

**SOCIAL CAPITAL, COLLEGE CHOICE, AND COLLEGE PERSISTENCE OF  
HISPANICS: A CASE OF A PUBLIC UNIVERSITY IN WESTERN PENNSYLVANIA**

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Submitted to the Graduate Faculty of the  
School of Education in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy

University of Pittsburgh

2016

UNIVERSITY OF PITTSBURGH

SCHOOL OF EDUCATION

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Liza C. Valle, PhD.

University of Pittsburgh, 2016

The purpose of this research study is to identify the social capital factors that help Hispanics in their decision to attend a Predominantly White Institution (henceforth PWI) and those social capital factors that are significant in their college persistence. College persistence is defined as returning a second year and beyond. This case study uses a mixed methodology, specifically an explanatory sequential method. First, a cross-sectional, online survey was sent to participants who self-identified as Hispanics and who were currently enrolled during the spring of 2015 (N=365). The survey was followed-up by four individual semi-structured interviews. The target population is undergraduate Hispanic students who are 18 years old and who are attending the Indiana University of Pennsylvania (IUP).

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## **PREFACE**

Completing my doctoral degree has been a long and arduous journey. It has taken me almost 15 years to complete it. There are many people whom I would be eternally grateful for all their time, support, and dedication throughout the years. First of all, a very important and especial group of people, who helped me immensely and whose time and dedication are highly appreciated, are my dissertation committee members. Starting with my advisor, Dr. W. James Jacob who guided me through the last nine years in the completion of my doctoral degree. To my professor and mentor Dr. William E. Bickel, whose graduate courses were some of the most enjoyable ones I took in college; I learned tremendously from him. To Dr. Gina A. Garcia and Dr. Hilario Molina II who provided me with important feedback to improve my research proposal. I also want to thank Dr. Michael G. Gunzenhauser who provided me with needed advice and support even though he was not part of my dissertation committee.

I would also like to express my thanks to all Hispanic students that took part on my doctoral research project and to the Latino recruiter at IUP who assisted me in almost all the stages of my research project. Without their help, this project could not have been possible.

This dissertation had not been possible without the financial support of the School of Education, and the Office of the Provost. Both provided me with much needed financial support when I needed it the most. Great thanks goes to the staff in the IRB offices at both universities and to Paula Owens, from the School of Education at the University of Pittsburgh, who is one of

the most efficient staff workers I have ever known. Her dedication to the doctoral students has not been gone unnoticed.

Especial thanks goes to my husband, Dr. Josef R. Argueta, for his unconditional support and love all of these years. He is the one who strongly encouraged me to complete my doctoral degree when I had given up. He, along with my beloved children: Isaac and Sara cooperated with me by staying up late many nights while I was working on my dissertation. I admire their patience, love, and their encouragement.

I am grateful to my mother, Edna Sofía Fiallos de Valle, who was an inspiration for all my brothers and sisters to pursue higher education. She was, and still is, the pillar that kept our family together and my admiration for her is enormous. Love you a lot mom!!!

I dedicate this accomplishment to her, my brothers (*los ingenieros and masters*: Ramón, Lucio, Darwin, Fernando, Francisco, and César Valle Fiallos) and my sisters, (Dinora, Suyapa, and Licda. Teresa Valle Fiallos). In addition, I would like to thank our beloved father, Néstor Valle (R.I.P.), who was an incredible father and an inspiration to us all. His legacy is with us always. I also want to dedicate this accomplishment to my nephew David Mejia, who inspired me to choose this topic. I hope that one day he would also graduate from college. I would also like to thank all my friends and colleagues who encouraged and supported me, especially my friend Carmen A. Martínez. *¡Te admiro y te aprecio mujer!*

Last, but not least, I am grateful to God for giving me the strength and the health to complete my doctoral degree.

To all of you, *¡mil gracias!* ... as my new journey begins...

## **1.0 INTRODUCTION**

As a female Latin American, first-generation college graduate and first-generation immigrant, I have developed an interest in the Hispanic population in the U.S. and their process of decision making to attend college, more specifically I am interested in studying the forms and sources of social capital, as well as the resources derived from it, that influence their decision to pursue a college degree as well as social capital factors that affect their college persistence.

According to the U.S. Census Bureau (2014a), there are approximately 54 million people of Hispanic/Latino origin, which represents 17.1% of the total U.S. population. Even though Hispanics have one of the highest poverty rates among all ethnic groups in the United States (Kena et. al., 2014; p. 23), 88% of Hispanics considers a college degree the path to upward social mobility (Pew Hispanic Center, 2009, Figure 6.1). This might explain why in 2012, Hispanics enrolled in college in record numbers; almost 7 out of 10 Hispanic high school graduates entered college. Moreover, the high school dropout rate for Hispanics went down from 28% in 2000 to a record low of 14% in 2011 (Fry & Taylor, 2013).

## **1.1 A STATEMENT OF THE PROBLEM**

Despite this encouraging news, Latinos are still behind in other educational measures. Compared to other groups, Latinos enroll in lower proportions as full-time students. Moreover, they are less

likely to enroll in four-year colleges and less likely to graduate from college (Fry & Taylor, 2013). Table 1.1 shows that although college graduation rates have increased for all major ethnic groups, Hispanics are still behind all groups (Aud, Wilkinson-Flicker, Kristapovich, Rathbun, Wang, & Zhang, 2013).

**Table 1.1** College graduation rates for 25-29 year olds, by ethnic group

<b>Race/Ethnicity</b>	<b>Year 1990</b>	<b>Year 2012</b>
Asians/Pacific Islanders	43%	60%
Whites	26%	40%
Blacks	13%	23%
Hispanics	8%	<b>15%</b>

*Source:* Created by the author using information from Aud, et al. (2013).

It has been suggested that having citizens with low levels of education is not only a “serious moral” and “civic” challenge, but also an economic one (Ream, 2005, p. 153). The educational deficiencies faced by the Latino population are significant and do present a serious challenge not only for their communities, but also for the entire U.S. society as education is not only related to higher earnings, but also to being employed. For instance, the unemployment rate in 2012 was lower for individuals who had a bachelor’s degree, compared to those who had only a high school diploma (Aud, et al., 2013).

Furthermore, a report published in 2012 estimated that by the year 2020, postsecondary education and training will be necessary for 66 percent of the jobs (Carnevale & Smith, 2012). Hence, getting a college education is not only beneficial to the individual, but also to a country’s economy. A study conducted by Robles (2009) estimated that if Latinos had the same levels of educational attainment as that of Whites, the economy would get an additional 15 billion dollars in revenue.

Thus, it is important that the U.S., as a nation, looks seriously at the achievement gap among minority groups, and design policies that would help minorities achieve their dream of upward social mobility. It is undeniable that the achievement gap is really a reflection of the “pervasive racial” and income inequality that exists in contemporary America (Lavin-Loucks, 2006, p.2). However, it is also evident that getting an education, especially at the college level, is still one of the means, if not the only, to achieve upper social mobility (González, Stoner, & Jovel, 2003).

The situation of Hispanics is troublesome in light of the recent projections by the U.S. Census Bureau (2012) that estimates that by the year 2060 Hispanics would grow from 53.3 million in 2012 to 128.8 million, which means that almost one third of the U.S. population would be Hispanic. This is worrisome because an industrialized country such as the United States cannot afford to have almost one third of its population with low levels of educational attainment especially at the secondary and tertiary levels. However, it is common knowledge that getting a college education is becoming a very expensive investment and due to their socioeconomic condition, many Hispanics may not consider enrolling in college (National Center for Education Statistics, 2015).

Despite their economic and educational situation, some Hispanics do enroll and graduate from college. For these Hispanics, I find the framework of social capital useful in identifying their sources of information and social networks that influence their college choice and their persistence past their freshman year and beyond.

Within the social capital framework particular attention would be paid to Stanton-Salazar’s bilingual network and his theory of institutional support agents and chain migration discussed by Pérez and McDonough (2008). Moreover, two important models that have some

elements of social capital are discussed: Astin's model of student engagement and Tinto's interactionalist model. I find these two models relevant in explaining why some Hispanics will choose to attend a public four-year college and why some persist in college past their freshman year.

## **1.2 SIGNIFICANCE OF STUDY**

As it was stated earlier, even though Hispanics have been enrolling in record numbers, their graduation rates still lag behind that of Whites and Asians. For instance, at this particular institution, 51.7% of Hispanics who entered in 2007 graduated in six years compared to 55.8% of Whites (personal communication, 2014). Even though graduation rates are important, it is also essential to examine year to year college persistence. Some authors contend (Nora & Cabrera, 1996; Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008; Tinto, 2012; Wells, 2008-2009) that the first year is critical as it is during this time period that one can find more students leaving college (Hu & St. John, 2001). This is perhaps due to the adjustment that students need to make in their lives to adapt to the new college culture. At this particular institution in 2012, 69.2% of Hispanic freshmen returned for a second year, compared to 75.9% of White freshmen.

Some authors argue that some studies focus mostly on why students leave and not on why they stay (persist) in college (Torres, 2006). This is perhaps one of the reasons why my study focuses on what have helped or influenced students to continue their studies at this institution. Moreover, most studies that I have reviewed on college choice and persistence among Hispanics have focused on large nationally representative samples and on states such as California and Texas where the percentage of Hispanics is high. However, the percentage of

Hispanics in Pennsylvania is only 6% of the population and unlike California and Texas a high percentage (more than 80% according to the Pew Research Center, 2011) are of non- Mexican origin. My study would be, to my knowledge, one of the few in the state of Pennsylvania to study college choice and persistence among Hispanics. Moreover, I hope that my study would identify the social capital factors, especially their sources of information and support, that help Hispanics choose a four-year public college that is a predominantly White institution (henceforth PWI) and the social capital factors that are more significant in helping them persist past their freshman year. Hence, my study would contribute with important findings that would help policy makers, college faculty, and staff to improve their programs and policies aimed at recruiting and retaining Hispanic students.

### **1.3 PURPOSE OF THE RESEARCH STUDY**

The purpose of this study is to identify the social capital factors that influence Hispanic undergraduate students in choosing a four-year public university that is also a predominantly White institution and to identify the social capital factors that helped them persist past their freshman year. An explanatory sequential mixed-methods design is used and it involves the collection of quantitative data first through the use of a cross-sectional, self-administered online survey. The second phase involves the collection of qualitative data through the use of semi-structured interviews with four individuals. The interviewees for the qualitative phase were selected from the same sample that took the online survey. The main rationale for collecting both quantitative and qualitative data is to illustrate and further explain the results which will result in

a greater understanding of the phenomenon of college choice and persistence of Hispanics at this particular institution.

#### **1.4 SCOPE OF THE STUDY**

This study is limited to Hispanic undergraduate students at Indiana University of Pennsylvania (IUP). The population that took part on the survey were from the two main campuses: Indiana and Punxsutawney. One of the limitations of this study is the lack of generalization to the larger Hispanic population who attend college at other institutions as this a case study and it is more of a descriptive/explanatory study. Another limitation, which is characteristic of survey research, is the self-selection of participants. Therefore, the findings of this research should be interpreted in light of these limitations.

#### **1.5 CONTRIBUTIONS TO RESEARCH AND PRACTICE**

Several studies on college choice and persistence among Hispanics have been done in states where there is a high percentage of Hispanics (Alvarado & López Turley, 2012; Arana, Castañeda-Sound, Blanchard, & Aguilar, 2011; Butler 2010; Ceja, 2006; Cejda, Casparis, Rhodes, & Seal-Nyman, 2008; Desmond & López Turley, 2009; Martínez, 2012; Pérez & McDonough, 2008; Riegle-Crumb, 2010; Zarate & Gallimore, 2005). However, the Hispanic population in the state of Pennsylvania is low (U.S. Census, 2014a). Moreover, some authors (Torres, 2006) state that in the literature there is a greater emphasis on the obstacles and barriers

that Hispanics face rather than on what factors have contributed to their success in college (e.g., persist past their freshman year and graduate from college). In light of these facts and assertions, my study focuses on the social capital factors that helped Hispanics to choose and persist in a public university in Western Pennsylvania. The primary aim of my study is to help administrators and faculty not only in the recruitment but also in the retention of Hispanic students by strengthening existing programs/organizations and by developing and implementing policies and practices for faculty and staff members to better serve the Hispanic population. To the field at large, my study will add to the body of literature on college choice and persistence and provide researchers and practitioners with significant findings that could be transferred and replicated in other four-year public universities that are predominantly White institutions and located in states that have a low Hispanic population.

## **2.0 LITERATURE REVIEW**

My literature review is divided in three general sections due to the complexity of my topic which requires a close examination of three bodies of literature. The first section is a review of my overarching theoretical framework, social capital. I start with a conceptualization of social capital as it is applied in education. Within this section, I also present a section that deals with how social capital has been measured in empirical studies and the methods that researchers have used, and finally there is a subsection titled “criticism of social capital” in which I provide the main criticism of social capital and the counterarguments to those critiques. The second section is devoted to the college choice models as it is relevant to discuss those in order to examine the factors that shape people aspirations and decision to attend college, and specifically those who influence students to choose a particular institution. I use a deductive method in sections two and three so that that readers can understand my reasoning for including these two sections. Within section two, I link college choice models through the lens of social capital and with an emphasis on minority students especially, Hispanics. The third section examines college persistence. I also use a deductive approach when examining the literature on this topic. I start by examining Tinto’s theory of student departure and Astin’s model of engagement, but again using a social capital lens to examine the related literature. I conclude my literature review by providing the gaps that exist in the literature in these two sections.

## 2.1 TOWARD A CONCEPTUALIZATION OF SOCIAL CAPITAL

Coleman (1988), a U.S. sociologist, who is perhaps the most cited scholar in this area, stated that social capital:

is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors—whether persons or corporate actors—within the structure. (p. S98)

Coleman's introduction of social capital, as a "resource for action," was in response to the overly individualistic nature of *rational action*. Unlike physical capital, which can be observed, social capital cannot, as Coleman clearly pointed out. In his article, Coleman suggested that there are three forms of social capital that one can obtain by forming relationships with other individuals. Those forms are obligations and expectations (which depend on trust); information; and norms and sanctions. He later added that some social organizations are more effective in creating some of the above forms of social capital than others. For example, those social structures that have *closure* (i.e., every individual has some type of interaction with other members in the same network). This type of social networks creates *effective* rules and trust. An important concept related to this idea is what Coleman called *intergenerational closure*. To illustrate this concept, he gave the example of parents having connections with the parents of their children's friends. By doing so, the creation and enforcement of rules as well as penalties for violating those rules is more effective as every member is aware of the rules and individuals feel compelled to enforce them since there is a common interest in monitoring their children's activities and behavior. Coleman viewed *intergenerational closure* as social capital that transcends the monitoring of school related behavior but that included other behaviors as well. It

is important to stress here that Coleman assumed that *peer* relations among children show *intergenerational closure*; however, he placed greater emphasis on the relationships among parents.

The important contribution of Coleman (1988) is his treatment of social capital in the “creation” of human capital which is one of the most important concepts in education. To this end, Coleman distinguished between social capital in the family and social capital in the community. Furthermore, he pointed out that “family background,” which is usually used to investigate achievement in school, comprises financial, human, and social capital. Coleman defined financial capital as the family’s assets and/or salary, human capital as the parents’ years of schooling, and the social capital as the *relationships* that parents (and also other members of the extended family) have with children. Coleman suggested that in order for social capital to create human capital, parents need to be engaged in their children’s lives by dedicating “time” and “effort” to interact with their children. To achieve that goal, two conditions must be met: Physical presence and nurturing attention from the parents. These two conditions are important because parents can have high human capital, but if they do not use that capital in their homes through social interactions, their children would “lack” social capital.

Coleman (1988) stated that dropping out of school is one of the educational outcomes strongly affected by a lack of familial social capital. He supported this claim by analyzing a random sample of 4,000 students from public schools and using three sources of social capital: the presence of both parents, number of siblings, and mother’s expectations. He found out that, after controlling for human and financial capital, the dropout rate among high school sophomores, who came from a two-family home, had only one sibling, and their mothers expected them to go to college, was only 8.1%. On the other hand, sophomores who came from

single-parent homes, had four siblings, and their mother did not expect them to enroll in college, the dropout rate went up to 30.6%. He claimed that his findings were consistent with previous research that showed that younger siblings in large families did not get as much adult attention and therefore, they had unsatisfactory educational outcomes than older siblings. I would argue that this claim might be more applicable to Anglo-Saxon cultures than to Latin American cultures because it is common for other adults (e.g., grandparents, aunts, uncles) as well as older siblings to be in charge of educating younger ones. Therefore, this claim might not be so applicable to other cultures.

Familial social capital though was not the only important type of social capital for Coleman (1988). He also argued that social capital outside the family (e.g., networks in their communities) was also important. The *intergenerational closure*, which is a source of social capital, is measured by changes in the family's residency. Coleman argued that the more mobile a family is, there is an increase in the dropout rate. His reasoning was that it takes time to develop and maintain social ties with others in their communities. However, if a family moves often, those relationships are disrupted. Although I recognize that being mobile could be detrimental to children, Coleman did not distinguish the type of move. For instance, families could probably move from a poor neighborhood to a low middle class neighborhood because the schools are better or because of a better job opportunity. Therefore, moving by itself should not be considered a negative factor in building intergenerational closure, but perhaps the "quality" of that move should.

The type of schools (e.g., public, religious, and non-religious private schools) was also another variable of social measure that Coleman used and which is important to predict the dropout rate. For instance, in Catholic schools the dropout rate was the lowest in his sample.

Another measure of social capital that he used was the “frequency of attendance at religious services.” Students, who attended religious services often, had a lower dropout rate than those who rarely or never attended (9.1% versus 19.5%). His argument was that even though familial social capital is important, non-familial social capital through *intergenerational closure* can sometimes “compensate” for a lack of social capital at home.

Another important sociologist often cited in educational studies that dealt with social capital is French sociologist, Pierre Bourdieu. In his often cited article, *the forms of capital*, Bourdieu (1986) defined social capital as the accumulation of resources (“potential” or “actual”) that are derived from an individual’s membership to different groups. Bourdieu argued that social capital is intimately associated with the other forms of capital (e.g., cultural and economic). Moreover, he affirmed that “economic capital” is the source of all other forms of capital. Bourdieu stated that the amount of social capital is determined by both the individuals’ ability to “mobilize” their social “connections” and the “volume” of other forms of capital possessed by the individual’s social connections. Some other authors have argued that the term social capital should be treated as an economic concept. For instance, “social networks” require investment (e.g., time) that would yield some net benefit. The net benefit does include financial and non-financial aspects and the investment could be either intentional or unintentional (Westlund, 2006). While Coleman focused more on the importance of the family as providing support, Bourdieu focused on “access” to resources provided by the individual’s own network which included other non-family associations.

One of the main differences between Bourdieu and Coleman’s definitions has to do with the conversion of social capital. Coleman’s (1988) used social capital to explain the creation of human capital. On the other hand, Bourdieu stated that, in some instances, social capital can be

converted to economic capital. Moreover, Bourdieu was concerned more on how social capital reproduces inequality (Morrow, 2006). According to Sociologist Portes (1998), the importance of membership and engagement in organizations within communities (which is a source of social capital) is not new to sociologists and it can be traced back to Durkheim and Marx. He also added that in empirical studies social capital has been used as “the ability of actors to secure *benefits* by virtue of membership in social networks or other social structures” (p. 6, emphasis added). In order to create social capital individuals must be part of a group. It is important to recognize that social capital is not the groups or associations that an individual belongs to, but rather the resources that one can obtain by being a member of a particular group or organization. Portes believes that this distinction can be confused in Coleman’s definition of social capital. In reviewing the literature on social capital Portes summarizes three important functions that social capital provides: social control, family support, and source of benefits through non-familial ties.

Perhaps one of the most extensive treatments of social capital is the monograph written by Lin (2001) in which he conceptualizes social capital as “the *resources embedded in social networks accessed and used by actors for actions*” (p. 25). In his definition, Lin emphasizes the role of resources (*material or symbolic goods* as defined by Lin as cited in Lin, 2001, p. 29) which are represented in the networks and not in the individuals. Another area emphasized by Lin is the choice that individuals have in accessing and using those resources. He argued that in order to access and use those resources individuals must realize that those resources exist and that they can tap on them. Furthermore, he added that in the above conceptualization of social capital there are three essential parts: 1) resources; 2) social networks; and 3) action (p. 29).

Unlike Coleman and Bourdieu, Lin does not consider that networks must be *dense* or *closed* in order to fulfill the role of providing information and influence as this neglects the

importance that *weak ties*<sup>1</sup> or *bridges* have. Lin stressed that a closed or open network is needed depending on what outcome or goal an individual wants to achieve. For instance, if an individual wants to maintain resources that he/she already has access to (i.e., *expressive action*), a close-knit network is preferred. On the other hand, if individuals want to obtain access to new resources, (i.e., *instrumental action*) then an open network would be preferred.

In discussing social capital, it is also important to refer to the work done by Stanton-Salazar (1997) who, unlike Coleman, did address the issue of how individuals who are from working families can accumulate and/or have access to social capital. Stanton-Salazar defined social capital as “instrumental or supportive relationships with institutional agents” (p. 7). *Institutional agents* usually refer to teachers, counselors, community leaders and so on, but can also include school peers. Stanton-Salazar argued that it is through these institutional agents that minority students can have access to middle-class “resources, privileges and support” which are necessary to achieve and keep an individual’s “economic and political position in society” (p. 6). Unlike Coleman, who focused on the role of adults within the family and how they can provide support to children, Stanton-Salazar focused on the individual’s own *agency*. He also concentrated on how low-status youth has problems accumulating social capital by giving attention to structural problems that children encounter in the educational system. A key term in his social capital framework is the concept of *institutional support*. He pointed out that there are six forms of institutional support that are essential for *social integration* and success in schools: 1) the provision of various forms of knowledge; 2) bridging; 3) advocacy; 4) role modeling; 5)

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<sup>1</sup> Social relationships can be classified by their degree of intensity into strong or weak ties. Strong ties imply that individuals know each other very well because they have invested a lot of time and energy in their relationships. Their level of familiarity is high. On the other hand, weak ties can viewed as “acquaintances” people who we know, but not very well and people who we know indirectly through our networks. Granovetter (1973) argued that the strength of the weak ties lies in the fact that more people in social networks can be reached through them. For instance, when transmitting information.

*emotional and moral support and 6) the consistent and personalized provision of evaluative feedback, advice, and guidance* (p.11).

The relevance of the conceptual framework developed by Stanton-Salazar is that it places great importance to the school system and the ties that individuals form in this setting. Therefore, having a two-parent family or fewer siblings, as Coleman argued, it is not enough for children to succeed, especially if they belong to a low-socio economic class. Children also need the support of the school environment. Stanton-Salazar strongly argued that minority groups have more work to do than White middle-class children because minority students enter into a world (referring to the U.S. school environment) that it is not familiar to them; the norms, process of socialization, the linguistic forms are different from what they experience at home. On the other hand, for White, middle-class children, the school system validates the norms and the socialization that they have already experienced at home, and in their community. Therefore, children who come from disadvantaged homes not only have to deal with being academically competent, but also need to be able to *decode the system* that is unfamiliar to them. In other words, in order to be successful they need to concentrate in understanding all the structural and cultural aspects of the educational system and in learning new skills.

I find the conceptualization of Coleman's helpful in the sense that parents have a great role to play in their children's education; however, I find the conceptualization of Stanton-Salazar to be more elaborated as it includes also the school as an institution that plays a critical role in building social capital. But more importantly is that Stanton-Salazar places great importance to children's own agency in having a say in forming and accessing ties in the school system. Minority students, especially Hispanics can learn the norms of the predominant culture and be acculturated without losing their own cultural identity. The development of a *bicultural*

*network orientation* as identified by Stanton-Salazar (1997) is needed. Bicultural identity does not preclude a child from being successful in the predominant culture, but it helps them navigate successfully in both cultures. Although most studies in education use Coleman and Bourdieu's conceptualizations of social capital, Stanton-Salazar's study is often cited by researchers that are interested in studying minorities, especially Latinos/as, which is my research area of interest.

Another common cited author, although of lesser importance, is Putnam (1995) a well-known political scientist, whose main argument was the decline of social capital in the United States; a claim that has been disputed by others (Lin, 2001). Putnam measured social capital by membership in civic organizations such as the parent-teacher association (PTA), Boy Scouts, Red Cross, and bowling leagues to name a few. Putnam claimed that television was a big culprit in the decline in membership in these organizations. However, Lin (2001) refuted Putnam's claim; he argued that there is not such a decline of social capital, but an increase due to the rise of cyber networks. In 2000, Putnam published a book in which he conceptualized the difference between *bonding* and *bridging ties*.<sup>2</sup> The distinction between these two concepts is important because they serve different purposes. Bonding ties are those ties that are created with people who are like us. They can also be thought as dense networks that provide "social and psychological support," while *bridging ties* are viewed as more inclusive since they include members from diverse groups. *Bridging ties* are useful for accessing "external assets" and dissemination of information; they are similar to Granovetter's conceptualization of *weak ties*. Although one of the main values of the U.S. culture is individualism, Putnam argued that social capital (i.e., community connectedness) provides a lot of benefits to our society not only in civic engagement but also in education. In his analysis of data, he pointed out that children who live in

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<sup>2</sup> Term that, according to Putnam (2000), was first used by Ross Gittell and Avis Vidal.

states where there is high social capital do better than children who live in states where there is low social capital. He came to these conclusions by creating a social capital index which included the following measures: People trusting others, voting, volunteering, joining organizations, and socializing with friends (p. 296). Table 2.1 is a summary of the theoretical constructs of social capital as conceptualized by Coleman, Bourdieu, Stanton-Salazar, Putnam, and Lin.

**Table 2.1** Main proponents of social capital: Their conceptualizations and implications

Author	Conceptualization of Social Capital	Implications
1. Bourdieu (1986)	<i>Accumulation</i> of resources through membership of social groups	Social capital functions as a process to reproduce the structure of society Can be converted to economic capital.
2. Coleman (1988)	Identifies three forms of social capital: <ul style="list-style-type: none"> <li>• Obligations and expectations (Trust is critical in the development of obligations)</li> <li>• information and</li> <li>• norms and sanctions</li> </ul> There are two types of social capital: <ul style="list-style-type: none"> <li>• familial</li> <li>• Non-familial</li> </ul> (For both types of social capital <i>intergenerational closure</i> is an important source of social capital)	<ul style="list-style-type: none"> <li>• Importance of social capital in the creation of <i>human capital</i>.</li> <li>• Critical role given to the presence of both parents and fewer siblings.</li> <li>• Social capital is useful to explain educational outcomes (e.g., dropout rate)</li> <li>• Moving often disrupts social capital</li> </ul>
3. Stanton-Salazar (1997)	Social capital found in school through relationships with <i>institutional agents</i> . It focuses on the individuals own <i>agency</i> <i>Institutional support</i> is critical for children in accessing and accumulating social capital.	Accessing social capital is more difficult for minority students as their experiences at home are different from the norms, values, linguistic of the dominant group. Therefore, the role of the schools is critical as well as the individual own agency.
4. Putnam (1995, 2000)	Two important forms of social capital: <i>Bonding (exclusive)</i> and <i>bridging (inclusive) ties</i> . They serve different purposes. The decline in social capital is highly correlated with: <ul style="list-style-type: none"> <li>• Two-career family</li> <li>• Suburbanization, commuting and sprawl</li> <li>• Use of electronic media, especially TV</li> <li>• Generational change – children and grandchildren are less involved than older generation (p. 283).</li> </ul>	There is a decline of social capital that has affected the lives of the U.S. population in different spheres from a decrease in civic engagement, political participation and the like. This also affects education. Students, who are in states that exhibit <b>high social capital</b> , have better educational outcomes.
5. Lin (2001)	<i>Resources</i> found in the social networks that prompt an actor to action. 3 aspects are important <ul style="list-style-type: none"> <li>• Resources (resources are <i>embedded in social structures</i>)</li> <li>• Location of network (<i>strength of ties and bridging</i>)</li> </ul> Purpose of action ( <i>instrumental or expressive</i> )	Social capital is a theory useful to explain action especially on research related to <i>status attainment</i> .

Sources: Created by the author using the works of Bourdieu (1986), Coleman (1988), Stanton-Salazar (1997), Putnam (1995, 2000), and Lin (2001).

## **2.2 HOW HAS SOCIAL CAPITAL BEEN MEASURED?**

Most studies that have used social capital have focused on K-12. However, its use is also found in studies conducted in predicting and explaining educational decisions and outcomes in higher education. Social capital has been defined through the use of indicators such as friendships, relationships with parents, teachers, and counselors (Bryan, Moore-Thomas, Day-Vines & Holcomb-McCoy, 2011; Monkman, Ronald, Théràmène, 2005; Riegle-Crumb, 2010). Besides the above indicators, social capital has also been conceptualized as sources of information and support received from parents, peers, extended family, and siblings which have influenced the decision making process of college choice (Ceja, 2006; Pérez & McDonough, 2008; Sánchez, Reyes, & Singh, 2006). Parental involvement has also been used as a measure of social capital (Perna & Titus, 2005). In their study, parental involvement included parent-student involvement (which included six different variables), parent-school involvement and parent-to-parent involvement. They also included a variable called disruption to involvement which was measured as the number of times a family moved in the last four years. Other variables used to measure social capital are the resources available within a community and networks (e.g., religious groups and neighbors) (Martinez, 2012).

Social capital has also been measured by the number of college-bound friends as well as relationships of parents with the schools, the type of curricular track in high school, and whether or not students had discussions about college with parents, counselors, family, and friends (Alvarado & López Turley, 2012; Oseguera & Malagón, 2011). In one study (O'Connor, Hammack & Scott, 2010), the researchers measured social capital by using four variables related to financial knowledge. The indicators used were parents' and students' actions to get information about financial aid, parents' savings for college, and parents' perception of how

difficult was to apply for financial aid. In studying Hispanics, there has been an emphasis on the family, or *familism* (Esparza & Sánchez, 2008), which is also considered social capital. *Familism* has been measured as a dichotomous variable of whether or not students prefer to live close to their family (Desmond & López Turley, 2009).

Although Coleman (1988) was not much concerned with how one creates social capital; it is a question that some researchers have tried to answer. For instance, students who come from families in which parents are well educated, have more resources at home than someone who is coming from a low socioeconomic background (Jez, 2008). The important question then becomes how someone who is a member of a minority group and also has low socioeconomic status builds the “right kind of social capital.” Some researchers argue that schools are the places where low income students, especially minorities, can have access to the appropriate networks that would help them be successful as these networks serve not only as information channels, but also as support (Stanton-Salazar & Dornbusch, 1995). Stanton-Salazar and Dornbusch used seven variables to measure social capital. Some of those variables were: The *number of school-based weak ties*, the number of *high status adults* that acted as sources of information and the social economic status of the student’s *information networks*. Their study revealed that “highly” bilingual students have more “information networks” even if they belong to a lower socioeconomic status. Moreover, students who belong to a low socioeconomic status and are also highly bilingual showed greater *educational expectations* than those who were monolingual. Other authors (Núñez & Bowers, 2011) have also conceptualized social capital as one’s native language, being first or second-generation (in terms of immigration), and socioeconomic status. (See Appendix F for a list of studies that have used different variables/proxies to measure social capital).

### **2.3 METHODS USED TO MEASURE SOCIAL CAPITAL**

As one can observe, the variables/proxies used to conceptualize and measure social capital are extensive and varied. However, the methods used to measure social capital have been somehow more consistent. Coleman's initial conceptualization of social capital was based on a quantitative analysis of a large data set on high school dropouts and many educational studies that followed Coleman's conceptualization of social capital also used quantitative methods (e.g., longitudinal surveys using logistic regressions and hierarchical linear modeling) with very few studies using qualitative methods and analysis (e.g., grounded theory, semi-structured interviews, and inductive method). The use of quantitative methods to measure social capital has been criticized by some (Dika & Singh, 2002). The next section addresses their specific criticism as well as other criticism raised by some experts in the field of sociology. At the end of my paper, I devote a more detailed section on the rationale for using quantitative or qualitative methods to measure social capital and their relationship with college choice and persistence.

### **2.4 CRITICISM OF SOCIAL CAPITAL**

Portes (1998) also stated that one of the criticisms of social capital definitions, as well as its forms, is the overemphasis on the "positive" functions of social capital, but not so much on the negative aspects of it. He asserted that exclusion of "outsiders" and limitations of personal freedom are among some of the negative outcomes of social capital. Other authors (e.g., Morrow, 2006) criticized Coleman's definition of social capital as he neglected the role of gender, as well as the role that children and siblings play in "creating" and "negotiating" social

capital. Furthermore, Morrow criticized the emphasis on quantity rather than on quality when measuring social capital. She gave as example Coleman's measurement of social capital as the number of siblings that a child has, but he ignored whether or not children have a good relationship with their siblings and how supportive or unsupportive those relationships are. Kao and Rutherford (2007) pointed out that, researchers need to clearly define what they mean by social capital as it has been overused in the literature. They stated that many studies have not considered which racial or immigrant group displays more social capital related to schools rather than families.

For some researchers the question is not so much if an ethnic group or a particular race or gender has social capital, but whether or not they have the "right" kind of social capital that will help individuals climb the social ladder. By this I mean the social capital either in the form of membership to formal or informal organizations and access to information that would help individuals improve their socioeconomic status (Duggan, 2004). For some authors, social capital should not be conceptualized and measured as a dichotomous variable as everyone has social capital (Fukuyama, 2001). For instance, the Mafia and gangs are examples of groups that have social capital (Fukuyama, 2001; Portes, 1988) even though it is not the "desirable" type of social capital that one expects in the creation of human capital.

In their comprehensive review of the literature on social capital, Dika and Singh (2002) argued that the concept of social capital has been misapplied in several studies. According to them, Coleman's conceptualization was vague and the use of large data sets threatened the validity of the measurement of social capital. For instance, Coleman's high school data set contained variables that *were not meant* to measure social capital. However, Coleman collapsed several indicators to use as proxies for social capital. In this sense, they argued that qualitative

studies would be more suitable to measure social capital as researchers' studies would specifically define and measure social capital. For this reason, they praised the work of Stanton-Salazar for developing a more comprehensive framework to study how a person can access social capital. Stanton-Salazar's contribution was that children, in his case Mexican-Americans, play an active role in forging relationships with institutional agents that would help them access resources that are valuable to achieve educational success. These resources could be in the form of information about better ways to study and application to college, to name a few. In other words, those networks are the 'insiders' of valuable information and support. He also provided a more optimistic view of what individuals are able to accomplish. Moreover, Stanton-Salazar is to my knowledge the first to use *bilingualism* as an indicator of social capital.

