel & Stoner, 2004). While growth occurred for Latina women in post- secondary education, only 6.6 % of Latina women were enrolled in post baccalaureate studies in 2008 (Audet al., 2008). Thus, while the literature noted gains for Latina women in post-secondary education, authors also noted that failures in the educational pipeline mean that the pool of Latina female applicants at the final stage of the pipeline, the doctorate, remains small (Villalpando, 2010; Rivas et al. 2007; Watford et. al, 2006).

## **Factors Affecting Degree Completion**

### **Access Issues**

Gaining equal access to graduate education for Latina female students is a problem that has existed in American higher education for decades. Current Latina female doctoral students deal with many challenges with regard to accessing higher education. These challenges include: economic factors, inequity problems at the elementary and secondary levels, and historical traditions of exclusivity (Zarate & Pachon, 2006; Quijada & Alvarez, 2006; Aleman & Renn, 2002). Economically, researchers have noted that providing financial assistance to Latina female students is an important issue with regard to access to higher education (Zarate & Fabienke, 2007). Despite research focus on financial assistance, many initiatives now aim at recruitment and preparation rather than scholarships and direct funding (Weisbuch 2005). This problem is further compounded by a 65% increase in the cost of graduate education in the last ten years (National Center for Education Statistics, 2004), with the average total price for one year full-time doctoral education averaging \$42,800 (National Center for Education Statistics, 2010). Thus, the increase in price for doctoral education may be a hindrance for Latina female students in accessing post baccalaureate education.

Justin and Kameen (2001) contended that at the elementary and secondary level, prior to post-secondary education, inequity problems for students of color, such as Latina females, in the K-12 pipeline limit access for these students into post-secondary education. Examples of inequity problems for Latino children include: instruction by less qualified teachers, instruction in poor classroom conditions, and attendance at schools which receive less funding, leading to underprepared students (Quijada & Alvarez, 2006).

Further, Latinos typically attend overcrowded and racially segregated schools and are usually exposed to inferior college-bound curricula (Yosso, 2006). These inequities are the result of an education system historically founded to provide opportunities for the dominant Anglo population (San Miguel & Donato, 2010).

Likewise, research indicates that Anglo students fare much better in the educational pipeline than Latino students (Yosso, 2006). Schools that serve Anglo populations frequently benefit from stronger institutional histories, better faculty recruitment, and better tax bases (Quijada & Alvarez, 2006). Thus, these inequities, such as Latino exclusion from education during a student's foundational years, lead to struggles for higher education institutions committed to retaining and recruiting Latina female students. Fewer prepared college applicants among Latinos prompt institutions to provide remedial education and seek other specific solutions (Justiz & Kameen, 2001).

A review of the historical foundations of post-secondary education indicates that the founders established higher education in the United States to prepare young men to serve in ministry and as leaders in colonial government. Students in post-secondary education during this era were mostly affluent Anglo men (Thelin, 2003). Low income men, women and minorities were not included in the higher education system at this time, perpetuating a culture of exclusivity and elitism in post-secondary education.

However, between 1860-1880, the co-educational college movement began in earnest as colleges funded by the Morrill Act began to struggle financially due to a drop in male enrollment as a result of the Civil War (Geiger, 2005; Soloman, 1985). This drop in enrollment positively affected women who were recruited to attend post-secondary institutions to make up for lost male tuitions. Therefore, as a matter of economic self-

interest (unfortunately, not humanitarian interest), more colleges began to admit women. Following the death of Martin Luther King Jr. in 1968 and the riots that followed, American leaders insisted on educational equality for our country in order to benefit all constituents. As a result, the passage of the Civil Rights Act of 1964 set the foundation for affirmative action programs and other work to eliminate discrimination based on sex, race, faith, or ethnic background (Figueredo, 2007). Further, the Civil Rights Act of 1964 was amended in 1972, requiring post-secondary institutions to affirmatively recruit women and minorities to all institutions receiving federal aid (Rasheed & Sinha, 2002). This led to hundreds of post-secondary institutions creating affirmative action programs in order to recruit and assist in the retention of women and people of color.

Regardless of the recent changes in post-secondary education, Latina women continue to face difficulties throughout the higher education process, particularly at the doctoral end of the pipeline (Watford et al., 2006). These difficulties often lead to retention problems and persistence challenges for Latina female doctoral students (Gloria & Castellanos, 2006). Of particular importance for understanding these difficulties is a higher education system with a deeply rooted focus on mostly affluent Anglo men (Martinez, Aleman, & Renn), often perpetuating institutional and cultural inequities for traditionally underrepresented student populations such as Latina women.

Harris-Schenz (1990) asserted that these inequities affect current Latina female student populations negatively, since most Latina women are first generation college students unaware of institutional mores and campus culture rules. This lack of knowledge and understanding of institutional rules and mores leads to an even greater concern for Latina women who are often marginalized as their values are not indicative of the

dominant culture (Watford et al., 2006). For example, Castellanos, Gloria, and Kamimura (2006) reviewed Latino doctoral narratives via a psychosociocultural approach. One of the emerging themes from this assessment involved the negotiation of their educational environment, which led to feelings of loneliness and alienation. In negotiating their educational environment, participants addressed stress associated with navigating an institutional environment which often invalidated these students. In maneuvering through this academic environment, participants struggled in an academic culture not reflective of their perspectives, viewpoints, and values.

Thus, as minority student populations such as Latina women have struggled to participate in an educational system reflective of dominant Anglo cultural perspectives and values (Okibar, 1994), it is imperative that higher education institutions adapt services, programs, policies and values which capture ideologies and principles of diverse student populations. By utilizing such practices, higher education institutions will be better able to retain and assist Latina female doctoral students in graduate studies.

Additionally, where institutional policies are comparatively less influential on the prevailing culture, this weakens the evolving state of the pipeline as the historic underrepresentation of Latina women has created a vicious cycle of limited retention and persistence issues for these students. Challenges related to retention and persistence issues for Latina female doctoral students include: lack of preparation as a result of poor K-12 education, low socioeconomic origins, isolation from family due to cultural dissonance associated with the culture of higher education and that of family, and tokenization by peers and faculty (Gonzalez, 2006).

Moreover, historical racism has led to an academic culture that may not be friendly or congruent to the needs of Latina female doctoral students. Chait and Tower (2002), posited that higher education has a strong culture reflected in a set of principles and conjectures (often unspoken and unwritten) which direct individual and collective behavior and influence the way post-secondary institutions do business. Since higher education was founded on historically Anglo principals, Latina women in programs with mostly White middle to upper class male perspectives and faculty may have difficulties finding advisors who are culturally sensitive and attentive to their needs (Poock, 1999). As strong cultures are not easily changed, Latina female doctoral students often face an unwelcoming academic culture which can negatively affect persistence and retention rates.

### **Retention/Persistence Issues**

Many researchers have pointed to cultural and discriminatory factors that affect Latina female persistence and retention in higher education (Yosso, 2002; Alvarez, 2001; Cantu, 2001). For example, a study pertaining to Latina women conducted by Gonzalez, Jovel and Stoner (2004) “was two-fold: (1) to understand the factors in expansion and constriction of college opportunities for Latinas, and (2) to disentangle the multiple strands in the issue of Latinas leaving home for college” (p. 19). One of the challenges faced by Latina women was their need to gain independence from the family and to negotiate the belief that they should reside at home during college. The parents of these women did not believe that their daughters could be self-sufficient or secure and take care of themselves. However, the presence of support systems such as Chicano cultural programs, Latino professors, churches and other Latina female students did help ease the

worry of parents. The study also highlighted the struggle within Latina female students who were about to graduate from college and were faced with the choice to move back home or to move even farther from home to attend graduate school (Gonzalez, Jovel, & Stoner, 2004). This study implied that Latina female graduate students struggle with moving further from family, therefore necessitating a more supportive university environment.

Achor and Morales (1990) studied 100 Latina women who had earned doctoral degrees. Of these 100 Latina women, the authors noted that 65% faced racial or gender discrimination during their doctoral work and 34% believed that such issues and other institutionally related aspects served as significant hindrances in pursuit of their education. Other related institutional aspects included discriminatory admissions practices. An example of such practices involved a respondent being asked if she was planning to marry and have a child. As a result, this student had to assure the admissions committee that she was committed to the program and would not leave due to family obligations. Examples at another institution involved limited access to assistantships, lack of assistance and guidance from dissertation committees, and inadequate opportunities to publish with others (Achor & Morales, 1990).

Researchers note that these various instances of discriminatory practice often discourage Latina women throughout their doctoral program adding significant specific stresses to an already generally stressful academic program. Potential consequences of stress involve low self esteem, feelings of isolation, and feelings of inadequacy which are common stressors for all students in doctoral programs, and which can be made worse due to discrimination. Furthermore, Watford et. al, 2006, discussed Latina female

doctorates and their experiences in dealing issues of marginality in their programs. The authors noted that the percent of Latina women who completed their doctorates increased from 3.5% in 1990 to 5% in 2000. However, when addressing parity issues they declared that Latina female “doctorates were significantly under-represented in female doctorate production for the 11-year period” (Watford et. al., 2006).

In a review of the literature, Watford et. al (2006) discovered marginality as a consistent theme for Latina female students that served to shed light on the numerous challenges Latina female graduate students face as well as the resistance mechanisms utilized to confront barriers and succeed. Watford took this idea of marginality from a number of previous researchers and observed it as a process resulting from discrimination against women of color and Latina women (Watford et. al, 2006; Collins, 1990; Hooks, 1990). Watford et al. (2006) found that several forms of marginality were associated with Latina women’s experiences in graduate school. Forms involving overt and covert marginality resulting from the institution as well as opposition from the margins were indicative of their study of Latina women in graduate programs.

Additionally, other studies investigated overt forms of marginality resulting from Latinas’ exposure to racial, ethnic and sexist jokes, as well as stereotypes in educational environments facing questions of their merit to be in academic programs, or being told they did not belong in doctoral programs, often without regard to academic standing (Cuadraz & Pierce, 1994; Flores, 1988; Gonzalez, Marin, Moreno, & Navia, 2001; Nieves-Squires, 1991; Solorzano, 1998; Williamson, 1994). In one instance as noted by Williamson (1994), a Latina female doctoral student faced sexual harassment by a faculty member, in which he threatened the student telling her she would not graduate from the

program. The author also addressed a Latina female doctoral student who constantly dealt with a professor who continuously called on her to discuss issues pertaining to students of color, although the student had vehemently reminded the professor that she was competent to respond to topics beyond student of color issues. Although post-secondary institutions generally have guidelines opposing discrimination, research shows that Latina female doctoral students continue to face various forms of overt marginality in graduate studies (Nieves-Squires, 1991).

Moreover, covert marginality often arises out of racial and ethnic stereotypes. A common form of covert marginality involves claims by faculty and peers that Latina women are accepted into doctoral studies as “affirmative action charity cases” (Achor & Morales, 1990, p.278). In the classroom, Latina female doctoral students reported dealing with covert marginality as many peers expected them to address issues regarding all people of color when lectures on race and ethnicity occurred (Gonzalez et al., 2001; Solorzano & Yosso, 2001; Williamson, 1994). Neives-Squires (1991) posited that devaluing one’s input in class, particularly with regard to race and ethnicity, rendered feelings of tokenism common for Latina female graduate students. “The paradox of experiencing both invisibility and tokenism is exacerbated as Latina women often find that they are the only persons of color, or Latinas/os in their graduate program” (Watford et. al, 2006).

Latina female doctoral students also contend with classroom lectures and curriculum dealing with common ideals that race is based solely on philosophies constructed via a Black-White binary (Solorzano, 1998; Solorzano & Yosso, 2001). One common way in which this twofold issue of Black-White philosophy is evident in course

teachings is through professors presenting race only through the historical relationships between African Americans and Anglos. Latina female graduate students commonly encounter binary practices relating to only Black-White issues, resulting in disregard for how race or ethnicity can be created by issues of language, immigration, and culture (Solorzano & Yosso, 2000). Thus, cultural issues and discriminatory factors as mentioned above may affect the retention and persistence of Latina women in post baccalaureate studies.

Therefore, persistence and retention issues related to Latina women must encompass programs and services founded on a cultural adaptation lens sensitive to Latina female student needs who typically originate from a culture established on a collectivistic perspective (Pope, Reynolds and Mueller, 2004). Moreover, as Latina women stem from a culture rooted in collectivism rather than individualism (Perderson, 1988) in which the success of the group and interdependence within the group is key, (Marin & Marin, 1991) and as the demographics of college students change, it is imperative that faculty and administrators of post secondary institutions adapt services, improve teaching curriculars and enhance their own knowledge base in order to assist Latina female doctoral students succeed.

### **Cultural Adaptation**

Latina women may face marginalization in doctoral programs as their culture often clashes with the dominant culture. This culture clash results in self-reliance as well as the development of resistance mechanisms to assist Latina women to travel through the rocky terrain of doctoral studies (Watford, et al., 2006). These mechanisms are rooted in Latina female doctoral students' desire to achieve and their resolve to defy hierarchical

power dynamics. The study by Watford et al. (2006) found that Latina women utilized knowledge acquired from their place within the margins to face up to structures that defied their existence and success in doctoral programs (Watford et al, 2006). In general, establishing resistance from their place within the margins assisted to position Latina female doctoral candidates as outsiders within the program (Collins, 1990). This status as outsiders can provide Latina female doctoral students with the tools to confront and transform post-secondary campuses that profess to value diversity, but do little to establish or preserve academic environments that are hospitable for Latina female doctoral students (Watford et. al, 2006).

When looking at the educational factors associated with diversity and culture in post-secondary education, assessment of these factors assists faculty and administrators in understanding various schools of thought and ideologies in relation to students of color and how they adapt to academe (Sugrue, 2009). Chang, Seltzer, and Kim (2002) report that an increase of the Latina female student population which is proportionate to the majority enhances the learning environment by providing opportunities to educate all students with a greater sensitivity to diverse opinions and cultures. The underrepresentation of Latina women in higher education perpetuates Latina womens' representation in the lower echelons of the service sector and in minimum wage jobs, resulting in few opportunities to advance up the socioeconomic ladder. Benefits of Latina women in higher education include Latina women adding to the academic rigor of learning not only by their mere presence in the classroom as students, but as individuals who may potentially be a positive factor in student learning outcomes and experiences (Chang, Seltzer, & Kim (2002).

### **Relationship Between Ethnic Identity and Completion of the Doctorate**

Many studies investigating ethnic identity pointed to the relationship between identity achievement and social support as important factors for academic success in college (Torres & Hernandez, 2007; Arrellano & Padillia, 1996; Watford et al., 2006; Yosso, 2002). Ethnic Identity is defined as “an enduring, fundamental aspect of the self that includes a sense of membership in an ethnic group and the attitudes and feelings associated with that membership” (Phinney, 1996, p. 922; Bernal & Knight, 1993; Keefe, 1992; Phinney, 1990). Expanding on the work of Erik Erickson pertaining to issues of identity in post-secondary education, Arthur Chickering’s and Linda Reisser’s research on undergraduate students contended that the formation of identity is a fundamental developmental issue for college students, a contention echoed in many other studies (Chickering & Reisser, 1993; Erickson, 1968; Ortiz & Santos, 2010). Thus, identity achievement in higher education is an important aspect in assisting students in achieving academically. Further, at the final stage of the educational pipeline, ethnic identity in conjunction with social support is a particularly salient issue in completion of the doctorate, as noted in the research below.