It is important to notice that some authors mixed cultural and social capital as some argue (Wells, 2008-2009) that the proxies used to measure both are difficult to "disentangle." For instance, Wells argued that a variable such as college-bound friends can be considered a proxy for social capital because we are dealing with ones' network. However, it could also be seen as cultural capital because we are dealing with a "peer-culture" based on social class. In my research study I would consider peer networks as sources of social capital. It is evident that different networks have their own culture because they have their own set of beliefs, norms, and values. But norms and values are within Coleman's definition of social capital. Moreover, social capital is a theoretical framework at the micro level and therefore falls under the broad umbrella of culture.

Although some of the criticisms of Dika and Singh (2002), and Portes (1998) have some validity others have refuted them. For instance, Field (2008) argued that it would be a mistake to dismiss the findings of studies that have used *large-scale surveys* just because they were not

originally designed to measure social capital. Moreover, Field argued that Portes' criticisms regarding the overemphasis of the positive aspects of social capital as well as his idea that the term has been used "loosely" to describe too many "events" is without merit. He concluded that as long as a concept can provide "new insights when applied finely" it is a good analytical tool (p. 47). Therefore, the concept of social capital is still useful in studying the process of college choice and persistence among Hispanics. However, it is important to conduct studies in which the authors create and refine their own variables to measure social capital and to develop ethnic specific studies as different groups may have unequal access to social capital. In the next sections, I would address the forms and sources of social capital that affect both the process of college choice as well as college persistence.

## **2.5 INTRODUCTION TO COLLEGE CHOICE**

It is well documented that college graduates earn more money than high school graduates. For instance, Aud, et al. (2013) reported that the median income in 2011 for high school graduates was \$30,000 compared to \$45,000 for college graduates. This means that college graduates would earn, over their lifetime, at least \$600,000 dollars more than individuals who only have a high school diploma. Thus, a college degree is a very important contributor to upward social mobility, more so when competing with citizens of other countries in a global economy. This is more critical for minority groups, especially Hispanics given their low levels of college attainment. Yet, not only is the decision to enroll in college important, but also the *type* of college to attend, as the type of institution (e.g., four-year institutions) greatly influences the odds of degree attainment (Ross, et al, 2012).

### 2.5.1 College choice models

The decision to get a college education is known in the literature as *college choice*. Some experts have suggested that deciding to pursue a college education is a *process* that is complex and multi-stage. Hence, several models of college choice have been proposed to describe the process that individuals follow to make their final choice to enroll in college (Jackson, 1982; Litten, 1982). However, the model most cited in the literature is the one developed by Hossler and Gallagher (1987). According to them, college-choice has three phases: *predisposition*, *search*, and *choice*. Although recently, some authors (Jez, 2008) contend that stages one and two should be combined and considered as one. Hossler and Gallagher's model was based on the ideas proposed by Jackson and Litten. However, they added, to their model, educational *organizational* factors that “interact” with student variables in every step of the process of college choice. They described *predisposition* as the stage in which students decide if they would like to pursue higher education. Once students have made the decision to go to college instead of engaging in other activities (e.g., work, army), they collect information about their prospective colleges and universities and develop their “choice set” (Jackson, 1982). The last phase is the *choice*, which is when students make their final selection of which college to attend.

The college choice phases are associated with different grade levels. The *predisposition* may start as early as seventh grade; the *search* stage with grades 10<sup>th</sup> to 12<sup>th</sup>; and the *choice* stage with grades 11<sup>th</sup> to 12<sup>th</sup>. (Nora & Cabrera as cited in Cabrera & La Nasa, 2000, p. 6). The process of how students develop their aspirations to go to college is an area that has also been studied. Research suggests that one factor that has been the most influential in the predisposition stage is parents' *expectations* and *support* (Hossler, Schmit, & Vesper, 1999). They argued that by the time students are in ninth grade, their parents are already thinking about their children college

choice process, as well as the costs associated with it. Other factors that influence the plans to attend college are their own academic achievement, their parent's education, their peers, and their engagement in high school organizations. Nonetheless, Hossler, et al. (1999) acknowledged that the predisposition stage is affected by the individual's gender and race.

This is supported by a longitudinal study conducted by Zarate and Gallimore (2005) in which they found that the factors that "lead" to college enrollment for Hispanic males and females are different. For Hispanic males, the indicators were their academic achievement (measured by test scores) and parental expectations. For Hispanic females the factors were their teachers' rating of their performance and their discussion with counselors. One of the strength of this study is their longitudinal design. The researchers selected their participants before they were enrolled in kindergarten and followed them for 15 years. Most of their participants were from the same socioeconomic class and had similar immigration status. An early study suggested that the model of college choice developed by Hossler and Gallagher has probably been based on those who are coming from wealthier families and thus their model might be inadequate to explain the college process for other ethnic and racial groups (Hurtado, Inkelas, Briggs & Rhee, 1997). In their study, based on a national longitudinal data set, they found significant differences in college access and choice. For instance, their results indicated that Hispanics showed the *lowest* educational expectations (e.g., to graduate from college), were more likely to apply to fewer colleges, and postpone their entrance to college. According to the authors, these trends have not changed since the 1970s.

Another criticism of earlier college models is that these models assume that every student is a *traditional* student, and therefore, everyone follows the same path which is based on purely economic reasons in which costs and benefits of attending college are weighted. In response to

this, some authors have developed college choice models more appropriate for minority students. One of them is Perna's model (as cited in Perna, 2007, p. 58). She proposed a model that it is better thought as *layers* of contexts. Her model includes four layers: The individual's *habitus*; the school and community context; the higher education context; and the social, economic, and policy context. In other words, instead of thinking about steps in which rational choice of cost and benefits dominate the conversation, she argued that social (and cultural) capital needs to be taken into account. The relevance of Perna's model in studying Hispanics is that she included social (as well as cultural) capital variables to explain differences in their enrollment in four-year colleges. This is very significant as it has been argued that Hispanics tend to be heavily influenced by their immediate networks (such as family, friends, and trusted individuals) when making the decision to enroll in college. Moreover, Perna (2007) argued that quantitative methods can be used to measure social capital. One of the advantages that I find in Perna's model is that all these layers influence an individual's decision in all three stages and her model is multidisciplinary as it encompasses not only the field of economics, but also sociology.

Overall, the major contribution of college choice models is that they provide a starting point to untangle what is a very complex process. In the next sections, I discuss the main factors, including the forms and sources of social capital that play a role in the process of college choice.

### **2.5.2 Factors influencing the process of college choice among Hispanics in particular**

There are several factors that influence the process of college choice. A few of them are general factors such as cost and the availability of financial aid. There are however several social capital factors such as the role of parents, siblings, *familism*, peers and friends, school counselors, and high school and college characteristics that influence this process. When studying Latino/a's

college choice patterns, it is important to take into account two other factors: One is their immigration generation (e.g., first-, second-, and third-generation) and the other is being a first-generation college student. That is, being the first member in their family to attend college.

#### **2.5.2.1 Cost and financial aid**

Perhaps two of the most often cited factors that influence the decision to attend college and which type of college to attend are: Cost and the availability of financial aid. For students whose parents do not have the means to help defray the cost of attending college, borrowing from private banks and the federal government has been an alternative. Yet, it has been argued that Hispanics have an aversion to having educational debts (Cunningham & Santiago, 2008). According to Dowd (2008), "...differences in attitudes toward debt and actual borrowing behaviors are not due to amorphous cultural values but to socioeconomic influences, such as parental education, family income, and immigrant generation" (p. 246). Therefore, she argued that the idea that Hispanics have an aversion to having educational debt holds true only for those Hispanics who come from a low socioeconomic status and those who are first-generation immigrants. But once researchers control for these variables, minorities tend to borrow as much as Whites do. The significance of these findings is that Hispanics, who are high achievers but who are from a low socioeconomic status, and are first-generation, would be curtailing their chances to attend more selective and thus more expensive institutions.

For some researchers, availability of financial aid is one of the reasons why students will choose a particular college. For instance, in a study conducted by Engberg and Wolniak (2009) in eight private universities located in different regions of the United States, it was found that students who applied for financial aid and those who were given higher grants were more likely to enroll in college. For other researchers, the net cost of attending a particular higher education

institution is probably the most important factor when applying to or selecting a college. From an economic and rational perspective, when cost is taken into account, among the most chosen institutions are community colleges (Adelman as cited in Kurlaender, 2006, p. 7). It has been argued that this is the reason why Latinos are more likely than any other ethnic/racial group to choose communities colleges. However, a study conducted by Kurlaender (2006) contradicted this assertion and indicated that after controlling for socioeconomic status, Hispanics are still more inclined to attend community colleges rather than four-year colleges, even if they are coming from wealthier families.

#### **2.5.2.2 Type of college: Four year colleges, ethnic composition and college proximity**

As it has been previously stated, whether or not one chooses a two-year versus a four-year institution is critical because the type of institution has an impact on attainment (Arbona & Nora, 2007; Melguizo, 2009). Of particular interest for researchers has been the college choice based on personal preference of attending institutions that have a student body that resembles one's own ethnic and racial composition. For instance, Butler (2010) found that there is a strong relationship between the *ethnic-racial* composition of the high school where students graduated with the ethnic composition of their college choice. He also found that, when compared to Hispanic males, Hispanic females prefer to select colleges that have more Hispanic students. He offers three possible explanations for this finding. One of them has to do with college proximity to their homes, finding also supported by Turley's research (2009) in which she claims that college proximity is especially important for disadvantaged groups as they tend to weigh heavily not only the issue of college cost, but also the advantages that students derive from living close to their family members. The second explanation is the influence of parents in suggesting segregated institutions. The third explanation is the Braddock's segregation hypothesis in which

he argued that Blacks, who attended desegregated high schools, were more prone to also attend desegregated colleges in which Whites were the dominant group. By the same token, students who graduated from segregated high schools, tended to attend segregated colleges.

The sample of Butler's study (2010) was 7,016 seniors and Turley's was a national sample of 17,000 students. Although those samples are quite large, Butler's was based on a sample from Texas. A limitation of Turley's study, as she clearly pointed out in her article, is that the process of college choice is a complex one and there are many factors involved in it and it is a difficult task to find causal relationships. It is worth mentioning that a clear difference between these two important studies is the fact that Butler's study deals with the *preference* of high school seniors *before* they enrolled in college. On the other hand, Turley's research tracked applications and actual enrollments.

An early study conducted by Perna (2000) indicated that African-Americans who attended segregated schools were more inclined to attend four-year institutions when compared to other African-Americans who did not. Although we can learn from previous research that there are advantages in enrolling in a college that caters to one's ethnic and racial group, there are some limitations in doing so. For instance, one limitation is probably related to having access to a network of friends that would probably have less social capital than those networks found in a White dominant college. This would probably affect employment opportunities as well (Braddock, 1980). Other studies (e.g., Engberg & Wolniak, 2009) have also found that *diversity* of the college student body was highly correlated with the decision to attend private institutions. Enrollment in four-year institutions is also affected by parental involvement, a form of social capital, (Perna & Titus, 2005) that was measured by the number of discussions that students have with parents and parent involvement with their children's high school. As it was argued by

Coleman (1988) moving often affects children's educational outcomes. In Perna and Titus' study, moving several times was negatively related to college enrollment in either two or four-year colleges.

### **2.5.2.3 Two-year institutions and community colleges**

As it was mentioned previously two-year institutions and community college are popular choices among Hispanics. A quantitative study conducted by Núñez, Sparks and Hernández (2011) found that Hispanics, who attend two-year Hispanic-serving institutions (henceforth HSIs),<sup>3</sup> tend to be older, first-generation, and male. Their study was based on a large national representative sample of first-time college students, in their first year in post-secondary education, and who answered a survey during their first academic year of 2003-2004. Among their results they highlighted two important findings: Hispanics who attend these institutions tend to have higher GPA in high school and higher educational aspirations (e.g., intention to transfer). Moreover, it appears that their *income* did not have an effect on their college selection. This contradicts an earlier study conducted by Jez (2008) in which she concluded that students who are coming from wealthier homes are more likely to enroll in four-year institutions regardless of race. However, the findings of Núñez, et al. found that, regardless of their socioeconomic status, this sub-population of male Hispanics tends to choose two-year HSIs. One possible explanation, provided by the authors, is that Hispanics, unlike other groups, place heavy emphasis on the information provided by their family members, which according to Coleman (1988) constitutes a form of social capital. In fact, Núñez, et al. (2011) indicated that Hispanics listed *personal* and *family* reasons as paramount in deciding to choose a particular institution. They argued that future researchers should

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<sup>3</sup> According to the U.S. Department of Education, HSIs are higher education institutions that have an undergraduate enrollment of at least 25% of Hispanic students. <http://www2.ed.gov/programs/ideshsi/definition.html>

concentrate their efforts in creating college-choice models that take into account the idiosyncrasies of Hispanics.

Another quantitative study supporting similar findings is the one conducted by O'Connor, Hammack and Scott (2010). In their study, they found that college-qualified Hispanics are more likely to enroll in community colleges because they lacked information on how to finance higher education in four-year colleges. As Oseguera and Malagón (2011) suggested, Hispanics rely more on family and friends, but these types of networks often do not have the appropriate knowledge about college information and finances. This is true even when controlling for socioeconomic status. The relevance of O'Connor, et al.'s study is that they only selected those students who were qualified to enter college and those who aspired to complete a bachelor's degree, but who decided to enroll in community colleges.<sup>4</sup> Among other secondary findings were that language spoken at home and generation (in terms of immigration) were not significant neither delaying entrance to college.

#### **2.5.2.4 Parents and family as sources of information in the college-choice process**

Information is a key form of social capital that is critical in the last two phases of *search* and *choice* of a college. For Hispanics, social networks such as their family and friends play a critical role in collecting information (Sánchez, Reyes, & Singh, 2006). However, Hispanics are at disadvantage when compared to their White counterparts because their parents' educational level is low and many of them have not experienced any type of post-secondary education. Therefore, even if parents of Hispanic students have great aspirations and expectations for their children to

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<sup>4</sup> In order to be a qualified student they used the definition of Berkner and Chavez (1997), that is a student had to graduate from an academic program and fulfill **one** of the following characteristics GPA of 2.7; or SAT of 820; class rank 54% or Aptitude test of 56 or an ACT of 19) (O'Connor, Hammack & Scott, 2010, p. 200).

go to college, their children cannot rely on them for information. In many instances, older siblings, who have had experience with the college process, may act as *protective agents* of information. Siblings are not only providers of information, but also they influence the aspiration to go to college and influence their sibling's major choice (Ceja, 2006). This finding contradicts Coleman's initial assessment of social capital in which he argued that having more children is detrimental in the creation of human capital.

Research suggests that the types of higher education institutions that Hispanics choose are determined by their informational sources. For instance, a quantitative study conducted by Oseguera and Malagón (2011) pointed out that Latino students who had discussions about college choice with their counselors were more likely to enroll in for-profit institutions than those who got their information from their teachers, family members, and/or friends. The importance of friends and family in the process of college choice is well documented. For instance, Pérez and McDonough (2008) conducted a qualitative study in which they studied 106 Hispanic students, who were *college-bound* and *high achievers*. They found that Hispanic students rely heavily on the information provided by their immediate and extended family as well as "trusted individuals." These informants provide information based on their own experiences with the college process or based on what others have experienced. The disadvantage of this type of information is that it is based on the perception of the informants and it is not necessarily based on what is best for the prospective college-bound student. Pérez and McDonough suggested that the process of college choice for Hispanics is better understood by using the theory of "chain migration" which is within the social capital framework, which relies on network members for information and support to make decisions such as where to attend

college. Therefore, they recommend that information regarding college and financial aid should be targeted to the entire family and not only to the individual.

#### **2.5.2.5 *Familism* and the influence on college choice**

Some researchers have argued that not everyone follows a *linear* or *predictable* path to college application (Pérez & McDonough, 2008). A useful concept that has been discussed in the literature to explain why Hispanics decide to attend college and/or which college to attend is that of *familism* which has been defined as the importance of the family over the individual (Lugo Steidel & Contreras, 2003; Valenzuela & Dornsbuch, 1994). Some of the manifestations of *familism* is the desire to live close to one's family and to provide (e.g., financially, emotionally) for other family members (Lugo Steidel & Contreras, 2003). Some authors have argued that *familism* is positively associated with school achievement among Mexican–American youth (Valenzuela & Dornsbush, 1994) while others have argued that *familism*, measured as the desire to attend college while living at home, is highly correlated to the low rate of college application among Hispanics (Desmond & López Turley, 2009). Results from Desmond and López Turley's study indicated that when compared to other groups, Hispanics were by far more inclined to live at home while attending college. This was the case even after controlling for socioeconomic status.

The fact that Hispanic parents want their offspring to stay at home is not surprising giving the fact that Hispanic families tend to be group oriented. I would argue that Hispanic parents even if they belong to a higher socioeconomic status, might not be comfortable with the idea of their children living *too far away* from their family since family is so central in the lives of Hispanics. I would also argue that most Hispanic parents do not object to their children integrating into the mainstream culture as they might perceive that some Anglo Saxon values are

also shared by Hispanic families, for instance, the values of hard working and entrepreneurship. However, Hispanic cultures are, as Hall stated (cited in Bennett, 1995, p. 63), *higher context societies* and some other cultural values may differ from the predominant White non-Hispanic culture as the U.S. society is considered a *low context society*.<sup>5</sup> The concept of *familism* also affects the structure of the Hispanic family. For instance, it is quite common to live with members of the extended family such as grandparents and older aunts in the same household mostly to provide care for them. Thus, younger Hispanics might feel the need to live at or close to home disregarding whether or not the college that is near home may be a good fit for them or not.

#### **2.5.2.6 High School and college characteristics**

Another variable that has been studied in the college choice models is the impact of high school characteristics. Some of the variables that researchers have examined in this area are: the high school environment (diversity), quality, and whether the school has *historical connections* to a particular college. In a recent quantitative and longitudinal study, Núñez and Bowers (2011) found that high school *organizational habitus*, measured by variables such as location, size, resources, student-teacher ratio, and diversity to name a few, was related to the likelihood of attending two-year Hispanic Serving Institutions. Using a large national representative sample, they found that students who graduated from public schools; had greater presence of Hispanic high school teachers; and had a diverse student body were more likely to enroll in two-year HSIs. Moreover, this study found that students who had lower math academic preparation, were

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<sup>5</sup> See Bennett (1995) p. 63-67 for a detailed explanation of differences between high and low context societies.

second-generation immigrants, and preferred to live close to their families were more likely to attend four-year HSIs.

According to a study conducted by Engberg and Wolniak (2009) on four-year private universities located in several regions in the United States, Hispanic applicants who attended high schools that have historical connections to a particular college were more likely than Blacks to enroll in that college. Another important finding was that high school quality (measured as academic preparation), which is usually associated with higher odds of enrollment in college, was negatively related to enrollment. That is, Hispanic students who were coming from high schools that are of high quality were less likely to matriculate in any of the four-year private colleges involved in the study. Their sample was 16,207 freshmen and their analysis was based on the admission and financial aid data of the applicants.

Besides the high school characteristics that influence the college choice process, researchers have also studied the characteristics of higher education institutions that influence students in making their final decision to attend a particular college. In general those factors have been studied using economic, socioeconomic and psychological theories. A recent study (Nora, 2004) conducted in three different institutions (public, private and religious) showed that *psychosocial* factors were strongly related to enrolling in college more so than traditional factors such as high school academic preparation (i.e., measured by grades) and institutional characteristics (i.e. cost, location). This study revealed that regardless of minority status, students who feel *accepted*, *welcomed* and *safe* found that these factors are more important when they are making the decision to enroll in a particular college. Therefore, in the last stage of the college-choice process, the campus visit to an institution is then extremely critical for students.

#### **2.5.2.7 Peers and friends**

In the highly read and cited study carried out by Perna (2000), college matriculation in four-year institutions was considerably affected by social capital variables, which enhance the prediction of her model even though their impact varies among ethnic groups. Although Perna did not find any significant relationship between peers and college enrollment, others researchers have found that close friends do influence not only college aspirations, but also college enrollment (Hallinan & Williams, 1990; Perna & Titus, 2005) especially when those friends are from the same gender and have similar high school experiences (e.g., are placed in the same track: vocational or academic). Hispanics rely more on friends and family members (e.g., siblings, aunts,) to decide to attend a particular college (Pérez & McDonough, 2008; Person & Rosenbaum, 2006). For instance, in a study conducted by Riegle-Crumb (2010), it was found that having *academic focused* peers is related to college enrollment for female Hispanic students.

Similarly, in a recent study conducted by Alvarado and López Turley (2012), it was found that having *college-bound* friends is positive associated with applying to college especially to four-year institutions for both Whites and Hispanics. Alvarado and López Turley's findings are based on data from the Texas Higher Education Opportunity Project. Their participants were a total of 13,803 seniors from 96 public high schools. Similarly, a study conducted by Arbona and Nora (2007) found that Hispanics, who in 10<sup>th</sup> grade reported that most of their friends planned to go to college, were more likely to enroll in four-year colleges.

#### **2.5.2.8 School social networks: Counselors**

Access to school social networks (a type of social capital) influences the decision to enroll in college for Hispanics. Female Hispanics tend to enroll in college in higher numbers than male Hispanics. In a study conducted by Riegle-Crumb (2010), it was found that, besides better

academic preparation, access to school social networks accounts for these differences between Latinos and Latinas. The author used longitudinal data and selected a representative sample of high school seniors in Texas (N=3641) that included only Whites and Hispanics. She conducted logistic regressions using five different models in which she included social capital as one of her independent variables. She measured social capital by using three sources of interpersonal relationships with friends, parents, and counselors. Her findings indicate the importance of having access to school counselors which was measured by the number of discussions the female students had with them. The author found out that the interaction with the school counselor weighted heavily on their decision of female Hispanics to attend four-year institutions. This is significant because it could be possible that these female students realize that other social networks such as their families do not have the academic preparation to guide them when they are in college and therefore, they need to rely on other sources of social capital for support. The author raises some important concerns about the underrepresentation of minorities, especially male Hispanics that is worth to explore in future studies.

The importance of counselors in the decision making of applying to college has also been supported by other studies (Bryan, Moore-Thomas, Day-Vines & Holcomb-McCoy, 2011). Bryan, et al. (2011) found that the number of counselors as well as students contacting their counselors by or in their 10<sup>th</sup> year of their secondary education, was positive related to applying to two or more colleges. However, for Hispanic students consulting their counselor after their 10<sup>th</sup> is negatively related to applying to two or more colleges. Hispanic students who did not see a counselor had better odds of applying to two or more colleges. This study confirms the importance that Hispanics place in their trusted networks rather than relying solely on information sent by the colleges they are planning to attend.

#### **2.5.2.9 First-generation college students**

There has also been an interest in researching students who are *first-generation* college students as well as students who have been identified as being at risk of dropping out of high school and therefore, unlikely to pursue a college degree. Studying these two groups is important because many Hispanics (and African-Americans) due to their high levels of poverty are classified as such. In their review of the literature regarding these two groups Choy, Horn, Núñez and Chen (2000) suggested that peers, parental involvement, college preparation, and a demanding mathematics curriculum are all positively associated with enrolling in a four-year college. Similarly, Cabrera and La Nasa (2000) sustained that academic preparation is paramount for students at risk and low socioeconomic status. Using a longitudinal study, they found out that students who are well prepared for college are more likely to attend college. For example, 70% of the students who had the necessary academy credentials matriculated in a four-year college right after they graduated from high school. However, for students coming from the lowest social strata and who were also academically prepared, that rate dropped to 65.6%. More significant though is the fact that only a small fraction, 29% from the lowest socioeconomic status quartile had the necessary pre-college preparation. In contrast, the percentage of students from the highest socioeconomic status who had such preparation was 69.7%.

#### **2.5.2.10 First-generation of immigrants**

In the last few years there has been an interest not only in studying differences in educational outcomes and the process of college choice across distinct ethnic groups, but also there has been an interest in studying differences among generations of immigrants. Past research has shown that there is an “immigrant paradox”; teenagers who have immigrant parents do better in subjects such as math and science than those whose parents were born in the United States (Crosnoe &

Turley, 2011). The immigrant paradox is stronger among Asian immigrants who tend to perform better, in standardized tests, than most students including children of Whites. Although socioeconomic status is partly responsible for this success in secondary education, the authors stated that after controlling for socioeconomic status this academic advantage still prevailed. The researchers suggested that this could be attributed to strong ties among family members, parental support, and high educational expectations for their children. All of which are forms and sources of social capital. Since Hispanics are now the largest minority group in the United States, it is important to uncover whether or not there are differences among first-, second-, and third-generation students as they might have different social networks with varying amounts of social capital.

Hagy and Staniec (2002) conducted a quantitative study and indicated that in terms of college choice there are some significant differences among racial groups and immigrants. They used the data from the 1988 National Educational Longitudinal Study (NELS henceforth) and their analysis suggested that first-generation immigrants regardless of race were more inclined to matriculate in any type of higher education institution (that was not private) than not to enroll. However, their choice of institutions was overwhelmingly public institutions. Moreover, first and second-generation Asians are more prone to matriculate in two- and four-year public institutions, whereas second-generation of Hispanics and *native* blacks are more inclined to attend public as well as private four-year institutions. In their study they also found out that second-generation of Hispanics and native Blacks are enrolling more in four year colleges, whether they are public or private. They suggested that the increase of enrollment of these two groups might be due to policies such as the existence of affirmative action programs. A recent quantitative study conducted by Hurtado-Ortiz & Gauvain (2007) found that although first- and later-generations of

immigrants (second, third, fourth, and fifth) do not differ in their college aspirations, there is variation in the *perception of their academic ability* and being successful in a four-year college, later-generations of Hispanics are more likely to be enrolled in college than first-generation Hispanics. However, first-generation Hispanics who are not enrolled in college reported to be working to save for college. One of their explanations as to why first-generation Hispanics may not enroll in college has to do with their perception of them feeling unable to afford college which may be due to their lack of information regarding financial resources. The authors conclude that there is a strong correlation between acculturation and college attendance. In other words, the more acculturated students are, the more likely they will be enrolled in a four-year college. Among other important findings were that there is a positive relationship between mother's education and college enrollment, but father's education was not related to being enrolled in college. Another significant finding was that for all these groups having an older sibling who has college experience was related to being enrolled. Differences in college-going patterns among first and later-generations is a variable that I would like to study for my dissertation to see if there are significant differences among these two as the social networks and thus their social capital might be different.

### **2.5.3 Concluding remarks on college choice**

The process of college choice is a complex one. It seems clear though that for Hispanics, social capital factors such as the family, whether they are parents or siblings, play a critical role not only in the decision to go to college, but also the type of college they should attend. Friends and peers are also influential in the process of college choice as so are counselors. Most studies reviewed in this paper are quantitative with a few qualitative case studies. By in large the most

frequently used data for these quantitative analyses have been the National Educational Longitudinal Studies. Perna (2007) explains that the main advantages of this type of analysis are the external validity, the statistical power to find differences, and the availability of data. However, quantitative studies also have some disadvantages. For example, it is difficult to find adequate *proxies* to study complex ideas. Although the data used is large, it lacks an oversampling of other groups. For instance, Hispanics is a very heterogeneous group and it would be important to study the differences between U.S. citizens of Mexican origin and those of Puerto Rican origin to name some examples. Many of the studies here also analyzed the waves of data of the 1988 cohort. But many changes have taken place in more than two decades and those changes are important to take into account. For instance, the release of the 2012 U.S. education report shows some improvements in college enrollment. However, these higher enrollments might be due to changes in the U.S. economy such as the recession that took place in 2008. Moreover, this report concluded that across the board regardless of race and ethnicity women have outperformed men in many indicators. For instance, for the last three decades one finds that the enrollment of 18-24 year olds males has been consistently enrolling in lower numbers than females in either college or graduate school. In 2010, 39% of males enrolled compared to 47% of females. It is more dramatic for Hispanic males as their percentage rates was only 26% compared to 36% of females (Ross, et al., 2012). It is encouraging to see more women enrolled in college, but why men, especially Hispanic men, are not enrolling as much as women is an area that deserves more attention as some researchers have rightly pointed out (Sáenz & Ponjuan, 2011). Although there is an advantage in using national large data sets since the results can be generalized to the general population, I would argue that it is also important to

conduct cases studies in states such as Pennsylvania where Hispanics are not a significant minority.

## **2.6 COLLEGE PERSISTENCE**

Persistence has been defined in different ways. Some researchers define persistence as completing the first year of college while others defined it as obtaining an undergraduate degree and even enrolling in graduate school (Lee, Mackie-Lewis, & Marks, 1993). Yet, it is important to point out that some authors make a distinction between the terms persistence and retention although they are related. For example, Tinto (2012) stated that persistence is used from the student's perspective and retention is used from the institution's perspective. However, he acknowledged that the process of college persistence is a complex one and that it may be influenced by an array of personal, environmental, and institutional factors.

The questions of why some students leave college, especially disadvantaged and minorities, while others persevere have been addressed in the literature. Of particular importance has been the work of Tinto (1975, 1993, 2012), Astin (1999) and Nora and Cabrera (1996). I will start with Tinto's Interactionalist theory (1975) as is one of the most cited in the literature (Braxton, Hirschy, & McClendon, 2004). Tinto (1975) argued that, dropping from college,

can be viewed as a longitudinal process of interactions between the individual and the academic and social systems of the college during which a person's experiences in those systems (as measured by his normative and structural integration) continually modify his goal and institutional commitments in ways which lead to persistence and/or to varying forms of dropout. (p. 94)

Tinto's model gives prominence to academic and social integration which is affected by the student's initial goals of commitment to the institution and to college completion. He acknowledged that students come to college with different characteristics such as social class, gender, race, among others, and that these characteristics affect their formation of initial goals. However, he argued that after controlling for those characteristics, students who demonstrate higher degrees of integration (academic and social), would likely show greater commitments to their institutions and would persist until graduation from college. From a theoretical standpoint, Tinto's model is very comprehensive although others have criticized it because it is partially applicable to residential colleges; and it is neither applicable to two-year colleges nor to different racial and ethnic groups (Braxton, Hirschy, & McClendon, 2004).

Nonetheless, in later revisions of his model, Tinto (1993) takes into account the experience of older students, minorities as well as other factors that affect college persistence. An important idea that is strongly related to social capital is Tinto's concept of the stages that individuals experience when making their transition from high school to college. Basically, Tinto (1993) stated that individuals go through the following stages: Separation, transition, and integration. Individuals must "disassociate" with past communities (e.g., friends), adapt the norms and values of the college culture, and fully integrate into college by forging new ties that would help students adapt to their new role as college students. Integration would be more difficult for those individuals who chose to live at home, especially if their old networks do not support their college career. To sum up, to be successful in college, students must be socially and academic integrated.

In consideration to the importance of establishing connections with others, some authors have come up with more specific models that deal exclusively with specific areas of student

integration in college. One of the most cited models is Astin's (1999) model of student involvement. He defined *involvement* as "the amount of physical and psychological energy that the student devotes to the academic experience" (p. 518). Astin summarizes the types of involvement that are positively related to persistence. Among them are: Living on campus, joining organizations, participating in extracurricular activities, participating in sports, working part-time on campus, attending four-year colleges, interacting with faculty, and involvement with student government. He concluded that the more engaged students are in college, the more personal growth and learning would take place which in turn would help them integrate socially and academically. Thus, helping them persist in college rather than to withdraw. Astin's model of student involvement is closely related to Putman's social theory of civic engagement. In order to be involved one needs to be engaged with others in either organizations or clubs, or establish relationships with faculty. These social networks provide *bonding ties* which provide social and psychological support to students and *bridging ties* that could be useful for accessing information or other resources needed to advance one's career plans. These different ties are needed to feel connected to the university and thus persist in their studies. Nora and Cabrera's (1996) structural model of persistence studied the factors that have a direct and indirect influence on academic and social integration (and thus persistence) for both minority and White students. They found that for minorities who were freshmen in a PWI both parental support and encouragement, and the perception of discrimination were directly associated with their academic experience and social integration to that particular college.

It seems clear that students need not only to be engaged in their institutions, but also need support from differences sources. In Tinto's (2012) latest book, *Completing College: Rethinking Institutional Action*, he argued that most studies on student persistence have identified four

*conditions* that help student be successful in college and thus persist in their studies: Expectations, support, assessment and feedback, and involvement. Three of these conditions are related to social capital. That is, expectations and support from family members, especially parents and faculty, as well as involvement in college organizations help students access new resources while in college. He stressed that these conditions are *critical* in the first year of college. Tinto argues that, while in the past it was common to focus more on retention programs outside the classroom, the new student body requires higher education leaders to play close attention to what takes places in the classroom as some students, due to other responsibilities, may not have time to engage in social and academic activities outside the classroom. Therefore, a greater role is given to faculty who become in some instances the only representation of the institution.

Being able to afford college is one of the factors that affect student persistence particularly the availability of financial aid in the form of grants and loans. However, it is not the only factor according to Hu and St. John (2001). They strongly suggest that obtaining good grades and having other positive college experiences contribute to student persistence. In their analysis of the rate of persistence among the three largest ethnic groups (Whites, Blacks, and Hispanics) they found that there are differences in their persistence rates, but they were not due to availability of financial aid, but academic achievement. Although they asserted that this disparity among ethnic groups could be narrowed by improving the college experience of Hispanics (and Blacks), their college experience indicators only included grades, type of institution, housing, and year in college. Therefore, one of their limitations of their study is their lack of other measures of social integration; a limitation that they cite in their analysis. Other

significant findings were the following: Among the three ethnic groups, freshmen, older students and males were less likely to persist.

In the case of Hispanics who initially matriculated in a four-year college, Arbona and Nora (2007) pointed out that variables of academic integration such as enrolling in college right after high school, being a full-time student, and attending college continuously are strong predictors of college persistence. Furthermore, similar to what other researchers (Nora & Cabrera, 1996) have suggested, academic performance (measured by GPA) and the ratio of credits enrolled versus credits completed, are also two strong indicators. These two findings are important because as Arbona and Nora have suggested for minorities having a low GPA may be one of the reasons why they leave college even though the institutions have not put them on probation or have not asked them “to leave.” In the following sections I would discuss those factors that are closely related to social capital.