Moreover, the significance of ethnic identity to one’s sense of self is evident through research on various ethnic groups, including African Americans, Latinos, Asians, and Anglos (Cross, 1978; Arce, 1981; Makabe, 1979; Driedger, 1976; Rosenthal & Hrynevich, 1985). Ethnic identity research became a national issue in the 1960s as a result of the civil rights movement (Laosa, 1984) and has seen additional attention due to the shifts in demographics across the country (Phinney, 1992). Of these shifts in demographics in relation to Latina female doctoral students and ethnic identity, obtaining

the doctorate provides social and intellectual status; yet the path to achieving this degree is embedded with strenuous cultural choices which can infringe on their identity (Torres, 2006). Under this perspective, the progression of transformation an individual encounters in doctoral education not only affects the individual's professional training but also influences the development of the entire self (Gardner, 2009) a process which may affect the retention of Latina female doctoral students who are already in the process of negotiating numerous identity structures.

Further, academic programs have formal and informal initiatives that define how students are socialized into the program and institution (Tierney, 1997). Torres (2006) argues that for doctoral students, this socialization process is a particularly important issue as these students understand that the premise of doctoral study is to establish an identity as a scholar in the program, with minimal regard for the salience of a student's past identity. Further, the manner in which a person assesses and integrates various dimensions of their identity is critical in developing one's sense of self and succeeding in higher education (McEwen, 2003).

The development of one's sense of self is a particularly salient issue for Latina female doctoral students, as they must contend with complicated decisions to shape the self while at the same time balancing the demands of academe with that of their Latina female identity (Torres, 2006). The understanding of the strain placed on Latina female doctoral students to balance identity while dealing with issues of marginality is relevant to higher education administrators and faculty who need to provide supportive programs, mentors and opportunities relevant to these students that can assist in recruitment and retention of Latina female doctoral students (Watford et. al., 2006). By providing these

support mechanisms more Latina female faculty members and administrators will move into higher education and assist in creating a positive cycle encouraging more Latina female undergraduate women to pursue doctoral studies that will ripple down the pipeline (Contreras & Gandara, 2006).

Research conducted by Chavez and Guido-Dibriton held that racial and ethnic identity are critical components related to one's personal and collective identity. They also believed that for populations of the non-dominant culture in the United States, racial and ethnic identity were prompted by two contradictory social and cultural influences. Thus, Chavez and Guido-Dibriton (1999) stated:

First, deep conscious immersion into cultural traditions and values through religious, familial, neighborhood, and educational communities instills a positive sense of ethnic identity and confidence. Second, and in contrast, individuals often must filter ethnic identity through negative treatment and media messages received from others because of their race and ethnicity (p.39). These two contradictory social and cultural influences may cause significant stress for Latina women in academe as they try to balance familial cultural values with the negative stereotypes that can often be perpetuated at academic institutions.

Taking into account issues of social support and ethnic identity, as well as culture and counseling of ethnic minorities, research conducted by Constantine, Chen, and Ceesay (1997) found that relationship problems with family members were cited as the most common stressor for three of the four ethnic groups studied. The authors noted that counselors must understand that while they may view post-secondary institutions as a place where students may detach from families of origin, ethnic minorities may hold

cultural ideals emphasizing attachments to the family even during college. This study suggested that counselors at universities should provide interventions and culturally sensitive counseling methods which take into account the needs of ethnic minorities and their identity.

Vera and De los Santos (2005) discussed issues of identity construction of Latina women, stating that traditional paradigms are not sufficient in addressing Latina female identity formation in higher education. Further, Vera and De los Santos (2005) outlined research conducted by Chicana feminists such as Gloria Anzaldua, who posited that Latina women maintain survival mechanisms from living amid two cultures and being forced to decipher how to preserve their ethnic identity while at the same time learning to acclimate to the dominant culture. Maintaining survival skills in relation to living among two cultures is critical to Latina doctorates who become professors in the academic world as Latina women encounter a double minority status involving not only their race, but also their gender and the paucity of Latina women in the professoriate (Arrendondo & Castellanos, 2003). Thus, Latina female doctorates moving into the professoriate are women who often have to maneuver between the dominant world defined by the values of the Anglo society consisting of autonomy and intolerance and their own identity of conflicting Latina female values, often embedded in ideas of collaboration and tolerance (Calasanti & Smith, 2002).

### **Research Using the Ethnic Identity Measure**

A significant subcomponent of general identity involves ethnic identity, which encompasses “feelings of ethnic belonging and pride, a secure sense of group membership, and positive attitudes toward one’s ethnic group” (Phinney & Alipuria,

1996, p. 142). According to Phinney (1992) ethnic identity is a vital aspect of one's overall self-concept. Further, ethnic identity is a particularly salient issue in identity formation (Phinney & Rosenthal, 1992; White-Stephan, 1992). As the racial composition of the United States is becoming increasingly ethnically diverse, the necessity for a broader research base in relation to ethnic identity and academic success is warranted (Phinney & Alipuria, 1996). In order to examine and evaluate ethnic identity and its correlates across groups, Phinney (1992) developed the Multigroup Ethnic Identity Measure. This measure may be used by researchers to assess ethnic identity in Latino students in higher education, implement support mechanisms and gain insight congruent to the higher education needs of Latino students.

Moreover, from a developmental aspect, ethnic identity entails a process of assessing the importance of one's ethnicity and understanding as well as affirming one's association in an ethnic group (Phinney, 1989). Ong, Phinney, and Dennis (2006), used the Multigroup Ethnic Identity Measure in a study involving 123 Latino college students. The students participated in a longitudinal study assessing the experiences of ethnic minority students whose parents did not attend or complete college. The Multigroup Ethnic Identity Measure assessed two areas of ethnic identity development consisting of exploration and commitment. Exploration involved the extent to which participants had explored the meaning and implications of their ethnicity. Commitment involved the extent to which participants affirmed their sense of belonging to their group. The researchers found that Latino students who reported higher levels of ethnic identity and family interdependence demonstrated higher academic success in post-secondary education.

Thus, the researchers noted that these findings correlate with other studies which found that highly ethnically identified Latinos fare better in post-secondary education (Ethier & Deaux, 1994; Phinney & Alipuria, 1990). Implications from this study suggest that higher education institutions should provide support programs, initiatives and curriculum which assist in affirmation of identity for Latino students in order to promote academic achievement.

### **Research Using Perceived Social Support Inventory**

A review of the literature indicated that achieving academically in post-secondary education is greatly contingent on support provided to the student (Yosso, 2002; Mina, Cabrales, Juarez, & Rodriguez-Vasquez, 2004; Schneider & Ward, 2003) Sanford (1966) contended that providing an appropriate equilibrium between challenge and support is an integral component in the university environment to promoting student growth and development. Zimet, Dahlem, Zimet and Farelly (1988) developed “The Multidimensional Scale of Perceived Social Support” to address the subjective evaluation of social support adequacy. This scale assessed the issue of social support adequacy via three areas: family, friends, and significant others. The authors specified that social support includes some type of relationship exchange between individuals and that the nature of the relationship exchange is outlined in an array of ways. Further, Shumaker and Brownell (1984) defined social support, “as an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient” (p.13). Zimet et al. (1988) asserted that since the mid-1970s, there has been evolving interest regarding the role of social support as a coping mechanism for individuals.









institutions often providing advantages to a homogenous population, and attitudes and conduct thwarting interaction between different race and ethnic groups serve as prime examples of how institutional climate embedded in a culture of traditionally segregated campuses perpetuate often unrecognized benefits and conflicts for different student groups out of which Anglo student populations are often best adapted and most privileged (Duster, 1993).

Most campuses with a high concentration of Anglo student populations have a history of limited admittance and exclusion of minority populations (Thelin, 1985). A campus's historical legacy of limited access can influence the prevailing university climate and affect the existing practices of post-secondary institutions (Hurtado, 1992). Various campus case studies documented the influence of the historical context in relation to climates for diversity and efforts to establish a supportive environment for minority students (Hurtado, Pederson & Allen, 1998; Peterson, Blackburn, Gamson, Arce, Davenport, & Mingle, 1978; Richardson & Skinner, 1991). Researchers discovered that success in establishing supportive institutional environments was often contingent on a campus's initial response to the entrance of minority students (Hurtado, Pederson & Allen, 1998; Peterson et. al, 1978; Richardson & Skinner, 1991). Important factors regarding an institutions first response to minority students "were the institutional philosophy of education for students of color, commitment to affirmative action, institutional intent for minority-specific programs, and attention to the psychological climate and intergroup relations on campus" (Hurtado, Pederson & Allen, 1998, p.3; Peterson et al., 1978). This has significant implications for Latina female doctoral students, as very few Latina women are represented in the final stages of the academic

pipeline. Thus, Latina female doctoral candidates often contend with programs and university environments which are both more hospitable to the dominant culture and structured to privilege homogeneity (Gloria & Castellanos, 2006).

## **Theoretical Framework**

### **Critical Race Theory**

Critical Race Theory evolves from a broad literature foundation in law, sociology, history, ethnic studies, and women's studies (Yosso, Parker, Solorzano, & Lynn, 2004). This theory considers the role of race and racism in education while attempting to eliminate racism as well as other forms of subordination related to gender, class, sexual orientation, language, and national origin (Solorzano & Yosso, 2002). The five goals of Critical Race Theory are as follows: 1) the focus and overlapping issues of race and racism in education 2) confronting the dominant ideology in education 3) the dedication to social justice 4) the focus on experiential knowledge, and 4) the interdisciplinary point of view in relation to education (Fernandez, 2002).

Furthermore, Critical Race Theory scholars contend that racism is normal and prevalent in today's society (Ladson-Billings & Tate, 1995; Scheurich & Young, 1997; Tatum, 1997; Tyson, 1998). Therefore, because it is a common practice in everyday society, racism is often overlooked in how it functions and molds post-secondary institutions, how it influences relationships, as well as how it influences ideologies and thought of the dominant society (Lopez, 2003). Ladson-Billings (1999) contended that Critical Race Theory exposes issues of White privilege and brings to light a social order in our country that is extremely stratified and fragmented along racial lines, benefiting the Anglo community. The use of Critical Race Theory in this study assisted in recognizing

and bringing to the forefront issues of race and racism that may have hindered the success of Latina women who completed the doctorate and shedding light on factors that assist in successful completion of the doctorate.

### **Latino Critical Race Theory**

Epistemology is the study of the nature, status, and creation of knowledge (Hardin, 1987) and the manner by which individuals experience and understand the world (Bernal, 2002). Ladson and Billings (2000) focused on epistemology's role in understanding the methods of knowing associated with an individual's worldviews and embedded in the conditions by which individuals live and learn. These authors asserted that "there are well-developed systems of knowledge, or epistemologies, that stand in contrast to the dominant Euro-American epistemology" (p. 258). Indeed, numerous scholars espouse the idea that there are race-based epistemologies stemming from annals of social, political and cultural ideals that exist in direct contrast to the dominant race (Bernal, 2002; Dillard, 1997, 2000; Gordon, 1990; Ladson-Billings, 1994, 2000; Scheurich & Young, 1997). Race-based epistemologies contest the broad scope of acceptable contemporary research paradigms, ranging from positivism to constructivism and liberal feminism. The dominant ideals frequently derive from a narrow base of knowledge evolving from Anglo social, historical and cultural ideals that may be less critical to other epistemologies (Stanfield, 1994).

Evolving out of the field of law, Latino Critical Race Theory provides researchers with an alternate framework to assess how so called race-neutral laws and guidelines fuel racial, cultural and gender subordination (Crenshaw, Gotanda, Peller, and Thomas, 1995). Latino Critical Race Theory provides "credence to critical raced-gendered epistemologies

that recognize students of color as holders and creators of knowledge” (Bernal, 2002).

This theory stresses the analysis and establishment of laws in relation to “proper historical and cultural context to deconstruct their radicalized content” (Crenshaw, Gotanda, Peller & Thomas, 1995).

These frameworks confront the dominant liberal ideals of colorblindness and meritocracy by demonstrating how these ideals function to disadvantage Latinos while benefiting the Anglo population (Delgado & Stefancic, 1994). Latino Critical Race Theory also involves a progressive movement by academic scholars, taking issues such as language, immigration, race, identity, phenotype, and gender into consideration (Espinoza, 1990; Garcia, 1995; Hernandez-Truyol, 1997; Johnson, 1997; Martinez, 1994; Montoya, 1994). Latino Critical Race Theory illuminates Latinos’ multifaceted identities, particularly “the intersectionality of racism, sexism, classism, and other forms of oppression” (Solorzano & Bernal, 2001). This theory frequently opposes traditional ideals of today’s educational system, such as color blindness, equal rights for all, and meritocracy. Latino Critical Race theorists maintain that these traditional schools of thought can function as camouflage for the benefit of dominant groups (Calmore, 1992).

Social justice is another goal of Latino Critical Race Theory, based on providing a transformative response to various types of oppression, such as racism and classism (Matsuda, 1991). Most importantly, this theory takes into account the lived experiences of Latinos by embracing family history, cultural words of advice, stories, and biographies (Bell, 1987; Carrasco, 1996; Olivas, 1990; Solorzano & Villalpando, 1998; Solorzano & Yosso, 2000). Additionally, within education Latino Critical Race Theory contests a historicism and single disciplinary focus, instead insisting on assessing race and racism

by viewing these ideals via an interdisciplinary approach embedded in historical and contemporary context, as noted by the following researchers: Delgado, 1984; 1992; Garcia, 1995; Harris, 1994; Olivas, 1990. This study's use of Latino Critical Race Theory attempted to utilize a methodology that will illuminate both the specific character of complication in the retention of Latina women while enabling the study to approach the problems of Latinas in the educational pipeline holistically.

### **Social and Cultural Capital**

Social capital is often described as the collective norms, principles, trust and connectedness common to others in a group (Coleman, 1988; Bourdieu, 1986). With respect to higher education, social capital involves the “norms and social networks that assist in the transfer of education from one generation to the next” (Lashcher 2008, P. 22). Cultural capital is a subset of social capital involving cultural value systems exclusive to specific groups. As a result, people cultivate a type of cultural capital currency when assisting those in a specific cultural group to form mobility within a certain social group (Lin, 2001). Researchers argue that social and cultural capital function in colleges and other venues to intercede in the social reproduction of inequality. (Bourdieu, 1977 a, Bourdieu, 1977 B; Coleman, 1988; White & Glick, 2000). Initially, however, social and cultural capital tend to “reflect and reproduce stratification patterns in a class-based society such as the United States” (Monkman, Ronald, & Theramene, 2005). This has significant ramifications for the Latino population, since many are first generation college students who lack the social and cultural capital tools that ease access and navigation in higher education.