### **2.6.1 Participation in organizations, sense of belonging, and college environment**

Establishing connections with existing college organizations help student adjust to college and therefore persist. In a large national quantitative study (N=4,753) conducted by Fischer (2007), it was found that students’ engagement in *formal social* activities (i.e., clubs and organizations) has a positive impact on students’ academic achievement (measured by their GPA), and therefore college persistence. This was the case for Asians, Latinos, and Blacks, but not for Whites. However, Strayhorn (2010) conducted a quantitative study on Black and Hispanic males using a national representative sample from the NELS: 88/00 (N= 171,936 and N= 140,222 respectively) in which he found that participation in fraternities was negatively associated with student achievement, and therefore persistence. Establishing connections with others on campus is

important for students, but it is more critical for Latinos, especially if they are a minority on campus. As students become engaged, they also receive support (either academically or emotionally). Some Latino/as find helpful being engaged in a Latino organization, especially in a predominantly White institution (Hernandez, 2000). Other scholars have supported the importance of being involved in organizations and activities while attending college. For instance, a quantitative study conducted by Cerna, Pérez, and Sáenz (2009) found that measures of social capital, such as participating in community service and religious activities, were positively related to graduating from college or expecting to graduate from college. Their sample included 262, four-year institutions (both private and public) that took part in the 1994 Cooperative Institutional Research Program's (CIRP) survey of entering freshmen. Their sample also included graduates and "eventual college graduates." The latter were defined as those students who remained matriculated at their institutions after six years of college education. From these institutions the researchers used a sample of Hispanics that consisted of 1,323 Mexican-American students, 569 Puerto Ricans, and 1,065 students who belong to other Latino/a groups. Finally, a recent quantitative study conducted by Baker and Robnett (2012) found that Hispanics who were members of a student club had higher odds of remaining in college than those who were not. However, in this particular college, Latinos/as had a higher dropout rate than African-Americans. A possible explanation for this was that Latinos/as had more non-school ties than other students, making harder to establish school ties. The significance of this particular study is that pre-college variables (e.g., SES, academic preparation, and gender) were *not* associated with persistence in college.

Equally important for students is their social adjustment to college. In this regard the reception of the institutions, especially for minority students, plays a crucial role. Feeling

connected to one's institution creates a sense of fitting in that may have an impact on college persistence. A quantitative study conducted by Nuñez (2009) considered *sense of belonging* as social capital because it shows the characteristics of emotional and moral support which are closely linked to Stanton-Salazar's (1997) conceptualization of institutional support. Nuñez measured social capital by using direct measures such as easy navigation to campus; engagement in the community; and faculty who are interested in Hispanic students. The indirect measures she used were community service and being a second-generation immigrant. Her final sample included 362 students from nine different U.S. colleges located in nine different states. She found that Hispanic students who engage in class discussions, community service, and who have access to courses that deal with diversity show a stronger connection to their institutions, but it also makes students more aware of *hostile* campus environment. That is, a perception that the college environment excludes Hispanics and that they are not welcome in college. Moreover, her results suggest that being a second-generation immigrant has a negative effect on feeling connected to the university. One of her explanations, which is based on other studies (Portes & Rumbaut, 2001), is that individuals, who are second-generation, have experienced more racial discrimination than Latinos/as who are first or third-generation immigrants. However, she concludes that the research on this area is very scant and therefore, it would be useful to have more studies that address this important issue.

Researchers have also examined the within year persistence, particularly the first year, which for some authors is the most critical year (Nora & Cabrera, 1996; Tinto, 2012; Wells, 2008-2009) as it is during this time period that one can find more students leaving college (Hu & St. John, 2001). A study conducted by Kuh, Cruce, Shoup, Kinzie, and Gonyea (2008) found that students who participated in *purposeful* activities in their first year had better grades which in

turn affected their decision to return for a second year. These purposeful activities included 19 items from the National Survey of Student Engagement (NSSE) that deal with the interaction of students with faculty and with others in diverse situations such as classroom discussions or outside the classroom. Their sample included first year students from 18 colleges and universities who filled out the NSSE between the years of 2000 and 2003. The institutions were very diverse in terms of racial and ethnic composition. This finding is applicable to all ethnic and racial groups once other variables, such as parents' education and financial aid were controlled for, among others. This study supports Tinto's (2012) conclusion that student persistence is influenced also by what happens in the classroom. Therefore, institutions need to focus on the quality of instruction and experiences that take place in them and move beyond an emphasis on (retention) programs only. Faculty plays a critical role in engaging students in the classroom not only through meaningful activities, but also by providing logistical support to them. For instance, the authors concluded that it is important for institutions to "make the first year more challenging and satisfying" for their students (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008).

## **2.6.2 Institutional agents: Faculty and mentors**

### **2.6.2.1 Faculty**

In his article on social capital, Stanton-Salazar (1997) stressed the importance of students establishing relationships with institutional agents, creating a new social network that would help them access resources and support. In the case of higher education, the relationship of professors with students is a factor that influences college persistence. For instance, in a qualitative study conducted by Arana, et al. (2011), they found that students who have "passionate faculty" and supporting staff were more likely to persist. The authors acknowledged that some of the

limitations of their study is that it was conducted in a private setting and there was a low number of participants (N=33). Cole and Espinoza (2008) also concluded that for Latino students, who are pursuing a major in science, technology, engineering, and mathematics (STEM), having the support and encouragement of faculty is critical in their academic performance and thus their persistence in college.

Faculty plays an important role in student persistence. In a recent qualitative study, Museus and Neville (2012) described four key characteristics of faculty that help minority students persist and succeed in college. Those characteristics are the following: 1) faculty who share the same ethnic background of their students; 2) faculty who provide *holistic support* (e.g., not only academic, but also non-academic support); 3) faculty who *humanized* the educational experience (e.g., educators show genuine concern for their students and care about their success); and 4) faculty who connect students with other sources of information and support. Their participants were students in predominantly White institutions (PWI). These institutions varied in terms of their characteristics; they included three rural and one urban university. Out of the four universities, two were research universities, one was a comprehensive university, and the other was a community college. They highlighted the importance that educators have in helping students navigate the complexities of college life and the fact that persistence and success in college are complex processes that require the support of caring faculty members. They emphasized the importance that *trust* and *closure* play in faculty and student relationships. However, one of their key observations was that White faculty, even though they do not belong to the same ethnic group, could also provide access to social capital to minority students by understanding the unique cultural background of their students and by familiarizing themselves with the problems and challenges that minority students face. The researchers acknowledged the

limitations of their study in which purposive sampling was one of them. Moreover, they highlighted the need for further studies that target the differences among ethnic minorities as well as the differences in generational immigration and gender.

Other studies conducted with Hispanic groups outside the United States, have also shown that *academically-focused* interactions among faculty and students are important for academic performance in higher education and thus persistence (Dika, 2012). Although there seems to be strong evidence that faculty plays a critical role in college persistence a study conducted by Otero, Rivas, and Rivera (2007) found that interaction with faculty was not related to college persistence. Their study was done in a Latino dominant institution and included students who were at risk.

#### **2.6.2.2 Mentors**

Faculty is not the only social support that students can have on campus. Having mentors is also important if universities want their students to persist. A longitudinal study conducted among 71 Hispanic students supported this claim (Bordes-Edgar, Arredondo, Robinson-Kurpius, & Rund, 2011). Similarly, another study conducted by Hu and Ma (2010) found that participants of the Washington State Achievers (WSA), who were assigned a mentor, were more likely to persist in college. Hispanics were also more likely than Whites to seek support and encouragement from their mentors; they also perceived their experience of having a mentor as positive. Even though these studies deal with two different samples, (the first one is exclusively of Latino/a students and the second includes other racial/ethnic groups), their conclusions are similar; having someone on campus to guide the students in their college studies is significant in helping them persist. For instance, in an experimental study carried out by Montiel (2009) and whose sample was Latino students at risk showed that participation in a mentoring program greatly increased

the odds of passing their courses and therefore persist in their studies. Mentoring by faculty members has also been associated with college persistence among Hispanic students (Gloria, Catellanos, López, & Rosales 2005). Other studies have also found that Latino/a students, who have a mentor or have the “perception” of being mentored, have a positive opinion about their college environment (Bordes & Arredondo, 2005). To sum up mentors play a critical role in student persistence as institutional agents who provide support and encouragement as Stanton-Salazar (1997) argues.

### **2.6.3 Social networks**

Other researchers have identified certain student characteristics that predict whether or not students will graduate from college. In the case of Hispanics, who initially matriculated in a four-year college, Arbona and Nora (2007) asserted that two key pre-college variables were critical: parents’ expectations and having college-bound peers. Others (Otero, Rivas, & Rivera, 2007) have found that establishing ties with friends on campus was positively related to college persistence. In a quantitative study conducted by Duggan (2004), it was found that for students, who are first-generation, the use of e-mail helped them persist their first year in college. He reasoned that e-mail is a type of social capital that allows students to navigate better their transition to college. E-mail exhibits the *bonding* and *bridging* aspects of social capital as defined by Putnam. For instance, students are able to keep in touch with friends and family back home and also are able to create new relationships on campus. This is important as first-generation students show greater problems in adapting to colleges and e-mail usage may help them adjust to college life and thus persist. Furthermore, Fischer (2007) pointed out that students, regardless of their race/ethnic background, are more likely to remain in college if they

are able to build *informal social ties* (e.g., friends) on campus. For Hispanics keeping their off-campus relationships help them stay in college, however, for Blacks and Whites is the opposite.

The importance of social networks in higher education has been studied by Saunders and Serna (2004). They studied a group (N=10) of first-generation Hispanic students who participated in the program called *Futures* in California. This program was a college access and intervention program aimed at students who did not have any prospects of entering college and were at high risk of dropping out of high school. Participants were given the opportunity to create networks in high school that helped navigate their transition from high school to four-year colleges. They found that for these Latino/a students being able to create and mobilize new social connections in college was related to persistence. However, when students are for some reason reluctant or unable to access any type of social network, they are more likely to struggle in college. These findings support Lin's (2001) conceptualization of social capital in which it is necessary for individuals to realize that there are resources within their social networks, but they must take the initiative to use them and take actions that would benefit their prospect for succeeding in college.

#### **2.6.4 Type of institution**

Some studies have focused on the choice of institution as a source of college persistence (Arbona & Nora, 2007; Melguizo, 2009). This might be due to the perception that depending on the type of institution (two-year, four-year, public, private, for profit or non for profit) students would have access to social networks and/or institutional agents that would either hinder or facilitate college persistence. The type of institution is related to Coleman's social capital theory which states that even though students may come from a home that has low social capital, they can

compensate this by attending institutions that provide access to high social capital (e.g., in his study, religious schools provided high social capital). In this regard, several studies are concerned with the role that community colleges play in helping or discouraging students to complete a bachelor's degree by transferring to four-year colleges. There are some contradictory findings in the literature regarding community colleges. In an early study conducted by Lee, Mackie-Lewis and Marks (1993) it was found that there are no significant differences among students who began their higher education in community colleges and those who went directly to four-year colleges after high school. This holds true even though students who went to community college were from a low socioeconomic status and did not manifest any of the behaviors related to integration in the academic and social life of their colleges. They drew their sample from four waves of data from the high school class of 1980 from the *High School and Beyond* data set.

A more recent study supports Lee, Mackie-Lewis, and Mark's finding regarding the role that community colleges plays in attainment. Melguizo (2009) conducted a quantitative study to assess the impact of transferring from a community college in attaining an undergraduate degree as opposed to attending four-year colleges from the start. She used two samples as her cohorts: one from the *High School and Beyond Sophomore (HS&B/So) high school senior class* of 1982 and the other from the *National Education Longitudinal Study (NELS: 88/2000) high school senior class* of 1992. The number of participants was 220 students from the HS&B/So and 140 from the NELS. Melguizo expanded the model of student persistence introduced by Lee, Mackie-Lewis, and Marks (1993). According to this model, the main factors related to college persistence are: (1) students' background; (2) pre-college achievement and academic preparation; (3) transferring to a four-year college; and (4) institutional and state measures (p. 97). When

comparing both cohorts there was a substantial drop in college completion in the 2000 cohort in which over 60% of Hispanic students graduated compared to 82% in the HS&B/So cohort. The percentage of students who transferred from community colleges to four-year colleges increased dramatically from almost 10% in the first cohort to 46% in the second cohort. She concluded that although attending a community college first and transferring to a four-year college later does not significantly affect persistence in college, the graduation rates for Hispanics have decreased in both cohorts.

### **2.6.5 Family**

There are many social capital factors that influence the complex process of college persistence. For Hispanics, a very important factor is the family (Hernandez, 2000; Cejda, Casparis, Rhodes, & Seal-Nyman, 2008; Arana, Castañeda-Sound, Blanchard, & Aguilar, 2011; Ojeda, Navarro, & Morales, 2011). In a qualitative study carried out by Hernandez (2000), he found that for recent graduates and seniors in college, the family provided support, encouragement and “pressure” to these Hispanic students to persist in college. The family was the main motivation as students did not want to disappoint their parents by not graduating from college. The importance of the family as a source of social support through parental encouragement was also found as significant factor in college persistence *intentions* among Mexican-Americans. In their quantitative study, Ojeda, Navarro, and Morales (2011) found that parental encouragement accounted for more than half of the variance in the indirect relationship between intentions to persist and *familismo*. Although the family can provide support and encouragement, sometimes it is a crisis in the family or the inability to juggle family and school responsibilities at the same time that prompts a student to withdraw from college (Arana, Castañeda-Sound, Blanchard, & Aguilar, 2011). In a qualitative

study conducted by Gándara (1995) it was found that mothers were particularly a source of support for Hispanics. Although mothers did not provide financial support, they did provide “verbal support” and “encouragement” (p. 39). Even though the family may be a factor that affects persistence for other racial and ethnic groups, for Hispanics the family seems to exert a stronger influence. I would argue that this is not only due to a strong *familism*, but also to the fact that many Hispanic families are recent immigrants and therefore their family is the most immediate and the most trusted network that students have.

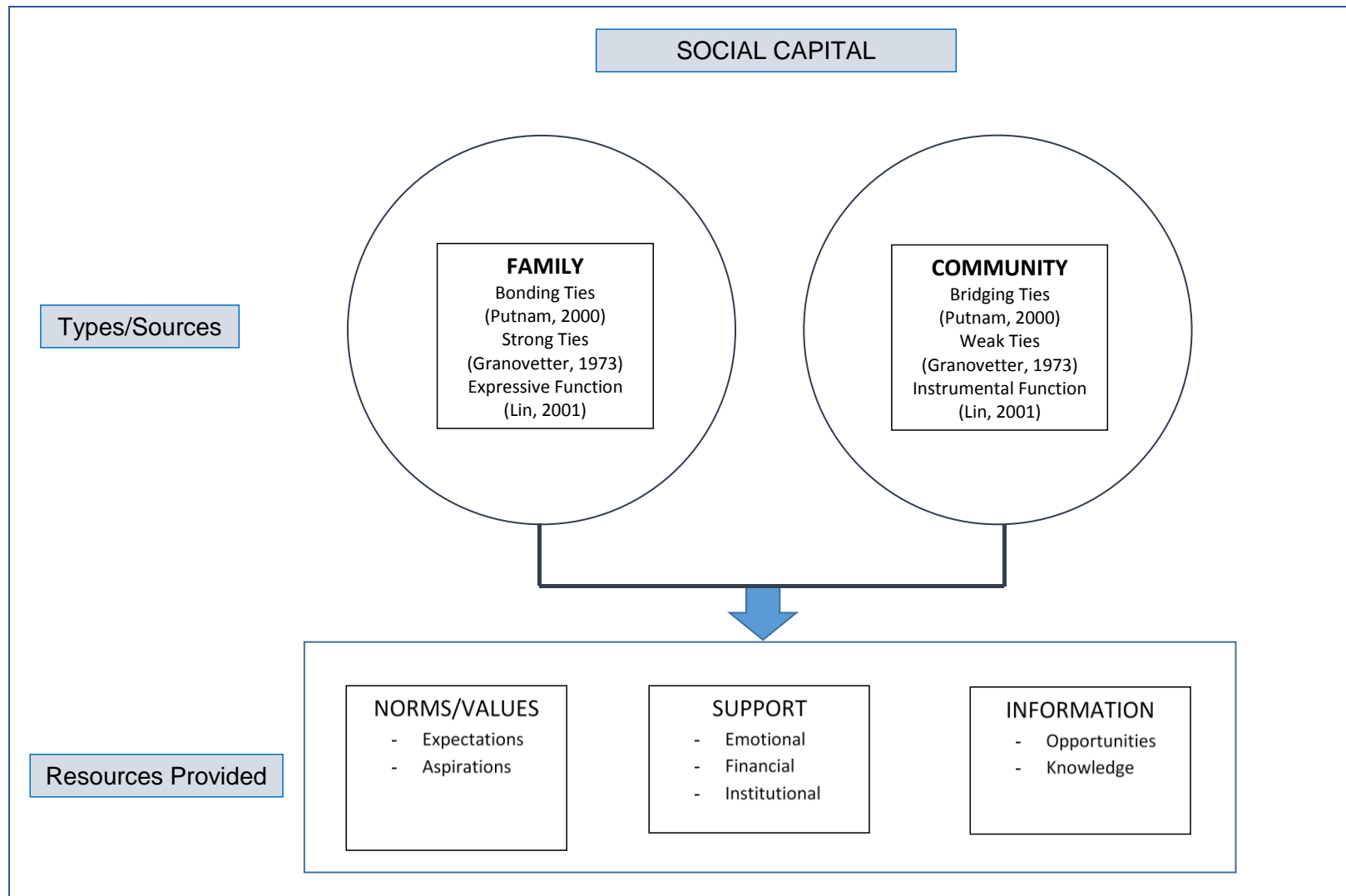
#### **2.6.5.1 Older siblings**

Another source of support that influences Latino/a college persistence is the role that older siblings may play in Hispanic families. (Gloria, Castellanos, Lopez, & Rosales, 2005; Sánchez, Reyes, & Singh, 2006). Older siblings could probably provide information and access to other networks on campus necessary for Latinos/as not to feel socially isolated. There are few references in the literature about the role of older siblings, but in my opinion is one that needs to be addressed closely. To my knowledge, Gándara (1995) was one of the first and perhaps one of the few researchers that raised the importance of studying the role of older siblings. In her qualitative study of fifty successful Mexican-Americans who obtained degrees from Ivy League institutions, she found that when participants were the youngest of their family, they were the only ones who made it to college. Gándara stated that for these participants having older siblings who did *not* attend college was their source of encouragement to attend college. Gándara rightly pointed out that in her study, “family size,” was not an obstacle to attend and persist in college. Her participants came from large families, with more than four siblings on average. Her finding contradicts Coleman’s initial assertion that the number of siblings is negatively related to the

creation of human capital. Her study is important because these professionals came from low-income families.

I would agree with Gándara's findings because it is common in the Latino culture to have older siblings sacrifice themselves by becoming economic providers for their families so that their younger siblings would be able to attend college. In this case, I would argue that there may be a positive relationship between having an older sibling (whether or not s/he has attended, or is attending, college) and college enrollment and persistence of younger siblings. This is one of the areas that I would like to explore in my dissertation study.

Figure 2.1 is a visual depiction of my interpretation of social capital as it relates to both college choice and persistence.



**Figure 2.1** Visual depiction of social capital

## 2.7 CONSIDERATIONS WHEN STUDYING HISPANICS

When studying Hispanics, it is important to take into account their acculturation because some differences in the variables studied may be influenced by the *level of acculturation* and this can result in misinterpretation of results (Padilla, 2004). For instance, Hurtado-Ortiz and Gauvain (2007) found a strong correlation between acculturation and college attendance. They pointed out that the more acculturated students are, the more likely they will be enrolled in a four-year college.

In the college retention (persistence) literature some authors have also suggested that it is important to study the role that acculturation plays in students who are highly bicultural as opposed to those who are monocultural (Castillo, Conoley, Choi-Pearson, Archuleta, Phoummarath, & Van Landingham, 2006). A quantitative study, conducted by Ojeda, Castillo, Rosales Meza, and Piña-Watson (2014), suggests that being acculturated to the mainstream White culture, but also maintaining the cultural identity with the Mexican-American culture is “positively” associated with college persistence. Moreover, they advance the theory of being bicultural. That is embracing the U.S. culture while maintaining their Hispanic culture. Some authors (Parra Cardona, Busby, & Wampler, 2004) prefer to use the term *cultural identity* instead of acculturation since the latter implies among other things losing the values and customs of the immigrant groups by adapting those of the host culture.

It is essential to highlight that there is no a perfect measurement of acculturation although there are several instruments developed to measure it. Acculturation is usually measured by (a) self-rated language proficiency; (b) language use at home; (c) preference for ethnic related activities (e.g., food, music, etc.); and (d) friends (Padilla, 2004). For this study acculturation is measured by using seven proxies: ethnicity of friends, language spoken at home, self-rated

proficiency of English and Spanish, language preference when viewing TV, and listening to music; as well as the frequency of eating ethnic foods. The proxies that I use are coming directly from the literature. Since my study is more descriptive, I describe the level of acculturation of the sample that responded my survey as well as the interviewees.

Another important mediating variable is that of generation of immigration that was previously discussed as I have previously mentioned in my literature review that there are a couple of studies that take into account immigration generation. For instance, first-time immigrants are more likely to enroll in public institutions than second-generation immigrants (Núñez & Bowers, 2011; Hagy & Staniec, 2002). Moreover, later-generations of Hispanics are more likely to be enrolled in college than first-generation Hispanics (Hurtado-Ortiz & Gauvain, 2007). For my study, it is also necessary to have a discussion on enclaves in order to determine if Hispanics who come to IUP are coming from a particular Hispanic enclave. I track enclaves by asking students about their high schools as this perhaps could influence their level of acculturation.

## **2.8 RESEARCH QUESTIONS IN MIXED-METHODS**

There are very few references in the literature on the necessity of researchers to have mixed methods research questions. Creswell (2014) points out that even though researchers omit the mixed-methods research question, *strong* mixed-methods studies *should* have them. There are three ways to write the research questions in a mixed-methods study: (1) researchers can write separate research questions for both the quantitative and the qualitative components of the study followed by a mixed method question; (2) researchers can write a *hybrid* research question that

could be the basis for subsequent quantitative and qualitative research questions; or (3) researchers can write separate questions for each component as they “emerged” (Tashakkori & Creswell, 2007).

Regardless of what model a researcher follows, Tashakkori and Creswell, (2007) suggest that mixed-methods studies should have at least one mixed method research question that reflects the *nature* of mixing approaches. They further elaborate that the formulation of questions will vary depending on the type of research design. For instance, in parallel designs the mixed methods research question could be formulated at the beginning of the study. On the other hand, in sequential designs, such as mine, the mixed-methods question could be formulated as the study progresses. I have formulated one mixed-method research question based on the purpose of using a mixed-methods approach for my study. My mixed-method research question is found in the following section.

## **2.9 RESEARCH QUESTIONS**

Some studies involving college Hispanic students (e.g., Desmond & López Turley, 2009; Turley, 2009; Butler, 2010) have indicated that Hispanics are more likely to either live at home while attending college or attend colleges that are closer to their homes. This is viewed as a manifestation of *familism* which is a form of social capital. One of the reasons for such pattern of behavior might be that closer-to-home colleges may have similar degrees of diversity than the nearby communities where many of their Latino students come from. Another reason is the advantages that living at home or attending a college close to home provides to Hispanic students (e.g., cost). Still, there are many Hispanic students who attend colleges that are located in regions

with very low Latino populations and/or have student populations with few Latino students and low diversity.

My dissertation research focuses on the Hispanic undergraduate student population attending IUP. The main campus of IUP is located in a rural area of the southwestern Pennsylvania region, which is predominantly White (95% White; African-American 2.7%; Hispanic/Latino 1.3% and 1% Asian) (U.S. Census Bureau, 2014b). Similarly, IUP has a student population with considerable low degree of diversity (White 76%; African-American 9.4%; International students 5.85% Hispanic 2.79%; Asian 0.97% (IUP, 2016). Thus, a question that begs to be answered is why Hispanic students decide to attend IUP in the first place, assuming that the vast majority of Hispanic students come from communities in which they have access to other community colleges as well as four-year colleges and universities that are closer to their residences and perhaps which would be more affordable. Moreover, Hispanic attrition is higher than that of Whites in this university. Therefore, an important question is to identify the social capital factors that helped Hispanics at this institution to persist past their freshman year as it has been suggested that students are more likely to drop out of college in their freshman year (Hu & St. John, 2001). Moreover, it would be helpful to find out whether or not those factors are the same for male and female Hispanic students as it has also been suggested that males are less likely to persist than females (Hu & St. John, 2001). Among Hispanics another important variable to take into consideration is the role that acculturation plays in college choice and persistence. Although I use the term Hispanic to refer to a person of any race that identifies with the Latin American cultures, it would be a mistake to assume that Hispanics are a “monolithic” group (Kao & Thompson, 2003). Quite the contrary it has been well documented in the literature that there are considerable differences among different Hispanic groups (Jensen, 2001). Some

researchers have highlighted the importance of also studying generational status (in terms of immigration) (Museus & Neville, 2011). Institution specific studies in this sense are useful as illustrations of these intra-group differences.

### **2.9.1 Research Questions**

Below is a list of three guiding research questions for this study.

1. What are the social capital factors that helped Hispanic undergraduate students to choose a four-year predominantly White public university?
2. What are the social capital factors that Hispanic students find helpful in persisting past their freshmen year and beyond?
3. How do the results of the qualitative data help to explain the results of the quantitative phase of the social capital factors that are relevant for college choice and persistence among Hispanic undergraduate students?

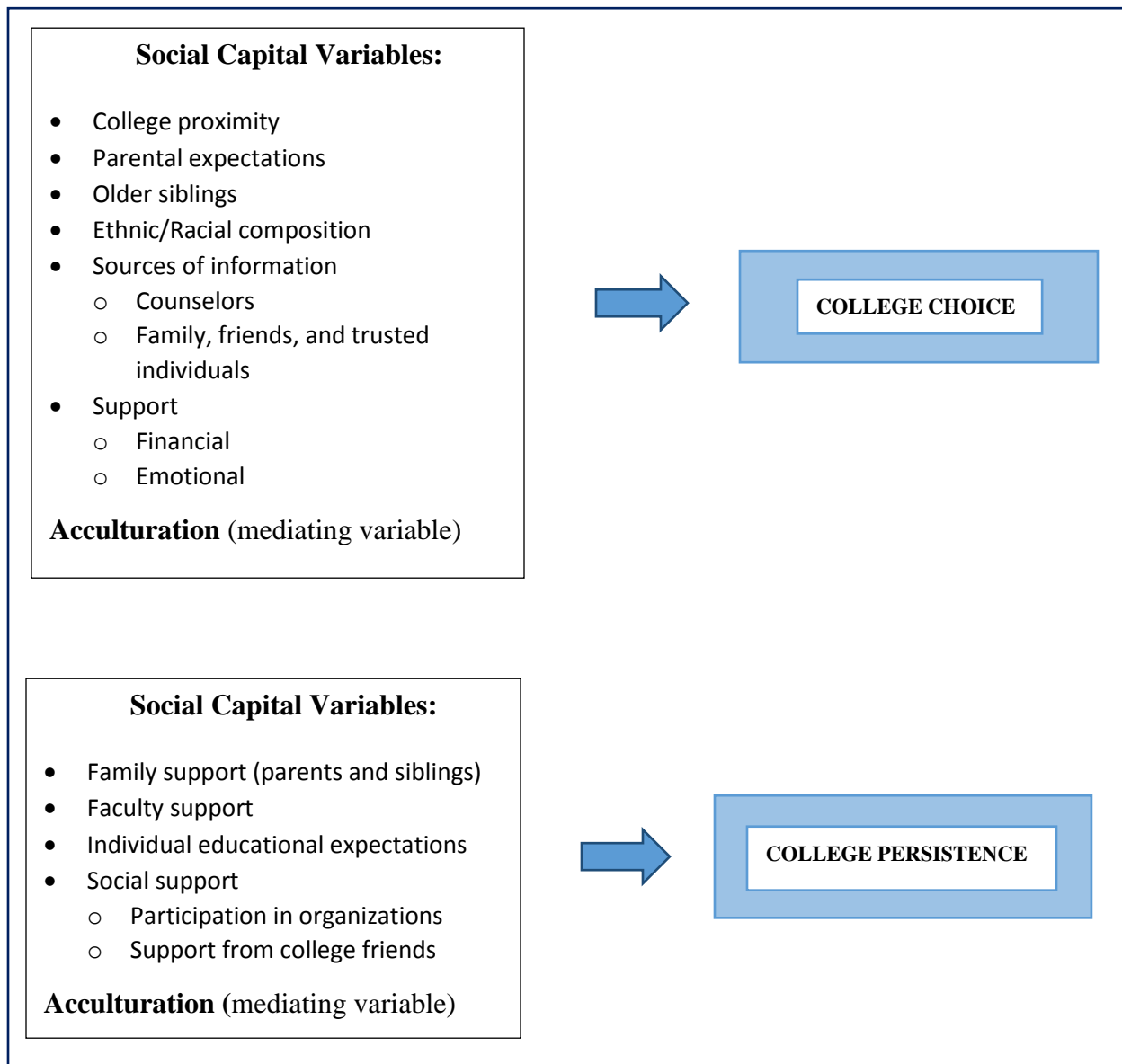
Based on the previous literature review I expect to find the following characteristics among the undergraduate Hispanic population.

1. Hispanic students obtain their information from trusted individuals especially their family. Female students obtain their information from institutional sources more than males do.
2. Involvement in college organizations helps students to persist past their freshman year.
3. When choosing IUP Hispanic students get their support from their families, but in order to persist Hispanic students need to have the support of faculty, organizations, and the friends that they have made here on campus.
4. It is possible that Hispanic students choose IUP precisely because it is a PWI.
5. There would be more second- and later-generations and bilingual students enrolled here than first-generation and monocultural (English-dominant) students.

My overall argument is that students who have chosen to come to IUP is because they have known someone who had experience with the university and they trusted their information.

Hispanics need to have ties with others in order to come here. Moreover, students who have older siblings, whether or not these have attended college, are more likely to attend this institution. Although family, friends, and trusted individuals are important in their decision to choose IUP, those who have persisted in college (e.g., persistence is defined as past their freshman year) have established relationships with institutional agents, namely faculty members and have created new ties in college. These ties could be established by being members of on-campus organizations although not necessarily of Hispanic nature. It is possible that many Hispanic students come here because it is a PWI. Therefore, college proximity as it has been suggested in the literature is not a factor in deciding to come to IUP, but the ethnic composition of the university is. While family and friends are important to choose IUP, it is the creation of new ties and networks that helped them the most to persist in this university.

Moreover, students who have developed a bicultural network, are generally second-generation, and who are bilingual will be more likely to be enrolled as opposed to those that are first-generation. Second-generation immigrants tend to be bilingual and therefore have developed a bicultural network as described by Stanton-Salazar (1995). This second-generation students, who are bilingual, are able to navigate easily both cultures and would likely represent a majority of those students who have persisted in this university setting. The main social capital variables derived from the literature review are depicted in Figure 2.2.



**Figure 2.2** A visual model of college choice and persistence among Hispanics in a PWI

## 2.10 CONCLUSION

The theoretical framework of social capital is very useful for studying the process of college choice and persistence in higher education among Hispanics. It is evident from the literature on college choice and college persistence that there are different forms and sources of social capital relevant for the Hispanic population. The sources of social capital are useful in providing support either emotionally, financially or motivational. As Coleman (1988) suggested parents exert a major influence in the educational outcomes of children. In the case of Hispanics in higher education, parents and the family as a whole influence their decisions to attend college and the type of institution they choose. Although cost is still an important variable in college choice, college proximity is more related to the concept of *familism* in Latin American cultures (Desmond & López Turley, 2009).

For Hispanics, the concept of family is extended beyond parents and siblings and may also include the extended family. More recent studies on both college choice and persistence have focused on the importance of the role of older siblings as sources of information and support to younger siblings (Gloria, Castellanos, Lopez, & Rosales, 2005; Sánchez, Reyes, & Singh, 2006). The research reviewed here clearly shows that for Hispanics the influence of the family is more pronounced than perhaps in other ethnic racial groups (Hernandez, 2000; Cejda, Casparis, Rhodes, & Seal-Nyman, 2008; Arana, Castañeda-Sound, Blanchard, & Aguilar, 2011). Peers and friends are also sources of social capital that influence the decisions of Hispanics to attend and persist in college (Arbona & Nora, 2007; Otero, Rivas, & Rivera, 2007). One of the most relevant findings is the role that faculty members play in student persistence (Arana, et al. 2011; Museus & Neville, 2012). Moreover, it seems evident from the literature the importance of

social networks in college; Hispanic students may need to establish both formal and informal *ties* in the campus community in order to be integrated (Fischer, 2007; Saunders and Serna, 2004).

For my study, it would be important to find out whether being involved in ethnic-specific organizations is relevant for Latinos to stay in college or just being associated with any type of campus organization would make a difference. It is also relevant to investigate whether or not the sources or forms of social capital varies among men and women as it has been shown that Hispanic females tend to have better/more networks in high school (Riegle-Crumb, 2010) than Hispanic males. Those networks helped females make their transition to college. Moreover, some studies (Hu & St. John, 2001) have shown that males are less likely to persist in college. As it has shown in the literature, *strong* and *weak ties* or as Putnam (2001) calls them (bonding and bridging) are important in accessing resources. More important for me is to identify institutional agents (e.g., faculty or staff members at the university) that may contribute in helping Hispanic students choose and persist in a four-year public university.

### **3.0 METHODOLOGY**

It is important to comment on the methodology employed by the authors to measure social capital in relation to college choice and college persistence. Among the empirical studies on college choice reviewed here, there was a heavy emphasis on quantitative methods, perhaps due to the availability of mega data sets (Perna, 2007) that allowed researchers to draw conclusions that could be generalized to the entire Hispanic population. The samples used in the studies range from a low of N=121 to a high of N=312,158 participants. Moreover, many of the studies reviewed here used longitudinal data that allowed researchers to observe changes of the same cohort over time. Another advantage of using quantitative methods is the ability of the researchers to control for other variables that could influence the college choice in their different phases. The most common statistical analysis used were regressions, ANOVA, and hierarchical linear modeling. Several studies used quantitative methods to study college choice and persistence (Alvarado & López Turley, 2012; Arbona & Nora, 2007; Baker & Robnett, 2012; Bryan, Moore-Thomas, Day-Vines & Holcomb-McCoy, 2011; Cerna, Pérez, & Sáenz, 2009; Desmond & López Turley, 2009; Duggan, 2004; Fischer, 2007; Nuñez, 2009; Núñez & Bowers, 2011; O'Connor, Hammack, & Scott, 2010; Oseguera & Malagón, 2011; Perna, 2000; Perna & Titus, 2005; Riegle-Crumb, 2010; Strayhorn, 2010; Zarate & Gallimore, 2005). Despite the use of large data sets, some studies did not make distinctions among different Hispanic groups and different generation of immigrants. Perhaps the main reason for not making these relevant

comparisons was the lack of representative samples of those specific populations. In studying college persistence there were also some studies that used qualitative methods, especially those that dealt with Hispanic populations. The rationale for using qualitative methods is to explore and understand problems and issues from the participants' point of view (Creswell, 2014). Due to the nature of qualitative research, the *inductive method* is commonly used to identify general *themes* (Creswell, 2014). There were several studies that dealt with college persistence that used different qualitative research designs. Among those were grounded theory, thematic analysis, unitizing and categorizing, and case study. The limitation of qualitative studies is that generalizations cannot be made to the general population, but their findings could be *transferred* to other cases. However, the reader is the one who decides whether or not the findings are transferable (Guba & Lincoln as cited in Mertens, 2010). Although qualitative studies were usually exploratory, they validated previous findings of other studies that used quantitative methods. Thus, I use a mixed-method case study for my dissertation research. Data were collected through a quantitative online survey and afterwards I interviewed a couple of students to get their perspectives on their decision making process of college choice and persistence.