Furthermore, researchers posit that cultural and social issues tend to serve as barriers for Latinos pursuing and attending post-secondary education. In fact, studies have demonstrated that Latino cultural customs negatively influence traditionally low university participation rates (Gandara, 1995; Cortese & Duncan, 1982; McDonough & Antonio, 1996; Perna, 2000; Cantrell & Brown-Welty, 2003). For example, the Latino culture advocates for familial rather than individual goals. Thus, Latina women often lack family support for collegiate cultural values that advocate for living away from home (Gandara, 1995).

Cantrell and Brown-Welty (2003) addressed research studies centering on Bourdieu and Passeron's (1977) theories of cultural and social capital as aspects related to decisions to attend college and overall access to college. In theory, cultural capital is evident within middle and upper-class students and families as they exchange educational values, beliefs, and information about college for economic capital and social ranking in life (Cantrell and Brown-Welty, 2003; McDonough & Antonio, 1996; McDonough, Ventresca, & Outcalt, 2000). Thus, low income, first generation Latino students are disadvantaged due to a lack of cultural capital concerning college importance, access, and other factors (Cantrell & Brown-Welty, 2003).

According to Espino (2008) when assessing cultural capital and graduate study, the literature maintains that the gathering of knowledge, understanding, and expertise to maneuver through graduate study is contingent on prospective graduate students' levels of comprehension of the graduate school process. Thus, graduate students with cultural capital indicative of the dominant culture may have a more positive experience than cultures such as the Latino culture, which are often marginalized as their cultural capital

is not reflective of the dominant social culture. Such factors can point to the advantages for graduate programs in utilizing professional advisors or extended orientation for programs that can aid students in attaining a greater scholastic awareness.

Lascher (2008) argued that on average Latino students enter post-secondary education with less social capital than their Anglo peers. Thus, Lasher (2008) contended that greater social capital for a student, which can provide greater educational achievement such as graduating from high school and entering higher education, may be a factor of student success that institutions can compensate for outside of such traditional criteria as study habits, financial support and time stressors. This may have a significant impact on Latino student success in post-secondary education as they have less social capital in comparison to non-Latino Caucasian students.

Via a social capital framework, Perez and McDonough (2008) investigated the resources and networks assisting Latino students in their college selection process. As indicated in prior studies, results indicated that Latinos depend greatly on family and friends, including secondary staff such as teachers and counselors in regard to college selection (Ceja, 2001; Gandara, 1993, 1995; Perez & McDonough, 2008). One unique aspect involved “the degree to which Latino students relied on individuals who were extended family members for college information” (Perez & McDonough, 2008, p. 255). These patterns by which Latina female students utilize social capital may be of interest for higher education administrators and graduate programs as they recruit from the Latina female population, and could be expected to be retention factors in this study.

### **Conceptual Framework**

As mentioned previously, Latino Critical Race Theory and Critical Race Theory is used as a framework to demonstrate how the history of higher education systems founded on the dominant culture has created stumbling blocks for Latina women by negatively affecting the university environment (Villalpando, 2004). Whereas the Latino population is the fastest and largest growing racial group (Gandara, 1994), this population continues to be the least educated in the United States (Chappa, 1991). Villalpando (2004) contended that when a Latina female student faces racism and isolation in college due to a negative university environment, this experience is not only in relation to her ethnicity but also to her identity as a woman, her socioeconomic class, her ability to speak English, her sexual identity and her immigrant generational status. Thus, various aspects of Latina women's identity are negatively impacted due to a non-supportive university environment.

Moreover, research has indicated that social support provided to Latina women via interactions with professors, mentoring, and cultural celebrations assists Latina female students to overcome dissatisfaction associated with negative university environments, educational practices and procedures that are geared toward the dominant culture (Gonzalez, Jovel, and Stoner). Thus, Latino Critical Race Theory and Critical Race Theory provide a framework to assess issues of race in relation to education by assessing how educational theory and procedures hinder and marginalize Latina female students. This framework may be utilized by practitioners in higher education to examine patterns of racial discrimination, marginality, and exclusion against Latina female college students (Villalpando, 2004).

## **Research Contributions**

From 2009-2021, the number of white non-Hispanic and black non-Hispanic students will decrease each year even as the amount of Latino students increases. Thus post-secondary institutions will start to find new importance in recruiting from student populations consisting of Latino students (Van Der Werf & Sabatier, 2009). Economically, the Latino population is an integral component in higher education due to this population's ability to preserve a vital workforce (Gershwin, Coxen, Kelley & Yakimov, 2007) and to adapt to changing demographics in student recruiting emphasizing Latinos (Van Der Werf & Sabatier 2009). Educationally, Chang, Seltzer, and Kim (2002) reported that a proportionate increase of the Latino student population will assist in enhancing the educational environment. An enhancement of the educational environment can provide opportunities to educate all students with a greater sensitivity to diverse opinions and the cultivation of academic and social growth (Hurtado, Dey, Gurin, & Gurin, 2003). This study hoped to contribute to the research by providing timely data regarding Latina female doctoral completers in relation to Latina female ethnic identity and completion of the doctorate. Also, the study hoped contribute to the research by assessing the social, economic, academic and institutional factors that influence Latina women to pursue the doctorate, and of these factors, which are the most important to successful retention and completion of the doctorate.

## **Summary**

This chapter provided an overview of the literature on the importance of Latina female doctoral graduates and the factors influencing Latina women who pursue the

doctorate. The review also discussed ethnic identity in relation to the university environment and perceived social support.

Chapter 3 provides an overview of the study design. The research hypotheses are clarified. The assessment survey is presented, as well as study procedures and data analyses.

## **Chapter III**

### **Research Design and Methodology**

#### **Introduction**

This chapter explains the proposed research methodology for this quantitative study. As indicated in Chapter 2, very few studies have investigated the link between Latina female doctoral students' success and ethnic identity with respect to university environment and perceived social support within post-secondary education. The purpose of the research was to identify the social, economic and institutional factors that encourage Latina women to pursue the doctorate and to determine which of these factors are the most influential in the successful completion of the doctorate. The study explored this relationship through correlational analysis and multiple regressions, focusing on subjects' perceptions of ethnic identity, university environment and perceived social support. This chapter contains a description of participants, instrumentation, data collection, procedures, and data analysis.

#### **Research Questions**

This study was designed to answer three key questions:

##### **Research Question One**

Is there a relationship between ethnic identity and completion of the doctorate degree for Latina women?

##### **Research Question Two**

What social, economic, academic, and institutional factors influence Latina women to pursue the doctorate?

### **Research Question Three**

Which of these factors are most important to successful completion of the doctorate?

### **Research Design**

#### **Design and Procedures**

The principal investigator sent emails obtained from the American College Personnel Association (ACPA) informing the prospective participants about the research study and inviting their participation. The principal investigator placed the demographic questionnaire and the adapted versions of the following survey instruments on SurveyMonkey: 1) the Multigroup Ethnic Identity Measure (MEIM) 2) the Multidimensional Scale of Perceived Social Support (MPSS) and 3) the University Environment Scale (UES). The principal investigator sent emails to participants two times: once inviting participants to partake in the study, and a second time asking participants to complete the study. The participants had two weeks to complete all four instruments.

Additionally, the principal investigator contacted the Texas Associate of Chicanos in Higher Education (TACHE) requesting email contact information from this organization. While the organization was not able to provide this data, members of TACHE'S executive board forwarded the principal investigator's original email requesting colleagues to participate in the study. The principal investigator also posted messages via Facebook requesting friends and colleagues to forward the study to other professional and personal contacts that fell within the study's criteria. The principal investigator narrowed the sample to include Latina women who have graduated with a

terminal degree within the last five years. Prior to the study, the Institutional Review Board approved the online survey instruments and the overall structure of the study.

### **Description and Sample**

Participants in this study consisted of both instructional and non-instructional Latina females who have completed the doctoral process and who were employed at either public or private post-secondary institutions in the United States at the time of the study. The American College Personnel Association (ACPA) states that there nearly 8,500 members representing 1,500 private and public institutions from across the United States and around the world. Thus the survey was sent to all female members of The American College Personnel Association (ACPA) as the organization was not able to provide delineated data in regard to Latina female members. Therefore, a total 2,473 female members of The American College Personnel Association (ACPA) were contacted by the principal investigator. In the body of the message sent out, the researcher asked specifically for Latina female members who were either faculty or staff and held a doctorate to complete the survey.

Furthermore, the principal investigator sent out 25 emails, grouping the email addresses into groups of 100. The Texas Association of Chicanos in Higher Education (TACHE) is a statewide organization of students, faculty, administrators and institutions of higher education dedicated to improving opportunity and equity in Texas higher education. As mentioned previously, while the principal investigator was not able to obtain email contact information in regard to members of Texas Association of Chicanos in Higher Education (TACHE), executive board members of Texas Association of Chicanos in Higher Education (TACHE) forwarded the principal investigators original

email requesting colleagues to participate in the study. The principal investigator also placed her study on Facebook inviting friends who fit the study's criteria to complete the survey and asked friends forward the survey to others who fit the study's criteria.

Additionally, the principal investigator received emails from Latina women across the nation informing her that they had forwarded her study to colleges.

### **Pilot Study**

A pilot study was conducted at a large university located in the southern portion of the United States in order to assess the feasibility of the technique and to determine the reliability of the measures. The pilot study was also used to test logistics and gather information prior to the larger study to facilitate quality and efficiency. Five participants were contacted via email and were asked to complete an online survey via SurveyMonkey. The principal investigator also used the pilot study to assess for deficiencies and to make necessary adjustments to the research methodology. The deadline to complete the survey instruments was two weeks. The principal investigator sent a reminder email a week before the deadline requesting that the participants complete the survey. The pilot study provided participants with a brief outline of the research study and directions on how to complete the survey. Ultimately, three participants completed the pilot study, providing valuable feedback to the principal investigator.

## **Instrumentation**

### **Instrument Design**

The study used 3 variables captured by four instruments (Appendix A). Ethnic identity acted as the dependent variable and university environment and perceived social

support functioned as independent variables. A demographic instrument was used to capture the independent variable information. The following modified instruments were utilized to measure the dependent variables: the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992), the University Environment Scale (Gloria & Robinson Kurpius, 1996), and the Multidimensional Scale of Perceived Social Support (MSPSS; Ziment, Dahlem, Ziment & Farley, 1988). The Multigroup Ethnic Identity Measure answered questions regarding how the Latina women felt about their ethnicity during their doctoral program. The Multidimensional Scale of Perceived Social Support assessed how these Latina women perceived social support during their doctoral program from friends, family and professors. The University Environment Scale provided data regarding how Latina women felt about their university environment.

### **Demographic Questionnaire**

The demographic questionnaire included a total of 14 items. Participants were asked about general personal information including their age, grade point average (GPA) in their doctoral program, marital status during their doctoral program, living arrangements during their doctoral program, and generational status. Educational questions were centered on the following: completion of master's degrees at doctoral institutions; highest academic degree participant expected to earn during undergraduate study; emphasis of doctorate; sources of financial assistance; continuation of study between bachelor's degree and doctorate; years of completion between master's degree and doctorate; parent and sibling education; generational status; and how confident they were in regard to completion of the doctorate during doctoral studies.

## **Reliability**

### **Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992)**

According to Dr. Jean Phinney, the Multigroup Ethnic Identity Measure (MEIM) was developed to assess ethnic identity of adolescents and young adults from diverse populations. This instrument assessed participants whose ages range from age 12 through the adulthood (Phinney, 1992). Numerous studies utilizing the MEIM consistently demonstrate good reliability, with alphas above .80 across a vast spectrum of ethnic groups and ages (Phinney, 1992). The MEIM was adapted to assess doctoral students for this study based on research of the Multigroup Ethnic Identity Measure by Phinney (1992). Ponterotto, Gretchen, Utsey, Stracuzzi, and Saya (2003) located 12 published studies using the MEIM. They reported measures of internal consistency (coefficient alpha) in six college samples and four high school samples. Two subscales were addressed in the study by Ponterotto et al. (2003). The subscales are Ethnic Identity and Other-Group Orientation component subscale. The alphas were similar along these two developmental groups. Collectively, for the Ethnic Identity subscale, alphas were between a low of .81 (Goodstein & Ponterotto, 1997; Phinney, 1992) to a high of .92 (Taub, 1995), including a mean of .86 and a median of .85. The Other-Group Orientation subscale included alphas ranging from a low of .85 (Ponterotto, Baluch, Greig, & Rivera, 1998) to a high of .82 (Taub, 1995), with the mean of .69 and a median of .75. Reese, Vera, and Paikoff (1998) tested fourth and fifth grade students using a slightly modified MEIM test and discovered lower alphas for the Ethnic Identity subscale in two administrations of the test consisting of .72 and .59. These authors did not test for the internal consistency of the Other-Group Orientation subscale. Upon reviewing for the

mean and median coefficient alphas across samples, the internal consistency scores are strongest for the Ethnic Identity subscale and a bit weaker for the Other-Group Orientation subscale. Reese, Vera, and Paikoof (1998) also found a low test reliability coefficient of .25 during a 6-week interval.

**Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988)**

The Multidimensional Scale of Perceived Social Support (MSPSS) is a 12-item scale created to assess perceived social support from three different areas consisting of family, friends, and a significant other. The MPSS assessed social support of 136 female and 139 male university undergraduates. The MSPSS is rated on a 4-point Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree*). No items were reverse scored. Sample items included “I got the emotional help and support I needed from my family”. The MSPSS produced three scores. The Cronbach’s coefficient alpha values in Zimet et al. (1988) were .91, .87, and .85 for Significant Other, Family, and Friends subscales, respectively. The present study utilized the three scale scores regarding The Cronbach’s coefficient alpha values as noted in Zimet et al. (1988). To measure reliability, Cronbach’s coefficient alpha was used to assess internal reliability.

**University Environment Scale (UES; Gloria & Robinson Kurpius, 1996)**

The University Environment Scale (UES) (Gloria & Robinson Kurpius, 1996) examined the perceptions of the university environment by racial and ethnic minority students. A total of 454 Chicano undergraduates between the ages of 18-22 participated in this study. The scale is composed of 14 items, which included five reverse-coded items. Items #1, 4, 5, 11, and 13 are reverse scored. Responses are based on a 4-point

Likert-type format, ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*). A sample item is “University staff has been warm and friendly.” Using a mean scale score, higher scores indicate a more positive perception of the university’s environment. The pilot sample used in Gloria and Robinson Kurpius (1996) study yielded a Cronbach alpha of .84. Similarly, other research has found internal consistency coefficients of .75 and .79 for two groups of Chicana female undergraduates (Gloria, 1997).