### **3.1 CASE STUDY**

This study examines a single case higher education institution as the unit of analysis; IUP is a single four-year public university that is also a PWI in Western Pennsylvania. Yin (2009) makes a strong argument on the utility of case study as a research tool. He states that a case study approach is used when investigating a *contemporary phenomenon*. In this study the phenomena

are college choice and college persistence of Hispanic undergraduate students. He also adds that the use of a case study is determined by the type of research questions researchers posit.

An important point made by Yin is his response to criticisms of case studies for lacking *scientific generalization*. He points out that due to the uniqueness of case studies there are issues with external validity. However, he argues that case studies deal with “*analytic*” generalization. That is, the purpose of the case study is “to expand and generalize theories” and not to provide *statistical generalization* (p. 15).

Case study research does not have to be equated only with qualitative *evidence* as a case study can also rely on quantitative data collection. In this particular study, I use mixed-methods (explanatory) to collect data. The following sections elaborate on my epistemological assumptions as well as an explanation and description of the type of mixed-methods used in the study.

### **3.2 EPISTEMOLOGICAL ASSUMPTIONS**

When conducting research, it is important for readers to be familiar with the researcher’s philosophical perspectives because they do have an impact on research (Creswell, 2014). These philosophical perspectives, often called paradigms (Mertens, 2010) or philosophical worldviews (Creswell, 2014) deal with questions of how one perceives reality (*ontology*), how one acquires knowledge (*epistemology*) and the approaches used by researchers to gain that knowledge (*methodology*) (Guba, 1990). According to Morgan (2007), there are many definitions of paradigms; however, he defines “paradigms as systems of beliefs and practices that influence how researchers select both the questions they study and methods that they use to study them”

(p. 49). The most common philosophical worldviews or paradigms are: *post positivism*, *constructivism*, *transformative (also called participatory)* and *pragmatic* (Mertens, 2010; Creswell & Plano Clark, 2011). It is not my intention here to explain each of them, but to elaborate on the one that I identify the most, in this case the *pragmatic* paradigm. In the *pragmatic* paradigm, also called the *pragmatic approach* the choice of *what* to study and *how* to study is influenced not only by epistemological, ontological, and methodological issues, but also by our own values and politics (Morgan, 2007). Therefore, it is essential that the readers understand not only the personal background of the researchers, but also their overall personal and academic experiences in order to identify biases or limitations of their research studies. Mertens (2010, p. 11) summarizes the characteristics of the *pragmatic paradigm* based on the works of Guba & Lincoln and Morgan, as follows:

- There is only one reality; individuals have their own *interpretation* of that reality.
- Researchers determine what relationships are appropriate for a particular study.
- Researchers match methods to specific questions and purposes of research. Mixed methods are usually used. That is both quantitative and qualitative data are collected.

For Creswell (2014), another important characteristic of the *pragmatic paradigm* is that “... research always occurs in social, historical, political, and other contexts.” (p. 11). Among pragmatic researchers it is common to use mixed-methods.

### **3.3 DEFINING MIXED-METHODS**

Johnson, Onwuegbuzie and Turner (2007) assert that there are many definitions of mixed methods. After analyzing multiple responses of experts in the field of mixed-methods, they came

up with the following definition: “Mixed methods research is the type of research in which the researcher or a team of researchers combines elements of qualitative and quantitative research approaches ... for the broad purposes of breadth and depth of understanding and corroboration.” (p. 123).

### **3.3.1 A brief history of mixed-methods research**

The reason why researchers began using mixed-methods could be traced back to ancient times when Western philosophers engaged in debates regarding the existence of one or multiple realities to study world phenomena and generate knowledge. The debates of the utility of both quantitative versus qualitative research were still being held in our modern era (Johnson, Onwuegbuzie & Turner, 2007). Mixed-methods emerged as an answer to this debate. Some authors (Johnson, Onwuegbuzie & Turner, 2007) view mixed-methods research in the middle of those two *extremes*. In their view, mixed-methods research tries “to respect fully the wisdom of both of these viewpoints while also seeking a workable middle solution for many (research) problems of interest.” (p. 113). Although the use of mixed-methods can be traced back to the beginning of the 20<sup>th</sup> century, the term “mixed methods” was not initially used.

### **3.3.2 Rationale for using a mixed-method design**

My literature review suggests that quantitative methods have been the preferred methods for studying college choice and social capital due to the existence of large data sets and the advantage of generalization of their findings to the general population. On the other hand, one finds not only quantitative studies but also qualitative studies in college persistence. The main

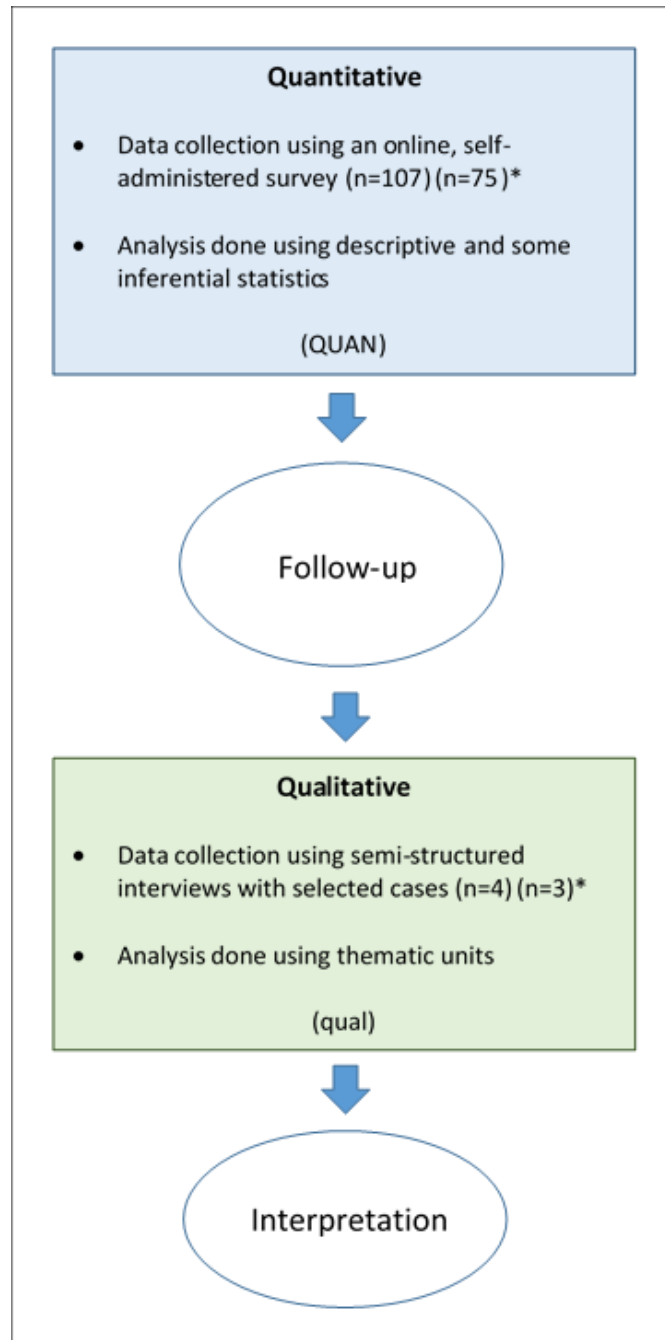
purpose of the qualitative method is not that of generalization, but of getting the stories of the participants through their own voices. There are very few studies that have used a mixed-methods approach. It has previously been stated that both quantitative and qualitative research methods have advantages and disadvantages. For my study I view the mixed-methods approach more appropriate because I see the shortcomings of using only one type of methods can bring. For instance, when conducting surveys, researchers are not able to ask participants to expand or clarify their answers. By using both quantitative and qualitative methods I am able to get a more complete answer to my research questions. As Creswell (2014) points out, there are two justifications for using mixed-methods. One of them is that by using both methods one can compensate for their shortcomings. This is what Creswell calls a “*general level*” justification and the second justification is at the “*procedural level*.” Mixed-methods are probably a better choice when one of the objectives of researchers is to use qualitative data to “explain” or elaborate the quantitative data.

### **3.3.3 Types of mixed-methods designs**

There are several types of mixed-methods designs and several authors have come up with different names for those designs depending on their field of study. (For a summary of these designs see Creswell & Plan Clark, 2011, p. 56-59). Within the field of education Creswell (2014, p. 220-221) describes six designs: *Convergent Parallel*, *Explanatory Sequential*, *Exploratory sequential*, *Embedded*, *Transformative* and *Multiphase*. For my research I use the *Explanatory Sequential Method* which I explain in more detail below.

### **3.3.3.1 Explanatory sequential mixed-methods design**

This design involves the collection of quantitative data first and a collection of qualitative data second. The main purpose of collecting qualitative data is to “explain” in more depth the quantitative data. (Creswell, 2014; p. 224). Figure 3.1 explains the quantitative and qualitative components of my design. In the first phase of the data collection, a cross-sectional, self-administered online survey is represented by capital letters (QUAN). This indicates that the quantitative findings from this study have priority over the qualitative findings. It was during the first phase that a greater number of individuals participated in order to get an overall description of the Hispanic population as well as to identify the variables that merited further study in the qualitative phase of my research. The follow-up phase was through the use of four semi-structured ethnographic interviews. This phase is represented by lowercase letters (qual) as this indicates that it plays a secondary and more of a supporting role. The four participants, one from each standing class (e.g., freshman, sophomore, junior, and senior), were purposefully selected (Creswell & Plano-Clark, 2011). This was a *criterion sampling* approach (Patton, 1990, p. 176) because I chose the qualitative participants from those who had already taken the online survey and who had shown interest in participating in a follow-up personal interview. One of the many objectives of the personal semi-structured interviews is to illustrate and elaborate on the quantitative findings by getting the participants’ stories. Therefore, the number of interviewees is not comparable to the number of respondents in the quantitative phase. Below is a visual model created by following the recommendations of Creswell (2014).



**Figure 3.1 Visual model depicting a mixed-methods sequential explanatory design**

### **3.4 QUANTITATIVE SURVEY METHODOLOGY**

There are several survey methods for data collection: mailed questionnaires, Internet (Web) surveys, telephone interviews and face to face interviews (Blair, Czaja, & Blair, 2014). For my study I selected an Internet survey. Although internet surveys are known for having problems with *coverage bias*, *response rate* and *frame bias* that threaten the validity of the survey. (Blair, et al., 2014); for my study *coverage* and *frame bias* do not constitute problems since all college students have an e-mail account and have access to the Internet. Moreover, I was able to reach all students who have identified themselves as being Hispanic or having Hispanic origin via the university Latino recruiter. To deal with the low response rate, I sent two friendly reminders as this increases the response rate (Blair, et al., 2014).

### **3.5 QUALITATIVE – THE SEMI-STRUCTURED INTERVIEW**

As it was explained earlier, the qualitative phase follows the quantitative phase of this study and it is used to further illustrate and explain the quantitative results. For this phase, I used the semi-structured interviews. I have included in the appendix the general questions that guided the protocol for my interviews. There are different ways to conduct research interviews and one of the most common is the semi-structured interview. Wengraft (2001) states that this type of interviews “are designed to have a number of interviewer questions prepared in advance but such prepared questions are designed to be sufficiently open that the subsequent questions ... cannot be planned ... but must be improvised in a careful and theorized way” (p. 5). Therefore, not all

the questions that I asked could be written in the protocol in advanced, especially since each participant provided different answers that needed different follow-up questions.

### **3.6 SETTING AND TARGET POPULATION**

My study was conducted at Indiana University of Pennsylvania (IUP), which is a public university that belongs to Pennsylvania's State System of Higher Education commonly known by the acronym PASSHE. IUP is the largest of the 14 PASSHE public institutions and it is the only one that grants doctoral degrees. It was originally founded as the Indiana Normal School in 1875. Throughout the years it changed names several times until in 1965 it adopted its current name (IUP 2007-2014a). IUP has its main campus in Indiana, PA, and three branch campuses in Punxsutawney, Monroeville, and Northpointe. Both the Indiana and the Punxsutawney campuses are residential campuses. The campus in Monroeville is exclusively for graduate programs (IUP 2007-2014b). The students who attend the Punxsutawney campus usually take classes to prepare them for their transition to college life. It offers two programs: the first year experience, and in the summer the Punxsutawney Advance College Experience (PACE). At this branch, students can start almost any major that it is offered at the main campus (IUP 2007-2017c). IUP offers approximately 135 majors in their main campus in Indiana. Many students who attend IUP are first-generation college students.

In the fall of 2014, there were 13,797 students enrolled in the Indiana campus, 230 students enrolled in Punxsutawney, 132 students enrolled in Northpointe, and 210 enrolled in Monroeville. For the year 2014, the total undergraduate population was 12,130. Out of that population, 440 were of Hispanic origin which represents 3.65% of the entire undergraduate

enrollment. It is noteworthy that the enrollment of undergraduate Hispanics students increased 17.3% in 2014. It is also important to observe that the freshman class increased almost 28% that same year.

The gender breakdown of the total student population is as follows: 54.85% females and 45.15% are males. For the Hispanic population, 55.35% are females and 44.65% are males which closely resembles the percentages of the general student body. A great majority of students are from the state of Pennsylvania. Table 3.1 shows the breakdown of the fall 2013 and 2014 for the Hispanic population.

**Table 3.1** Enrollment of Hispanic students at IUP (all campuses)

<b>Fall 2013 and Fall 2014 -Hispanic Students by Gender and Class</b>				
<b>Class</b>	<b>Fall 2013</b>		<b>Fall 2014 Preliminary</b>	
	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>
Freshman	89	72	121	85
Sophomore	55	44	47	40
Junior	40	26	50	35
Senior	31	18	34	28
<b>Undergraduate sub- totals</b>	<b>215</b>	<b>160</b>	<b>252</b>	<b>188</b>
Undergraduate total	<b>375</b>		<b>440</b>	
Masters	9	12	6	11
Doctoral	7	9	6	14
<b>Subtotal</b>	<b>231</b>	<b>181</b>	<b>264</b>	<b>213</b>
<b>Total</b>	<b>412</b>		<b>477</b>	

*Source:* Information provided by Latino recruiter (Personal communication, October, 2014).

Similar to the ethnic composition of the county where the main campus is located, IUP is a PWI with low numbers of Hispanic students. Despite having a low number of Hispanic students, the university has seen the importance of reaching out to Hispanics and in the fall of 2012 they hired a Latino recruiter (IUP, 2007-2014d) to help in the efforts of increasing the enrollment of

Hispanics. His office is located on the main campus. The freshman enrollment went up from 161 in the fall of 2013 to 206 in the fall of 2014. Twenty-six Hispanic students out of a total of 411 students are currently matriculated in the Punxsutawney campus. Out of the 411 Hispanic students, 80 students are transfer students from other universities (Personal communication, November 5, 2014).

Despite their low number of Hispanic students, IUP has several Latino/Hispanic student organizations. Among those are the Hispanic Heritage Council, Laso, Ritmo Latino, TLACUILO Honors Society, and SACNAS. There is also a retention program called CALSA which stands for Caring about Latino Student Achievement. This program was developed by faculty and students (IUP 2007-2014e).

There are however no curricular structures in place that speak to the Latina/o experience as one would find in states such as Texas or California. Moreover, the percentage of faculty who identify as Latina/o is small. In the fall of 2015, out of 757 faculty members, only 11 of those identified themselves as being Latino/a (1.5% of the total faculty). The percentage of Hispanic staff is smaller (1.3%) as there are only Hispanic 10 staff members out of 766.

### **3.6.1 IRB Approval**

In order to conduct my study, I obtained the approval of both the University of Pittsburgh and Indiana University of Pennsylvania institutional review boards. I obtained the approval from the University of Pittsburgh on October 19, 2014 (IRB#: PRO14040068). I submitted it as an exempt study because I am not dealing with sensitive topics, the participants are at least 18 years of age, and the responses to their survey are anonymous. Moreover, answering the survey poses minimal risks to the participants. On January 21, 2015, I received the IRB approval from IUP (Log #14-

351). However, I eliminated some questions to shorten the survey and also I modified the wording of the consent forms. These changes were approved on February 11, 2015.

### **3.6.2 Instruments**

#### **3.6.2.1 Online survey**

I collected my preliminary quantitative data through a cross-sectional, self-administered, online survey. I developed the survey using *Qualtrics* as it is the software required by the University of Pittsburgh due to its high level of security. The survey was developed specifically for this study, but it is based on the main variables identified in my literature review. The survey includes questions related to demographic information as well as questions related to college choice and persistence. The instrument is made up of dichotomous, Likert scales, categorical and ordinal items.

Appendix A describes in detail the research questions of this study in the first column, the variables in the second column, the theoretical basis for choosing a specific variable in the third column, and the specific survey questions to measure those concepts in the fourth and last column. For instance, for the first research question on social capital factors related to college choice, one of the main independent variables is college proximity. The third column briefly summarizes the main findings of the studies conducted by Alvarado and López Turley (2012), Desmond and López Turley (2009), and Núñez and Bowers (2011), which suggested that Hispanics tend to apply to fewer colleges and they prefer to attend the college that is closest to them. In order to measure the importance of college proximity for the participants, I asked four related questions (CP1-CP4) which are listed on the last column of Appendix A.

As the reader can observe each research question for both college choice and college persistence is presented in Appendix A as indicated above. The importance of having this type of information is to ensure that each question asked in the online survey was linked to a key variable and that was based on the literature.

### **3.6.2.2 Personal oral semi-structured interviews**

For the qualitative phase, I used oral semi-structured interviews. The protocol of the interviews is guided by some open general questions (see Appendix E). However, during the personal interviews some other questions were asked. The section below describes the type of questions that were used during the four personal interviews.

### **3.6.2.3 Interview: Type of questions**

The interview started with *ice breaker* questions (Creswell, 2014) to establish rapport with the participants, the main questions that pertain to the study covered background information of the participants and their family, questions related to reasons for coming to IUP, sources of information used, and factors that helped students persist past their freshman year. The only freshman student answered questions related to college choice and not persistence. Besides the main open questions, I also asked some probing questions when it was pertinent. As King and Horrocks (2010) suggest that not all probing questions can be anticipated before the interview. Therefore, some probing questions did emerge during the interview and I wrote these questions down. Based on the works of Patton and Rubin (mentioned in King and Horrocks, 2010, p. 53), probing questions can be classified into three types: *elaboration, clarification, and completion*. In the interviews that I conducted, I was able to ask these three types of questions. Table 3.2

details the procedures and the descriptions for data collection. See Appendix D for the consent script.

#### **3.6.2.4 Recording and note taking**

An important part of the data collection that merits explanation is the data recording and its purpose. For the face-to-face interviews, I recorded the interviews using a recording device. Sideman (2006, p. 114) provides four benefits of recording the interviews: (1) it is a method of *preserving* the original data, (2) researchers can go back and check the *accuracy* of their transcriptions, (3) the recordings can be used to improve interviewing techniques, and (4) participants can also go back and ensure that the information they provided will be treated responsibly. Besides, recording the interview, as I mentioned earlier, I also took notes during the interview. The reasoning behind the use of notes is that sometimes researchers can have problems with technology (e.g., the equipment fails or the recording is of poor quality) (Creswell, 2014; King & Horrocks, 2010).

### **3.6.3 Participants**

#### **3.6.3.1 Online survey**

The online survey was sent to all 365 students who self-identified as Hispanic, who were at least 18 years of age, and who were currently registered in the spring semester of 2015. Out of those potential participants, 107 completed the survey. Freshman students (n=32) only answered the questions that dealt with college choice; the rest of the student participants (n=75)—sophomores (n=34), juniors (n=24), and seniors (n=17)—answered the questions that dealt with both college choice and persistence. All participants answered the demographic as well as the family

background sections. This was a self-administered survey and cross-sectional as it was administered only once. To increase participation, I provided each participant the opportunity to be entered into a raffle to win six cash incentives of \$50.00 each. After I collected and closed the survey in *Qualtrics*, six winners were randomly selected and were notified via e-mail of their selection.

### **3.6.3.2 Personal interviews**

After I closed and analyzed the survey results, I sent an e-mail message to 79 students, who expressed their willingness to participate in a follow-up interview. These students also participated in the quantitative phase of the study. Out of the 79 students who expressed interest, 40 of them replied to my invitation. From this sample, I followed a purposive sampling method to identify one student to represent each standing class (Creswell, 2014; Patton, 1990). I also created a waiting list in case I needed more interviewees to illustrate each outstanding class. This constitutes my four interviewees and I conducted semi-structured interviews to get their stories. The main questions for the in-depth interviews were open-ended and they were conducted in my office.

One particular issue discussed in the literature is the number of participants needed to conduct a qualitative study. In his review of the literature on qualitative methods, Creswell (2014) found that there is variation in the number of participants depending on the design chosen by the researcher. In my case, the qualitative phase is a complement of the quantitative phase and it is used more for an illustrative purpose. My qualitative study is a case study, specifically a multiple case study (Yin, 2009), since I interviewed more than one individual to illustrate the college choice and persistence of undergraduate Hispanics. For case studies, Creswell states that their samples are usually four to five cases. Other authors, such as Charmaz (cited in Creswell,

2014, p. 189), suggest using the concept of *saturation* in which the researchers stop collecting data because they are no longer gathering any new information to create new *themes* or *categories*.

### **3.6.4 Procedures**

#### **3.6.4.1 Online survey**

To avoid cold calling participants, the Latino recruiter at this university cooperated with me in sending a letter via regular email to all those students who were registered at the university during the spring term of 2015, inviting them to participate in the study. The letter was sent on February 19, 2015. On March 2, 2015, the Latino recruiter sent an e-mail message to all Hispanic students who were currently enrolled in the Indiana and Punxsutawney campuses. The e-mail message contained a link to the online survey. The e-mail message as well as the online survey had an introductory consent script. The consent script explained the purpose of this study, the sections of the survey, incentives for participants, the estimated time it would take to complete the survey, how their privacy would be guarded, as well as the contact information of the principal investigator. Once participants completed the survey, they were asked whether or not they would like to participate in a drawing of six cash incentives and in a follow-up interview. Those who answered yes were also asked to provide a campus as well as a secondary e-mail addresses in case I needed to contact them after the semester was over. It was made clear to the students that their personal information was *not* going to be linked to their answers in their survey.

In order to recruit more Hispanic students and thus increase their participation in the survey, presidents of two Latino student organizations were contacted so that they could

advertise the study to their members. Moreover, the Latino recruiter is an advisor to other student organizations and he also promoted the survey.

After the survey was sent to the students, two additional e-mail reminders were sent. The first reminder was sent two weeks after the survey was sent and the second notification was sent a week later on March 23, 2015. This was done in order to increase the participation rate. Moreover, a thank you e-mail was also sent to all those who answered the survey. The survey was available for participants to respond to until April 11, 2015. The consent script was embedded in the survey. One of the demographic questions asked the age of participants. This ensured that only participants who were at least 18 years of age took the survey.

There were minimal risks to participate in this study, including a potential breach of confidentiality. However, every effort was made to avoid this. I eliminated any identifying information, in this case I eliminated the e-mail addresses from the results obtained via *Qualtrics*. Participants were asked to provide their e-mail address only once, so that I would be able to correspond with those students who, if selected, wanted to be interviewed for the follow-up qualitative phase of the study and/or to participate in the drawing of the six cash incentives. All digital files and hard copies of files related to this study will be kept under lock and key.

The research questions and the final survey questions are listed in Appendix A. Appendix B has the entire online questionnaire that was administered.

#### **3.6.4.2 Personal Interviews: Contacting participants and obtaining consent**

The four participants who participated in the in-depth oral interview were contacted via e-mail. After selecting the four students, I sent them a personalized message in which I indicated the time and place to conduct the interviews. This follow-up message was sent the day before the interview. All four interviews took place in my office in the Indiana campus in the week of April

20, 2015. On the day of the interview, participants received a written consent script which they read out loud. The consent script had all the ethical considerations outlined in the literature (Creswell, 2014; King & Horrocks, 2010). For instance, the voluntary nature of their participation, their right to withdraw from the study, how their private information will be kept confidential, and their compensation among others. Participants also chose a pseudonym before starting the interviews. All four interviews were digitally recorded in order to represent with accuracy the information shared with me. Moreover, I also took notes during the interviews in case the recording failed due to poor sound quality. The interviews lasted between 30-60 minutes. Table 3.2 presents the procedures for the personal interviews.

**Table 3.2** Procedures for data collection, qualitative phase

Steps	Description of Procedures
1. IRB Approval	IRB approval from the University of Pittsburgh was obtained on October 19, 2014. The initial approval from the IRB of IUP was secured on January 21, 2015. Final approval of changes to the consent form as well as an elimination of some questions was given on February 11, 2015. I started my data collection until I received the final approval.
2. Selection of Participants	The purposeful sample was drawn from the same sample that took the survey. Participants indicated in their survey if they wanted to do a follow-up interview by providing their e-mail addresses.
3. Contacting Participants	Initially participants were contacted via e-mail. Since I did not know their class standing because their personal information was not linked to their survey responses, I asked them in the e-mail I sent to them their year in college (freshman, sophomore, junior, or senior). The four participants selected were contacted again via e-mail for a personal face-to-face interview.
4. Consent to be interviewed	The day of the interview participants were given a consent script which they read out loud. The consent script specified the rights that they have as participants such as withdrawal from the interview, risks, confidentiality, and compensation among others. Participants also chose a pseudonym.
5. Type of questions to be asked	To establish rapport with the participants there were as Creswell (2014) outlines in his book, some <i>ice-breaker</i> questions. Followed by the main research questions that deal with the student background, their sources of information, the reasons why they chose to come to this institution, and the factors that helped them persist in their studies. There were also some probing questions as appropriate to either elaborate, clarify and/or complete information provided by each participant.
6. Recording and note taking	I recorded the interviews and also took notes during the interviews.

### 3.6.5 Validity and Reliability

#### 3.6.5.1 The Survey

Two important issues that are important to consider with any type of survey is the validity and the reliability of the survey. An instrument is valid if it measures what is supposed to measure and reliable if it is *consistent* in its measurement (Huck, 2008). In order to increase the validity and reliability of the survey I pilot tested the instrument with two individuals and received feedback from several content area experts. First, I did a cognitive interview with the IUP Latino recruiter in August 2014. Conducting a cognitive interview is the most-used method to *evaluate survey questionnaires* (Willis, 2005), as it often reduces survey error (Tourangeau, Rips, & Rasinski, 2000). I used the *think-aloud* and *verbal probing techniques* (Willis, 2005, p. 42). The purpose of this cognitive interview was to ensure that the questions I developed were easily understood. As a result of this interview, I changed the wording in some questions that could be misunderstood by the target population. Ideally it is best to use cognitive interviews with prospective participants; however, I decided to do it with the Latino recruiter as he is a young Hispanic male and has experience working with many prospective college students. Therefore, he is more familiar with the type of language and words that are easily understood by the participants. The cognitive interview took a little longer than an hour.

After making the necessary changes, I also conducted a pre-test of the survey with a former college student, who is Hispanic, in September 2014. The purpose was two-folded: to time how long it would take for the participant to take the survey and to go over some questions that he did not understand or had trouble understanding. After he took the survey, he pointed out to some specific questions that could be interpreted in different ways. As a result of his feedback, I changed the wording of a couple of questions that were not so clear to him. One of the

questions was related to the sources of financial support and going to a professor's office hours. The cognitive interview as well as the pilot testing increased the validity and the reliability of the instrument I developed.

After I developed the survey in Qualtrics, I also tested the survey by taking it myself to make sure that the format of the survey was easy to follow and to identify any other technology glitches. I also asked the Latino recruiter to review it and he provided some important feedback in terms of the layout of the format. I made those corrections and I also took the survey using different web browsers and also using a mobile phone.

### **3.6.5.2 Validity and reliability in qualitative research**

Validity and reliability are as important in qualitative research as they are in quantitative research. However, they mean different things in qualitative research. According to Gibbs, *qualitative validity* has to do with checking for accuracy of the findings and *qualitative reliability* deals with the use of procedures that are “consistent” with those used by other researchers (Creswell, 2014, p. 201). In order to establish the credibility of my study I used some of the *validity strategies* recommended by Creswell (2014). The first one is *member checking*. After I finished transcribing relevant parts of the interview, I provided participants with a copy of the summary of the transcription of their interview via a profile so that they could check for accuracy. Another strategy is to clarify the biases that I bring to the study. As a researcher, I explained to the interviewees my academic background, my experience as a Latin American, my experiences with the topic and connections to the university in which I conducted my study. The third strategy is to present *negative* or *discrepant* information on the themes that emerge. Since I interviewed different individuals, I recognized that their experiences would not be identical. By

having multiple voices, the topics of college choice and persistence were better illustrated and explained by the Hispanic student participants.

In order to establish reliability, Yin (2009, p. 79) recommends to have a detailed protocol of the case study which contains not only the instrument, but also the procedures. I did this by providing a detailed description of the plan with all the steps from data collection to analysis that were followed. The purpose of a detailed protocol is to allow other researchers to follow those procedures.

### **3.6.6 Data analysis and interpretation**

#### **3.6.6.1 Surveys**

For the survey the main analytical tool would be the use of descriptive statistics as the response rate was not high. The aim of the study is more descriptive in nature and comparisons among groups are restrictive to this sample and not to the Hispanic population at large. The aim of the study is to describe not to make statistical inferences to the larger population. Creswell (2014) recommends to have a list that represents the procedures that were used so that the reader has a better idea of how the data were analyzed and interpreted. Table 3.3 represents those steps outlined by Creswell (2014) that I used to help guide my study.

**Table 3.3** Procedures for data analysis and interpretation for the quantitative phase

Steps	Procedures
Step # 1 The sample	I reported the number of potential participants (target population) and the number of respondents who took the online survey and I provided the response rate.
Step #2 Addressing response bias	I conducted a wave analysis. According to Leslie, (cited in Creswell, 2014, pp. 162) this analysis consists of checking the responses of certain items weekly in order to identify changes in the responses.
Step # 3 Descriptive analysis	Descriptive statistics such as percentages and the mode are presented for all variables. The mean and standard deviation are presented for those variables when appropriate.
Step # 4 Interpretation of the results	The results are presented in tables and figures and how the results answered my research questions and the relationship of my findings with the literature on the topics of college choice and persistence.
Step # 5 Implications for practice and future research	The conclusions of the quantitative phase provided not only implications for practitioners in general, but also helped me identify the variables I should emphasize in my qualitative phase of the study.

### 3.6.6.2 Personal Interviews

In order to analyze the qualitative data, I followed the steps highlighted by King and Horrocks (2010) and Creswell (2014). The first task in data analysis is to decide whether or not one should do a partial or full transcription of the interviews (King & Horrocks, 2010). Since I have worked as a transcriber in the past, I know how time-consuming is to do full transcriptions. Moreover, full transcriptions are not always necessary as long as researchers obtain answers to their questions. Then a partial transcription with *relevant* information suffices (Foss & Waters, 2007). Thus, I did a partial transcription paying attention to either established themes in the literature or emerging themes and I created a profile for each participant. Only those parts that I considered relevant were transcribed. Once their profile was done, I contacted the participants via e-mail and sent them their profile. Due to time constraints, I could not ask them to come to my office to check a hard copy of their profiles. I sent those the last week of April and they were able to provide me with feedback. I received the last feedback from the interviewees on May 21, 2015.

Another related sub-step that I took was to type the field notes that I took during the interviews. This was important because these notes could then be stored digitally and retrieved at any time in case the data of the interviews were damaged or lost. Another step I took was the decision to use hand coding (rather than coding through a computer software program).

According to Creswell (2014), codes can fall in these three categories: *expected*, *surprising*, and *unusual*. Expected codes refers to those topics that are based on the literature and *common sense*. *Surprising* codes refer to those topics that researchers did not expect to find when they started their research and *unusual* codes are those particular to one or more cases that have a *conceptual* importance to the audience at hand. Another important step I followed was to conduct a thematic analysis. Once the data were coded, I then identified themes, between five-to-seven themes as recommended by Creswell (2014). In order to identify what constituted a theme, there needed to be some sort of repetition across the interviewees, usually in two or more interviews although King and Horrocks, (2010) point out that themes could be unique to a single interviewee. However, the themes needed to be different in order to make meaningful interpretations of the data. One of the final steps of data analysis was the representation of the themes. Since my qualitative data were based on interviews, I presented the information with description information about each participant in a table along with excerpts from the transcribed interviews under the themes already identified.

The final step in data analysis was interpretation. I compared the qualitative data with the results of my quantitative data and the findings in the literature review. Table 3.4 presents the steps I followed for data analysis and interpretation.

**Table 3.4** Description of procedures for data analysis and interpretation

Steps	Description of Procedures
1. Transcribe interviews and type my notes	I did a partial transcription as a full transcription is too time consuming. Moreover, I typed my notes.
2. Member checking	I sent the participants with a summary of the transcription written as a profile of the interview to check for the accuracy of my transcription. They were also asked to inform me if there was anything they would want me to change or not disclose.
3. Coding the data	Topics that emerged, were discussed in the literature, or that were common sense.
4. Identification of themes	Themes needed to be different and repetitive to be considered as such.
5. Representation of themes	Presented in description of the cases in a table with excerpts of the transcribed interviews.
6. Interpretation of the data	Compared findings with the results of the quantitative data and with those findings discussed in the literature on college choice and persistence among Hispanics.

### **3.6.7 Limitations**

One of the limitations of this study is not being able to generalize the findings due to the small sample size. However, my intention was not to be able to generalize the results of my study to the general Hispanic population, but to better understand the particular characteristics of the population that attends the case study university in hopes that other researchers or practitioners could either replicate or transfer some of my findings to similar institutions (e.g., four-year institutions and PWI located in states where the percentage of Hispanics is low).

### **3.7 CONCLUSION**

As a researcher, I identify more with the pragmatic paradigm. Thus, mixed-methods was the most appropriate choice to answer my research questions. By using mixed-methods, specifically the explanatory sequential design, I was able to further illustrate and explain the main quantitative findings as well as to report new ones. All ethical considerations were followed by securing the approval of the IRBs from both the University of Pittsburgh and IUP. The instrument, developed exclusively for this study, was reviewed by content experts as well as pilot tested using cognitive interviews. It was also approved by the IRBs of both universities. Late changes made to the instrument were also approved by the IRBs.