### **Validity**

#### **Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992)**

Phinney (1992) administered principle factor analysis on a group of 417 high school students and 136 college students. The high school sample yielded a two-factor structure, with factor 1 noted as Ethnic Identity 20% of the variance and factor 2 noted as Other-Group Orientation 9 % of variance. Reese, Vera, and Paikoof (1998) factor analyzed the Multigroup Ethnic Identity Measure (MEIM) via a principal components method among 118 fourth and fifth grade students. The factor analysis provided a single-factor solution accounting for 20% of the common variance. The Multigroup Ethnic Identity Measure (MEIM) is scored on a 4-point Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree*). Sample items include “During my doctoral program, I had a clear sense of my ethnic background and what it means for me” and “During my doctoral program, I understood pretty well what my ethnic group membership meant to me, in terms of how to relate to my own group and other groups.” The Multigroup Ethnic Identity Measure (MEIM) consists of 23 survey questions. The principal investigator added an additional question regarding experiences of machismo which participants may have encountered during their doctoral program. The mean of the 23 item scores for an

overall score, as the mean yielded a better assessment of individuals' sense of their ethnic group membership.

**Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988)**

Authors of the Multidimensional Scale of Perceived Social Support (MSPSS) utilized factor analysis to assess the validity of considering various sources of support as distinct from each other. The construct validity of the instrument was addressed by investigating the relationship concerning perceived social support and success in completion of the doctorate.

**University Environment Scale (UES; Gloria & Robinson Kurpius, 1996)**

The University Environment Scale (UES) was validated the instrument with Chicano/a students at two major universities in the Southwest region of the United States. Further, a 14-item University Environment Scale (UES) was administered to two student samples. The internal consistency at one university was .81, with a mean of 60.53 and a standard deviation of 12.36. The internal consistency at the second university was .85 with a mean of 66.73 and a standard deviation of 14.28. As the two sample groups were not statistically different, they were collapsed to examine the internal consistency of the total sample. Cronbach's alpha was .84. The mean for the total sample was 64.49 with a standard deviation of 13.92.

**Justification for Data Collection**

The researcher of the present study chose to collect data utilizing SurveyMonkey, as this survey medium provided a secure and effective means to collect data. Research demonstrates that online surveys are functionally easier for different types of groups such

as working women to access and complete (Garton, Haythornthwaite & Wellman, 1999). The three surveys used by the researcher have been used and vetted by other experts in the field, therefore establishing validity. Likewise, the Multigroup Ethnic Identity Measure (Phinney, 1992), the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1998) and the University Environment Scale (Gloria & Kurpius, 1996), specifically address the following variables: ethnic identity, social support from the university, social support of significant others, friends and family as well as the university environment.

### **Source of Data**

The source of the data came from both instructional and non-instructional Latina women who have a terminal degree from either a public or private post secondary institution. The principal investigator obtained the sources of data (email addresses) from The American College Personal Association (ACPA). Additionally, the principal investigator contacted The Texas Association of Chicanos in Higher Education (TACHE) requesting email contact information from this organization. The organization was not able to provide this data; however, members of The Texas Association of Chicanos in Higher Education (TACHE'S) executive board forwarded the principal investigator's original email requesting colleagues to participate in the study. Also, the principal investigator placed her survey on Facebook inviting people who fit the survey criteria to complete the survey, and asking friends to forward the survey to friends who fit the survey criteria. Also, members of the American College Personnel Association forwarded the survey to colleagues.

## **Participants**

Participants in this study consisted of both instructional and non-instructional Latina females who had completed the doctoral process and who were employed at either public or private post-secondary institutions in the United States at the time of the study. The American College Personnel Association states that there nearly 8,500 members representing 1,500 private and public institutions from across the United States and around the world. For the purpose of this study the researcher asked this organization for the email contact list of all female members. In the body of the message sent out via email, the researcher asked specifically for Latina female members who were either faculty or staff and held a doctorate to complete the survey. Of the emails sent out, 126 Latina women started the survey and 124 completed the survey for a completed response rate of 98.4%. Thus, the sample was a convenience sample.

## **Administration of Survey Instrument**

The principal investigator sent emails obtained from the American College Personnel Association informing the participants about the research study and inviting their participation. The principal investigator placed the demographic questionnaire and the adapted versions of the following survey instruments on SurveyMonkey: 1) the Multigroup Ethnic Identity Measure (MEIM 2) the Multidimensional Scale of Perceived Social Support (MPSS) and 3) the University Environment Scale (UES). SurveyMonkey is an online assessment tool that assists researchers to perform, manage and evaluate data relevant to one's study. The principal investigator emailed participants two times: once inviting participants to partake in the study, and a second time asking participants to complete the study. Each time the principal investigator thanked the participant in

advance with regard to participation in the study. The participants had two weeks to complete all four instruments. Prior to the study, the Institutional Review Board approved the online survey instruments and the overall structure of the study.

### **Statistical Overview and Analysis**

The researcher utilized descriptive statistics and multiple regressions as analyzed through SPSS Statistics 18 SPSS® 17. An alpha of 0.05 was used to determine significance. The process produced descriptive statistics including means, standard deviations, and ranges for each of the measures. Correlations were obtained to assess the relationship between each of the study's variables, which included ethnic identity, perceived social support and university environment. Multiple regressions investigated the amount of variance accounted for by the variables and identified the individual variables that accounted for unique significant variance.

### **Data Collection**

The data collected was from an online survey from SurveyMonkey. Each participant was sent an individual email seeking her participation in this research study. The email included a link to the online survey on SurveyMonkey. Secure sockets layer (SSL) encryption was used to ensure the privacy of the individuals completing the survey. All participants were made aware that their responses would be reported in the final study as group data. Information was collected anonymously and could not be tracked back to a specific individual.

### **Data Analysis**

Descriptive statistics, including means, standard deviations, and ranges were calculated for each of the measures. Correlations were obtained to evaluate the

relationship between each of the study's variables, which included university environment and perceived social support in relation to ethnic identity. Multiple regressions were conducted to investigate the amount of variance accounted for by the variables and to identify the individual variables that accounted for unique significant variance. According to Gall, Gall and Borg (2007), multiple regression analysis is one of the most commonly used statistical techniques in education research. Many researchers use multiple regression as it is versatile and provides a vast amount of information in regard to relationships among variables (Gall et al., 2007). This technique provided estimates on the magnitude and statistical significance of relationships between the variables.

### **Treatment of Missing Variables**

The online survey was programmed so that all response fields must be completely filled out before moving on to the next section. Questions on ethnicity allowed for write in responses by the participants. Participants' responses were reflected in the descriptive statistics results section. Missing responses or cases to the survey was small (<5%). Therefore as commonly done these cases were excluded from analysis (Tabachnick & Fidell, 2007).

### **Summary**

This quantitative study examined the education experiences of Latina women who completed the doctorate to determine the link between ethnic identity, social support and the university environment. This quantitative study also assessed the factors that encouraged Latina women to pursue and ultimately complete the study. The factors which were most significant in assisting these women were social support of members of

the university, friends, significant others, family, and support from the university environment.

The presentation of findings and data analysis, including a descriptive profile of population, follows in Chapter 4.

## **CHAPTER IV**

### **Results**

#### **Introduction**

The primary purpose of this study was to investigate the educational experiences of Latina women who completed the doctorate to determine the relationship between ethnic identity, social support and university environment during the doctoral process, including the factors that encouraged them to pursue the doctorate. After identifying the social, economic and institutional factors encouraging the completion of the doctorate, the study attempted to determine which of these factors were the most influential in the successful completion of the doctorate.

Chapter 4 presented a description of the sample followed by the results of the data analyses that addressed the research questions. The statistical procedures used in the analyses were correlation, regression and multivariate analysis of variance (MANOVA).

### **REVIEW OF THE RESEARCH QUESTIONS**

This study was designed to answer three key questions:

#### **Research Question One**

Is there a relationship between ethnic identity, social support and university environment for Latina women?

#### **Research Question Two**

What social, economic, academic, and institutional factors influence Latina women to pursue the doctorate for Latina women?

### **Research Question Three**

Which of these factors are most important to successful completion of the doctorate?

### **Participants and Respondents**

A total 2,473 female members of the American College Personal Association (ACPA) were contacted by the principal investigator. The principal investigator sent out 25 emails, putting the email addresses into groups of 100. The principal investigator also placed the study on Facebook, inviting friends who fit the study's criteria to complete the surveys, and asking friends to forward the survey to others who fit the study's criteria. Additionally, the principal investigator received emails from Latina women across the nation stating that they had forwarded the study to colleagues. Therefore, this sample was a convenience sample with 126 Latina women who started the survey, and 124 who completed the survey for a completed response rate of 98.4%.

### **Demographic Data**

Descriptive statistics were calculated for the general characteristics of the entire sample. Table 1 outlines the results of frequency distribution of all the participants. Respondents reported a mean age of 42, identified primarily as Mexican American or of Latino origin and the majority reported they were first-generation college students. The mean grade point average (GPA) was 3.67 and the majority of the women were single while completing their doctoral program. The majority of the Latina women completing the study hold a Doctor of Philosophy, accounting for 60.2%. The remainder of the participants had a Doctor of Education, accounting for 16.3 %, a Doctor of Jurisprudence, accounting for 21.1%, or a Doctor of Medicine accounting for 3.3%. A significant

number of the participants reported financing of their doctoral education through scholarships and student loans, with 61.8% reporting use of student loans and 51.2% reporting the use of scholarships. When asked about parental educational attainment, 5.6% reported that neither of their parents attended college while 25.4% reporting that both of their parents attended college.

The remainder of the demographic data in Table 2 discusses the following: continuous enrollment between bachelor's degree and doctoral degree; mean number of years between completion of master's and doctorate; parental college attendance; sibling college attendance; and generational status in regard to college attendance. First, when asked if they were continuously enrolled between their bachelor degree and their doctoral degree (n=37, 30.3%) said yes and (n=86, 70.5%) said no. The mean number of years between completion of the master's and doctoral degree was 6.03 years. Of those whose parents attended college, 25.4% reported that both parents attended college. When asked if they had siblings who attended college, 83.1% reported that, yes, they had a sibling attend college. Finally, 57.7% of the respondents reported that they were first-generation college students.

**Table 1*****Respondents' Demographic Information***

<b>Variable</b>	<b>N=124</b>
<b>Participant Ages Completing the Study</b>	
<b>26-30</b>	12 (10%)
<b>31-35</b>	35 (28.9%)
<b>36-40</b>	18 (15%)
<b>41-50</b>	18 (14.9%)
<b>46-50</b>	7 (5.8%)
<b>51-55</b>	12 (9.9%)
<b>56-61</b>	13 (10.9%)
<b>62-71</b>	5 (4.1%)
<b>Mean Doctoral GPA</b>	3.67
<b>Marital Status During Doctoral Program</b>	
Single	60 (48.8%)
Married	55 (44.7%)
Divorced	10 (8.1%)
Widowed	1 (0.8%)
<b>Living Arrangement During Doctoral Program</b>	
On-Campus Housing with Roommates	5 (4.0%)
On-Campus Housing Alone	5 (4.0%)
Off-Campus Housing with Friends	16 (12.9%)
Off-Campus Housing with Family	51 (41.1%)
Off-Campus Housing Alone	42 (33.9%)
Other	15 (12.1%)
<b>Attended Same School for Both Master's and Doctorate</b>	
Yes	40 (35.7%)
No	72 (64.3%)
<b>Expected Degree Attainment (as an Undergraduate)</b>	
Masters	67 (57.8%)
Doctorate	49 (42.2%)

<b>Type of Doctorate</b>	
Ph.D.	74 (60.2%)
Ed.D.	20 (16.3%)
J.D.	26 (21.1%)
M.D.	4 (3.3%)

<b>Financing of Doctoral Degree</b>	
Work Part-time	46 (37.4%)
Family	25 (20.3%)
Scholarship	63 (51.2%)
Work Full-time	40 (32.5%)
Student Loans	76 (61.8%)
Personal Savings	22 (17.9%)

**Table 2**

*Enrollment Data, Family Collegiate Attendance Data and Generational College Attendance Summary*

<b>Variable</b>	<b>N=124</b>
<b>Continuous Enrollment between Bachelor Degree to Doctoral Degree</b>	
Yes	37 (30.3%)
No	86 (70.5%)
<b>Mean Number of Years between Completion of Master's and Doctorate</b>	6.03
<b>Parental College Attendance</b>	
Neither Parent Attended	63 (51.6%)
Father Attended	17 (13.9%)
Mother Attended	11 (9.0%)
Both Parents Attended	31 (25.4%)
<b>Sibling College Attendance</b>	
Only Child	5 (4.0%)
Yes	103 (83.1)
No	17 (13.7%)
<b>Generational Status (College Attendance)</b>	
First Generation	71 (57.7%)
Second Generation	45 (36.6%)
Third Generation	6 (4.9%)
Fourth Generation	1 (0.8%)

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**Table 3 Respondents' ethnicity affiliation**

<b>Women Consider Ethnicity to be:</b>	<b>Frequency</b>	<b>My Ethnicity</b>	<b>Frequency</b>
Multiracial	4	Multiracial	7
Chicana	17	Chicana	12
South American (Columbian)	2	South American (Columbian, Nicaraguan)	3
Cuban (Cuban American)	2	Cuban (Cuban American)	3
Hispanic	24	Hispanic	17
Latina	32	Latina	24
Mexican (Mexican American)	26	Mexican (Mexican – American)	37
Puerto Rican	7	Puerto Rican	8
White	2	White	3
		Spanish	1
		Central American (Nicaraguan)	1

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**Means, Standard Deviations, and Ranges**

Table 5 presents overall means, standard deviations, and ranges of the participants on the measures used in this study. The average score for participants on the Multigroup Ethnic Identity Measure (MEIM) was (M= 2.09). The average score for the Multidimensional Scale of Perceived Social Support (MPSS) was (M=3.23) which was slightly less than the average scores found in the study by Zimet et al. 1988 with an average score of 5.80. The average score on the University Environment Scale (UES), was 37.48, which was almost 50% less than the average scores found in Gloria and Robinson Kurpius's (1996) study. The average scores for the subscales of the Multidimensional Scale of Perceived Social Support (MPSS) were 3.11 (SD=.88) for family, 3.25 (SD=.85) for friends, and 3.32 (SD=.93) for significant others. Additional

measures assessed include: Ethnic Identity Achieved with a mean of 2.80 (SD=.644), Multigroup Ethnic Identity Measure Group Orientation with a mean of 2.53 (SD=.552), and Machismo with a mean of 2.01 (SD=.974).