A brief rationale for using both surveys and semi-structured interviews was presented. Participants in both phases (quantitative and qualitative) were given a consent form. For the online survey, the consent was embedded at the beginning of the survey. For the personal face-to-face, semi-structured interviews, the consent was given prior to the interview and participants read it out loud. In order to increase the participation rates of the online survey, two additional reminders were sent to those who had not taken the survey yet. Validity and reliability were established for both phases of the data collection and analysis. A detailed protocol for the data collection, analysis, interpretation, and presentation for both phases of this research was followed in this study.

The following chapter explains in detail the sample population who participated in both phases of data collection. Moreover, the results and analysis of both the online survey and the semi-structured interviews are presented using tables and graphs.

## **4.0 DATA ANALYSIS AND RESULTS**

The purpose of this mixed-method research study was to identify the social capital factors that helped Hispanic students to choose to attend a four-year public PWI, and to identify those social capital factors that helped them persist past their freshman year and beyond. To that end, an online survey was developed to identify these factors, followed-up by four personal interviews. The survey was sent to all 365 self-identified Hispanic undergraduate students who were also registered during the spring semester of 2015. The sample for the interviewees was selected from those who had already taken the on-line survey.

### **4.1 DEMOGRAPHIC AND BACKGROUND INFORMATION**

The number of undergraduate Hispanic students registered in the spring of 2015, in both campuses: Indiana and Punxsutawney, was 365. Although the preliminary numbers in the fall of 2014 (see Table 3.1) show a higher number of students, the reason for this discrepancy, according to the Latino recruiter of this institution, is that not everyone who completed the admissions process in the fall of 2014 registered for the spring, (personal communication, February 19, 2015). Table 3.1 also included students from all campuses, and one can also assume that some students graduated in the fall of 2014. Therefore, the target population of my study

was 365 students who were matriculated in the spring of 2015. This undergraduate population included 28 students who were matriculated in the Punxsutawney campus as well.

All self-identified Hispanic undergraduate students from both campuses were invited to participate in the online survey. Out of those 365, 107 students completed the survey (29.3% response rate). To address the issue of response bias, I conducted a wave analysis to check if there were weekly changes for certain items and variables. There were three waves of responses. The first wave produced 68 responses, the second wave 32, and the third wave 7. I conducted a t-test to compare the means of several variables (e.g., the importance of living away from home and racial composition of the university, support from parents and siblings, first-college generation). There were no significant differences among the responses. The only variable that was statistically significant was the number of organizations. Respondents in the first and third waves were involved in more organizations than those who responded during the second wave. However, there were no significant differences in terms of GPA.

The age of the respondents ranged from 18-37 years and the mean age was 20.01 years. Most participants (91.6%) graduated from Pennsylvania high schools; the remaining 8.4% participants came from the following states: Florida, Indiana, New Jersey, Ohio, and Virginia. The mean GPA for the sample was 3.08. Forty-four percent of this sample were first-generation college students.



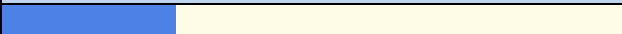

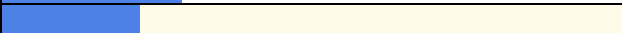

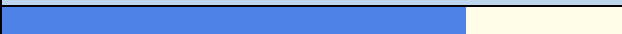

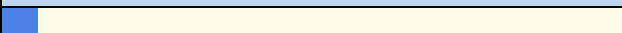

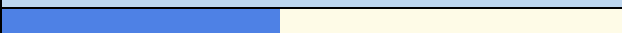
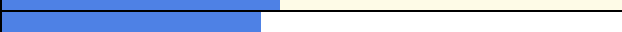



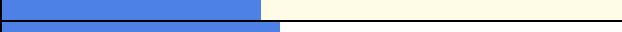


The majority of the respondents were female (77%), full-time students (99%) who live on or near campus (93%). Ninety-seven percent of the respondents were attending the Indiana campus while only 3% were attending the Punxsutawney campus. Almost one-third of the respondents were sophomores (32%). Most students were employed (53%). Those who were employed held part-time jobs (96%) and worked on campus (54%).

In terms of immigration generation, a majority of the students are second- or third-generation (86%) while only 14% percent are first-generation. I used the terminology from the U.S. Census Bureau (2013) to determine first-, second-, and third-generation students. A person born in another country is considered first-generation. An individual born in the United States, but with at least one parent born abroad is considered second-generation, and third-generation (and later-generations) are those whose parents were born in the United States. The countries of birth, of those students who are first-generation immigrants, are as follows: Mexico, Dominican Republic, Colombia, El Salvador, Honduras, Guatemala, and Venezuela. There were four students who were born in Puerto Rico. However, Puerto Ricans are U.S. citizens and are considered native born (Brown & Patten, 2013) and when referring to those who come to the United States from the island of Puerto Rico, the term used is that of “migrants” instead of immigrants. Forty second-generation students had at least one parent who was born abroad. The places of origin for more than half of their parents, were Puerto Rico and the Dominican Republic. Other countries of birth included Colombia, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, and Venezuela. Second- and later-generations were combined for analysis purposes because of the manner in which the question was formulated, it did not allow to distinguish between these two.

When compared with the target population (N=365), this sample has an over-representation of females. Other characteristics of the target population are unknown. Therefore, other comparisons cannot be established. However, we can compare this sample to the Hispanic population at large with information provided by the Pew Research Center for Hispanics (2015). In 2013, 35.2% of Hispanics were deemed first-generation compared to 18% in this sample. Hispanics of Mexican origin were 64.1% while in this sample they only account for 30%.

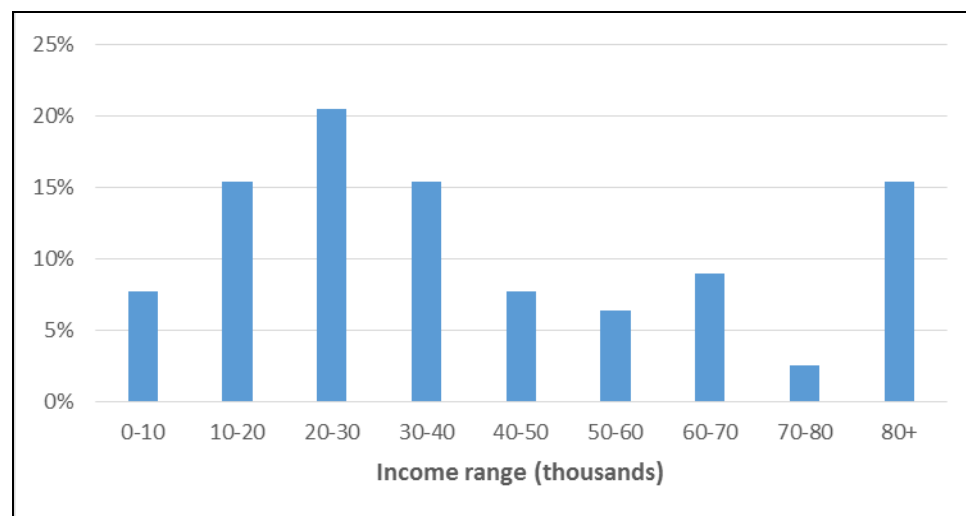
Moreover, 22.8% first-generation immigrants were enrolled in college. In this sample only 14% of Hispanics, enrolled in the spring of 2015, were first-generation. Table 4.1 summarizes some of the main characteristics of online survey respondents.

**Table 4.1** Characteristics of online survey respondents

<b>Gender</b>		<b>Responses</b>	<b>%</b>
Male		25	23
Female		82	77
Total		107	100
<b>Class Standing</b>		<b>Responses</b>	<b>%</b>
Freshman		32	30
Sophomore		34	32
Junior		24	22
Senior		17	16
Total		107	100
<b>Campus</b>		<b>Responses</b>	<b>%</b>
Indiana		104	97
Punxsutawney		3	3
Total		107	100
<b>Commuter</b>		<b>Responses</b>	<b>%</b>
Yes		7	7
No		100	93
Total		107	100
<b>Work</b>		<b>Responses</b>	<b>%</b>
Yes		57	53
No		50	47
Total		107	100
<b>Work</b>		<b>Responses</b>	<b>%</b>
Full-time		2	4
Part-time		55	96
Total		58	100
<b>Work</b>		<b>Responses</b>	<b>%</b>
On campus		31	54
Off-campus		26	46
Total		58	100
<b>First-generation college</b>		<b>Responses</b>	<b>%</b>
Yes		47	44
No		60	56
Total		107	100

Another important characteristic is that of income. Figure 4.1 shows the median income brackets of this sample. When compared with the median income of Pennsylvania (Census, 2015), 25% of

the respondents reported incomes of \$55,000 and above and 49% percent reported incomes below the median income. Twenty-nine percent did not want to disclose their family yearly income. However, in analyzing those who did not respond the income question, I used their parents' occupation to get a better idea of their economic status. Most online participants who did not answer the income question were found in the lowest economic strata and others in the highest economic strata. Thus, their non-response did not have a significant impact on the final percentages presented here.



**Figure 4.1** Yearly family income

#### **4.1.1 Hispanic enclaves**

When compared to states such as Texas, California, Florida, and New York, Pennsylvania has a low percentage of Hispanics (Brown & Lopez, 2013). However, the Hispanic population has increased dramatically from 2000 to 2010. For instance, there are some counties that have a higher percentage of Hispanics than those observed at the state level. Counties such as Lancaster

(8.65%), Philadelphia (12.29%), and Berks (16.37%) have a large Hispanic population. Some cities within those counties have an even higher percentage of Hispanics. For example, 39.33% of the population in Lancaster are Hispanics and in Reading, the Hispanic population is 58.16%. The borough of Kenneth Square, located in Chester County, has 48.80% of Hispanics. (U.S. Census, 2010). Puerto Ricans and Dominicans predominate in the Philadelphia area whereas persons of Mexican origin are concentrated in Southern Chester county (e.g., Kenneth Square) (Garcia, 1997).

An analysis of the high schools provided by the online respondents shows that out of the 95 online respondents who graduated from high schools located in Pennsylvania, 45.26% (n=43) are coming from schools located where there are Hispanic enclaves. For instance, 21% graduated from schools located in Philadelphia. However, it is important to clarify that online survey respondents listed 16 different Philadelphia high schools. The ethnic composition of the Philadelphia high schools, for instance, were as follows: 6 were predominantly Black, 4 diverse, 2 predominantly Hispanic, and 2 predominantly White. Two participants did not provide the specific name of their high school. It is also worth mentioning that almost 55% of the respondents graduated from high schools located in non-Hispanic enclaves. Most online survey respondents are coming from the eastern and central part of Pennsylvania and are attending IUP which is located in the west.

## **4.2 RESULTS: COLLEGE CHOICE**

The following section presents the results for college choice and it is based on my first research question that was as follows: What are the social capital factors that helped Hispanic students to choose a four-year predominantly White public university? In order to answer that question, I created a model for college choice that includes several variables that indicates the sources of social capital as well as the resources derived from social capital that helped students make their decisions to choose this institution over other institutions. As it was discussed in the literature on social capital, authors have used many variables as proxies to measure social capital. In my college choice model, I measure social capital by the following variables: college proximity, parental expectations, having older siblings, and the ethnic composition of the university. I also included variables related to the sources of social capital as well as the resources that social capital provides (e.g., information, financial, and emotional support).

### **4.2.1 Variables**

#### **4.2.1.1 College proximity**

The first variable that I have is college proximity. My rationale for using college proximity as an important variable that influences the decision to attend this particular university resides in the fact that recent literature on college choice (Butler, 2010; Núñez & Bowers, 2011; Núñez, Sparks, & Hernández, 2011; Turley, 2009) states that Hispanics tend to choose institutions that are closer to their homes due to financial and emotional reasons. This is a result of *familismo* a characteristic of Hispanic families. In my survey, I measure the importance of college proximity

by using a 5-point Likert scale, where 1=not important at all, to 5=very important. The question in the survey was as follows: “Q20. Please indicate how important was for you to live close to your family when attending college.”

Results are shown on Table 4.2.

**Table 4.2** Importance of living close to home

<b>College Proximity</b>	<b>Responses</b>	<b>%</b>
Not important at all	22	20.5
Somewhat unimportant	22	20.5
Neither important nor unimportant	33	31.0
Somewhat important	23	21.0
Very important	7	7.0
<b>Total</b>	<b>107</b>	<b>100.0</b>

Forty-one percent of the survey respondents expressed that living close to their families was either somewhat or not important at all. Only 28% viewed living close to their family as either somewhat important or very important. For 31% of the participants, this was not an important factor when deciding to attend this university. In order to triangulate this information two additional questions were asked. The first question was related to the number of institutions Hispanics students applied to, besides IUP (see Table 4.3).

**Table 4.3** Number of institutions applied to besides IUP

<b>Number of Academic Institutions</b>	<b>Responses</b>	<b>%</b>
None	14	13
1	8	7
2	18	17
3	27	25
4 or more	40	37
<b>Total</b>	<b>107</b>	<b>100</b>

As it can be observed, 87% of the survey respondents applied to at least one or more institutions besides IUP. The second question was related to the proximity of those institutions to their homes compared to the proximity of IUP. Table 4.4 shows that only 10% of the students, who applied to other institutions, expressed that IUP was closer to their homes. However, for 40% of the survey respondents IUP was the farthest institution that they applied to.

**Table 4.4 Proximity of Other Academic Institutions**

<b>Proximity to their homes</b>	<b>Responses</b>	<b>%</b>
All were closer than IUP	37	40
Some were closer than IUP	47	50
None was closer than IUP	9	10
<b>Total</b>	<b>93</b>	<b>100</b>

In order to avoid the fallacy of finding what I was looking for, I had an open question at the end of the survey in order to triangulate the information given in the survey. The open question reads as follows: “Q43. Why did you choose to attend IUP over other colleges?”

It is very revealing that living away from home was one of the top answers given by students. Approximately 19 students (18% of the total sample (n=107) stated that being away from home was one of the reasons why they were attending this particular college. Similar results were obtained in the qualitative part of the study which are discussed in the next section.

#### **4.2.1.2 Parental expectations**

The second independent variable in my model was parental expectations. As it was stated earlier, one’s social capital provides norms and values. In this case, parental expectations, influenced students to choose a four-year college, in this instance, IUP. Survey results show that parental expectations for this sample were high.

**Table 4.5 Parental expectations**

<b>Educational attainment</b>	<b>Response</b>	<b>%</b>
High school	13	17
Bachelor's degree	38	51
Master's degree	12	16
Doctoral degree	12	16
Total	75*	100

\* missing values are not included

This is very important because even when parents did not have a college degree, they expected their offspring to have a college education. For instance, in this sample 46% of the mothers and 57% of the fathers had a high school diploma or its equivalent; however, only 17% of parents expected their offspring to get a high school education only. That is, there was not a strong association between their parents' education and their parents' educational expectations. However, parents had lower expectations for males than females. For instance, 33% percent expected their sons to obtain only a high school diploma while for females that percentage was only 13%. There is an overrepresentation of females in this sample. But, it is possible that the reason why males pursue higher education less than females may be due to cultural expectations. That is, males are expected to enter the workforce as soon as they are able to.

#### **4.2.1.3 Older siblings**

The third variable of source of social capital was having older siblings. It has been stated that having older siblings, who had also experience with the college process, is related to being enrolled in college as they provide valuable information on applying to college (Ceja, 2006; Hurtado-Ortiz & Gauvain, 2007). Survey respondents answered two related questions: the first question asked them if they had older siblings. 65% of the survey respondents reported that they have older siblings (see Table 4-6).

**Table 4.6 Number of Older Siblings**

<b>Number of older siblings</b>	<b>Responses</b>	<b>%</b>
None (I am the oldest)	38	35
1	40	37
2	16	15
3	7	7
4	2	2
5 or more	4	4
<b>Total</b>	<b>107</b>	<b>100</b>

A second related question was what percentage of those who have older siblings are attending or have attended college. Sixty-two percent of those who have an older sibling, have attended or are attending colleges as it is shown on Table 4.7.

**Table 4.7 Siblings college attendance**

<b>College Attendance (past or present)</b>	<b>Responses</b>	<b>%</b>
Yes	43	62
No	26	38
<b>Total</b>	<b>69</b>	<b>100</b>

#### **4.2.1.4 Ethnic/racial composition of the university**

The fourth variable that I selected was the ethnic composition of the university. One of the assumptions that I made was that the ethnic composition of this university was important because Hispanic students may want to attend a PWI, so they can have access to a different social capital from what they have been exposed or because they feel more identified with the mainstream culture. Therefore, I asked the following question: “Q22. How important was for you the ethnic/racial composition of IUP in deciding to study here?”

Only 26% considered the ethnic composition as being either somewhat important or very important. Therefore, my hypothesis that Hispanic students chose to come to this university

because it is a PWI is not supported by the results of this survey. However, this could be due to the fact that 52% of the students (out 107 who responded this question) stated that they were coming from high schools in which White non-Hispanic students were a majority. Therefore, for these students diversifying their social capital networks was not essential for them. Additionally, 25% comes from diverse schools. In my survey, diverse schools were defined as those high schools in which there was not a clear majority of any ethnic/racial group. This may further explain why the ethnic composition of this university was not an important factor.

Another factor that may be at play is the formulation of the question. For instance, it could be possible that a survey respondent knew several Hispanic students, who were either attending or planning to attend IUP, and assumed that IUP was either a very diverse university or one that has a considerable percentage of Hispanic students. Thus, in future studies there should be a question that specifically addresses whether or not students are aware that a specific college/university is a PWI. Then, a follow-up question should be asked regarding the importance of being a PWI. In the qualitative phase of this study, I asked participants precisely those two questions. The results of the personal interviews are discussed in section 4.5.

#### **4.2.1.5 Sources of information and encouragement**

##### ***Institutional agents: Counselors and teachers***

The literature on Hispanics asserts that the interactions with institutional agents (e.g., counselors, teachers) are important for Hispanics to choose a four-year college (Riegle-Crumb, 2010). Results in this survey show that 100% of the survey respondents had school counselors in their high schools and 83% percent had discussions with counselors about attending college. Moreover, 61% percent had discussions on how to apply for financial aid. This is an important

finding as the literature suggests that Hispanics tend to choose community colleges because they lacked information on how to finance education in four-year colleges. Counselors, then, are important sources of information on how to enroll and finance college in general. However, only 11% of the respondents indicated that their counselors suggested to choose IUP as their college choice and an additional 12% of the survey respondents reported that other high school faculty or staff encouraged them to choose IUP.

### ***Parents and friends***

The literature on college choice states that for Hispanics the main sources of information that they tap into, when deciding to attend college and which particular institution to attend, are: family, friends, and institutional agents, namely counselors and teachers. (Oseguera & Malagón, 2011; Pérez & McDonough, 2008; Sánchez, Reyes, & Singh, 2006). Thus, it is assumed that students decided to attend IUP because they knew a trusted person who had either come to this institution or a family member or a friend who was familiar with this institution. Survey respondents answered four related questions:

Q31. How many of your close friends back home, attended or are attending IUP?

Q33. Are any of your relatives attending or have attended IUP?

Q35. How did you first learn about IUP?

Q36. Who encouraged you to choose IUP?

Survey results indicate that out of the 107 participants, 32% learned about IUP through a friend. This is consistent with the percentage of survey respondents who had a friend who attended or was attending IUP as 32% of them did. However, in terms of encouragement, only 22% of the survey respondents indicated that their friends encouraged them to choose IUP. Table 4.8 provides a summary of results for all sources of information used by the survey respondents.

**Table 4.8 Sources of Information: First Learned about IUP**

<b>Sources of Information</b>	<b>Responses</b>	<b>%</b>
Internet search	18	17
IUP representative	15	14
My high school counselor	6	6
Another faculty/staff from high school	9	8
My parents	7	6
My siblings	3	3
Other family member	2	2
A friend	34	32
Other source	13	12
<b>Total</b>	<b>107</b>	<b>100</b>

What it is very interesting is that 17% of the survey respondents learned information about IUP via the Internet. The percentage of students who used this source of information was higher than the percentage of students who relied on their family members, including their parents, for information about IUP (11%). An analysis by gender reveals that both males and females have diverse sources of information. However, friends were still the number one source for both genders.

However, when analyzing the source of encouragement; that is, who encouraged them to choose IUP, parents were the number one source of encouragement as 26% of the survey respondents indicated that their parents encouraged them to choose IUP. (See Table 4.9). It is relevant to point out that when the family (parents, siblings, and other family members) is considered as one source of encouragement, the percentage of survey respondents, who were encouraged by their family, goes up to 34%. That is, more than one-third of the students in this sample chose IUP because their family encouraged them to do so.

**Table 4.9** Who encouraged participants to choose IUP?

Source of encouragement	Responses	%
My high school counselor	12	11
Another high school staff/faculty	14	13
My parents <sup>a</sup>	28	26
My siblings <sup>b</sup>	5	5
Other family members <sup>c</sup>	3	3
A friend	24	22
Other source	21	20
<b>Total</b>	<b>107</b>	<b>100</b>

Note: <sup>a,b,c</sup> When these are added together they represent 34% of the valid responses.

#### **4.2.1.6 Support**

The last two independent variables of my model were the resources derived from their social capital, in this context the financial support provided by the institution as well as the emotional support derived from friends, siblings, and parents were taken into account.

##### ***Financial support***

One of the main reasons why Hispanic students attend community college is that of cost. In my model one variable that is relevant to explain college choice is financial support. I wanted to explore what sources of social capital provided information to Hispanic students on how to finance college and who/what provided the financial support for these students. Two issues are important here: one, the source of information and two, the source of funding. Results from the online survey show that the main source of information on how to finance their education at this institution was their parents as 40% of them indicated in the survey. Counselors also played an important role in providing information about financing college. Twenty-six percent of the online respondents indicated that they were their main source of information. This is not surprising as results show that 61% of the survey respondents had discussions with their school

counselors on how to apply for financial aid. Other sources of information are shown in Table 4.10.

**Table 4.10** Sources of Information: How to finance their college education at IUP

Source	Responses	%
My parents	43	40
A sibling	2	2
A friend	6	6
A high school counselor	28	26
A staff member from IUP	10	9
Other	18	17
<b>Total</b>	<b>107</b>	<b>100</b>

Federal student loans (79%) and grants (52%) were the most cited sources of financial support. It is worth mentioning that 31% of the survey respondents indicated that their parents were also an important source of financial support. Moreover, 45% of the survey respondents who applied to other institutions (n=93), indicated that IUP offered them more financial aid than the other universities that they applied to. Thirty-seven percent of the respondents have scholarships. Cost and financial support was also further explored in the qualitative phase.

### ***Emotional support***

Several studies suggest that having college-bound friends is related to being enrolled in college, especially in a four-year college (Alvarado & López Turley, 2012; Arbona & Nora, 2007; Riegle-Crumb, 2010). However, I extend that argument to include emotional support that one gets from close friends back home, parents, and siblings. Table 4.11 shows that the parents of 82% of the survey respondents were supportive or very supportive of their decision to come to IUP.

**Table 4.11 How Supportive were Parents/guardians**

Degree of Support of Parents/guardians	Responses	%
Not supportive at all	1	1
Somewhat unsupportive	9	8.4
Neither supportive nor unsupportive	9	8.4
Supportive	26	<b>24</b>
Very supportive	62	<b>58</b>
<b>Total</b>	<b>107</b>	<b>100</b>

Similarly, friends back home were also supportive or very supportive (81%) and siblings' support was indicated by 70% of the online respondents.

The online survey on college choice had an open question at the end which was used to triangulate the information given in the survey. The question was: *Why did you choose IUP?* One hundred seven survey participants answered this question. I did a word analysis to see the most common reasons for them to choose IUP (see Appendix G) and to find out if the social capital factors identified in the survey results were consistent with those given at the end of the survey. After doing the word analysis, I grouped the answer into themes.

The answers given in the close questions were consistent with the open-ended question. Survey respondents indicated that the main reasons why they chose IUP were as follows: financial support provided by the university in either scholarships or financial aid, strong academic programs, atmosphere of the campus as being diverse and welcoming, the university was away from home (college proximity), and a friend, family member, trusted individual encourage them to attend. As one can observe **three** out of the **five** main reasons are related to social capital factors conceptualized in the form of either support or sources of information. In the qualitative phase of this study these factors were further explored.

## **4.3 RESULTS: COLLEGE PERSISTENCE**

### **4.3.1 Introduction**

As it was stated earlier, college persistence for this particular study was defined as persisting in college past the freshman year and beyond. Therefore, the sample for college persistence excluded first year students. The total sample for the college persistence section was 75 students who completed the survey. Most of the respondents were female (75%). It is not possible to compare this sample with other characteristics of the target population because I did not have the information for the spring 2015, but again women are over-represented in this sample.

My second research question was: “What are the social capital factors that Hispanic students find helpful in persisting past their freshman year and beyond?” In order to answer this question, I developed a model for college persistence that included the following social capital variables: individual educational expectations, family support, institutional support via faculty, social support, via participation in on-campus and community organizations and support from on-campus friends.

### **4.3.2 Variables**

#### **4.3.2.1 Individual educational expectations**

A key aspect to persist in college is to have high educational expectations. Respondents to the online survey stated that they have high educational expectations. For instance, 27% expect to graduate with a bachelor’s degree, 47% expect to obtain their masters’ degree and 27% expect to obtain either a doctoral or other professional degree. When compared to the educational

expectations of their parents, survey respondents show higher educational expectations than those of their parents. However, parental expectations for this group of students was high as 83% of their parents expected these students to have either a bachelor's, master's, or doctoral degree and only 17% expected them to obtain only a high school diploma.

#### **4.3.2.2 Family support: Parents and siblings**

Family support and encouragement from parents and siblings is another factor in helping Hispanics to persist in college. Family support and encouragement were measured by three variables: parents encourage students to continue their studies at this university, parents want them to transfer to a college near home, and siblings encourage them to continue their studies at IUP. An overwhelming majority (90%) expressed that their parents want them to continue their studies at this institution and 88% indicated that their siblings also encourage them to continue their studies at IUP. In order to triangulate the information regarding their parents' encouragement to continue their education, a follow-up question was asked regarding their parents' desire to have them transfer to a college near home. Twenty-three percent indicated that their parents want them to transfer to a college near their homes. This indicates that even though parents encourage their offspring to continue their education, they would probably prefer if they do so in a college near their residence.

#### **4.3.2.3 Institutional support: Ties with faculty and support**

Several studies have indicated the importance of faculty support and interactions in helping students, particularly minority students persist in college (Arana, et al., 2011, Cole & Espinoza, 2008, Kuh, et al., 2008, Museus & Neville, 2012, Núñez, 2009). In this study, faculty support was measured by seven variables using a five-point Likert scale (1=strongly disagree to

5=strongly agree). The seven variables are listed on Table 4.12 which shows the percentages of those online survey respondents who either agree or strongly agree with each item.

**Table 4.12** Variables for faculty support and percentages

<i>Items for Faculty Support</i>	<i>% of agree or strongly agree</i>
1. My professors at IUP care about my academic success.	81
2. I feel comfortable talking to my professors about an academic problem.	81
3. I feel comfortable talking to my professors about a personal problem	28
4. I have gotten to know very well at least one of my IUP professors	69
5. My professors provide me with appropriate feedback on how to be successful in their classes.	82
6. My professors have taken the initiative to get to know me.	40
7. I have taken the initiative to get to know my IUP professors	56

As it can be observed, only items 3 and 6 show low percentages; that is, below 50%. However, the other five variables show percentages higher than 56%. In order to see if these variables can be grouped together and form a scale for faculty support, I run a factor analysis. Table 4. 13 shows the results of the factor analysis.

**Table 4.13** Factor analysis for the seven variables for the Faculty Support Scale

Test scale = mean(standardized items)

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
fs_1	75	+	0.7844	0.6951	0.5271	0.8699
fs_2	75	+	0.7914	0.7045	0.5246	0.8688
fs_3	75	+	0.5307	0.3779	0.6187	0.9069
fs_4	75	+	0.7854	0.6964	0.5268	0.8698
fs_5	75	+	0.8373	0.7665	0.5080	0.8610
fs_6	75	+	0.8936	0.8449	0.4877	0.8510
fs_7	75	+	0.7907	0.7035	0.5249	0.8689
Test scale					0.5311	0.8880

Interitem correlations (obs=75 in all pairs)

The Cronbach's Alpha coefficient is .88 which suggests that the seven items have a relatively high internal consistency and that they can be grouped to form a scale of faculty support. I created an index for faculty support and recoded the variable using the scale of 1 to 5 where 1 indicates low level of faculty support and 5 indicates high level of faculty support. The recoded variable (FacSupp5) is presented in Table 4.14.

**Table 4.14** Faculty Support Index

RECODE of FacSupp	Freq.	Percent	Cum.
1	12	16.00	16.00
2	17	22.67	38.67
3	15	20.00	58.67
4	14	18.67	77.33
5	17	22.67	100.00
Total	75	100.00	

The above results show that 41% of second-, third-, and fourth-year students indicate a high level of faculty support. Two additional questions were asked to find out how often students visit their professors during their office hours and what type of support they were looking for and receiving from their professors. Forty-three percent of the survey respondents went to their professors' office hour one-to-two times per semester. In addition, more than one third of the respondents (37%) indicated that they go on average three-to-five times per semester. The three main reasons why students went to their professors' office hours were: questions related to class assignments, grades, and understanding class content. What is revealing here is that 18% of the respondents went to professors' office hours to talk about personal problems which indicates that there is some level of trust that has been established between some Hispanic students and faculty members. In order to triangulate the information provided by the students, participants were also asked an additional question that reads as follows: "Q52. When you have an academic problem related to a class (e.g., not understanding class material), who is the first person you go to for help?" The results are shown in Table 4.15.

**Table 4.15** Sources of support

Sources	Responses	%
A friend	42	56
A family member	3	4
A professor	25	33
A tutor	1	1
Other	4	5
<b>Total</b>	<b>75</b>	<b>100</b>

To prevent the issue of primacy effect, which is the fact that survey respondents choose the first answer, I placed the category “a professor” in third place. Even though it was in third place, 33% of the survey respondents indicated that they go to a professor for help.

#### **4.3.2.4 Social support**

##### ***Participation in student organizations***

My last two variables in my model are: social support via participation in organizations and their networks of on-campus friends. Results from the survey show that 75% of the respondents are members of at least one student organization. However, only 25% are members of a community organization. Membership in Latino organizations is 21%. In the open section that I had, one student made a comment that I should have asked not only if they are currently members of an organization, but also if they had ever belonged to an organization. Therefore, in the qualitative phase I did include this question to find out why students used to participate in an organization and why they stopped being a member.

### *Support of on-campus friends*

Establishing connections with new people to expand one's network is important to persist in college as the literature on college persistence shows that students are more likely to remain in college if they are able to build informal ties (e.g., friends on campus) (Fisher, 2007, Saunders & Serna, 2004). Before measuring the support of their on-campus friends, I asked a background question to find out how many new friends students have made since their arrival on college. Ninety percent of the survey respondents have made at least one friend. What is more revealing is that 67% have made more than nine college friends. To measure the support from college friends, I use four variables using a five-point Likert scale (1=strongly disagree to 5=strongly agree). These variables as well as the results are presented in Table 4.16.

**Table 4.16** Support from on-campus friends

Items	Mean	Standard Deviation	% agree or strongly agree
1. My friends at IUP help me when I have personal problems	4.05	1.01	80
2. My friends at IUP help me when I have academic problems (e.g., not understanding class content, etc.).	3.69	1.03	81
3. I could not make it through college without the support of my friends at IUP.	3.41	1.36	51
4. My college friends encourage me to continue my studies at IUP.	3.89	1.06	68

As one can observe, the percentage of online respondents who either agree or strongly agree with the items that measure support from their college friends was above 51%. In order to see if these variables could be used as a scale, I conducted a factor analysis. The results are presented in 4.17.

**Table 4.17** Factor analysis results of support from on-campus friends

Test scale = mean(standardized items)

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
sup_friend1	75	+	0.9145	0.8385	0.5839	0.8081
sup_friend2	75	+	0.8177	0.6743	0.6952	0.8725
sup_friend3	74	+	0.8130	0.6684	0.6990	0.8745
sup_friend4	75	+	0.8869	0.7899	0.6160	0.8280
Test scale					0.6487	0.8807

The internal consistency of this scale was 0.87 (I used STATA S/E version 14). This Alpha coefficient suggests a relatively high internal consistency. The results reveal that survey respondents not only rely heavily on their college friends when they have personal problems, but also when they have academic problems. Moreover, college friends encourage them to continue their studies. As support from college friends seems to be an important social capital factor that helps participants persist with their studies, I followed-up these results when I conducted the personal interviews in the qualitative phase.

#### 4.3.2.5 Multivariate analysis of college persistence

Since there were more than 70 respondents, I decided to run a regression using the recoded variables (labels of variables are in parenthesis) of faculty support (FacSupp5), friend support (SuppFriend5), parent support, (parent\_sup1) sibling support, (sibling\_sup) individual expectations (degree), participation in organizations (numorg), participation in community organizations (comorg) and new college friends (new\_coll\_friends). Although a large percentage of students find helpful many of these factors, the only variable that is statistically

significant at the .05 level is participation in community organizations (see Table 4.18). College persistence is very complex and there might be perhaps other variables at play.

**Table 4.18** Regression model for college persistence

```
. regress class FacSupp5 SupFriend5 parent_suppl sibling_sup degree numorg comorg new_coll
> _friends
```

Source	SS	df	MS	Number of obs	=	74
Model	5.2056111	8	.650701387	F(8, 65)	=	1.01
Residual	41.8889835	65	.6444459	Prob > F	=	0.4376
				R-squared	=	0.1105
				Adj R-squared	=	0.0011
Total	47.0945946	73	.645131433	Root MSE	=	.80277

class	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
FacSupp5	.0290726	.0710073	0.41	0.684	-.1127387	.1708839
SupFriend5	-.0321929	.0757541	-0.42	0.672	-.1834842	.1190984
parent_suppl	.1993132	.1824257	1.09	0.279	-.1650162	.5636426
sibling_sup	-.0985224	.1420302	-0.69	0.490	-.3821763	.1851315
degree	.0638866	.1207372	0.53	0.599	-.1772423	.3050155
numorg	.0652063	.0678864	0.96	0.340	-.0703721	.2007847
comorg	.5802973	.2348935	2.47	0.016	.1111825	1.049412
new_coll_friends	-.0187536	.1076222	-0.17	0.862	-.2336901	.1961828
_cons	1.433272	.7631234	1.88	0.065	-.0907904	2.957335

## 4.4 ACCULTURATION

When studying Hispanics, it is also important to study the level of acculturation because some differences in the variables studied may be influenced by the *level of acculturation* of the participants and this can result in misinterpretation of results (Padilla, 2004). Therefore, an index of acculturation was created. The variables used to create this index were based on the literature on acculturation. The index included initially 8 variables; however, at the end only 7 variables were retained as one of the variables was poorly correlated with the other seven variables. The

variables included were: ethnicity of friends, language spoken at home, self-rated proficiency of English and Spanish, language preference when viewing TV, and listening to music; as well as the frequency of eating ethnic foods. Six out of the seven questions included a rating scale from 1 to 5. The variable *ethnicity of friends* has four options only.