**Table 4**

*Respondents' father and mother ethnicity affiliation*

<b>Father's Ethnicity</b>	<b>Frequency</b>	<b>Mother's Ethnicity</b>	<b>Frequency</b>
Multiracial	5	Chicana	3
Chicano	5	South American (Columbian, White Brazilian, White Columbian)	5
South American (Columbian, Peruvian)	6	Cuban/Cuban American	3
Cuban	3	Hispanic	13
Hispanic	17	Latina	12
Latino	11	Mexican (Mexican American)	45
Mexican (Mexican- American)	45	Puerto Rican	10
Puerto Rican	9	Puerto Rican	10
White	8	White	13
Spanish	1	Spanish	2
Central American (Nicaraguan)	2	Central American (Nicaraguan, Guatemalan)	2
Jewish	1	Jewish	2
Black	1	German	2

**Table 5**

*Means, Standard Deviations, Range*

	<b>Mean</b>	<b>Standard Deviation</b>	<b>Range</b>
Total MEIM	2.09	.452	.77-2.58
EthnicidentAchieved	2.80	.644	1-3.71
MEIMGO	2.53	.552	1-3.33

Machismo	2.01	.974	1-4.00
TotalMPSS	3.23	.807	1-4.0
MPSSFamil	3.11	.886	1-4.0
MPSSFri	3.25	.848	1-4.0
MPSSSigO	3.32	.930	1-4.0
TotalUES	37.48	7.50	15-49.0

**Analysis**

Pearson correlation coefficients were calculated for the study variables of ethnic identity, perceived social support and university environment. The relationships among the study’s variables are presented in Table 6. The analysis revealed that the ethnic identity had a significant positive relationship with social support and university environment for these Latina female doctoral completers. Specifically, total University Environment is ( $r=.823$ ) is most important, followed by total social support ( $r=.778$ ) and total family support ( $r=.656$ ). Table 7 presents the Analysis of Variance (ANOVA) pertaining to the relationships between ethnic identity, social support and university environment. Therefore, Latina women who reported higher levels of a strong ethnic identity also reported higher levels of perceived support from friends, a significant other, and family as well as a more positive perception of the university.

**Table 6**

***Pearson Correlation Coefficients Relationship between Ethnic Identity, Total University Environment, Total Social Support and Total Family Support***

Pearson Correlation	Total UES	Total Social Support	Total Family Support
Total MEIM	$r=.823$	$r=.778$	$r=.656$

**Table 7 Analysis of Variance between Ethnic Identity, Social Support and University Environment****Relationship between Ethnic Identity, Social Support and University Environment**

<i>Model</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
<i>Regression</i>	<i>17.851</i>	<i>3</i>	<i>5.950</i>	<i>104.205</i>	<i>.000c</i>
<i>Residual</i>	<i>6.681</i>	<i>117</i>	<i>.057</i>		
<i>Total</i>	<i>24.532</i>	<i>120</i>			

Furthermore, several significant relationships were found in this study. For example, a significant positive relationship existed between ethnic identity and social support of friends with ( $r=0.752$ ,  $p<0.05$ ). Ethnic identity also had a significant relationship with the subscales of the Multidimensional Scale of Perceived Social Support (MPSS) for significant others with ( $r=0.707$ ,  $p<0.05$ ) as well as with family with ( $r=0.656$ ,  $p<0.05$ ). While social support from friends, significant others and family were significant positive relationships, family was not as significant as the other two subscales. This suggests that family support was not as important as the other two subscales which may be due to the Latino culture.

Utilizing the Multidimensional Scale of Perceived Social Support (MPSS), the respondents reported higher levels of perceived social support from significant others with ( $r=.936$ ,  $p<0.05$ ), family ( $r=0.913$ ),  $p<0.05$ ), and friends ( $r=.823$ ,  $p<0.05$ ), as well as a more positive perception of the university ( $r=0.810$ ,  $p<0.05$ ). These findings suggest that Latina female doctoral students who perceived greater social support from these

entities had a more positive perception of the university, which may assist in completion of the doctorate.

A strong correlation with ( $r=0.823$ ,  $p<0.05$ ) was found between the Multigroup Ethnic Identity Measure (MEIM) and the University Environment Scale (UES). This suggests that individuals who reported higher levels of ethnic identity also reported higher satisfaction with their university environment while they were students. Likewise, the correlation between the University Environment Scale (UES) and the Multidimensional Scale of Perceived Social Support (MPSS) revealed a significant relationship ( $r=0.810$ ,  $p<0.05$ ). Students who reported a more positive perception of the university environment also reported increased levels of social support. All correlations between the Multigroup Ethnic Identity Measure (MEIM) and all dependent variables are shown on Table 8.

**Table 8**

*Correlation Analysis of Multigroup Ethnic Identity Measure (MEIM)*

<b>MIEM Instrument Variable</b>	<b>Pearson Correlation</b>	<b>Sig. (1-tailed)</b>
Total MEIM	0.183	0.024
Attendance at same school for Master's and Doctorate	0.183	0.024
What is your doctorate in?	-0.159	0.042
Ethnic Identity Achieved	0.983	0.000
MEIMGO	0.778	0.000
Machismo	0.376	0.000
MPSS Family	0.656	0.000
MPSS Friends	0.752	0.000
MPSS Significant Others	0.707	0.000
Total UES	0.823	0.000

In further analysis, Table 9 reveals a significant positive relationship between the Multidimensional Scale of Perceived Social Support (MPSS) the total Multigroup Ethnic

Identity Measure (MEIM) with ( $r=0.778$ ,  $p<0.00$ ) as well as with ethnic identity achieved( $r=0.756$ ,  $p<0.05$ ). Likewise a significant positive relationship existed between the Multidimensional Scale of Perceived Social Support (MPSS) and the Multigroup Ethnic Identity Measure Group Orientation (MEIGO) with ( $r=0.702$ ,  $p<0.05$ ) including family ( $r=0.605$ ,  $p<0.05$ ), friends ( $r=0.682$ ,  $p<0.05$ ), and significant others ( $r=0.623$ ,  $p<0.05$ ). Finally, a significant positive relationship existed between the Multidimensional Scale of Perceived Social Support (MPSS) and the total University Environment Scale (UES) with ( $r=0.810$ ,  $p<0.05$ ).

**Table 9**

*Correlation Analysis of Multidimensional Scale of Perceived Social Support (MPSS)*

<b>MPSS Instrument</b>	<b>Pearson Correlation</b>	<b>Sig. (1-tailed)</b>
Total MPSS	0.106	0.133
What is your doctorate in?	-0.208	0.012
Finance of Education	-0.158	0.044
Total MEIM	0.778	0.000
Ethnic Identity Achieved	0.756	0.000
MEIMOGO	0.702	0.000
MPSS Family	0.605	0.000
MPSS Friends	0.682	0.000
MPSS Significant Others	0.623	0.000
Total UES	0.810	0.000

Next, the Multidimensional Scale of Perceived Social Support Family Instrument (MSPSSFI) is reported in Table10. Specifically, this study revealed significant positive correlations between the Multidimensional Scale of Perceived Social Support Family Instrument (MSPSSFI) and all other variables.

**Table 10*****Correlation Analysis of Multidimensional Scale of Perceived Social Support Family Instrument (MSPSSFI)***

<b>MPSS Family Instrument</b>	<b>Pearson Correlation</b>	<b>Sig. (1-tailed)</b>
Total MEIM	0.656	0.000
Ethnic Identity Achieved	0.633	0.000
MEIMGO	0.605	0.000
Total MPSS	0.913	0.000
MPSS Friends	0.681	0.000
MPSS Significant Others	0.774	0.000
Total UES	0.732	0.000

Likewise, a correlation analysis was conducted to assess the relationship between the University Environment Scale (UES) and various variables. For example, Table 11 demonstrates that University Environment significantly correlates with the total Multigroup Ethnic Identity Measure (MEIM) with ( $r=.823$ ,  $p<0.05$ ) and ethnic identity achieved with ( $r=0.790$ ,  $p<0.05$ ).

**Table 11*****Correlation Analysis of University Environment Scale (UES)***

<b>UES Instrument</b>	<b>Pearson Correlation</b>	<b>Sig. (1-tailed)</b>
Total MEIM	0.823	0.000
Ethnic Identity Achieved	0.790	0.000
MEIMGO	0.768	0.000
MPSS Family	0.732	0.000
MPSS Friends	0.777	0.000
MPSS Significant Others	0.714	0.000

**Regression Analysis**

A simultaneous multiple regression was conducted to investigate which of the predictor variables significantly accounted for variance in ethnic identity scores. The predictor variables included perceived social support from family, friends, and a

significant other, and perceived university environment. The criterion variable was ethnic identity.

The predictor variables as a whole accounted for significant variance in identity scores,  $F(3,117) = 104.20$ ,  $p < .05$ ,  $R^2 = .728$ (adjusted  $R^2 = .721$ ) These predictor variables, social support from family ( $t(117) = -2.519$ ,  $p = 0.13$ ), social support from friends and significant other ( $t(117) = 4.38$ ,  $p = .000$ ), and perceived university environment ( $t(117) = 6.73$ ,  $p = .000$ ) were significant predictors of successful completion of the doctorate for Latina doctoral students. Therefore, these variables impacted successful completion of the doctorate. The total regression matrix can be found in Table 12.

**Table 12**

***Most Important Factors to Successful Completion of the Doctorate***

<b>Most Important to Successful Completion</b>	<b>Pearson Correlation</b>	<b>Sig. (1-tailed)</b>
Total MPSS	0.778	0.000
MPSS Family	0.656	0.000
MPSS Friends	0.752	0.000
MPSS Significant Others	0.707	0.000
Total UES	0.823	0.000

**Chapter Summary**

Chapter IV was a presentation of the findings of this study. The topics in this chapter included: an introduction of the study; a review of the research questions; population and respondents information; demographic data pertaining to respondents of the study; and results in regard to each question. A review of the final chapter will discuss the conclusions, implications and recommendations of the quantitative data collected.

## **CHAPTER V**

### **Conclusions and Recommendations**

#### **Introduction**

Research supports that the strength of a college student's identity has an impact on his or her success in college (Chickering & Reisser, 1993). The purpose of the present study was to examine specific variables related to ethnic identity, perceived social support and university environment that possibly assist in Latina women in the completion of their doctoral programs. Specifically, the present study investigated the link between Latina female doctoral students' success and their ethnic identity, measured by the Multiethnic Identity Measure (MEIM), with respect to university environment and perceived social support within post-secondary education. This chapter discusses the findings of the current research and conclusions drawn. Recommendations based on the findings are provided for higher education institutions to support recruitment and retention initiatives for Latina women who have the desire to obtain the doctorate.

#### **Summary of the Study**

A Latino Critical Race framework was used as a lens in this examination of the educational experiences of Latina women with doctoral degrees. By analyzing Latina female doctoral student persistence from an angle of success, this study sought to identify quantitative measures impacting Latina female doctoral degree attainment. Because disparities in graduate education remain for students of color, there is a need to better understand how Latina women succeed in degree completion (Tierney, Campbell, & Sanchez, 2004; Contreras & Gandara, 2006; Watford et. al, 2006). By understanding factors that contribute to Latina female student success, higher education practitioners

can assist Latina women along the graduate education pipeline and prepare these women to enter the American workforce.

### **Summary of Findings**

When analyzing historically marginalized groups, higher education policymakers must take into account one's race, class, gender, and ethnicity (Anderson & Hill-Collins, 2001). This is vital to higher education, as all graduate students encounter stress associated with socialization into a doctoral program. Marginalized groups may encounter more conflict in this process as they must concurrently navigate two worlds—one consisting of mainstream culture, and one based on their native culture and identity (Torres, 2006). This is a problem in higher education as many marginalized groups, including Latina women, often suppress their cultural identity in their academic environments in order to acclimate to their programs (Gloria & Castellanos, 2003). Suppression of identity is a problem in higher education, as this may stifle Latina female doctoral students' ability to successfully complete a program (Gloria & Castellanos, 2006). Since a firm ethnic identity is essential to successful progress in higher education (Ethier & Deaux, 1994; Phinney & Alipuria, 1990) assessment of one's race, class, gender, ethnicity and the intersection these with one's identity is warranted.

In order to minimize the repression of identity, assessment of marginalized groups' race, class, gender, and ethnicity is important as students from historically marginalized groups such as Latina women, who have multiple identities and experiences different from the majority, are entering graduate education (Villalpando, 2004). As collegiate student demographics change in the United States, practitioners should strive to understand the experiences of students in context and how they relate to their multiple

identities (Ortiz & Santos, 2009). Expressed identities should be analyzed to understand how race, class, gender and generational status impact their lived experience in addition with how factors such as age, ethnicity, sexual orientation, and religious values play a role in people's lives (Villalpando, 2004). The fact of the matter is not just that people are different; it is that race, class, gender and generational status are necessary axes of society. Therefore, it is vital to understand people's lives, institutional systems, contemporary social issues, as well as the possibilities for social change.

The major findings in this study demonstrated that the strength of one's ethnic identity is significantly interrelated to social support received by members of the university, friends, significant others, family, and the university environment in regard to successful completion of the doctorate. In addition, financial assistance served as an additional factor in assisting participants in completion of their doctoral study.

The Multiethnic Identity Measure (MEIM) and the Multidimensional Scale of Perceived Social Support (MPSS) revealed a significant positive relationship in regard to Latina female doctoral students' ethnic identity and social support of others, including the university environment, in regard to completion of the doctorate. Analysis indicated that social support from friends, significant others and family validated the ethnic identity of Latina female doctoral students. The Multiethnic Identity Measure (MEIM) and the University Environment Scale (UES) reflected a strong correlation as those participants with a stronger ethnic identity reported a more positive perception of the university environment. Correlation analysis indicated that ethnic identity is validated by social support functions of the university such as faculty, staff, and administrators.

The Multidimensional Scale of Perceived Social Support (MPSS) and the University Environment Scale (UES) demonstrated that participants in this study reported a more positive perception of the university environment as well as increased levels of social support. A university environmental factor which was of great important to student success involved student loans and scholarships which were most important sources of financial assistance to participants in this study.

### **Discussion**

Scholars, academicians, administrators and others utilize Latino Critical Race theory to evaluate racialized factors of subordination via a lens pertaining to ethnic identity, culture, gender, sexuality, language, phenotype, and immigration status (Yosso, 2006). This theory sheds light on the intersectionality of these factors and how they could play a role in the lives of Latina doctoral students (Solorzano & Bernal, 2001). Latino Critical Race theory provides a mechanism to challenge basic assumptions about college students and their needs as the demographics and characteristics of college students are changing (Delgado, Bernal, & Villalpando, 2002).

Latino students' participation in higher education is increasing. Therefore, those who work in higher education must examine current practices and factors that assist Latinos to be successful in graduate education via the present study's framework to meet the needs of a student population. The present study assessed the needs of participants with three assessment tools which were primarily used on ages ranging from 12 to 22 to include secondary and undergraduate students. Although the instruments assessed adolescents through undergraduate students in previous studies and had not assessed doctoral students, the present study was validated. Analysis of the current study

demonstrated that the dimensions of success (i.e., access, retention, and cultural adaptations) are consistent with the Latino Critical Race framework as well as social and cultural capital. Research by Gloria, Castellanos, Lopez, and Rosales (2005) demonstrated that factors such as social support from friends, peers, family, cultural congruity with the university, mentors, and role models, such as Latino individuals who have attained their educational goals, served as vital elements in retention of Latino student. Likewise, the present study found that social support from significant others, friends, family, as well as supportive factors within the university environment, such as faculty, staff, and mentors, served as supportive factors in participants' successful completion of their studies. Successful completion of the doctorate by participants in the present study was also based on support of participants' culture and their identity. Having a firm foundation in one's culture and ethnic identity while at the same time being supported by the university is vital for Latino students' success in graduate studies (Castellanos, 1996). Latina women in the present study demonstrated that validation of their ethnic identity was an important factor in their success as doctoral students. An important aspect of validation of the participants' identity involved self identification of their ethnic identity which was linked to demographic factors. The link between ethnic identity and support factors such as significant others, friends, family, the university environment, faculty, staff and financial assistance related to the Latino Critical Race framework. They related to this framework by providing various mechanisms which supported participants ethnically, racially, and holistically, as Latina female students often face multiple struggles in graduate studies. Latina women often struggle in higher education due to issues such as cultural alienation and loneliness. These struggles are not

only based on their ethnicity, but also on the students' gender, class, and immigrant status. In order to assist Latina women who face these struggles, Villalpando (2004) espoused an ideology based on Latino Critical Race theory in which universities should recognize and acknowledge that Latina female students may experience discrimination based on their ethnic identity and race which may hinder their success.

When compared to social support of friends and significant others, similar social support from family was least significant. This suggests that family may have a negative impact on Latina female doctoral student success. This concept is supported by researchers who have pointed to cultural factors that affect Latina female persistence and retention in higher education (Yosso, 2002; Alvarez, 2001; Cantu, 2001). For example, a study pertaining to Latina female students conducted by Gonzalez, Jovel and Stoner (2004) "was two-fold: (1) to understand the factors in expansion and constriction of college opportunities for Latinas, and (2) to disentangle the multiple strands in the issue of Latinas leaving home for college" (p. 19).

One of the challenges faced by Latina women was their need to gain independence from the family and to negotiate the belief that they should reside at home during college. The parents of these women did not believe that their daughters could be self-sufficient or secure and take care of themselves. However, the presence of support systems such as Chicano cultural programs, Latino professors, churches and other Latina female students did help ease the worry of parents. In addition, Gonzalez, Jovel & Stoner (2004) highlighted the struggle within Latina female students who were about to graduate from college and were faced with the choice to move back home or to move even farther from home to attend graduate school. This implied that Latina female graduate students

struggle with moving further from family, therefore necessitating a more supportive university environment.

Understanding and utilizing Latino Critical Race theory in assessment practices provides higher education administrators with the opportunity to recognize discriminatory and alienating factors. Latino Critical Race theory may serve as a platform in which to develop policies and programs sensitive to the ethnic identity needs of Latina women. These initiatives may assist these women to be successful as they face multiple challenges stemming from a different ethnic identity that is not congruent with the dominant student population. Latino Critical Race theory may assist higher education practitioners and administrators in taking a personal inventory of their archaic practices which serve the identities of the dominant Anglo culture and bring to the forefront needed programs and services for students who experience oppression and discrimination based on their ethnic identity.

### **Social and Cultural Capital**

Social support served as an important factor in the success of Latina female doctoral students by providing social and cultural capital to the women in present study. Participants in this study identified social support of significant others, friends, and family as the most important factors that assisted in completion of the doctorate. These women identified significant others as vital supportive factors in their success; as 62.9% of them believed they had a significant other with whom they could share their joys and sorrows during their program. Participants also ascertained that social support from friends was important to their success in their studies; as 50% of the women surveyed asserted that they could count on friends for support during stressful times in their

program. Family served as an important social support factor for these participants, as 56.9 % strongly agreed that their family provided assistance and support during their program.

The aforementioned factors of social support from significant others, friends, and family provided participants in the present study with encouragement, love and guidance during their studies. These factors are important as all graduate students experience challenges and dissonance in graduate school. Latina women, however, experience a greater level of challenges and dissonance as their needs in relation to their ethnic identity are different from the needs of the majority. The support offered by friends, significant others and family take into account the needs of these women as they validate their ethnic identity. This is important to higher education because some campuses may not provide a climate or resources sensitive to the needs of diverse student populations. Universities may want to assess the support provided by friends, significant others and family in order to establish programs, policies and practices which are inclusive of minority populations such as Latina women.

Carter (2006) asserted that education and educational success are founded heavily in social processes within the educational environment formed by social interactions and bound by social systems involving humans. This may be linked to Latina female needs in higher education as cultural capital formed by social support is a mechanism which may be used for inclusion allowing Latina women to maneuver in a world different from their own. Latina women in the present study developed social capital from support of significant others, friends, peers, family, faculty, staff, and a supportive university environment. These factors served as a foundation which established cultural capital for

participants in the present study, providing them with mechanisms to validate their ethnic identity leading to success in their programs. Social and cultural capital played a significant role in exposing these women to culturally sensitive resources which positively affected their performance in their studies. This was important to these women, as higher education tends to focus on the dominant Anglo student group, and may not provide the same support to Latina women. Data from Pearson correlation analysis revealed participant's ethnic identity had a significant positive relationship with social support functions of the university. Thus, successful Latina female doctoral completers who reported higher levels of a strong ethnic identity also reported higher levels of perceived social support from university members such as faculty, administrators and staff. This is supported in previous research that ties social support (Solberg, Valdez, & Villareal, 1994), personal-emotional adjustment (Kenny & Stryker, 1996), institutional attachment (Watters, 1999), and acclimation to post-secondary education (Solberg & Villarreal, 1997) for Latinos. Hernandez (2000) conducted a qualitative study which focused on 10 undergraduate Latino students to assess the university factors and experiences that played a role in their persistence in their studies. Hernandez's study revealed that support and guidance from faculty, staff and other administrators within the university had a significant impact on their decision to remain at their respective institution. Research conducted by Lopez (1995) posits that faculty and staff play an important role in the lives of Latinos via support and guidance with their studies. Pino's (2005) study on first-generation Mexican American university students assessed the factors that influenced these students to persist in their first two years of study. The study found that participants formed mentoring relationships with faculty and staff at the

university, which assisted them in completion of their degree, as well as with general guidance to accomplish their goals. While Pino's study is on first-year Mexican American college students, it adds to the validity that social support functions of the university are critical for Latino students at any level of collegiate study.

Correlation analysis for the current study revealed that the ethnic identity of Latina female doctoral students is validated by social support of friends, significant others and family. Chickering and Reisser's (1993) model of identity development of college students identifies social support from friends as an important factor in navigating challenges in post-secondary education. Lawson and Fuehrer (2001) asserts social support from friends is critical to graduate students during their program. Aune's (2000) interactional model of student development suggests that for students to move forward successfully in post-secondary education, academic and social integration is key. The present study revealed that the social support of friends played the most significant role in the lives of the Latina women in comparison to significant others and family.

This is congruent with the literature as Lopez's (2006) study on Latino college students found that peer relationships and friendships assisted these students to persist in their studies. Solberg and Villarreal's (1997) study on Hispanic college students found that students who perceived themselves as having peer support systems on campus had less overall stress in comparison to those who believed they had less peer support systems. Thus, friendships play an important role in the lives of Latina female students.

Social support from significant others was also important to participants in this study. A significant other is "an individual who is or has been deeply influential in one's life and in whom one is or once was emotionally invested" (Anderson & Chen, 2002, p.

619). The present study indicated that 62.9% strongly agreed that they had a significant other with whom they could share their joys and sorrows during their program. The relevance of significant others is supported in the literature as found in Wycoff's (1996) study which reported that 50% of the Latina female graduate student participants assessed mostly depended on their significant others for academic support. Research indicates that emotional support from significant others helps Latina women succeed in their educational aspirations (Gomez, Fasinger, Prosser, Cooke, Mejia, & Luna, 2001). Pino's (2005) study on Latino's found that Latina women's boyfriends or husbands served as important supportive factors during their studies. These men were proud of their girlfriends or wives and often assisted them with their studies by quizzing them over test materials. Hence, significant others may play a vital role in Latina female doctoral student success in this study.

While social support from family was important to these women, family was the least significant of the three variables. This may be due to cultural issues associated with Latina women and familial expectations. Latina women are often expected to marry, have children, care for other family members, put the needs of the family before their own needs, and often experience guilt if they take care of their own needs rather than doing what is best for the family. Research conducted by Nora, Rendon, and Cuadraz (1999) indicated that family ties consisting of caring for other family members such as a sibling, parent or the entire family may put pressure on Latina female students, thus negatively affecting their decision to continue in their studies. Gloria (1997) espoused that Latina women often encounter various family related pressure and personal stress consisting of placing one's personal needs second to that of the needs of the family.

Since many Latina female doctoral students in this study were first-generation college students, they were also less likely to have family members who earned graduate or professional degrees, as Latino's have historically been excluded from higher education (Donato, 1997; Gandara, 1995; Moreno, 1999). This may cause significant stress for first-generation Latina female students, since many are frequently viewed as role models for other family members and members of the community, adding, to their pressure to succeed (Cuadraz & Pierce, 1994; Nieves-Squires, 1991). This may hinder familial understanding of responsibilities associated with doctoral studies. Families may not understand that Latina female doctoral students may not be able to go home for family gatherings such as weddings, quinceaneras, or birthdays. Often doctoral students who are in the dissertation phase of their studies must work over holiday breaks to review research and to write. Families may not understand the commitment doctoral students must make to complete the dissertation and may put pressure on the student to put their studies aside in order to attend family gatherings and dinners. This may create difficulties for Latina female students as balancing demands from the university with that of family expectations can be a juggling act for them. Universities may want to provide mechanisms within the university environment to assist Latina female students balance both school and family responsibilities.

Social support from the university environment is an essential element in student success. A strong correlation was found in the present study between the University Environment Scale (UES) and the Multidimensional Scale of Perceived Social Support (MPSS). Those who reported a more positive perception of the university reported higher levels of social support. This means that Latina women who felt the university

environment was positive also felt they had social support mechanisms to help them in their journey as doctoral students. The social support established a supportive university environment, which led to successful Latina female doctorates. Universities should provide social support mechanisms via a Latino Critical Race Theory and Critical Race theory framework in order to increase social support perceptions and positive perceptions of the university environment.

Perceived social support for Latina women can be provided by the university in various forms such as multicultural counseling, mentoring, advising, financial assistance, and other areas of student support services. Research indicates that Latino students' perception of the university environment is an integral factor in forecasting the perseverance of these students (Gloria, 1997; Gloria, Castellanos, Lopez, & Rosales, 2005; Gloria & Robinson-Kurpius, 1996). This is consistent with the present study as, 77% of respondents agreed or strongly agreed that the university seemed to value minority students. This indicates that participants in this study felt the university environment was supportive.

A review of the literature conducted by Watford et al. (2006) addressed themes of covert and overt marginality faced by Latina female doctoral students on college campuses. Watford et al. (2006) found that these practices created an unwelcoming environment and significantly challenged Latina women. Overt forms of marginality included Latina women dealing with racial jokes, stereotyped in the classroom, being told they do not belong in college and only being called on to answer questions about students of color (Cuadraz & Pierce, 1994; Flores, 1988; Solorzano, 1998; Williamson, 1994). Covert forms of marginality included peers and professors accusing Latina women of

being admitted into their program due to affirmative action and not based on their academic merits (Achor & Morales, 1990; Cuadraz & Pierce, 1994; Nieves-Squires, 1991; Williamson, 1994). Watford et al. (2006) found that while Latina women persevered in their studies, these women faced a significant amount of stress in doctoral studies due to unsupportive environmental factors such as overt and covert marginalization.

Torres' (2006) research on environment factors for Latino doctoral students espoused that most graduate programs are embedded in predominately White institutions. Torres's (2006) research on academia and Latino identity indicated that Latina female doctoral students face environmental dissonance during their graduate studies. Yet, the present study indicates that 90.5% participants agreed or strongly agreed with the statement that during their doctoral program, they felt comfortable in the university environment. Participants in this study had a high perception of the university environment; therefore the university was providing support which assisted these women. Latina women in this study indicated that the library staff was willing to assist them with research, university staff was warm and friendly, and that the university- supported ethnic groups and faculty were available to help with concerns. These supportive factors provided by the university environment helped participants in this study achieve academically.

One supportive factor in the university environment in the present study was participants' experience with financial aid. This study revealed that student loans and scholarships were the most important sources of financial assistance to participants in this study, and without this aid they could not have survived in the environment. While some

researchers note that debt deters students from attending graduate school (Bedard & Herman, 2005; Kim & Eyermann, 2006; Murphy, 1994) the present study demonstrated that financial aid was a positive factor in enabling Latina women to attend graduate school. This finding by Hu and St. John (2001) found that various types of financial aid packages consisting of loans and grants had a significant positive correlation on the persistence of Latino students as compared to non-aid students. Likewise, Gonzalez's (2006) study on Latina female doctoral students found that financial assistance consisting of fellowships and scholarships from their university played an important role in their success as doctoral students. Other authors note that financial aid is positively correlated with Latino perseverance, retention, and achievement in post-secondary education (Abrona & Novy, 1990; Cabrera, Nora, & Castaneda, 1992; Hernandez, 2002; Nora, 1990).

A positive supportive university environment which supports ethnic groups on campus is essential to the success of students of color. Results indicated a strong correlation between ethnic identity and the University Environment Scale (UES). Latina females in this study who reported a strong ethnic identity were also highly satisfied with the university environment. This is supported by various researchers who assert the importance of a strong ethnic identity to Latino student success in higher education (Spence & Rodgers, 2006; Miller, 1999; Castellanos, (1996). The present study found that more than 50% of participants reported spending time trying to find out more about their own ethnic group, such as its history, traditions, and customs. Sixty two percent of the participants revealed that during their doctoral program, they talked to other people about their ethnic group. When asked if they thought about how their life would be

affected by their ethnic group membership, 67.8% agreed or strongly agreed with this statement. This is consistent with the literature as the manner in which a person assesses and integrates various dimensions of their identity is critical in developing one's sense of self and succeeding in higher education (McEwen, 2003).

Likewise, this is important for Latina female doctoral students, as Torres (2006) argued that the development of one's sense of self is a particularly salient issue for Latina female doctoral students, since they must contend with complicated decisions to shape the self while at the same time balancing the demands of the academe with that of their Latina female identity. Gloria and Castellanos (2003) posit that Latina female students often have to repress their identity in the graduate school process. However, the present study revealed that many of the women felt supported by their institution and that they felt a strong attachment toward their own ethnic group. This study also revealed that participants felt valued on campus, as 82% of the respondents reported that their university encouraged or sponsored ethnic groups on campus. Latinos experience stress such as cultural adjustment issues and cultural insignificance from others. These stressors may drastically impact their collegiate experience and their resolve to stay at their institution (Gloria, 1997; Hurtado & Carter, 1997; Jones, Castellanos, & Cole, 2002; Landry, 2002; Rendon, 1992). Therefore, attending an institution providing an environment sensitive to cultural adaptation and cultural values may assist Latina women in completion of the doctorate (Meza, 2008).