To determine the validity of the index an item analysis was done. The overall Cronbach's alpha was .80, which indicates good internal consistency (see Table 4.19 for all correlations of the seven variables).

**Table 4.19** Variables for acculturation: Item correlations and alphas

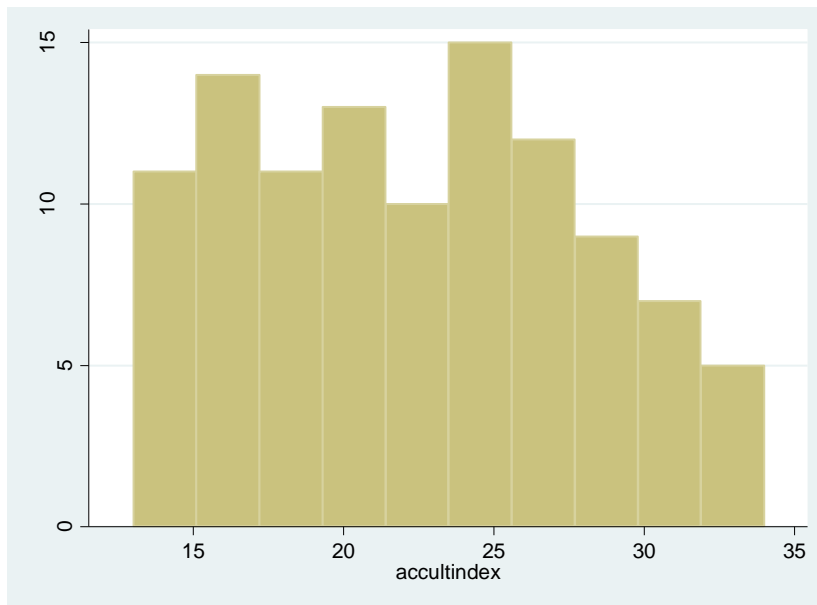
Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
Ethn friends	107	+	0.5964	0.4338	0.4006	0.8004
Span_Prof	107	+	0.7280	0.6029	0.3588	0.7705
Lang_at home	107	+	0.8212	0.7310	0.3292	0.7465
Lang_TV	107	+	0.7598	0.6458	0.3487	0.7626
Hisp Music	107	+	0.7377	0.6159	0.3557	0.7681
Hisp Foods	107	+	0.7626	0.6496	0.3478	0.7619
English prof	107	+	0.3590	0.1577	0.4760	0.8450
Test scale					0.3738	0.8069

Test scale = mean(standardized items)

Interitem correlations (obs=107 in all pairs)

The scores for each variable were added and a cumulative score was given to each respondent. Low acculturation was associated with numbers 1 and 2 and high acculturation was associated with numbers for 4 and 5. Number 3 was viewed as middle acculturation and more related to dual/bicultural orientation. The lowest expected value was 9 and the highest 34. However, survey results of this sample (n=107) show that very low levels of acculturation were not present. The lowest score was 14 and the highest was 34. It is important to highlight that six variables were re-coded in order to align low numbers with low acculturation and high numbers

with high acculturation. For instance, the variable *Spanish proficiency* was re-coded as follows: 1=very good, 2=good, 3=fair, 4=poor and 5=very poor. Refer to Appendix B to see how the questions were initially coded. Figure 4.2 shows the distribution of the responses of the acculturation index.



**Figure 4.2** Acculturation Index Results

The cut offs for low and high were determined by identifying which variables had the highest correlation with acculturation. Language spoken at home ( $r = .84$ ) and proficiency ( $r = .75$ ) had two of the highest correlations. The number of low acculturated and high acculturated students were counted and the cutoffs percentages were used. Table 4.20 summarizes the results.

**Table 4.20** Acculturation levels

Cumulative score	Level of acculturation	Percentage
13-17	Low	23
18-25	Middle (bicultural)	46
26-34	High	31

As can be observed, the percentage of low acculturated students is low (23%). However, the largest percentage (46%) can be described in between low and high acculturation. This group could be better described as being *bicultural* rather than acculturated. This group of students might not necessarily be fully bilingual, but they have preserved some elements of the Hispanic culture while acquiring some values of the White non-Hispanic culture and are able to function in both cultures. Thirty-one percent (31%) of the students in this sample are high acculturated.

#### **4.4.1 The role of acculturation in college choice and college persistence**

The role of acculturation in college choice and college persistence is considered a mediating variable. Consistent with the literature on college choice (Hurtado-Ortiz & Gauvain, 2007), more acculturated students in this sample are enrolled at this institution than low acculturated students. This is due to the fact that there are more second- and later-generation than first-generation immigrants enrolled.

One of the important finding was that college proximity, a manifestation of *familism* which is a social capital factor, was not a significant factor among survey respondents. Living away from their home was actually one of the main reasons for choosing this institution. Acculturation might explain this finding. For instance, for college choice, there was a positive correlation, between the levels of acculturation and the desire to attend college close to their

homes ( $r = .11$ ). For those students who are low acculturated, leaving close to their home was important or very important.

There was also a negative correlation ( $r = -.27$ ) between acculturation and the importance of the ethnic composition of this college (PWI). For example, the more acculturated a student is, the less important is the ethnic composition of this university. There is also a positive correlation between the ethnic composition of the high school with acculturation ( $r = .25$ ). Low acculturated students are coming from high schools where Hispanics are the majority.

In terms of college persistence, acculturation was negatively related to the number of organizations a student participates in. For instance, more acculturated students participate in less student organizations ( $r = -.26$ ). However, there is a negative correlation between low acculturation and participation in Hispanic organizations. Low acculturated students tend to participate more in Latino organizations than high acculturated students ( $r = -.36$ ). This highlights the importance of having student associations geared to Hispanic students. Participation (or lack of) in organizations was explored in the qualitative phase of the interviews.

## **4.5 QUALITATIVE RESULTS FROM THE IN-DEPTH INTERVIEWS**

### **4.5.1 Introduction**

As it was explained in the methodology section, the sequential explanatory, mixed-method design requires a follow-up section. This second phase complements the quantitative phase and its purpose is to illustrate and further expand on some of the main findings of the quantitative phase. Thus, the sample size is much smaller than the online-survey and is not meant to be

representative. Four Hispanic students were selected for the personal interviews. The interviewees were from the same sample that took the online survey. A purposeful *criterion sample* (Patton, 1990) was used. Thus, I selected one participant from each standing class (e.g., one freshman, one sophomore, one junior, and one senior). The other criterion was gender. I wanted to have at least one male since only 23% of the online survey sample was male. The personal interviews were conducted in my office at the main campus and they were digitally recorded. In addition, I took notes during the interviews. The general protocol remained unchanged as the questions were quite open (See Appendix E). However, I did some follow-up questions during the interview to reflect some of the major findings of the online survey. Each participant selected a pseudonym to protect their privacy. Table 4.21 presents a summary of their main characteristics.

**Table 4.21** Profile of four interviewees

Participant	Marisol	Sofia	Lucas	Jessica
Class standing	Freshman	Sophomore	Junior	Senior
Self-identification	Puerto Rican	Hispanic	American	Dominican
Age	19	20	20	23
(Im)migration generation	Third	Third	Second	First
College generation	First	Second	First	First
Languages	Monolingual	Monolingual	Bilingual	Bilingual
Number of Older siblings	1	0	2	3
High School Ethnic composition	Diverse	Predominantly White	Predominantly White	Diverse
Active in organization	N/A *	Yes	No	No
Social capital factors that were helpful in persisting in college	N/A *	-Her mother -Professors -College friends	-College professors -Being first-college generation	-Advisor/Professor -College friends -Her mother -Being first-college generation

\*Freshman was not included in college persistence.

After the interviews, I did a partial transcription of their interviews and created a profile which was sent to each participant. They read the profile and informed me whether they agree with the information the profile has. Each profile is described below using the main themes that emerged from their interviews and from the variables discussed in the quantitative data.

## 4.5.2 Profiles of four interviewees

### 4.5.2.1 Marisol: Profile of a freshman

#### *Personal and family background*

Marisol is a 19-year-old freshman who is a monolingual, third-generation Puerto Rican. Both of her parents are Hispanic, born in Pennsylvania. Her paternal grandparents were born in Puerto Rico, but her maternal grandparents were born in New York. Her GPA is 2.0/4.00. Neither of her parents went to college. However, she does have an older half-brother who is also attending IUP,

but they did not have a close relationship growing up. She also has two younger sisters. Marisol is from an upper middle class.

### ***Her high school***

Marisol studied in one of “the most diverse high schools in the nation.” Her high school had counselors and they provided information on how to apply and finance college.

### ***Her college choice: “I wanted to be away from home”***

Some survey respondents indicated that they chose this institution because they wanted to be away from home. Marisol expressed the same sentiment. She mentioned that one of the reasons for her choosing IUP was to be away from home, especially away from her “over-protective father.” She did not want to have any surprise visits from her parents while she was in college. Besides IUP, she also applied to other colleges that were out-state.

### ***Sources of information***

She first learned about IUP on line and through posters in her high school. Moreover, an admissions officer from IUP came to her high school. Her other sources of information were her dad and half-brother.

### ***Social capital source: Parents***

Besides being the best fit for her academically, Marisol stated that her parents were very supportive of her attending IUP, especially his father pushed her to study here because her half-brother was also attending the same school. Her dad wanted someone to watch over her. In sum, her dad and half-brother were the most influential people in her decision to come to study at IUP.

### ***College friends***

Back home she has 5 to 10 close friends. Out of that group of friends, five of them are attending college and the rest are in high school. On campus she has made about 3-4 new college friends who are also scholarship recipients.

### ***The role of acculturation***

Even though Marisol was born in the United States, she strongly identifies with the Hispanic culture and self-identifies as Puerto Rican. However, her source of information about IUP was done not really through friends or counselors, but through her own internet search. It is quite interesting that at the end she chose IUP, for two unrelated reasons. One, her father and half-brother encouraged her to come here, so that she could have someone to look over her. Second, she wanted to be away from home and wanted to be in a college where her parents could not stop by and surprise her. Although some of her attitudes are clearly more associated with the Hispanic culture, some of her values (e.g., live away from home while attending college) is more associated with White non-Hispanic culture.

#### **4.5.2.2 Sofia: Profile of a sophomore**

### ***Personal and family background***

Sofia is a 20-year-old sophomore student. She is a monolingual, third-generation Hispanic, and middle class. Her mother is White and her father is Hispanic. Her parents were divorced when she was seven. Therefore, they moved from New Jersey to Pennsylvania. She has a younger brother who is three years younger than her. Even though Sofia is not bilingual and was raised by

her White mother, she strongly identifies herself as Hispanic. She and her brother are very driven and try to get involved in their father's culture. Her current GPA is 3.6 /4.00.

### ***Her high school***

She attended a public, predominantly White school. She did have counselors that discussed with her how to apply to colleges. Sofia mentioned that she went to her counselors to get a lot of help.

### ***Her college choice: "Be away from my community"***

One of the main factors in choosing IUP was the fact that her department is small. Therefore, she knew that she was going to have close interactions with the people (e.g., professors) in the department. Another factor in choosing IUP, besides her program of studies, was the fact that Sofia wanted to get away from the city life and come to a more rural place like IUP. In a place where people did not hold so many preconceptions about Hispanic people. For instance, in her town if someone is Hispanic, he/she lives in a certain area.

Sofia applied to six other colleges and universities besides IUP; all of them were in PA. She never thought about going to a community college because she just wanted to "jump in and get a very good college degree." Even though she applied to another institution that was closer to her home, she really like the multicultural awareness at IUP. Being close to home was not really important for her, especially since she wanted to be away from the community that she grew up in.

### ***Reason for choosing IUP: "IUP is a welcoming place"***

Sofia mentioned that IUP has been a welcoming place for people of color and that her experience has been very positive. She added, "...when I came here my expectations were met with how

diverse and accepting this campus is...I have not heard one negative thing about the color of my skin since I have been here.”

### ***Sources of information***

Unlike other Hispanic students who learned about IUP through their friends, Sofia learned everything about IUP through the university’s website. She did not have any friends of hers coming to IUP.

### ***Parental and individual expectations***

Her parents expected her to get a bachelor’s degree. However, she expects to get a doctorate degree. Sofia stated that since she was very young she wanted to go to college for her mom as her mom had to drop out of college when she got pregnant with her. Thus, her mother has been her inspiration. Even though her father did not attend college, he also encourages her to go and stay in college.

### ***Social capital from high school***

Sofia has five close friends and even though her high school has counselors, none of Sofia’s friends from high school went to college; not even her best friend. At first, when she informed her friends about her decision to come to college, they discouraged her because they had the idea that they would just move together to another place and have a fresh start. But with time, they have become very supportive. They have visited her and sent her “little things” to get her through finals. She does know two younger friends from back home who are now at IUP, and they are freshman.

#### **4.5.2.3 Sofia's College Persistence**

##### ***Support from college friends and professors***

Since her arrival at IUP she has made a large group of friends about 15 people. They have been very influential in her staying here in college. Moreover, she is active in two organizations. In one of the organizations, she is a board member.

She definitively thinks that her professors helped her with her transition to college as she has developed close relationships with them. She also mentioned two older college friends that she met her freshman year that guided her and helped her in college. One of those friends graduated last year and the other one is a senior this year.

##### ***The role of her mother***

Sofia stated that even though professors and college friends have helped and supported her, her mother continues to be the most influential person in her decision to continue in college as she is very supportive.

##### ***Acculturation***

Even though Sofia identifies as being Hispanic, she stated that,

When I was home I considered myself more Hispanic because people will hear my last name and assumed I was Hispanic. But as I come here and I meet people from, you know, South American countries, from Latin American countries, with strong roots; I am realizing that, that I am not as Hispanic as I have been identifying. But that also gives me more drive to connect to my culture... talk to my grandparents, and learn the language, be able to relate with people that I share such close ties with.

She equates being Hispanic with having a Hispanic surname and being identified by others as Hispanic because of her skin color. Although she identifies as Hispanic, the strength of her ties with the Hispanic culture is not as strong. For instance, most of her friends are White non-Hispanic, she is monolingual, and she did not want to be dependent on her mother for everything. Therefore, one can assume that her level of acculturation to the White non-Hispanic culture is high.

#### **4.5.2.4 Lucas: Profile of a junior**

##### ***Personal and family background***

Lucas is a 20-year-old junior; he is a bilingual, second-generation Hispanic, born in New Jersey. Both of his parents were born in the Dominican Republic. He comes from a lower middle income family. Even though he was born in the United States, Lucas went back to the Dominican Republic with his parents when he was about two years old and came back when he was about nine or 10 years old. In the Dominican Republic, he did first and second grade and when he arrived in the United States, he took ESL (English as a Second Language) classes. He uses Spanish when he communicates with his parents, but English with his siblings. He has two older brothers and he is the first person to ever attend college in his family. He has a GPA of 4.00/4.00.

##### ***Social capital from his high school***

He attended a predominantly White high school (about 80%). He stated that students in his high school were expected to go to college. Lucas decided to go to college when he was about 17 years old. His high school had counselors and in his junior year they provided him with all the

information regarding the SATs and the names of colleges which he could apply to. All his friends from high school are in college.

### ***Support's from parents***

Lucas stated that his parents have always been supportive of his plans to go to college. However, they were apprehensive because they were always thinking about the price and distance. Joining the work force and being close to one's family is very important for Hispanics according to Lucas as well as taking care of your parents and family is a "huge thing." He added that,

things like going to college and investing in yourself and then possibly maybe not making it or possible not getting a job afterwards or possibly making the exact amount that you would make if you would have started your workforce at the beginning...the unpredictable is something they are not about.

Therefore, for his parents, cost was a big worry as they are not accustomed to making an investment to go to college and being uncertain as to what the outcome would be.

Even though his parents were supportive of his idea to further his education, at first they were not supportive of him going to a four-year college and suggested to attend a community college as it is cheaper than attending a four-year college. However, for him community college was not an option because being a U.S. citizen he had the privilege to go to a college that he could afford.

### ***His college choice: "I wanted to go away"***

Moreover, he also wanted to "go away." He stated that he wanted to be close to his family (emotionally), but not physically. His parents were not very happy when he informed them about coming to IUP because it is away from his home. For Lucas, distance was one of the main

factors in choosing which college to attend. He wanted a college that could be at least two hours away from home. A private college accepted him, but that college was too close to his home and he wanted to have “the college experience” and he stated that if he had chosen to go to this private college, he would have been mostly at home. The private college offered him a “full ride.” However, he declined their offer. During his first semester at IUP, he had some financial aid, a scholarship, and financial help from his parents.

#### ***Sources of information: A friend***

A friend from high school was the main source of information about IUP. His friend applied first and suggested to him to apply also. His friend is also a student at IUP. He mentioned that having a friend coming here influenced his decision, but that he also knew a lot of people from his high school who were coming here. Approximately 15% that is about 50 people. His friends are mostly White non-Hispanic. Lucas also mentioned a female friend who was Hispanic and who was also a first-generation college student. She was someone who encouraged him to go to college. Lucas applied to about 13 colleges and universities.

#### ***Cost***

Even though he was accepted to other universities, cost was a big factor for him because he did not want to get into too much debt. Lucas stated that he wanted both, an inexpensive school and one that was far away from home.

### **4.5.2.5 Lucas’ College Persistence**

#### ***The role of professors***

His professors have also been an influential factor in persisting in his studies as they have kept his interest in the subject he is studying. For instance, right now he is involved with research in biology and he stated that professors are always promoting doing research at IUP.

***Participation in organizations: “Barely have time to be involved”***

Seventy-five percent of the survey respondents indicated that they are involved in at least one student organization. However, currently Lucas is hardly involved in anything due to time constraints. For instance, he does research with biology professors plus his job takes a lot of his time; he works part-time on campus. However, he mentioned that in the past he used to be a member of a ministry where he played the piano and guitar. This was an off campus organization and he also did attend Bible studies and was in a swimming club.

***Being first-generation-college student***

Although he has made a lot of friends since he arrived here at IUP through his involvement in tutoring on campus, something that has kept him in college is the fact that he is a first-generation- college student. Instead of being a deterrent, it has been a motivation for him.

***Support from parents***

When asked about the role that his parents have played in staying in college, he said that his parents have always been supportive of him, but last year they encouraged him to transfer to a college closer to home.

### ***Acculturation***

Lucas considers himself more “American” than Hispanic because of the school system that he was put on. He mentioned that one learns different values when an individual is in school and through watching television, but mainly school plays a critical role in teaching students White non-Hispanic values. He stated that if he had been home-schooled, the outcome would have been different. He elaborated on what he meant by different values. He pointed out that in his view, Hispanics value “family,” “family,” “family.” On the other hand, in the U.S. culture is more being “successful,” having a good job. Lucas is highly acculturated to the White non-Hispanic culture.

#### **4.5.2.6 Jessica: Profile of a senior**

### ***Personal and family background***

Jessica was born in the Dominican Republic. She is a bilingual, first-generation-college student, and first-generation immigrant. Her parents separated when she was two and when she was seven years old, she came to the United States. Her mom still lives in the Dominican Republic and she visits her native country twice a year; she does have family members in New York and Pennsylvania. She identifies herself as Dominican. She has two sisters and four brothers. She started her schooling in the Dominican Republic where she finished second grade. However, when she came to the United States she had to repeat second grade.

### ***High school –social capital***

She is coming from a diverse school that also has a large percentage of African-American and Hispanic students. Her school had also counselors and her guidance counselor was the one that suggested to apply to IUP.

### ***Her college choice: “Being away from home”***

She did not want to live close to home and she mentioned that one of the reasons why she wanted to study in college was to be away from home; she wanted to learn to be independent, feel like an adult and not be dependent on her family. Her objective was to leave Pennsylvania because of the weather as well and the fact that she would like to live in a big city. However, in retrospect she wishes she had stayed close to home.

### ***Sources of information***

She found out about IUP through her guidance counselor in high school. Her guidance counselor suggested IUP as in state college. Jessica did apply to other three schools that were not in state. Jessica however was not aware that this was a predominantly White institution.

### ***Friends***

Jessica also mentioned her friends as being influential in her decision to come to IUP. She knew several students who were attending IUP from her high school community. She mentioned that at least 50 students who are at IUP are Dominican.

#### **4.5.2.7 Jessica's College Persistence**

##### ***The role of her mother***

Jessica mentioned that one of the main reasons why she stayed in college was because she promised her mom that she would graduate from college. Both of her parents finished junior high, but she is the first one in her family to go to college and probably the first college graduate from both sides of her family. She also mentioned that in the past, there were moments in which she thought about leaving, dropping out of college because of financial reasons, but her mom would talk her out of it.

##### ***Support from advisor and professors***

Besides her mom, she mentioned that her advisor played a key role in her persistence to continue her college education as well as the support of her professors from her department. The support from her advisor was mainly in the area of what classes she should take as well as to guide her in her studies here at IUP. She added that, "[All] of the professors in my department are very supportive ...I have a close relationship with pretty much all my professors."

##### ***Participation in organizations: "There is no time"***

Jessica currently does not belong to any organization on campus although in the past she was a member of an academic club in her department. The main reason for her lack of involvement in any type of organization is because of her classes and the fact that this is her senior year and she is about to graduate in May. Moreover, due to her working full-time and off campus, Jessica has little time to engage in student organizations. She concluded that, "I started working and I did not have time to join the club, to do the work, plus school."

### ***Financial support: “I had to work full-time”***

Jessica also mentioned that she worked full-time (off campus) her whole college career. In her last job, she was laid off and that is one of the reasons why this semester (spring) she is not working. She did have federal loans and grants, but there were not enough to support her in college and pay her bills. Besides she does not have financial support from her family. Thus, she did not have a choice, but to work full-time. She added that her family did not support her financially not so much because they were not able to do so, but due to the fact that, in her opinion, she is an adult and she should support herself.

### ***Support from college friends***

She also mentioned that she has a support group of five college friends that are almost at the same academic stage as she is. According to her, it is nice to have a group of friends that gives one motivation to keep going when there have been times when one does just want to be “lying in bed and no do anything.” “We are definitely each other’s support system when we just wanted to stop.”

### ***Support from family***

Her family has been supportive of her being in college. However, she also stated that in her particular family situation if she had dropped out of college to pay bills, they would have been understanding. Yet, her mom would have been disappointed as she is the one who instilled in her the idea to get a college degree despite her mother’s low income status.

### ***Being the first one to graduate***

Jessica is the first person to ever go and graduate from college and she mentioned that this has been an important factor in her persisting through college. Her older siblings decided to work

and joined the army. She stated that being the first one to graduate out of her siblings is a big accomplishment. “That pushes me. That is a big accomplishment.”

### ***Acculturation***

Jessica strongly identifies as being Dominican and is very proud to be Dominican. However, her desire to live away from home and be independent are values that are more associated with the White non-Hispanic culture than with Hispanic cultures. *Jessica* is a first-generation immigrant who came to this country very young and therefore, is bilingual. She speaks at home both in English and Spanish and most of her friends are Hispanic. Based on the information given, her level of acculturation is in the middle and it could be inferred that she is more bicultural. That is, she is able to function in both cultures with ease. The acquisition of White non-Hispanic values could be due to the fact that she did most of her schooling in the U.S. and she has lived in a diverse community and attended a diverse high school. It is quite possible that her Hispanic friends are also bicultural.

### **4.5.3 Comparison among interviewees**

There are some similarities among the four interviewees in terms of college choice. For instance, all of their parents expected them to get a college degree, all of their high schools have counselors, and all of them wanted to attend college far away from their home, but for different reasons. It is clear that even though most of them have a close relationship with their parents, they wanted to have a college experience away from home. As *Lucas*, one of the interviewees explained, he wanted to be emotionally close to his parents, but not physically. The role of their parents in encouraging to choose IUP was only important for *Marisol*, for the rest their decision

was influenced by a peer and by a guidance counselor who suggested IUP to one of the participants.

Financial support provided by the university via scholarships or via student loans and grants was important. However, the parents of two participants had to also provide some financial support for them to come to study at IUP. For *Jessica* the loans and the grants were not enough and she had to work full-time almost her entire college career. She acknowledged that she wanted to drop out for financial reasons, but her mother and her college friends were her support system and they encouraged her to continue her education. It is relevant to mention that for *Lucas* his desire to live away from home was more important than receiving full financial support as he declined full support from a private institution because that institution was too close to his home.

The sources of information that the four participants used to learn about IUP were different. For instance, *Sofia* and *Marisol* both learned first about IUP via the Internet. For *Jessica* her guidance counselor suggested IUP and for *Lucas*, a friend provided the information. Besides IUP, all participants applied to other college and universities.

In terms of college persistence, there are some similarities as well among the three participants (*Marisol* who was a freshman was not included in the college persistence section). All of them have high educational expectations as they expect to obtain at least a master's degree. Faculty members played a significant role in their college persistence. Although the kind of support that they received from their professors was different. For instance, for *Jessica*, professors were very supportive when she switched majors and advised her on what courses to take. For *Lucas*, their support is more related to keeping his interest in his major as he is engaged in research.

A difference emerged in terms of participation in organizations as only *Sofia* was active in student organizations. However, both *Lucas* and *Jessica* were active before, but due to time constraints, they stated that they had hardly any time to be actively involved.

#### **4.6 MIXED-METHOD QUESTION AND RESULTS**

My third and last question was: How do the results of the qualitative data help to explain the results of the quantitative phase in identifying the social capital factors that are relevant for college choice and persistence among Hispanic undergraduate students?

The four personal interviewees further illustrated some of the main findings although not all. Consistent with the online survey, college proximity was not important for neither of these students. All of them expressed that one of the main reasons for choosing this university was to be away from home or away from their community. It is important here to make the distinction between not wanting to be close to home and not wanting to attend college in the same community. *Sofia*, for instance, is very close to her family, especially her mother, but she wanted to attend college away from her community because of the preconceptions that people have in her community about Hispanics. It could be possible that she is not alone in her perception.

Similar to the results of the online survey, the ethnic composition of this institution was not important for neither of the participants. In fact, *Jessica*, one of the interviewees stated that she was not aware that IUP was a PWI until she came and visited the campus. For her, it was somehow a shock because Hispanic food items are very scarce and Indiana is a very small town compared to her urban upbringing. Therefore, she would advise students to come to visit the campus and the community first. This is not surprising given the fact that she is coming from a

very *diverse* community. For *Lucas* the ethnic composition was not important either. In fact, he stated that he is well aware that IUP promotes *diversity*. However, he stated that if this had been an institution that would target only minorities, he probably would have not chosen to come here. This is perhaps due to the fact that *Lucas* is coming from a high school where the majority of the students are White non-Hispanic and due to his high acculturation to the White non-Hispanic culture, he did not feel the need to attend a college where minority students were the majority. *Lucas* probably equates being Hispanic with knowing the language and eating certain foods. However, he stated that his values are those of an “American.” He believes that this is due to the school system that he was put in. This observation is consistent with Stanton-Salazar (1997) who wrote on the role that schools have in children’s socialization.

The role of older siblings is quite important too. Three participants in the qualitative phase had older siblings. However, only one of them was attending college. *Lucas’* and *Jessica’s* older siblings decided to either work in order to provide for the families or joined the army. In *Marisol’s* case, her brother was also a source of information about IUP as he was attending this institution. These two aspects of the importance of older siblings is consistent with the literature. As other authors have found out (Gloria, Castellanos, López & Rosales, 2005; Sánchez, Reyes, & Singh, 2006) older siblings are a source of encouragement even if they have not attended college, and if they have been to college, they act as *protective agents* of information (Ceja, 2006).

Results from the online survey showed that counselors also played an important role in college choice as sources of information regarding college application and financial information. All interviewees expressed that their high schools have school counselors and that they provided information related to college.

Unlike the quantitative results, the role of the mother was salient in the qualitative results. Both *Sofia* and *Jessica* expressed the paramount role of their mothers in both their college choice and college persistence. Although the literature mentions family and parents or trusted individuals as important sources of support and information, Gándara (1995), in studying successful Mexican-Americans, described mothers as a particular important source of support. She expressed that although mothers did not provide financial support, they provided “verbal support” and “encouragement” (p.39).

Even though in the online survey most students were *not* first-college generation, two of the participants were. They indicated that being the first in their families to ever attend, and possibly graduate from college, was a very important factor in persisting in their studies.

Another important variable in college persistence is educational expectations that the individual has. I consider this social capital as values and norms are some of the resources derived from social capital. In both samples (online and interviews) participants show high educational expectations. For instance, *Lucas* plans to be a doctor, *Sofia* also wants to have her Ph.D. and *Jessica* expects to have a master’s degree in the near future.

Faculty support is clearly an important social capital factor in both the quantitative and the qualitative phase. All of them expressed that professors have been an important factor in persisting in college, but for different reasons. One interviewee expressed that her professors advised her on what classes to take. Moreover, due to the size of her department, she knows her professors well. Therefore, she has enough trust in them to ask them when she has any problems. Other interviewee expressed that the research conducted with his professors has kept his interest. It is relevant to point out that the support that they received, as expected, is more in the realm of academics. This is consistent with the results of the online survey.

Regarding the social support that is derived from having friends on campus and participation in organizations, both the online and the results of the interviews, indicate that having friends in college is an important factor in their college persistence as on-campus friends have become their support system, especially in times when they have wanted to quit. Results from the interviews, show that all of them have made new close friends on campus. *Lucas* expressed that he has more than 15 friends, *Jessica* stated that she has five close friends and all of them are at the same stage (e.g., seniors). *Sofia* also stated that she has approximately 15 close friends here on campus.

The online results indicated that 75% percent of the respondents participated in organizations. In the interviews, only *Sofia* was active in organizations. The other two pointed out that they used to participate in organizations, but due to commitments with work and classes, they did not have the time to be a member of any organization. This suggest that being a member of an organization is more critical during the freshmen year than in subsequent years as it is at the beginning of their college careers that students tend to drop more out of college and participating in organization gives them the opportunity to establish ties with on-campus friends.

Having a mixed-method approach has helped illustrate in more detail the important findings of the quantitative phase. And it has also served to find out other factors, such as being first-college generation, which could be further studied in future studies as the literature on this is scant. Tables 4.22 and 4.23 summarize the findings in both phases of this study.

**Table 4.22 Quantitative and Qualitative Results of College Choice**

<b>Variables/emerging topics/themes</b>	<b>On-line Survey Results Quantitative (QUAN) ( n= 107)</b>
1. College Proximity	41% somewhat <b>unimportant or not important at all</b> to live close home
2. Parental expectations	51% of their parents expected them to complete <b>at least</b> a bachelor's degree
3. Older siblings	65% had older siblings 62% of older siblings have attended or are attending college
4. Ethnic/racial composition of university (PWI)	Only 26% considered this as either important or somewhat important
5. Sources of information and encouragement to choose IUP	11% counselors suggested IUP 26% parents suggested IUP 32% learned about IUP through a friend 17% learned through the University Website
6. Parental, friends back home and siblings' emotional support	Percentage that were supportive or very supportive: parents 82% friends 81% siblings 70%
7. Financial support	79% had federal student loans and 52% grants; these two were the main sources of funding followed by scholarship (37%) and parental contribution (31%).
Open question: Why did you choose IUP? (Reason)	The <b>five main</b> reasons: 1. Financial support provided by the university (e.g., scholarships or financial aid); 2. Strong academic programs; 3. Atmosphere of the campus (being diverse and welcoming) 4. University was away from home & 5. A friend, family member, trusted individual encourage them to attend, (Reasons 1, 4 and 5 are related to social capital)

The personal interviews with four students illustrate and expand some of the most important results of the quantitative phase. For instance, the theme of being away from home was important for all four students. Parents have also high expectations. Older siblings are important as they provide support regardless of whether they are in college or not. Only one participant had a brother attending college. The ethnic composition of the university was not important either. One reason is that one of the interviews did not even know that this was a PWI. The sources of information were varied as they were in the quantitative phase. However, for two

participants the website of the university provided all the information needed. In terms of financial support, three students are receiving grants and scholarships. However, one participant had to work full-time to afford college. The other themes that emerge was the lack of time to participate in organizations. Overall, the main reason why they wanted to attend this university was because they wanted to be away from home. The main reasons for this has to do with their cultural orientation. Students in the sample are highly acculturated to the White non-Hispanic culture although they identified strongly with being Hispanic.

**Table 4.23 Comparison between Quantitative and Qualitative Results of College Persistence**

<b>Variables/emerging topics/themes</b>	<b>On-line Survey Results Quantitative (QUAN) n= 75*</b>	<b>Semi structured Personal Interviews Results (qual) n=3*</b>
1. Individual educational expectations	47% of survey respondents expect to get a master's degree 27% expect to get their doctoral degree or other professional degree	1 participant expects to get a Master's degree 2 participants expect to get either a doctorate or professional degree.
2. Family support (Parents and siblings)	90% expressed that parents want them to continue at IUP.88% of their siblings encourage them to continue	Parents are very supportive as well as siblings.
3. Faculty support	81% agreed or strongly agreed that professors care about their being successful in their classes and feel comfortable talking about an academic problem; 69% indicated that they have gotten to know very well at least one of their professors; 82% indicated that they either agree or strongly agree that their professors provide them appropriate feedback on how to be successful in their classes.	3 participants expressed that their professors have been important in their persistence. But for different reasons: help with classes, doing research with them and develop independent thinking.
4. Social support: Participation in student organizations	75% participates in student organizations. 26% participates in community organizations 21% participates in Hispanic organizations	Only one participant is involved in organizations. The other two participants used to participate, but due to commitment to class and work currently they are not a member of any organization
5. Support of on-campus friends	67% has made 9 or more college friends. 68% agree or strongly agree that their college friends encourage them to continue their studies at IUP.	Even though they have received support from their friends, two of them expressed that their <i>mother</i> has played a vital role in being enrolled.
6. Being first-generation college student	N/A	Two participants expressed that it has been a motivation for them to continue their studies.

\* Freshman were excluded as persistence was defined as returning for a second year and beyond.

## **5.0 DISCUSSION**

### **5.1.1 Introduction**

The process of college choice and college persistence is complex as it has been pointed out by other authors (Turley, 2009 & Tinto (2012). Some authors have suggested that for Hispanics the process of college choice is not linear and that family and trusted individuals play a significant role in helping them decide when and where to go to college (Pérez & McDonough, 2008). However, social capital seems to be a useful framework to study the complexities of both college choice and persistence. Thus, the social capital framework was used to identify the social capital factors that help Hispanics choose a four-year PWI and the social capital factors that are significant in their college persistence. The models of Tinto (1975, 1993), Astin (1999); Stanton-Salazar's (1997) bilingual network as well as Pérez and McDonough's (2008) chain migration are referred as they have elements of social capital. Thus, models for college choice and college persistence were created taking into account the social capital variables more relevant in the literature. An analysis of the main findings follows below.

### **5.1.2 College Choice Variables**

One of the main independent variables for college choice was that of college proximity. However, contrary to what the literature suggests (Turley, 2009), college proximity was not an

important variable. The literature suggests that Hispanics are either more inclined to live at home while attending college (Desmond & López Turley, 2009) or preferred to live close at home (Núñez & Bowers, 2011) due to *familism*. That is, the idea that the welfare of the family is above or more important than the needs of the individual. This, in turn, could be detrimental to Hispanic students because the college close to their homes might not be a good fit for them. This specific sample of survey respondents and interviewees indicated that living close to their family was not an important factor. For instance, only 28% of the online survey respondents stated that college proximity was either important or very important. But, 41% percent indicated that this factor was either not important at all or somewhat unimportant. The qualitative results further illustrate this finding as all four interviewees strongly stated that *being away from home* was one of the main reasons why they chose to attend this four-year PWI. This contradicts the literature.

What it is quite revealing about this finding is that even though the family seems to play a critical role in the lives of young college Hispanic students, they still want to have a “typical” college experience and go away to college. For instance, some students in the online survey wrote that the main reasons for choosing IUP were the distance from their homes. One of them expressed, “... [IUP] was far enough from home that I could learn to be on my own and independent.” Another stated, “[I]t felt like a good idea to go away to college, gain some independence, and grow as a person.” Being away to college is viewed by these students as a step to exert their independence and grow as a person. This should not be interpreted as a desire to cut their ties with their families.

There may be other explanations for this as well and that has to do with the level of *acculturation* or cultural identification. Low acculturated students, those who tend to identify more with the Hispanic culture, view college proximity as an important factor, but high

acculturated students, those who tend to identify with the White non-Hispanic culture, view college proximity as not important.

Moreover, most respondents are second- (or later-generation) in terms of immigration and college tradition. Therefore, living in the United States has helped them acquire some cultural values that are more associated with the White non-Hispanic culture. For instance, *Lucas*, who even though self-identifies as Hispanic, feels that he is more “American” because he adheres more to the values of the White non-Hispanic culture than to the Hispanic culture.

The ethnic composition of this institution was another variable in the college choice model that was **not** an important factor in choosing this institution. That is, being a PWI was not a significant factor that influenced Hispanics to choose IUP. Some authors (Butler, 2010) suggested that having more students who belong to the same ethnicity is cited as one of the reasons why female Hispanic students tend to select a particular college. Others (Engberg & Wolniak, 2009) suggest that it is the *diversity* of the college that is important for students in choosing a college. However, I hypothesized that it was possible that many Hispanic students came here because it is a PWI. My assumption was that most Hispanics who come to this institution come from high schools that are predominantly Hispanic or African-American. Therefore, I suggested that a majority of Hispanic students may want to extend their social capital networks by attending a PWI in order to diversify their social capital. Results of the online survey show that there are few instances where students do feel the need to extend their networks by attending a PWI. For instance, one student expressed,

IUP was a new start for me, my entire life I have seen and been around lower income and ghetto neighborhoods, this experience and change was something I've always dreamed about. I just wanted to make something of myself and have a better life.

However, results from the quantitative and qualitative phases show this is not always the case. The ethnic composition of the university was not an important factor in choosing to attend this university as only 26% of the respondents indicated that this factor was either very important or somewhat important. A possible explanation for this was that 52% of the survey respondents are coming from high schools that are predominantly White non-Hispanic and 25% are coming from high schools with a diverse student body. Results from the qualitative phase were consistent with the quantitative results. Therefore, as other authors (Núñez & Bowers, 2011) have pointed out, it is the high school ethnic composition that is more relevant than the ethnic composition of the college.

There could also possible be other explanations as to why the ethnic composition of the university was not important for these students. 1) the manner in which the question was formulated; for instance, the question could be interpreted in several ways 2) perhaps these particular students are not aware of the importance of race in this society and are indeed "color blind". However, in my interviews one of the students clearly stated that she did not know that this was a PWI and if she had known before her tour, probably she would have attended other institution. Another interviewee, for instance, found this university as being *diverse* even though IUP is not a diverse institution in terms of raw numbers. But IUP emphasizes the importance of *diversity*. This was pointed out by one of the interviewees. I could only speculate about the reasons why online respondents did not view the racial composition as very important. Perhaps

future studies could ask questions related to race and discrimination to be able to correlate those with the importance of ethnic racial composition of the university.

Parental expectations play a key role in college choice (Zarate & Gallimore, 2005). Survey and personal interview results indicate that for this sample of Hispanics, parental expectations were high as more than 80% expected their offspring to graduate from college. Therefore, this study is consistent with the findings of Zarate and Gallimore (2005).

The role of older siblings was another variable related to college choice. Results from both the online survey and the personal interviews show that for both groups older siblings, regardless of whether or not they are attending college, are a source of support for Hispanics to come to study at IUP. These results are consistent with other findings in the literature that suggest that having an older sibling who has college experience was related to being enrolled in college (Hurtado-Ortiz & Gauvain, 2007) as they act as *protective* agents of information (Ceja, 2006).

#### **5.1.2.1 Sources of information**

##### ***Institutional agents: Counselors***

Another independent variable that was part of the current college choice model was the role of counselors. A review of the literature suggests that having discussions with school counselors (Zarate & Gallimore, 2005) is an important factor for Hispanic females to decide to go to college and interactions with school counselors weighted heavily in the decision of female Hispanics to attend four-year institutions (Reigle-Crumb, 2010). Results from both survey respondents as well as the interviewees are consistent with the literature. Undergraduate Hispanic students in this sample were familiar with the process of applying to college as they had discussions with their

counselors that also included discussions on how to apply for financial aid. This is important because it has been documented that Hispanics enroll in community colleges because they lack information on how to finance higher education in four-year colleges (O'Connor, Hammack, & Scott, 2010). The role of counselors becomes crucial especially for those students whose parents are not familiar with the Higher Education System of the U.S. as it has been documented that often times family, friends, and “trusted individuals” might not have the appropriate knowledge about college information and finances (Oseguera & Malagón, 2011; Pérez & McDonough, 2008).

### ***Family, friends, and trusted individuals***

The process of college choice for Hispanics is better understood by using the theory of “chain migration” which is within the social capital framework, which relies on network members for information and support to make decisions such as which college to attend. Thus, Hispanics tend to rely more on family, friends, and “trusted individuals” when applying for and choosing a college (Pérez & McDonough, 2008; Oseguera & Malagón, 2011). Survey results are consistent with those findings as they show that the main source of information for Hispanics students were friends. For instance, *Lucas* had a friend who knew about IUP and he encouraged him to apply. Survey results indicated that parents and friends were key in choosing to come to IUP. The qualitative results are also consistent with the survey results and further illustrate the quantitative results. For example, in *Marisol's* case, her father and half-brother persuaded her to come to IUP. Thus, these findings reaffirmed the results obtained in previous studies found in the literature.

However, a surprising finding is that 17% of the survey respondents first learned about IUP and obtained information through an internet search, specifically from the university's

website. The qualitative results also illustrate these results. For instance, both Marisol and Sofia first learned about IUP through their own internet search. *Marisol* also learned through posters displayed at her high school. Although there are articles on the role of social media in the college aspirations of high schoolers (Wohn, Ellison, Khan, Fewins-Bliss, & Gray, 2013), there are no, to my knowledge, any articles on the importance of college websites as initial sources of information.

### **5.1.3 College persistence variables**

Research suggests that in the freshmen year students are more likely to drop out of college. (Hu & St. John, 2001). Therefore, for the analysis of college persistence freshmen were not taken into account.

#### **5.1.3.1 Family support: Parents and siblings**

For Hispanics having the support of parents and siblings is important in their college persistence (Hernandez, 2000; Ojeda, Navarro, & Morales, 2011; Gloria, Castellanos, Lopez, & Rosales, 2005; Sánchez, Reyes, & Singh, 2006). The results of both the online survey and the semi-structured interviews support the literature findings. In the qualitative results, the role of the mother was salient for two of the interviewees. This is also consistent with other qualitative work conducted by Gándara (1995) in which mothers provided “verbal support” and “encouragement.”

#### **5.1.3.2 Individual educational expectations**

Tinto (2012), in his summary of the literature on college persistence/retention, listed expectations as one of the conditions that help a student persist and succeed in college (e.g., to graduate). As

he points out on p. 7. "...no one rises to low expectations." Thus, in this college persistence model, one independent variable that was related to persistence was individual educational expectations. That is, students who have already passed their freshmen year, will be those that have high individual educational expectations. The results of the quantitative and qualitative phases is consistent with that claim. For instance, the online survey results show that 74% percent of the sample have very high educational expectations (e.g., obtain either a master's degree or higher level of education). In the interviews, the three participants recalled when they starting having the goal of getting a college education. For *Jessica* and *Sofia* when they were very young, their mothers always instill in them the importance of getting a college education and thus, it was instilled in them early in life. On the other hand, *Lucas* stated that as long as he remembers his educational goal has been to be a doctor, even before attending a predominantly White high school, being a doctor has been his educational goal. This contradicts the literature that states that Hispanics showed the lowest educational expectations. That is, to graduate from college (Hurtado, Inkelas, Briggs & Rhee, 1997).

When compared with 18-25 young Latinos at the national level, this sample has higher educational expectations. In the national sample, 64% of second-generation Hispanics expect to get a bachelor's degree or higher and for third-generation Hispanics that percentage dropped to 54% (Pew Research Hispanic Center, 2009).

#### **5.1.3.3 Support from faculty and on-campus friends**

It is undeniably that support from faculty plays a significant role in student's persistence. The variables used in the scale to measure faculty support validated those claims. Both survey and qualitative results indicate that professors (and college friends) have been important factors for Hispanics in persisting in their studies. These results are consistent with the literature that

highlight the importance of faculty and friends (Nuñez, 2009; Cole & Espinoza, 2008, Otero, Rivas & Rivera, 2007; Saunders & Serna, 2004). This is not surprising as students interact with professors often during the week. The support that is provided by faculty can come in many forms, but usually related to academics. For instance, students in this sample sought the help of a professor in understanding class material, help with assignments, participating in research, graduate school and the like.

#### **5.1.3.4 Social support: Participation in on campus and community organizations**

An important independent variable in college persistence is participation in organizations. Participation is also known as involvement or engagement (Tinto, 2011). The literature suggests that engagement in the community, and in formal activities such as clubs and organizations has an impact on grades and therefore persistence. (Nuñez, 2009; Fischer, 2007). Hispanics who were members of a student club had higher odds of remaining in college and being engaged in a Latino organization is helpful especially if they are in PWI (Baker & Robnett, 2012; Hernandez, 2000). The results of the online survey support the literature as 75% of the Hispanics that have persisted past their first year are members of at least one student organization. However, participation in Latino organizations and in the community was low. There is however, a correlation between *acculturation* and participation in Latino organizations. Low acculturated Hispanics participate more in Latino organizations than high acculturated students.

An important observation made by one of the online participants is that the survey should have asked about *past* participation as students progress in their studies, they might not have that much time to participate in organizations. Thus, in the qualitative phase, participants were asked about past participation in organizations. All four participants stated that they were involved in at

least one organization at the beginning of their college career, but as time progressed they did not have the time to keep attending meetings because of their classes and due to work.

#### **5.1.3.5 Other findings**

An important finding here that emerged from the qualitative results was the importance of being a first-generation college student even though the aim of this study was not to study this particular factor. For instance, for *Lucas* and *Jessica* being the first in their family to graduate from college was a motivation by itself to continue their studies. This is an important factor that merits further study.

## **5.2 CONCLUSIONS**

The purpose of the present mixed-method case study was two folded: (1) identify the social capital variables that helped undergraduate Hispanic students to choose a PWI, and (2) to identify the social capital factors that Hispanic students found helpful in their college persistence. Persistence was defined as returning for a second year and beyond. The main theoretical framework was social capital based on the works of Bourdieu, Coleman, Stanton-Salazar (1997) as well as on the models of Tinto (1975, 2012), Astin (1999), and Pérez & McDonough (2009). Thus, two models were created: one for college choice and one for college persistence. Moreover, I have made five assumptions/hypotheses about college choice and persistence that are also revisited in this section.

I will start first with my five assumptions and then I will list the other main findings of this study. The first assumption was that Hispanic students obtain their information about college

choice from trusted individuals, especially their family. The results of this study support to certain extent this assertion which is consistent with the literature (see, for instance, Oseguera & Malagón, 2011; Pérez & McDonough, 2009; Sánchez, Reyes, & Singh, 2006). Although the family plays an important role as a source of information, friends are the **most** important source. This is also consistent with the concept of the strength of the weak ties discussed by Granovetter (1973), in which he argues that weak ties are important in transmitting information. A related and embedded assumption was that female students obtain their information from institutional sources more than males do. However, an analysis of their sources found that this was not the case. For both males and females, friends were still the number one source of information. This contradicts the literature such as Riegle-Crumb (2010) and Zarate & Gallimore (2005).

The second assumption was that involvement/participation in college organizations is a factor that students find helpful in persisting past their freshman year. This is supported by both the findings of this study and it is consistent with the literature (Baker & Robnett, 2012; Fischer, 2007). However, results from conducting a regression analysis with the three variables related to student participation in organizations showed that participation in community organizations is *statistically* significant as opposed to student organizations. However, the number of students who do engage in community organizations is relatively small.

The third assumption was that when selecting IUP, Hispanic students receive their support from their families. But in order to persist, they need to have the support of faculty, organizations, and the friends they have made while on campus. The results support the assertion of family support in college choice. However, the support of faculty indicated by seven variables found that the only item that is significant is the variable that deals with faculty caring about the academic success of their students which is consistent with other studies (e.g., Arana et al., 2011;

Museus & Neville, 2012). However, it seems that the support is more critical during the second year than in subsequent years.

The fourth assumption was related to the ethnic composition of the university. I hypothesized that it was possible that Hispanics chose this institution precisely because was a PWI. However, this was not supported by the findings of the study. The last assumption was that in this sample there were going to be more students who were bilingual, second- and later-generations as opposed to those who were first-generation, monolingual (English dominant). In fact, this particular sample has very few first-generation students and as predicted a large percentage (39%) are bilingual compared to 28% who are monolingual (English-dominant). The main argument was based on the literature, such as Stanton-Salazar (1995) who described the bicultural networks of Mexican-American children.

The following are a list of the other main findings of this study as it relates to the literature of college choice and college persistence. First, college proximity, expressed as the desire to live close to home while attending college, was **not** an important finding in this study. It was actually quite the opposite; a significant percentage of Hispanic students came here because this institution is *away* from their homes. This finding could be explained better by *acculturation*. Low acculturated students—those who tend to identify more with the Hispanic culture—view college proximity as an important factor, but high acculturated students—those who tend to identify with the White non-Hispanic culture—for the most part view college proximity as not as important.

Second, parental expectations in this sample of Hispanics students is high. This is consistent with the literature that parental expectations do play a role in both college choice and persistence. As Torres (2003) points out, it is important to debunk the myth that Hispanic parents

do not value education. According to her, this myth is due to “the fact that many Latino parents do not know how to support their sons and daughters in college” as they are generally unfamiliar with the complexities of the higher education system especially how to afford college (p. 6).

Third, older siblings play an important role in providing support and encouragement whether or not they have attended college. Fourth, the ethnic composition of this university (PWI) is not an important factor in their decision making as I have suggested. However, this could be explained by the fact that most students are coming either from predominantly White and diverse high schools. Therefore, the ethnic composition of the high school seems to me more associated with choosing a particular college as it was stated by previous studies (Butler, 2010; Núñez & Bowers, 2011; Perna, 2000).

Fifth, institutional agents—namely school counselors—play an important role in providing information related to financial aid and the college process. It is relevant to clarify that 100% of the students here come from high schools that have counselors; however, that is not the case of most Latinos who attend high school in the United States.

Sixth, Hispanic students obtain their information mainly from friends, family, and trusted individuals. This is consistent with the literature on college choice (Ceja, 2006; Pérez & McDonough, 2008; Sánchez, Reyes, & Singh, 2006). Moreover, both parents and siblings show high degrees of support for the students to come to study here at IUP even though this college is far from their homes.

Seventh, family support is key for Hispanics to persist in their studies as well as having high individual educational expectations. When compared with a national sample of young Latinos, Hispanics at this institution show greater educational expectations. Eighth, a great percentage of Hispanics in this institution view the support of faculty in their persistence as

being important. This is supported by previous studies (Arana et al., 2011; & Espinoza, 2008; Museus & Neville, 2012) on the importance of having ties with faculty. However, the type of support provided is varied, ranging from help with homework and assignments to discussing personal problems.

Ninth, friends at home are very important in college choice as well as college friends in their college persistence. This is also consistent with the literature on the importance of both friends at home and college friends (Arbona & Nora, 2007; Fischer, 2007; Riegle-Crumb, 2010). One of the benefits that they derived from their friends in college is the support that they receive in situations such as not understanding class material to personal problems.

Tenth, the majority of Hispanic students participate in at least one organization. But there are low levels of participation in Latino and community organizations. It seems that participation in organizations is more critical at the beginning of their college career for some. As the demands in their classes and work increases, there tends to be less time for them to participate in organizations.

Eleventh, low acculturated Hispanics tend to participate more in Latino organizations than high acculturated Hispanics. And finally, acculturation—a mediating variable as it was stated in the literature (Castillo, Conoley, Choi-Pearson, Archuleta, Phoummarath, & Van Landingham, 2006; Ojeda, Castillo, Rosales Meza, & Piña-Watson, 2014; Padilla, 2004)—may help explain some differences in some key variables.

### **5.2.1 Policy implications**

First, friends and family still play a crucial role in the decision making of Hispanic students in college choice. However, the role of the internet in reaching out to students seems to be

important as well as several of the online survey respondents learned first about this PWI via its website. Therefore, college and universities should invest heavily in reaching students also through social media as this new generation is more familiar with technology and the use of it. Thus, it is important also to have a user friendly and well-designed website. It would be advisable to also have a link in Spanish and in English for parents, so that they also can be involved in the process of college choice as well.

Second, at the K-12 level, Hispanic parents should be involved in the dissemination of how to apply to colleges and obtain financial aid. This is especially important for those parents who are first-generation immigrants as parents exert great influence in the college choice that their children eventually select.

Third, faculty members play an important role as they are the ones who act in many cases as advisers. Hispanic students need, regardless of their professor's ethnicity, someone who is interested in getting to know them on a personal level. Colleges and universities should provide faculty with specific information of Hispanic/minority students so that they can better serve their needs. For instance, IUP last year invited faculty to a webinar related to Hispanic students to learn more about the best practices at other colleges and universities.

Fourth, provide students with more opportunities to do research early in their undergraduate programs as this seems to keep students engaged in their studies and affect their college persistence. Research should not be only conducted in STEM fields, but other field of studies as well.

Fifth, the low numbers of Hispanic males in higher education should be of special concern. Although this trend is not exclusive of Hispanics, but it is across all ethnic groups. There needs to be more education at the K-12 on the importance of having a college degree in

the long term. This is not to suggest that a college education is for everyone, but it has been documented that Hispanics lose billions of dollars in income as they do not have the same levels of education as that of Whites non-Hispanic (Robles, 2009).

Sixth, PWIs should ensure that they both serve low and high acculturated Hispanic students. For instance, low acculturated students—those who are usually coming from high schools where there is large percentage of Hispanics—should have access to student Latino organizations. For high acculturated students, an effort should be made to promote the importance of being engaged in organizations especially in their freshmen year as this may have an impact on retention.

Seventh, Hispanic students mentioned in the open question that the atmosphere of the university, as being welcoming as well as diverse, was important for them. Therefore, cultural activities that celebrate the cultural contributions of other cultures should be a regular part of a college extra-curricular events. For instance, one of the participants mentioned her participation in the International Unity Day event held on campus. By having cultural activities such as this, it is possible that students perceive more levels of support from those who come from different backgrounds. It is possible that these cultural activities also develop multicultural awareness in White non-Hispanic students.

### **5.2.2 Future areas for research**

One of the unique contributions of this study is that it is one of only a few mixed-methods case studies conducted in the state of Pennsylvania on undergraduate Hispanics. By using a mixed-methods case study approach, it was possible to further illustrate and/or expand the main findings of the survey results. It also highlights the importance of this type of research as much

can be learned from a case study, especially to highlight that Hispanics are not a monolithic group as some might think. An important follow-up study would be to extend this case study to a state or even national level to learn more about the decision making patterns of Hispanics in PWIs and the social capital factors that are important in their persistence.

Future studies could also focus on Hispanic groups who are coming from different high school backgrounds to find out if social capital factors are similar or different as the sample for this study was mainly coming from predominantly White high school backgrounds.

Even though one of the limitations of this study is the over-representation of females, this study illustrates the importance of conducting case studies, such as this, in studying differences among the many Hispanic sub-populations. For instance, in this university there is a large presence of Hispanic-Americans from Puerto Rico and the Dominican Republic whose level of acculturation might be different from those who are of Mexican descent.

The online survey administered in this study not only provided large amounts of information, but it was strengthened with more insightful information by including an open-ended question at the end of the survey. In this study, an analysis of the open-ended question provided valuable information as to other reasons of why Hispanic students decided to attend IUP. In this particular institution, the *atmosphere* or *climate* of the university was a theme that emerged from this open-ended question. Future studies that entail survey research should also consider having one or more open-ended questions.

As I have already mentioned, an important theme that emerged from the survey respondents was the atmosphere of the university although it was not an aim of this study. Hispanic participants, in both the quantitative and qualitative portions of the study, expressed that IUP was a welcoming institution where they felt at home and an institution that was

perceived as being diverse. This was a surprising finding as IUP is a PWI and it is not what one would traditionally consider having a diverse population. However, future studies should focus on *why* students perceive an institution as being diverse and welcoming by minority students. What transpires from these results is that the ethnic composition of the university is not as important as the emphasis that the university places in their policies of being inclusive and multicultural. I would argue then that diversity or the perception of diversity probably is not related with the number of minority students per say, but the *climate* that the university has created to welcome minority students is what might be important for Hispanic students. This atmosphere/climate in turn creates a sense of belonging (Núñez, 2009) that plays a key role in college persistence. Future research on PWI and Hispanics should focus more on this important dimension of social capital as this might help in the retention efforts of minority students.

Future studies should focus on best practices of PWIs in retaining Hispanics. It would be ideal to have longitudinal studies in which different cohorts of students could be investigated to observe changes over time as cross-sectional surveys offer information from a specific point in time.

Seventh, it would be important to conduct studies on male Hispanics in higher education as they enroll and graduate in lower numbers than their female counterparts. It would be especially helpful to identify and better understand the social capital factors that help Hispanic males to attend and persist in college.

Finally, the mediating variable of acculturation seems to be an important variable that is significant in explaining some differences among Hispanics and is worth further study. However, as it was discussed in section 2.7 some authors prefer to use the term *cultural identification* rather than acculturation. For instance, in this sample most Hispanic students have high ethnic

self-identification when they were asked how they self-describe themselves in terms of ethnicity. However, some of their behaviors were not congruent with their high ethnic self-identification. That is, even though some of them identified strongly as being Hispanics, their ties to the Hispanic community were relatively weak. A limitation of the use of acculturation is that it does not clearly identify who is bicultural although in my analysis I considered those who were middle acculturated as bicultural. In this sense, a better instrument may be the one developed by Torres (1999) the Bicultural Orientation Model (BOM) in which she combines acculturation and ethnic identity that produced four different cultural orientations: Hispanic, Anglo, Marginal, and Bicultural.

## APPENDIX A

### RESEARCH QUESTIONS/THEORETICAL BASIS AND SURVEY QUESTIONS

Research Questions	Variables/Concepts	Theoretical Basis/Authors	Survey Questions/Measurement
1. What are the social capital factors that helped Hispanic undergraduate students to make their decision to come to a four year predominantly White college?	<b>College proximity:</b> <i>(independent variable)</i> Measured as the desire to attend a college that is close to home.	Hispanics tend to apply to fewer colleges and they prefer to attend the college that is closest to them. Living close to their home is an important factor for instance to choose a four-year HSI (Alvarado & López Turley, 2012; Desmond & López Turley, 2009; Núñez & Bowers, 2011).	CP1. How many academic institutions did you apply to <b>besides</b> IUP? CP2. If your answer to CP1 was <b>1, or more</b> , how far from your permanent residence were they located in comparison to IUP? CP3. Using the following scale, please indicate <u>how important</u> was for you to live <b>close to your family</b> when attending college. CP4. Using the following scale, please indicate <u>how important</u> was the proximity to your home residency in deciding to choose IUP.

Research Questions	Variables/Concepts	Theoretical Basis/Authors	Survey Questions/Measurement
	2. <i>Parental educational expectations</i> ( <i>independent variable</i> )	Parental expectations are related to college enrollment for Hispanic males (Zarate & Gallimore, 2005).	PE 1. What is the highest degree that your parents <b>expected</b> you to complete?
	3. <i>Having older siblings</i> ( <i>independent variable</i> ) Number and support from Siblings	Number of siblings is negatively related to academic outcomes (Coleman, 1988). However, in the college choice literature older siblings influence the college aspirations of younger siblings (Ceja, 2006)	SIBL1. How many <b>older</b> siblings do you have?
	<b>Ethnic/Racial Composition</b>	There is a strong correlation between the ethnic-racial composition of the high school with that of their college choice. Hispanic females tend to select colleges that have more Hispanics (Butler, 2010). Engberg & Wolniak, (2009) suggest that it is the <i>diversity</i> of the college that is important for students in choosing a college.	ERC1. What was the ethnic/racial composition of the high school you graduated from? ERC2. <u>How important</u> was for you the ethnic/racial composition of <b>IUP</b> in deciding to study here?
	<b>Sources of Information about IUP</b>  1. Institutional agents 2. Family, friends and trusted individuals.	Interactions with counselors is highly related to enrollment in four-year colleges for female Hispanics. (Bryan, Moore-Thomas, Day-Vines & Holcomb-McCoy, 2011; Riegle-Crumb, 2010 and Zarate and Gallimore, 2005). Hispanic students rely heavily on their family, especially older siblings, friends, and <i>trusted individuals</i> play a critical role in collecting information on how to apply to college and financial aid.	SI1: Did your high school have counselors? SI2. Did you have discussions with your high school counselor about going to college? SI3. Did you have discussions with your high school counselors on how to apply for financial aid? SI4. On average how many times did you meet with a high school counselor to discuss <u>anything</u> related to going to college in your <u>last year of high school</u>

Research Questions	Variables/Concepts	Theoretical Basis/Authors	Survey Questions/Measurement
		Especially important is the concept of <i>chain migration</i> which relies on network members for information to make decisions where to attend college. (Perez, & McDonough, 2008; O'Connor, Hammond, & Scott, 2010).	(e.g., application for admission, financial aid application, choosing a particular college, etc.?) SI5. How did you, <b><u>first</u></b> learned about IUP? SI6. Who <u>encouraged</u> you to choose IUP?
	<i>Resources derived from social capital Support</i> <b>Financial Support</b>	Cost, availability of financial aid, and higher grants are important factors in choosing a college. (Adelman cited in Kurlaender, 2006, p. 7; Engberg & Wolniak, 2009).	FS1. What/who was <b><i>the main source of information</i></b> on how to finance your college education at IUP? FS2. Compared to IUP, how was the overall cost of attending college of the other institutions that you also applied to? FS3. Compared to IUP, how was the availability of financial aid in the other institutions you applied to? FS4. What are your <b><u>TWO</u> main sources</b> of funding to pay for college? Please check two.
	<b>Emotional Support</b>	Important to investigate if relationships with siblings are supportive (Morrow, 2006) as siblings are influential in the aspiration of younger sibling to attend college and serve as an inspiration to go to college (Ceja, 2006; Gándara, 1995). Friends and peers influenced not only aspirations of going to college, but also choosing to attend a four-year college. (Hallinan & Williams, 1990; Perna & Titus, 2005; Arbona & Nora, 2007;	ES1. How supportive were your <u>parents or guardians</u> of your decision to come to IUP to study? ES2. How supportive were your <u>siblings</u> of your decision to come to IUP to study? ES3. How supportive were your <u>other relatives</u> of your decision to come to IUP to study?

Research Questions	Variables/Concepts	Theoretical Basis/Authors	Survey Questions/Measurement
		Riegle-Crumb, 2010; Alvarado & López Turley, 2012)	
			<p>ES4. How many of your <u>close friends</u> back home attended or are attending college?</p> <p>ES5. How many of your <u>close friends</u> back home attended or are attending IUP?</p> <p>ES6. How supportive were your <u>close friends</u> of your decision to come to IUP to study?</p> <p>ES7. Are any of your <u>close relatives</u> attending or have attended IUP?</p> <p>If you answered yes, what is your relationship?</p>
2. What are the social capital factors that help Hispanic students persist in college past their freshman year?	<b>1.1. Family support (independent variable)</b> <b>measured by:</b> 1.1.a. Parental encouragement and support 1.2.b. Siblings encouragement and support	The family is the main source of encouragement and support to continue their studies (Coleman, 1988; Hossler, Schmit, & Vesper, 1999; Hernandez, 2000; Cejda, Casparis, Rhodes, & Seal-Nyman 2008). Important to investigate if relationships with siblings are supportive (Morrow, 2006). Siblings act as protective agents (Ceja, 2006) providing not only information but also emotional support and inspiration to persist in college (Gándara, 1995).	<b>Parental support (PS)</b> PS1. My parents encourage me to continue my studies in IUP. Yes____ No____ N/A____ PS2. My parents want me to transfer to a college near home. Yes ____ No ____ N/A ____ <b>Sibling Support (SS)</b> SS1. My sibling(s) encourage me to continue my studies in IUP. Yes ____ No ____ N/A____ SS2. My sibling(s) want me to transfer to a college near home. Yes ____ No ____ N/A____
	2. Individual educational expectations (independent variable)	In a study conducted by Hurtado, Inkelas, Briggs & Rhee, (1997), Hispanics showed the <i>lowest</i> educational expectations for instance,	IE1. What is the highest degree that <b>you expect</b> to complete?

Research Questions	Variables/Concepts	Theoretical Basis/Authors	Survey Questions/Measurement
		graduate from college.	
	<b>Institutional support – Faculty support (FS)</b> <i>(independent variable)</i> will be measured by nine different variables.	Institutional agents (e.g., faculty) provide information and support that impact the students' persistence in college. Having passionate faculty helps students persist in college (Arana, et al., 2011; Cole & Espinoza, 2008; Museus & Neville, 2012). Latino students in 4 year colleges- need to learn not only how to mobilize and maintain new ties in college, but also create new ones if they are to persist in college. (Stanton-Salazar, 1997; Núñez 2009).	<b>FS1.</b> My professors at IUP care about my academic success <b>FS2.</b> I feel comfortable talking to my professors when I have an <i>academic problem</i> . <b>FS3.</b> I feel comfortable talking to my professors when I have a <i>personal problem</i> . <b>FS4.</b> I have gotten to know very well at least one of my IUP professors. <b>FS5.</b> My professors provide me with appropriate feedback on how to be successful in their classes. <b>FS6.</b> My professors have taken the initiative to get to know me. <b>FS7.</b> I have taken the initiative to get to know my IUP professors. <b>FS8.</b> On average how many times <u>per semester</u> do you go to your professor's office hours? <b>FS9.</b> Were those visits related to, (check <b>all</b> that apply): <b>FS10.</b> When you have an academic <b>problem</b> related to a <b>class</b> (e.g., not understanding class material), who is <b>the first person</b> you go to for help:
	<b>1.3. Social support on campus-</b> <i>(independent variable)</i> Measured by: 1.3.1.Participation in organizations and clubs 1.3.2.Participation in	*Participating in a student organization (e.g., club) is positive related to college persistence among Latinos(as) (Fischer, 2007). However, participation in fraternities was negatively associated with student achievement and therefore persistence (Strayhorn, 2010).	<b>MCCO1.</b> How many <u>student organizations</u> are you a member of? <b>MCCO2.</b> Are you a member of any Latino/Hispanic organization on campus? <b>MCCO3.</b> Are you a member of any <u>community organization</u> , including religious organizations, in Indiana?

Research Questions	Variables/Concepts	Theoretical Basis/Authors	Survey Questions/Measurement
	community organizations 1.3.3.Number of on-campus friends 1.3.4.Degree of support given by on campus friends	* For Hispanics is helpful to be engaged in a Latino organization. Hernandez (2000); * Establishing ties with friends on campus was positively related to college persistence. (Otero, Rivas, & Rivera, 2007). * Latino students in 4- year colleges need to learn not only to mobilize and maintain new ties in college, but also create new ones if they are to persist in college. (Nuñez, 2009; Baker & Robnett, 2012; Saunders & Serna, 2004).	1. Yes _____ 2. No _____ If yes, list the names of the organization: SCF 1. Since your arrival to IUP, how many new college friends have you made? SCF 2. My friends at IUP help me when I have personal problems. SCF 3. My friends at IUP help me when I have academic problems (e.g., not understanding class content, etc.) SCF 4. I could not make it through college <i>without</i> the support of my friends at IUP. SCF5. My college friends encourage me to continue my studies at IUP.
	<b>Acculturation (mediating variable)</b> Six different variables are used as proxies for acculturation 1. <i>Language use at home</i> 2. <i>Language preference when viewing TV</i> 3. <i>Ethnicity of friends</i> 4. <i>Preference for Hispanic foods</i> 5. <i>Language proficiency (English and Spanish)</i>	When studying Hispanics is important to take into account their acculturation because some differences in the variables studied may be influenced by the <i>level of acculturation</i> and this can result in misinterpretation of results (Padilla, 2004). For instance, Hurtado-Ortiz & Gauvain (2007) found a strong correlation between acculturation and college attendance. In other words, the more acculturated students are, the more likely they will be enrolled in a 4 year-college. Acculturation is usually measured by a) self-rated language proficiency, b) language use at home; c) preference for ethnic related activities (e.g., food, music, etc.) and d) friends (Padilla, 2004). Immigration generation	AC1. Were you born in the United States? Yes, _____ No _____ AC2. If you answered no, in which country were you born? _____ AC3. How old were you when you came to the United States? _____ AC4. Was <i>any</i> of your parents <i>born</i> in the United States? Yes _____ No _____ If you answered no, in which country were they born? _____ AC5. How do you identify yourself? AC6. When you have any kind of problems who do you call or text <b>first</b> ? AC7. Are <i>most</i> of your friends? <b>10. English proficiency (EP)</b> EP1. How do you rate your <i>overall</i> English skills? <b>11. Spanish proficiency (SP)</b> SP1. How do you rate your <i>overall</i> Spanish

Research Questions	Variables/Concepts	Theoretical Basis/Authors	Survey Questions/Measurement
		status will be also included in “acculturation.” Regardless of race, first time immigrant are more likely to enroll in public institutions than second-generation immigrants (Núñez & Bowers, 2011; Hagy & Staniec, 2002). Moreover, later-generations of Hispanics are more likely to be enrolled in college than first-generation Hispanics (Hurtado-Ortiz & Gauvain, 2007).	language skills? <b>12. Language use at home (LH)</b> LH1. What language do you speak <i>at home</i> when you are <i>with your parents</i> ? <b>13. Language Preferred When Watching TV (LTV);</b> LTV1. Do you watch T.V? <b>14. Music (M)</b> M1. How often do you listen to music in Spanish (e.g., salsa, bachata, merengue etc.?) <b>15. Food (F)</b> F1. How often do you eat Hispanic foods when you are at home with your family?
<b>Qualitative Phase- Research Questions</b>			1. First at all, tell me about some basic information about yourself and your family background. 2. What are some of the main reasons you decided to study in IUP? 3. What were the main sources of information that you used to learn about IUP? 4. Who or what was the most influential factor in choosing IUP? 5. What are the most important factors in your decision to continue your education at IUP?
5. How do the results of the qualitative data help explain the results obtained in the quantitative phase?	This is a mixed method question. The protocol for the interview was very open. However, during the interviews the follow-up questions were related to the main findings in the online survey.		