### **Learning From Successful Latina Doctoral College Students**

Higher education institutions may learn a great deal from the experiences of successful Latina female doctoral students. These students play an important role in

informing higher practitioners of their needs and wants via a Latino Critical Race lens. Because assessment, competition for research dollars, accountability and learning outcomes play a more important role in higher education than ever before; the understanding of Latina female student needs is warranted due to the ever expanding Latino population within the United States. We must seek ways in which to educate this population to help our country grow socially, economically and educationally. Latina female doctoral students may provide faculty, staff and administrators with personal and educational testimonies and knowledge in relation to their needs. By paying attention to research on Latina female doctoral students, higher education practitioners may develop culturally inclusive practices that incorporate their sociohistorical and cultural knowledge and understandings of their life in relation to higher education.

This is vital to higher education as current policies and practices often have a one-size-fits-all mentality, which limits the scope of support needed by diverse student populations. Latina women often face challenges related to access, persistence, and completion of studies in higher education. Successful Latina female doctoral students may educate faculty, staff, students, and administrators by assisting these individuals in reviewing practices and policies via a Latino Critical Race framework. This may shed light on inconsistencies, discriminatory practices, and negative campus climates and may increase the success, satisfaction, and retention rates for minority student populations who may experience intolerance in the higher education environment. By providing mechanisms to increase retention and to help Latina women succeed, they will then become positive contributors to society, provide role models for future Latina women and enhance the learning environment.

To create an optimal learning environment for Latina female doctoral students, higher education must view the cultural and ethnic knowledge Latina women bring to the forefront as an asset. When issues such as cultural sensitivity, diversity, and support for various ethnicities are viewed as and acted on as a resource for instruction and learning in the educational environment rather than a hindrance, transformative learning may occur for all involved. By listening to Latina female doctoral students, acknowledging and understanding what these successful women can bring to the table in terms of teaching others, a culturally sensitive action oriented approach may be incorporated into the learning environment for both inside and outside of the classroom.

### **Implications for Practice**

Findings of this study reveal many significant implications that may assist higher education institutions in providing supportive doctoral programs for Latina women. The findings reveal both practical and theoretical implications consistent with the literature. The practical implications involve that higher education administrators, deans of colleges, department chairs, advisors, dissertation committees and professors in doctoral programs need not only be educated on issues with regard to diverse needs of students such as Latina female doctoral students, but also on the opportunities to work with these students. Hence, such opportunities to work with a more diverse make up of doctoral students adds to the learning of others and contributes to research in a more diverse perspective, as a diverse student doctoral population may conduct research via a different lens. The theoretical implications are that higher education institutions foster both social and academic environments that nurture and validate Latina female doctoral students' ethnic identity in order to assist in successful completion of the doctorate.

The first implication suggests supporting Latina female doctoral students' ethnic identity by providing social support mechanisms within the university through a Latino Critical Race Theory and Critical Race Theory framework. Providing such training will assist in the cultivation of culturally sensitive social support mechanisms. Social support mechanisms may include the establishment of cohorts which join Latina women together in research projects, university student housing pairing Latina female doctoral students together, and opportunities to conduct research with faculty members. This is reflected in research by Schneider & Ward (2003) which assessed ethnic identity and perceived social support in relation to Latinos' adjustment to college. The researchers found that when combining and taking into account faculty, peer, family and institutional support, these support mechanisms accounted for 51% of the variance in university attachment. Thus, support mechanisms such as faculty may assist Latina female doctoral students, as 81.9% in the present study agreed or strongly agreed with the statement that during their doctoral program, faculty were available to help them make course choices. This indicates that participants in this study felt the university environment was supportive.

Deveo and Torres (2007) encourage post-secondary institutions to focus on support from peers, faculty and the institution when considering the needs of Latino students in regard to adjusting to college. Support may come from Latino faculty who may want to sponsor lunches with Latina female doctoral candidates during recruiting of graduate students. These lunches may lead to opportunities for Latina women to have mentors who value their culture and who understand challenges associated with the Latina female population. Academic departments may want to co-sponsor university celebrations with other campus entities indicative of the Latino culture in which students

and their faculty mentors may join together to honor their culture. This is important to Latino students, as Castellanos & Jose (2003) stress the importance of role models and mentors with whom students can identify as significant for Latino student success.

Providing role models and mentors has significant implications for Latina female doctoral students, according to the literature addressing tokenism, in which students of color may feel marginalized (Jones, Castellanos, & Cole, 2002; Milem et al., 2005). Due to possible feelings of marginalization incurred by Latina female doctoral students, it is critical that campuses foster a student-centered environment to welcome these students and help them feel valued (Esquivel, 2010). Universities should strive to promote policies and practices that support and promote positive social support mechanisms throughout the campus so that Latina female doctoral students do not feel like tokens.

Practices include providing undergraduate Latina female students with opportunities to conduct research and to learn about opportunities in graduate programs. Providing such opportunities to Latina female undergraduate students may assist graduate programs in recruiting these students, increasing the amount of Latina female doctoral students in programs and subsequently providing opportunities for more than one of these women to speak on issues regarding Latinos and lessening feelings of tokenism. Providing funding such as fellowships, teaching assistantships, research assistantships and scholarships may increase the amount of Latina women in doctoral programs.

Policies include hiring Latino faculty who understand issues faced by Latina female doctoral students may assist them by providing mentors to help them navigate the graduate school culture, which is typically embedded in Anglo ideologies and practices. Providing mandatory training to all new faculty and staff pertaining to the Latino student

population's needs and challenges may also serve as policies which assist the Latina female student population. By implementing recruiting measures, funding measures and hiring Latino faculty members universities can provide Latina female doctoral students with role models and with Latina female classmates, thus validating these women's ethnic identity.

The second implication suggests that Latina female doctoral students' ethnic identity is validated by social support functions consisting of friends, significant others, and family. This implies that doctoral programs should foster an inclusive environment which assists Latina female doctoral students in forming friendships both inside and outside of the classroom. Universities and doctoral programs may want to assist in the creation of student organizations for Latina female doctoral students in order to help new Latina female doctoral students form friendships. Partnering with other departments on campus such as the Multicultural Services Department or the International Student Services department may provide opportunities for Latinos in doctoral programs to form friendships and support systems with other Latinos across disciplines. Formation of friendships with other Latinos may affirm Latina women's identity as these students may identify with others with similar backgrounds and cultural values. Doctoral programs may want to place Latina doctoral students in cohorts in order to allow them to conduct research together, form friendships based on similar interests and to support one another.

The importance of forming support systems is maintained in the literature, as research conducted by Grijalva and Coombs (1997) assessing 20 Latina female medical students and physicians discovered that many of these individuals dealt with stress, low self-esteem, sexism and discrimination. However, these women found effective means to

deal with these obstacles such as positive thinking, developing assertive behavior and establishing social supports within their environment.

Rodriguez (1996) espoused that the support and reinforcement from significant others serves as motivating factors in assisting Latina women to persevere in academia. Since social support from significant others has been deemed critical in this and other studies, universities may want to provide programs rooted in Latino Critical Race Theory and Critical Race Theory to educate significant others of Latina female doctoral students needs on the demands of their program. One example of such a program may be that provides discounted meals to significant others in order to allow Latina female students and their partners opportunities to enjoy a meal together in between research and study sessions. Creating a listserve in which the graduate school of a emails significant others of Latina female doctoral students to remind them of upcoming deadlines may serve as another support mechanism. This would enable the significant others to support the students by reminding the student of important dates and keeping them informed of their loved one progress. While research indicates that family obligations such as marriage and relationships with significant others can deter, interrupt, and thwart Latina women from completing the doctorate (Achor & Morales, 1990; Gandara, 1996), the present study revealed that these women had a significant other who was supportive during their doctoral studies. For example, 62.9% revealed a special person was around when they were in need during their program. Significant others served as positive social support mechanisms in the present study, as participants in this study were successful.

Programs supporting Latina female doctoral students via a Latino Critical Race theory and Critical Race theory framework may assist Latina female doctoral students in

balancing family expectations with their studies. The present study implied that universities may want to provide opportunities for families to become acquainted with doctoral studies and the demands for Latina women interested in obtaining their doctorate. Latina female doctoral students may experience pressure during their doctoral program as the academic demands may not coincide with that of familial demands and expectations. This is congruent in the literature as Latina females who follow traditional cultural expectations are less likely to pursue collegiate studies (Cardoza, 1991). Challenges experienced by Latina women can prove difficult during doctoral studies, as Latina women may experience isolation from families due to cultural conflict when family life and their academic life clash (Gonzalez et al., 2001).

Doctoral programs may want to partner with university offices such as Parent and Family Relations departments to offer bilingual orientation sessions rooted in the present study's framework for parents, including bilingual marketing materials explaining the doctoral process to families. Latino faculty and staff associations may want to sponsor lunches with parents of Latina female doctoral students to explain that their daughter may not be able to go home for family gatherings due to studies. This is supported in the literature that states that in the Latino culture, family is of great importance (Orozco, 2007). Therefore, support initiatives for both the student and the family are imperative.

A third implication involves the significant correlation between the University Environment Scale (UES) and the Multidimensional Scale of Perceived Social Support (MPSS). The present study suggests that universities should strive to ensure supportive university environments through social support mechanisms in order to ensure success for Latina female doctoral students. This is consistent with the present study, in which

77% of respondents agreed or strongly agreed that the university seemed to value minority students. Similarly, 43.5% disagreed with the statement that during their doctoral program they did not feel valued as a student on campus. Examples of social support mechanisms may include cultural celebrations, research symposiums hosted by the library, Latino ethnic support centers, as well as Latino studies programs. For example, libraries may want to sponsor research symposiums on culture and identity for students of color such as Latina women, in which traditionally underrepresented student populations and faculty mentors may come together to share research relevant to their identity and academic life. This is supported in the literature in which Brown, Davis and McClendon (1999) contend that providing a mentoring relationship that connects Latinos to faculty's professional lives helps the students to become studious practitioners, ultimately providing support and resiliency for them. Thus, universities should strive to ensure environments which value Latina female doctoral students' identities, and in which their ethnicity is respected in order to ensure that this student population succeeds. This can be achieved with support from various entities on campus.

The next implication suggests that financial aid, such as student loans and scholarships, may contribute to Latina female doctoral student success, as the present study revealed that these forms of financial assistance were the most important sources of aid. Thus, Latina female doctoral students may benefit from helpful financial aid and financial aid staff. Consequently, universities should provide financial services such as orientation sessions to assist Latina women in applying for and receiving loans, grants, fellowships, research assistantships, teaching assistantships and scholarships. This is congruent with Clark's (2006) research on Latina female students, which reveals that

many of these students are ignorant when it comes to issues of financial aid. For example, Clark found that these students did not understand that when graduate assistantships, other university aid, federal grants and loans, as well as private aid are packaged together, this funding can often add up to starting salaries equivalent to that of a bachelor's-degree job (Clark, 2006). Recognizing that Latina women may not understand the financial aid process and financial opportunities offered in graduate school is imperative in assisting these students in navigating through graduate school.

The final implication involves a strong correlation between ethnic identity and the University Environment Scale (UES). This suggests that Latina female students benefit from a culturally inclusive university environment. Supportive culturally inclusive university environments are best formed when elements of Latino Critical Race theory and Critical Race Theory serve as a foundation. Watford (2006) et al. posit that Latina female doctoral students may face marginalization during their program as they contend with overlapping and conflicting dynamics related to ethnicity, gender, and class. Ensuring that Latina women do not face marginalization involves a commitment from the administration, faculty, and staff to create a culturally inclusive campus environment via a Latino Critical Race theory and Critical Race theory framework.

A culturally sensitive university environment established via a Latino Critical Race theory and Critical Race theory framework involves more than cultural celebrations such as Hispanic Heritage Month. It involves changes in the curriculum to educate the dominant Anglo culture on diverse cultures and hiring Latino administrators, faculty and staff who can serve as role models and who can give cultural sensitive perspectives related to Latina female student needs. Monthly dinners between Latino student

organizations and the university administration to discuss Latino students' needs, orientation sessions geared to Latino student issues and speakers who present on diversity to various constituents on campus are just a few examples of ways to establish a culturally sensitive university environment. Meza (2008) contends that students' beliefs that their culture is supported and reflected at the institution may serve as a source of comfort in the university environment, resulting in success for the student. Given support of diverse cultural values between the institution and their culture, Latino students may encounter less cultural stressors, such as marginalization, racism, and culture shock (Gloria, 1997; Jones, Castellanos, & Cole, 2002; Landry, 2002; Rendon, 1992).

As Valverde and Rodriguez (2002) stress the importance of campus support in relation to a quality doctoral program and eventual completion of the doctorate, Gloria's (1997) and Tinto's (1993) research stipulates that having a post-secondary institution as part of one's social support, instead of a barrier, adds to students' perceptions about persisting throughout their academic program. Thus, a supportive and culturally sensitive university environment may assist in preparing future Latina female doctoral recipients.

### **Institutional Recommendations**

Based on evaluation of this research, several institutional recommendations are provided to aid higher education institutions in being proactive in the recruitment, retention and overall success of Latina female doctoral students. The present study's findings led to several institutional recommendations as the researcher assessed participants' needs by means of a Latino Critical Race theory framework. The researcher found that support provided to Latina female doctoral students from significant others, family, friends, faculty, staff and through a supportive university environment served to

address the multiple identities of these women and contributed to their success. This is important to higher education as very little research exists in regard to the experiences of underrepresented student populations such as Latina women (Howard-Hamilton, 2009).

By adding to the dearth of research on Latina women in graduate education, these findings may assist institutions of higher education with knowledge on how to provide a supportive university environment within and outside of the classroom. By establishing a more inclusive, supportive environment, higher education institutions may be better able to address barriers and obstacles faced by Latina women and other underrepresented student populations (Pope, 2009). A supportive university environment includes providing fellowship programs geared toward Latina women who are interested in Latino Critical Race Theory, ethnic identity, and retention and recruitment of diverse student populations. Such a program may assist Latina female doctoral students by validating their identity, as well as by adding to research pertaining to the needs of non-dominant student groups. A fellowship program for Latina women founded in a Latino Critical Race Theory framework may help students to fare better in doctoral programs, as this framework offers a greater degree of understanding of the Latina female student population (Gonzalez, 2009).

Along with fellowship programs, graduate programs should also provide mentors for Latina women. Establishing mentoring programs for Latina female doctoral students may provide these women with opportunities to become better acclimated to the process of acquiring a doctoral degree. Acclimation of students of color such as Latina women into graduate education is essential in order to maneuver through the culture of graduate and professional studies (DeAngelo, 2009).

Research conducted by Galbraith and Cohen (1995) found that mentoring provided by a professor to a graduate student provides the student with socialization into the profession and an opportunity for identity transformation as a graduate student. This is important to Latina female student success as mentoring relationships connecting Latina women to faculty's professional lives assist the student to transform into a studious practitioner (Brown, Davis & McClendon, 1999). Providing Latina female graduate students with mentors facilitates a positive learning environment for these women who may struggle to fit in academically, professionally and socially.

A positive learning environment may also be facilitated via university student housing. University student housing should create living and learning communities that provide opportunities for Latina female doctoral students to study together, conduct research and to offer support to one another in regard to their studies. This is important, as it would provide a seamless university learning environment involving the classroom, research and living communities as well as enable Latina women to feel like a member of the university community. Research conducted by Hurtado and Carter (1997) found that Latino students had a greater overall sense of belonging to the institution if these students worked with other peers on academic issues outside of the classroom. Likewise, Hurtado et al. (2003), posit that campus administrators should establish programs and services which facilitate conditions that positively impact the learning for all involved in racially and ethnically diverse campus environments. Establishing university learning communities inclusive of Latina female graduate student needs may assist these women in acclimating to university climates which may not be inclusive of diverse students.

Acclimation to the university climate may also be achieved by services provided by university student counseling centers. Services such as university counseling centers are essential in assisting students' transition into university life (Pope, Reynolds, and Mueller, 2004). As counseling centers assist in exploring and dealing with transitional stress, university student counseling centers may want to establish groups for students of color such as Latina women. This would be helpful since a counseling center could provide a safe venue in which to discuss concerns related to university climate, stress, loneliness and the challenges that come from repressing their culture and their identity (Gloria & Castellanos, 2003). An additional purpose that counseling support groups would serve is providing counseling center staff who are aware of campus and community resources focused on Latina women and students of color (Gloria and Rodriguez, 2002). Resources counseling centers may recommend to Latina women and students of color include financial services, student organization services, places of worship, places to shop relative to students' culture and community centers relative to students' culture. Services such as university counseling centers may be able to help Latina women establish coping mechanisms and success strategies, as well as establish support networks consisting of Latina women and students of color who often encounter similar stress related to their ethnic identities.

Success strategies for Latina women may also be established via summer bridge programs. Summer bridge programs in which Latina women may attend prior to actually starting doctoral studies should be provided so as to offer Latina women insights in regard to the doctoral process, as many are unaware of the academic culture associated with doctoral studies (Gloria & Castellanos, 2006). Summer bridge programs, such as the

California Alliance for Minority Participation program for undergraduate students, allow students to work with faculty, administrators, and tutors in preparing for coursework in the fall (Hurtado & Kamimura, 2003). Culturally sensitive experiences such as those in the aforementioned bridge program are vital to the success and retention of Latina women, as such programs aid students as they maneuver through the campus, learn about resources, develop peer support networks and establish connections with faculty and staff (Hurtado, Milem, Clayton-Pederson, & Allen, 1999). Experiences provided by a summer bridge program are critical for Latina women in graduate studies, because developing the skills to maneuver through and acclimate to graduate programs will assist them in paving the path for future Latina female graduate students (Castellanos, Gloria, & Kamimura, 2006). This will facilitate a strong educational pipeline leading to successful Latina female graduate students who are prepared to enter the professoriate, and subsequently these Latina women will become mentors to Latina women and other students of color who can assist and understand issues of racism and sexism (Carroll, 1998).

Services offered through University Career Center may provide Latina female graduate students with assistance to enter the professoriate. University Career Centers should provide opportunities for Latina female doctoral students, such as meeting with employers who are interested in hiring Latina women to serve as faculty members. This is important as Latino faculty members are underrepresented in the academy (Contreras & Gandara, 2006). The underrepresentation of Latino faculty in the professoriate is a problem, since Latino faculty add to the learning through a diverse teaching lens. Research by Milem (2001) found that faculty of color are more apt to participate in research on ethnicity, culture, and gender, resulting in using diverse pedagogical methods

to engage students in the classroom. Likewise, Gloria and Rodriguez (2000) contend that Latino faculty serve as role models for Latinos as such faculty represent to these students individuals who are from a similar background, culture, ethnicity and race, who can navigate, conquer and succeed in graduate studies. Latina female faculty members may provide opportunities for Latina female students and students of color to feel connected to campus as research demonstrates that students of color in graduate studies have difficulties identifying with faculty with whom they cannot relate (Guido-DiBrito & Batchelor, 1988; Patton & Harper, 2003). Providing opportunities via career services will equip Latina female graduate students with the knowledge and tools to seek and gain employment within higher education.

These are just a few examples institutions of higher education should consider implementing to aid Latina women upon entering the doctoral process as well as to assist them upon completion of the process and into the professional sector. By implementing such practices a culturally sensitive, engaging, supportive university environment will be established to assist Latina women succeed in graduate studies.

### **Implications for Future Research**

In evaluation of this research, several recommendations for future research have become clear. Based on the dearth of research focusing on Latina women in graduate programs, continued research on Latina women in graduate school is warranted. Examining Latina female doctoral student success via a Latino Critical Race Theory lens, and how they have incorporated social support factors to overcome difficulties in obtaining the doctorate will provide current and future administrators and higher education practitioners with the knowledge and skills to assist this population of students.

Assessment of the university environment and how it relates to the success of Latina female doctoral completers should be continued. Thus, there are numerous implications for future research involving Latina female doctoral students' ethnic identity in conjunction with perceived social support and a supportive university environment.

These implications include: assessing the generational status of students, assessing siblings' participation in higher education, research on the need for more categories for self identification, research on racial identity, and assessing the ethnicity of significant others. As studies conducted by various researchers reveal, those who have not abandoned their ethnic identity and are well grounded in their ethnic identity are more apt to succeed in school resulting in the need to assess the aforementioned issues (Feliciano, 2001; Okagaki, Frensch & Dodson, 1996).

The current study suggest the need for future research assessing the generational status of Latina female doctoral students, as the present study involved 57.7% of participants as first generation students. Since the Latino population is the fastest growing ethnic group in the United States, those who may be third- or fourth- generation may not have as highly an achieved ethnicity as those who are first generation. Thus, universities may encounter Latina women who are not as grounded in their identity, which may hinder their success in doctoral programs.

A second suggestion for future research relates to siblings' participation in higher education, as 83.1 % of participants reported that they had siblings attend college. Future research should be conducted on Latina female doctoral students who have siblings in college because family support is critical to Latina female students and siblings may provide support as they have an understanding and appreciation for collegiate studies.

Further research should be conducted to assess the need for more categories for self identification within the Latino population. When asked about their ethnic identity, participants in the present study self identified in various categories ranging from women of Latina origin, to Mexican, to Columbian. Thus, as the student population is changing and as how higher education is allowing students to self identify, the need for more categories involving the Latino population for ethnic identification in all functions of life ranging from education, to government, to health care is warranted.

Finally, research on the ethnicity of significant others of Latina female doctoral students may be relevant. Latina female doctoral students may be involved with significant others whose ethnicity is different from their own, which may help or hinder in affirmation of Latina female ethnic identity. Likewise, as the United States population becomes more heterogeneous and more people marry from diverse ethnic backgrounds, future children of Latina female doctoral students may be of a mixed ethnic background. These children may one day be doctoral students who may have to affirm two ethnic identities. Thus, research on biracial students is imperative.

### **Limitations of the Study**

A limitation to this study was that the principal investigator selected participants from one professional organization and only asked Latina female doctoral graduates to complete the study. Thus, participants in this study may have been connected professionally and personally. The survey instruments may have presented a limitation in the study as some participants may have felt that the survey was too long to complete or that the deadlines were too difficult to meet. Participants in this study self-identified their ethnicities as well as that of their parents which may have served as a limitation. The

Multiethnic Identity Measure by Phinney (1992) presented a limitation as it uses racial and ethnic identity as synonymous frames of reference when assessing identity which is counter to other research (Helms, 1990; Worrell, Conyers, Mpofu, & Vandiver, 2006). The present study presented a limitation as this study did not address acculturation and success among Latina female doctoral students. Lastly, the principal investigator is a Latina woman who is currently in the process of completing her Ph.D., which means personal bias may have been a factor in this study.

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Appendix A  
Demographic Questionnaire

Thank you for filling out this survey that examines your thoughts about your educational experiences. Please do not spend a lot of time on each question-respond with your first reaction. Please circle the most appropriate answer to each question and answer all the questions.

\*\*Please do not write your name on this survey!

1. Age: \_\_\_\_\_

2. GPA in doctoral program: \_\_\_\_\_

3. Marital status during doctoral program:  
 Single     Divorced     Widowed     Married     Separated

4. Where did you live during your doctoral program?

on-campus housing with roommates  
 on-campus housing alone  
 off-campus housing with friends  
 off-campus housing with family  
 off-campus housing alone  
 other

5. Did you attend the same school for you doctorate as your master degree?

Yes     If no, where did you study for your master degree \_\_\_\_\_?

6. During your undergraduate studies, what was the highest degree you expected to earn?

Master degree     Doctorate

7. What is your doctorate in?

\_\_\_\_\_ PhD    \_\_\_\_\_ Ed.D  
\_\_\_\_\_ J.D. \_\_\_\_\_  
\_\_\_\_\_ M.D.

8. How did you finance your doctoral education?

work part-time     Family     Scholarship     Work full-time  
 Student Loans     Personal savings

9. Were you continuously enrolled between your bachelor degree and doctorate? \_\_\_\_\_

10. If not, how many years did you take between completion of your masters to your doctorate? \_\_\_\_\_

11. Did either or both your parents attend college? \_\_\_\_\_

12. Have any of your siblings attended college? \_\_\_\_\_

13. What is your generational status?

First Generation     Second Generation     Third Generation     Fourth Generation

14. During my doctoral program, I was confident that I would complete my doctorate:

Strongly Disagree     Strongly Agree     Disagree     Agree

Slightly Disagree     Slightly Agree

Appendix B

The Multigroup Ethnic Identity Measure (Phinney, 1992)

In this country, people come from a lot of different cultures and there are many different cultures and there are many different worlds to describe backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Mexican-American, Hispanic, Black, Asian-American, American-Indian, Anglo-American, and White. Every person is born into an ethnic group, or sometimes two groups, but people differ on how important their ethnicity is to them, how they feel about it, and how much their behavior is affected by it. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please fill in:

In terms of ethnic group, I consider myself to be \_\_\_\_\_.

My ethnicity is \_\_\_\_\_.

My father's ethnicity is \_\_\_\_\_.

My mother's ethnicity is \_\_\_\_\_.

Use the number given below to indicate how much you agree or disagree with each statement.

4: Strongly agree      3: Somewhat agree      2: Somewhat disagree      1: Strongly disagree

1. During my doctoral program, I spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs. \_\_\_\_\_
2. During my doctoral program, I was active in organizations or social groups that included mostly members of my own ethnic group. \_\_\_\_\_
3. During my doctoral program, I had a clear sense of my ethnic background and what it means for me. \_\_\_\_\_
4. During my doctoral program, I enjoyed meeting and getting to know people from ethnic groups other than my own. \_\_\_\_\_
5. During my doctoral program, I thought a lot about how my life would be affected by my ethnic group membership. \_\_\_\_\_
6. During my doctoral program, I was happy about the member of the group I belonged to. \_\_\_\_\_

7. During my doctoral program, I sometimes felt it was better if different ethnic groups didn't try to mix together. \_\_\_\_\_
8. During my doctoral program, I was not very clear about the role of my ethnicity in my life. \_\_\_\_\_
9. During my doctoral program, I often spent time with people from ethnic groups other than my own. \_\_\_\_\_
10. During my doctoral program, I really did not spend much time trying to learn more about the culture and history of my ethnic group. \_\_\_\_\_
11. During my doctoral program, I had a strong sense of belonging to my own ethnic group. \_\_\_\_\_
12. During my doctoral program, I understood pretty well what my ethnic group membership meant to me, in terms of how to relate to my own group and other groups. \_\_\_\_\_
13. During my doctoral program, in order to learn more about my ethnic background, I talked to other people about my ethnic group. \_\_\_\_\_
14. During my doctoral program, I had a lot of pride in my ethnic group and its accomplishments. \_\_\_\_\_
15. During my ethnic program, I didn't try to become friends with people from other ethnic groups. \_\_\_\_\_
16. During my doctoral program, I participated in cultural practices of my own group, such as special food, music, or customs. \_\_\_\_\_
17. During my doctoral program, I was involved in activities with people from other ethnic groups. \_\_\_\_\_
18. During my doctoral program, I felt a strong attachment towards my own ethnic group. \_\_\_\_\_

19. During my doctoral program, I enjoyed being around people from ethnic groups other than my own. \_\_\_\_\_

20. During my doctoral program, I felt good about my cultural or ethnic background.  
\_\_\_\_\_

For the questions below, please write in the number that gives the best answer to each questions.

- (1) Asian, Asian American, or Oriental
- (2) Black or African American
- (3) Hispanic or Latino
- (4) White, Caucasian, European, not Hispanic
- (5) American Indian
- (6) Mixed; parents are from two different groups
- (7) Other (write in):

22. My father's ethnicity is (use numbers above)

23. My mother's ethnicity is (use numbers above)

24. During my doctoral program, I dealt with machismo attitudes from other men in my life such as husband, boyfriend, father, brother, friend, or cousin.

Appendix C

Multidimensional Scale of Perceived Social Support  
(Zimet, Dahlem, Zimet & Farley, 1988)

Instructions: I am interested in how you feel about the following statements. Read each statement carefully. Indicate how you felt about each statement.

Circle the "1" if you Strongly Disagree

Circle the "2" if you Somewhat Disagree

Circle the "3" if you Somewhat agree

Circle the "4" Strongly Agree

1. There was a special person who was around when I was in need. 1 2 3 4 SO
2. There was a special person with whom I could share my joys and sorrows. 1 2 3 4  
So
3. My family tried to help me. 1 2 3 4 Fam
4. I got the emotional help and support I needed from my family. 1 2 3 4 Fam
5. I had a special person who was a real source of comfort to me. 1 2 3 4 SO
6. My friends really tried to help me. 1 2 3 4 Fri
7. I could count on my friends when things go wrong. 1 2 3 4 Fri
8. I could talk about my problems with my family. 1 2 3 4 Fam
9. I had friends with whom I would share my joys and sorrows. 1 2 3 4 Fri
10. There was a special person in my life who cared about my feelings. 1 2 3 4 SO
11. My family was willing to help me make decisions. 1 2 3 4 Fam
12. I could talk about my problems with my friends. 1 2 3 4 Fri

The items tended to divide into factor groups relating to the source of the social support, namely family (Fam), friends (Fri) or significant other (SO).

Appendix D

University Environment Scale (Gloria & Kurpius, 1996)

Indicate the extent to which you have experienced the feeling or situation during your doctoral program.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

	SD	D	A	SA
*Class sizes are so large that I felt like a number.	1	2	3	4
The library staff was willing to help me find materials/books	1	2	3	4
University staff have been warm and friendly	1	2	3	4
*I did not feel valued as a student on campus.	1	2	3	4
Faculty were not available to discuss my academic concerns.	1	2	3	4
Financial aid staff were willing to help me with financial concerns.	1	2	3	4
The university encouraged/sponsored ethnic groups on campus.	1	2	3	4
There were tutoring services available for me on campus.	1	2	3	4
The university seemed to value minority students.	1	2	3	4
Faculty were available for help outside of class.	1	2	3	4
*The university seemed like a cold, uncaring place to me.	1	2	3	4
Faculty were available to help me make course choices.	1	2	3	4
*I felt as if no one cared about me personally on campus.	1	2	3	4
I felt comfortable in the university environment.	1	2	3	4

\*Items are reverse scored