## APPENDIX B

### SURVEY QUESTIONNAIRE

Online survey using *Qualtrics*. (Pilot tested with Latino Recruiter on 8-6-2014). The following survey includes the modifications made after receiving feedback from the Latino recruiter at IUP.)

#### **Survey on college choice and persistence among Hispanic undergraduate students**

Instructions: The purpose of this survey is to get information on the factors, especially social capital ones, that are associated with college choice and college persistence among Hispanic undergraduate students at IUP. You need to be **at least 18 years** old to participate.

If you are willing to participate, our survey will ask you some background information (e.g., age, high school information, current GPA, family background, income, etc.). It would also ask you questions related to the sources of information used to help you in making your decision to come to IUP and those social capital factors that help you persist in college (e.g., participation in organizations, ties with faculty, etc.). There are minimal risks in completing the

questionnaire, being breach of confidentiality one of them. However, the researcher will do everything possible to protect your privacy and all responses will be kept under lock and key. Moreover, your survey responses WILL NOT BE linked to your personal information as this an anonymous survey. Upon completion of the questionnaire, you will have the opportunity to be entered into a raffle to win \$50.00 dollars in cash (there will be a total of 6 winners). This survey will take you approximately 10-15 minutes.

## I. Demographic and academic information

1. Age: \_\_\_\_\_
2. Gender: \_\_\_\_\_ male \_\_\_\_\_ female
3. Name and location of high school where you graduated from  
Name: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_
4. Are you a: \_\_\_\_\_ full-time student \_\_\_\_\_ part-time student.
5. What is your major? \_\_\_\_\_
6. Are you currently a \_\_\_\_\_ freshman \_\_\_\_\_ sophomore  
\_\_\_\_\_ junior \_\_\_\_\_ senior
7. Which campus do you attend? \_\_\_\_\_ Indiana \_\_\_\_\_ Punxsutawney
7. Are you a transfer student: \_\_\_\_\_ Yes \_\_\_\_\_ No
8. If **yes**, write the name of your previous academic institution:  
\_\_\_\_\_
9. Are you a commuter? Yes \_\_\_\_\_ No \_\_\_\_\_
10. Do you do work for pay? No \_\_\_\_\_ Yes \_\_\_\_\_  
If yes, do you work \_\_\_\_\_ full-time \_\_\_\_\_ part-time  
Do you work \_\_\_\_\_ on campus \_\_\_\_\_ off-campus
11. Are you the **first** one in your household to attend college? Yes \_\_\_\_\_ No \_\_\_\_\_
12. What is your current grade point average (GPA): \_\_\_\_\_

II. **College Choice:** The following questions deal with the factors that influenced your decision to choose IUP over other colleges and universities. Please answer the questions to the best of your knowledge.

1. **College Proximity (CP)**

CP1. How many academic institutions did you apply to **besides** IUP?

None   1       2       3       4 or more

CP2. If your answer to CP1 was **1, or more**, how far from your permanent residence were they located in comparison to IUP?

1. **All** were closer than IUP
2. **Some** were closer than IUP
3. **None** was closer than IUP
4. N/A

CP3. Using the following scale, please indicate how important was for you to live **close to your family** when attending college.

- 1= Not important at all
- 2= Somewhat unimportant
- 3= Neither important nor unimportant
- 4= Somewhat important
- 5= Very important

2. **Ethnic/Racial Composition (ERC)**

ERC1. What was the ethnic/racial composition of the high school you graduated from?

1. The majority of students were Hispanic
2. The majority of students were White
3. The majority of students were African-American
4. Diverse, no clear majority

ERC2. How important was for you the ethnic/racial composition of **IUP** in deciding to study here?

1. Not important at all
2. Somewhat unimportant
3. Neither important nor unimportant
4. Somewhat important
5. Very important

### 3. Financial Support (FS)

FS1. What/who was *the main source* of information on how to finance your college education at IUP?

1. My parents
2. A sibling
3. A friend
4. A high school counselor
5. A staff member from IUP
6. Other (please specify): \_\_\_\_\_

FS2. Compared to IUP, how was the overall cost of attending college of the other institutions that you also applied to?

1. **All or almost all** were more expensive than IUP
2. **About half** were more expensive than IUP
3. **None or almost none** was more expensive than IUP
4. N/A

FS3. Compared to IUP, how was the availability of financial aid in the other institutions you applied to?

1. **All or almost all** offered more financial aid than IUP
2. **About half** offered more financial aid than IUP
3. **None or almost none** offered more financial aid than IUP
4. N/A

FS4. What are your **TWO** main sources of funding to pay for college? Please check two.

- ☐ Federal student loans
- ☐ Scholarships
- ☐ Parents' financial contribution
- ☐ Work-study
- ☐ Grants
- ☐ Others (please specify): \_\_\_\_\_

### 4. Emotional Support (ES)

ES1. How supportive were your parents or guardians of your decision to come to IUP to study?

1. Not supportive at all
2. Somewhat unsupportive
3. Neither supportive nor unsupportive
4. Somewhat supportive
5. Very supportive
6. N/A

ES2. How supportive were your siblings of your decision to come to IUP to study?

1. Not supportive at all
2. Somewhat unsupportive
3. Neither supportive nor unsupportive
4. Somewhat supportive
5. Very supportive
6. N/A

ES3. How many close friends do you have back home? \_\_\_\_\_

ES4. How many of your close friends back home attended or are attending college?  
\_\_\_\_\_

ES5. How many of your close friends back home attended or are attending IUP?  
\_\_\_\_\_

ES6. How supportive were your close friends of your decision to come to IUP to study?

1. Not supportive at all
2. Somewhat unsupportive
3. Neither supportive nor unsupportive
4. Somewhat Supportive
5. Very supportive

ES7. Are any of your close relatives attending or have attended IUP?

1. No
2. Yes

If you answered yes, what is your relationship?  
\_\_\_\_\_

## **5. Sources of Information about IUP (SI)**

SI1. How did you, **first** learned about IUP?

1. My own internet search
2. An IUP representative came to my high school
3. My high school counselor
4. Another faculty/staff member of my high school
5. My parents
6. My siblings
7. Other family members
8. A friend
9. Other source (please specify): \_\_\_\_\_

SI2. Who encouraged you to choose IUP?

1. My high school counselor
2. Another faculty/staff member of my high school
3. My parents
4. My siblings
5. Other family members
6. A friend

Other source (please specify): \_\_\_\_\_

SI3: Did your high school have counselors? Yes \_\_\_\_\_ No\_\_\_\_\_

If you answered **no** go to the next section

SI4. Did you have discussions with your high school counselor about going to college?

0. No                      1. Yes

SI5. Did you have discussions with your high school counselor on how to apply for financial aid?

0. No                      1. Yes

SI6. On average how many times did you meet with a high school counselor to discuss anything related to going to college in your last year of high school (e.g., application for admission, financial aid application, choosing a particular college, etc.?)

- 0-Never  
1- Once  
2- two times  
3 -3 times  
4- More than 3 times

## Number and support from Siblings

SIBL1. How many **older** siblings do you have?

None (I am the oldest)      1      2      3      4      5 or more

SIBL2. Have any of your **older** siblings attended or are attending college?

Yes\_\_\_\_\_ No\_\_\_\_\_

**Open-ended Question:** Why did you choose to attend IUP over other colleges?

### III. College Persistence

The following section deals with questions related to the factors that help you **persist** in your studies past your freshman year. Please answer the questions to the best of your knowledge.

**NOTE:** Freshmen DO NOT need to respond to this section questions (College Persistence). Please skip this section and continue with the questions in section IV (-----).

#### 1. Membership on-campus and community organizations

MCCO1. How many student organizations are you a member of?

None   1        2        3        4        5 or more

MCCO2. Are you a member of any Latino/Hispanic organization on campus?

1. Yes \_\_\_\_\_      2. No

MCCO3. Are you a member of any community organization, including religious organizations, in Indiana?

1. Yes \_\_\_\_\_      2. No \_\_\_\_\_

If yes, list the names of the organization:

---

---

## 2. Faculty Support (FS)

How much do you agree or disagree with the following statements:

Questions	1. Strongly Disagree	2. Disagree	3.Neither Agree nor Disagree	4. Agree	5.Strongly Agree
FS1. My professors at IUP care about my academic success					
FS2. I feel comfortable talking to my professor about an <i>academic problem</i> .					
FS3. I feel comfortable talking to my professors about a <i>personal problem</i>					
FS4. I have gotten to know very well at least one of my IUP professors.					
FS5. My professors provide me with appropriate feedback on how to be successful in their classes.					
FS6. My professors have taken the initiative to get to know me.					
FS7. I have taken the initiative to get to know my IUP professors.					

FS8. On average how many times per semester do you go to your professor's office hours?

0. None      1-2      3-5      6-10      More than 10

If your answer was "*none*" go to the next section

FS9. Were those visits related to, (check **all** that apply):

- ☐ Problems understanding class content
- ☐ Asking questions related to assignments
- ☐ Asking questions related to grades
- ☐ Participation in research projects
- ☐ Personal problems **not** related to class material
- ☐ Obtaining information on how to apply to graduate school
- ☐ Obtaining information on other student services provided by the university
- ☐ Other (please specify): \_\_\_\_\_

FS10. When you have an academic **problem** related to **a class** (e.g., not understanding class material), who is **the first person** you go to for help:

1. A friend
2. A family member
3. A professor
4. A tutor
5. Other (please describe): \_\_\_\_\_

### **3. Support from college friends (SCF)**

SCF 1. Since your arrival to IUP, how many new college friends have you made?

None   1-2   3-5   6-9   More than 9

SCF 2. My friends at IUP help me when I have personal problems.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

SCF 3. My friends at IUP help me when I have academic problems (e.g., not understanding class content, etc.)

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

SCF 4. I could not make it through college *without* the support of my friends at IUP.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

SCF5. My college friends encourage me to continue my studies at IUP.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

#### **4. Individual expectations (IE)**

IE1. What is the highest degree that **you expect** to complete?

1. Bachelor's degree
2. Master's degree
3. Doctoral degree
4. Other professional degree

#### **5. Parental Expectations (PE)**

PE 1. What is the highest degree that your parents expected you to complete?

1. High School
2. Bachelor's degree
3. Master's degree
4. Doctoral degree

#### **6. Parental support (PS)**

PS1. My parents encourage me to continue my studies in IUP.

Yes\_\_\_\_ No\_\_\_\_\_ N/A\_\_\_\_

PS2. My parents want me to transfer to a college near home.

Yes \_\_\_\_\_ No \_\_\_\_\_ N/A \_\_\_\_

#### **7. Sibling Support (SS)**

SS1. My sibling(s) encourage me to continue my studies in IUP.

Yes \_\_\_\_ No \_\_\_\_\_ N/A\_\_\_\_

SS2. My sibling(s) want me to transfer to a college near home.

Yes \_\_\_\_ No \_\_\_\_\_ N/A\_\_\_\_

#### IV. Family background and acculturation

##### 1. Family Background (FB)

FB1. What is the highest degree or level of education of your parents?

<i>Mother</i>	<i>Father</i>
0. No schooling	0. No schooling
1. Less than 8 <sup>th</sup> grade	1. Less than 8 <sup>th</sup> grade
2. 9 <sup>th</sup> , 10 <sup>th</sup> or 11 <sup>th</sup> grade	2. 9 <sup>th</sup> , 10 <sup>th</sup> or 11 <sup>th</sup> grade
3. High school diploma or equivalent	3. High school diploma or equivalent
4. Some college; no degree	4. Some college; no degree
5. Associate degree	5. Associate degree
6. Bachelor's degree	6. Bachelor's degree
7. Master's degree	7. Master's degree
8. Doctorate or professional degree	8. Doctorate or professional degree

FB2. What is your mother' occupation? \_\_\_\_\_

FB3. What is your father's occupation? \_\_\_\_\_

FB4. What is the range of your **yearly** household income?

1. Under \$10,000
2. 10,000-19,999
3. 20,000-29,999
4. 30,000-39,999
5. 40,000-49,999
6. 50,000-59,999
7. 60,000-69,999
8. 70,000-79,999
9. More than 80,000
10. I choose not to disclose that information

##### 9. Acculturation

AC1. Were you born in the United States?

Yes, \_\_\_\_\_ No \_\_\_\_\_

AC2. If you answered no, in which country were you born? \_\_\_\_\_

AC3. How old were you when you came to the United States? \_\_\_\_\_

AC4. Was **any** of your parents **born** in the United States? Yes \_\_\_\_\_ No \_\_\_\_\_  
If you answered no, in which country were they born? \_\_\_\_\_

AC5. How do you identify yourself?

1. American
2. Hispanic
3. Latino(a)
4. Mexican-American
5. Puerto-Rican-American
6. Dominican-American
7. Cuban-American
8. Central American-American
9. Latin American
10. Other (please specify): \_\_\_\_\_

AC6. When you have any kind of problems who do you call or text **first**?

1. My family (either parents or siblings)
2. My friends back home
3. My friends on-campus
4. Other (please specify): \_\_\_\_\_

AC7. Are **most** of your friends?

1. Hispanic
2. White
3. African-Americans
4. Other (please specify): \_\_\_\_\_.

## 10. English proficiency (EP)

EP1. How do you rate your **overall** English skills?

1. Very poor
2. Poor
3. Fair
4. Good
5. Very good

## 11. Spanish proficiency (SP)

SP1. How do you rate your **overall** Spanish language skills?

1. Very poor
2. Poor
3. Fair

4. Good
5. Very good

**12. Language use at home (LH)**

LH1. What language do you speak *at home* when you are *with your parents*?

1. Spanish only
2. English only
3. Mostly in Spanish
4. Mostly in English
5. Both English and Spanish in equal proportions

**13. Language Preferred When Watching TV (LTV)**

LTV1. Do you watch T.V?

1. Only in Spanish
2. Mostly in Spanish
3. Only in English
4. Mostly in English
5. Equally in Both languages

**14. Music (M)**

M1. How often do you listen to music in Spanish (e.g., salsa, bachata, merengue etc.?)

1. Never
2. Rarely
3. Sometimes
4. Very Often
5. Always

**15. Food (F)**

F1. How often do you eat Hispanic foods when you are at home with your family?

1. Never
2. Rarely
3. Sometimes
4. Very Often
5. Always

16. Is there is anything else not already covered on this survey you would like to share?

Thank you for completing this survey! If you would like to be entered into a raffle to win \$50 dollars in cash (6 people will be randomly selected and each of them will receive \$50.00 each), please write your IUP e-mail address:\_\_\_\_\_@iup.

Would you like to participate in a follow-up personal interview? Yes \_\_\_\_ No \_\_\_\_  
(If you are selected for the follow-up study, you will be compensated for your time in the amount of \$50.00 dollars in cash).

If yes, please provide your IUP e-mail and a secondary e-mail address:

_____ @ iup	_____ @ yahoo.com
_____ @ aol.com	_____ @ hotmail
_____ @ gmail	

If you have any questions about this research please contact Liza Valle at [liza.valle@iup.edu](mailto:liza.valle@iup.edu) or [lcv3@pitt.edu](mailto:lcv3@pitt.edu).

Thanks again for your participation!

## **APPENDIX C**

### **INTRODUCTORY CONSENT SCRIPT FOR ONLINE SURVEY\***

\* Revised on February 5<sup>th</sup>, 2015

Introductory consent script- that will be included in the e-mail message as well as the letter sent to all Hispanic undergraduate students. Moreover, the presidents of two Latin Organizations will also read the invitation to participate in this research. To avoid cold calling I have chosen those two organizations because I know their presidents quite well. The letter will be sent to their campus addresses by the Latino recruiter.

Subject: Invitation to Hispanic students

Dear students,

You are invited to participate in a research study on college choice and college persistence of Hispanic undergraduate students. This research study is conducted by Prof. Liza Valle as part of her doctoral dissertation. The purpose of this study is to identify the social capital factors that influence the college choice (e.g., reasons for choosing IUP over other colleges) of Hispanics and those social capital factors that influence their persistence past their freshman year. For that reason, we will be surveying self-identified Hispanic undergraduate students who

are currently attending IUP. You need to be **at least 18 years** old to participate. This short survey will take approximately 10-15 minutes to complete.

If you are willing to participate, our survey will ask you some background information (e.g., age, high school information, current GPA, family background, income, etc.), the sources of information used to help you in making your decision to come to IUP and those social capital factors that help you persist in college (e.g., participation in organizations, ties with faculty, etc.).

In order to protect your privacy and confidentiality, your personal information will **NOT** be associated with any of your answers, which will be kept under lock and key. Therefore, the risks of taking this survey are minimal. As a token of appreciation participants will have the opportunity to be entered in a raffle of \$50.00 dollars (6 participants out of all those who responded will be randomly selected and will receive \$50.00 dollars each). Your participation is voluntary and you may withdraw from the study at any time. This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-2223). If you have any questions, please contact:

Liza C. Valle (Principal Investigator)  
Assistant Professor  
E-mail: [liza.valle@iup.edu](mailto:liza.valle@iup.edu)  
Phone number: (724) 357-6450

Dr. W. James Jacob  
Adviser  
E-mail: [wjacob@pitt.edu](mailto:wjacob@pitt.edu)  
Phone number: 412-648-7216

Below is the link to take the survey:

[a link to the survey in Qualtrics will be pasted here]

Sincerely,

Liza C. Valle

## **APPENDIX D**

### **INTRODUCTORY CONSENT SCRIPT FOR THE PERSONAL INTERVIEWS \***

\*This consent form will be printed using IUP letterhead\*

[Revised on February 5<sup>th</sup>, 2015]

The participant selected will be given the script and he/she will read it. I am planning on selecting four students; one for each class (e.g., freshman, sophomore, junior, and senior).

Dear participant

As part of the research study on college choice and college persistence among Hispanic undergraduate students at IUP, you have been selected to participate in a follow-up personal interview. The purpose of the interview will be to gather more specific information regarding your college choice and persistence. Your participation is voluntary and you can withdraw from the study at any time. If you would like to withdraw from the study, please contact Liza Valle at [liza.valle@iup.edu](mailto:liza.valle@iup.edu).

The risks in participating in this research are minimal as they are not greater than those encountered in daily life. The main researcher will do everything possible to protect

your privacy. Thus, you will be asked to choose a pseudonym that will be used in the research results. Your real name will **not** be revealed in any publication and you will have the opportunity to review some parts of your answers to double check that I have not misunderstood or misquoted you. This interview will be recorded and some parts, needed for the analysis of the results, will be transcribed. You will be compensated \$50 dollars upon completion of this interview. Partial compensation of \$25.00 will be given to you if you do not finish the interview. If you have any questions, please contact:

Liza Valle (Principal Investigator)  
Assistant Professor  
E-mail: [liza.valle@iup.edu](mailto:liza.valle@iup.edu).  
Phone number: (724) 357-6450

Dr. James Jacob  
Adviser  
E-mail: [wjacob@pitt.edu](mailto:wjacob@pitt.edu)  
Phone number: 412-648-7216

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-2223).

If you agree to participate, please sign and date below:

\_\_\_\_\_  
Date Participant's signature

I certify that I have explained to the above participant the nature and purpose, the potential benefits, and possible risks associated with participating in this research study, and have answered any questions that have been raised, and have witnessed the above signature.

\_\_\_\_\_  
Date Investigator's signature

## **APPENDIX E**

### **PROTOCOL FOR PERSONAL INTERVIEWS**

The qualitative part of this study will not be finalized until all the data from the survey is collected and analyzed. The following are some tentative open-ended questions that I am planning on asking the participants. Some follow-up questions will be used as needed.

1. First at all, tell me about some basic information about yourself and your family background.
2. What are some of the main reasons you decided to study in IUP?
3. What were the main sources of information that you used to learn about IUP?
4. Who or what was the most influential factor in choosing IUP?
5. What are the most important factors in your decision to continue your education at IUP?\*

## APPENDIX F

### MATRIX OF IMPORTANT STUDIES INCLUDED IN THE LITERATURE REVIEW OF SOCIAL CAPITAL

Author/Year	Indicators/Measures of Social Capital	Sample and Design	Methodology and Analysis	Outcomes
Valenzuela & Dornsbush (1994)	<ul style="list-style-type: none"> <li>• <i>Familism- measured by three dimensions</i> (behavior, structure and attitudes)</li> <li>• # of siblings</li> <li>• Family structure</li> <li>• Parental involvement</li> </ul>	N=2,666 Anglo and N=492 Mexican origin students – surveyed in 1987-88	Quantitative-regressions	School achievement – self reported grades (when there is an interaction between <i>familism</i> and parental education)
Perna (2000) <sup>1</sup>	<ul style="list-style-type: none"> <li>• High school quality</li> <li>• High school desegregation</li> <li>• High school location</li> <li>• High school control</li> <li>• Educational expectations</li> <li>• Parental encouragement</li> <li>• Help from school personnel</li> </ul>	National Educational Longitudinal Study (NELS) of 1994. Adjusted weighted sample (N=11,933)	Quantitative- Logistic regression analysis	College enrollment in four-year institutions (For Blacks and Hispanic social capital is as important as academic ability)
Perna & Titus (2005)	Social capital measured as parental involvement which was broken down to	NELS data from the second (1992) and third (1994) follow	Quantitative- Multinomial extension	Parental involvement is positive related to college

Author/Year	Indicators/Measures of Social Capital	Sample and Design	Methodology and Analysis	Outcomes
	<p>include:</p> <ol style="list-style-type: none"> <li>1. Parent-student involvement (composed of 6 variables –frequency of discussions with the student about course selection, grades, homework, activities at school, plans to take the SAT or ACT, and college application.</li> <li>2. Parent-school involvement (which includes among other things parents contacting the school on a range of issues such as attendance and behavior)</li> <li>3. Parent-to-parent involvement – measured by the number of their children’s parents who have interaction with a student’s parent and number of friends that has college plans.</li> <li>4. Disruptions to involvement (measured by the number of times the family moved from 1988-1992</li> </ol> <ul style="list-style-type: none"> <li>• School-level characteristics: measured by accessing social capital through social networks. This is measured by the % of parents who are involved in parent-teacher organizations and also by the number of the average of parent-student involvement</li> </ul>	<p>ups. The 1992 data is for school seniors and 1994 data is two years after high school. Data included only students who graduated from high school in 1992.</p>	<p>of HLM One-way ANOVA</p>	<p>enrollment as well as the number of friends who plans to attend a four-year college. Disruption of social capital measured by the number of times a family moves is <i>negatively</i> associated with college enrollment in either two or four-year colleges. African-Americans and Hispanics are more likely to enroll in a four-year college than Whites –after controlling for student and school characteristics.-And after controlling for other school and students variables – African-Americans are less likely to enroll in a two-year college. There is a positive relationship between the amount of resources available through social networks in the schools and college enrollment</p>
Zarate & Gallimore (2005) <sup>2</sup>	<ul style="list-style-type: none"> <li>• Parental expectations</li> <li>• Discussions with counselors</li> </ul>	N=121 Hispanic youth and their families- Los Angeles, CA	<p>Quantitative- Longitudinal (followed participants for 15 years) Used ANOVA, Chi-square and descriptive statistics</p>	<p>College enrollment Females enrolled more in two and four year colleges than males. Parental expectations were related to college enrollment for boys. For females, teachers’ ratings were able to predict college enrollment as well as more discussions with counselors.</p>
Sánchez,	<ul style="list-style-type: none"> <li>• Support – provided by parents,</li> </ul>	N=10 students (Mexican	Qualitative- Grounded	College

Author/Year	Indicators/Measures of Social Capital	Sample and Design	Methodology and Analysis	Outcomes
Reyes, & Singh (2006)	<ul style="list-style-type: none"> <li>peers, siblings and extended family, and other non-family adult members</li> <li>Types of support: <i>cognitive guidance, emotional support, informational and experiential support, modeling, and tangible support.</i> (p. 57)</li> </ul>	<p>American college students from an urban Midwestern four-year university)</p> <p>N= 12 individuals that provided support</p> <p>-Personal interviews</p>	theory	<p>persistence/attainment related to social support- Prominent role of parents and older siblings that also had college experiences.</p>
Ceja (2006)	<ul style="list-style-type: none"> <li>Information and support- from older siblings in college</li> </ul>	<p>N=20 Chicana seniors in urban HS in CA- first-generation college-bound and low SES</p>	<p>Qualitative- Constructivist approach</p> <p>-semi-structured interviews and semi-longitudinal</p>	<p>Aspirations to go to college</p> <p>Major choice</p>
Arbona & Nora (2007)	<ul style="list-style-type: none"> <li>Parental expectations</li> <li>college-bound peers</li> </ul>	<p>NELS:88-2000</p> <p>Follow-up surveys in 1990, 1992, 1994, and 2000.</p> <p>Hispanic students who were enrolled in community and four-year colleges</p> <p>N= 517</p> <p>N= 408</p>	Quantitative- Logistic Regression Analysis	<p>-College choice (four-year college) Among Hispanic having college-bound peers is related to attending a four-year college.</p> <p>-Parental expectations was not significantly related to attending a four-year college</p>
Pérez & McDonough (2008)	<ul style="list-style-type: none"> <li>Information provided by family both extended and immediate members (older siblings, cousins, godfather)</li> <li>Information provided by friends</li> </ul>	<p>N=106 Hispanic high school juniors and seniors who were high achievers and <i>college bound</i> in Los Angeles, CA</p>	<p>Qualitative- Interviews and focus groups</p> <p>- Identification of <i>themes</i></p>	College choice
Desmond & López Turley (2009)	<ul style="list-style-type: none"> <li><i>Familism</i> – desire to live at home while attending college</li> </ul>	<p>N= 13,803 students from 96 Texas public HS</p>	<p>Quantitative –Self -administered surveys</p> <p>Multi-linear modeling</p>	<p>-Decrease college application. Desire to live at home is negatively related to college application regardless of SES</p>
O'Connor, Hammack & Scott (2010)	<ul style="list-style-type: none"> <li>Information channels about knowledge of finances (included the knowledge that parents and student actions to find out about financial</li> </ul>	<p>NELS:88-2000 date set</p> <p>N= 4213 White students</p> <p>N= 436 Hispanic students (including 238 of Mexican origin</p>	Quantitative- Logistic regression and Oaxaca decomposition	<p>-College choice – (two-year vs. four-year) determined by financial knowledge.</p> <p>Hispanics overrepresented in</p>

Author/Year	Indicators/Measures of Social Capital	Sample and Design	Methodology and Analysis	Outcomes
	aid; parent's saving for college and whether or not parents perceived that applying for financial aid was "too much work" (p. 205)	It includes students who chose two-year institutions even though they were qualified to attend four-year schools		2 year institutions because they lack "information or resources" p. 216.
Riegle-Crumb (2010)	Sources of social capital: <ul style="list-style-type: none"> <li>• Friends' academic focus</li> <li>• College conversation with counselors related to college and financial aid</li> <li>• Closeness with parents</li> </ul>	High school seniors in Texas (N=3641) that included only White and Hispanics.	Longitudinal data/ multinomial logistic regression	College enrollment - Interaction with counselors is highly related to college enrolment for Hispanic students .
Bryan, Moore-Thomas, Day-Vines & Holcomb-McCoy (2011)	<ul style="list-style-type: none"> <li>• College information-through contact with counselors and number of school counselors</li> </ul>	Educational Longitudinal Study of 2002- (N= 4,835 high school seniors)	Quantitative-multinomial logistic regression analysis Post hoc interaction analysis	-College application- Student-counselor contact and number of counselors positively related to applying to two or more colleges – Relationship is stronger if contact is done by the 10 <sup>th</sup> grade.
Núñez & Bowers (2011) <sup>3</sup>	<ul style="list-style-type: none"> <li>• Family capital (Native language – English, first-generation, second-generation, and SES)</li> </ul>	Nationally representative sample. NCES) Education longitudinal Study 2002/06 N= 2,500 2 year model N=4,400 four-year model	Quantitative-Hierarchical linear modeling	College choice –HSIs. 4 year – Less likely to be first-generation, have lower math scores, living close to home is important.
Oseguera & Malagón (2011)	<ul style="list-style-type: none"> <li>• Parents connection to school</li> <li>• Discussions about college with teachers, counselors, family/friends</li> <li>• Curricular track (academic, general or vocational)</li> </ul> ALL variables were treated as dichotomous variables	NELS 2002-2006 panel. N= 2,112 (720 enrolled in 2 year and 555 enrolled in four-year and 837 were not enrolled in college or still in HS.	Quantitative- ANOVA	College choice -2 versus 4 year institutions for profit. These colleges are chosen more often if Hispanics have discussions with counselors.
Alvarado & López Turley (2012)	<ul style="list-style-type: none"> <li>• Number of <i>college-bound</i> friends</li> </ul>	Texas Higher Education Opportunity Project (THEOP) N= 13,803 seniors in 96 public schools in 2002 -Stratified random sampling	Quantitative-Propensity score matching	College application –There is a positive relationship between having college-bound friends and applying to college particularly 4 year colleges.
Hernandez	<ul style="list-style-type: none"> <li>• Family support and "pressure"</li> </ul>	N= 10 Hispanic students (4	Qualitative-	College persistence

Author/Year	Indicators/Measures of Social Capital	Sample and Design	Methodology and Analysis	Outcomes
(2000) <sup>2</sup>	<ul style="list-style-type: none"> <li>• Friends: provide support</li> <li>• Personalized relationships with faculty and staff</li> <li>• Involvement in organizations on and off campus</li> <li>• Having a Latino community</li> </ul>	graduates and 6 seniors )	Comparative method -Two processes: <i>unitizing</i> and <i>categorizing</i>	Family was a key factor in their persistence.
Duggan (2004)	<ul style="list-style-type: none"> <li>• e-mail account</li> <li>• family size</li> <li>• siblings attending college</li> <li>• high school curriculum</li> <li>• high school location</li> <li>• delayed entry</li> <li>• friends in same college</li> <li>• visit places with friends</li> <li>• meet with advisor</li> <li>• study groups</li> <li>• contact with faculty</li> <li>• talk with faculty</li> </ul>	Beginning postsecondary students (BPS) 96/98 database	Quantitative- Logistic regressions	College persistence- having an e-mail account was related to persistence
Saunders & Serna (2004) <sup>4</sup>	<p>Accessing old networks (Futures team, participants, teachers, coaches, counselors) and creating new social connections in the college setting (faculty, academic counselors, mentors, friends, social group members)</p> <ul style="list-style-type: none"> <li>• high school quality</li> <li>• high school desegregation</li> <li>• high school region/location</li> <li>• educational expectations</li> <li>• parental encouragement</li> <li>• encouragement from peers</li> <li>• encouragement from school personnel</li> </ul>	N=10 Latinos who participated in the <i>Futures</i> program in CA Used data from a longitudinal database that was in its 6 <sup>th</sup> year (1998-2004)	Quantitative, Qualitative (numerical data such as grades, course taking patterns) Semi-structured interviews, focus groups	College persistence Latino students in 4 year colleges- need to learn not only how to mobilize and maintain new ties in college, but also create new ones if they are to persist in college.
Fischer (2007) <sup>2</sup>	<p><i>formal social</i> activities (e.g., clubs and organizations) <i>informal social ties</i> (e.g., friends)</p>	National Longitudinal Survey of Freshmen. 28 institutions. N=4,573 were chosen and N=3,924 completed face-to-face interviews.	Quantitative- OLS and logistic regression	academic achievement (measured by their GPA) College persistence

Author/Year	Indicators/Measures of Social Capital	Sample and Design	Methodology and Analysis	Outcomes
Arbona & Nora (2007) <sup>2</sup>	<ul style="list-style-type: none"> <li>college-bound peers</li> <li>Parental expectations</li> </ul>	<p>NELS:88-2000</p> <p>Follow-up surveys in 1990, 1992, 1994, and 2000.</p> <p>Hispanic students who were enrolled in community and four-year colleges</p> <p>N= 517</p> <p>N= 408</p>	Quantitative- Logistic Regression Analysis	-College persistence/attainment: enrolling in college right after high school, being a full-time student and attending college continuously are strong predictors of college graduation and academic performance
Cejda, Casparis, Rhodes, & Seal-Nyman (2008)	<ul style="list-style-type: none"> <li>Sources of social capital (family, peers, faculty and mentors)</li> </ul>	<p>N= 90 Students from HSIs. (30 from each state supported community college)</p> <p>-Purposeful sampling</p>	Qualitative- Multiple case study- Inductive analysis	College Persistence- The family is the main source of encouragement and support to continue their studies
Núñez (2009)	<ul style="list-style-type: none"> <li>Sense of belonging (easy navigation to campus, giving back to community, and faculty interest in development)</li> <li>Indirect measures were community service and second-generation immigrant (p. 30)</li> </ul>	Final sample N=362 Latino students from 9 campuses (VT, MA, MD, MI, MN, NM, AZ, CA, WA) who completed the <i>Diverse Democracy Project Study</i>	Quantitative- Longitudinal- multivariate analysis and Structural Equation Modeling (SEM)	Integration to college and (persistence)
Cerna, Pérez & Sáenz (2009)	<ul style="list-style-type: none"> <li>Expectations to participate in community service work, religious services, protests</li> </ul>	<p>N= 262, longitudinal sample from four-year institutions (both private and public)</p> <p>Hispanic sample included</p> <p>N= 1,323 Mexican-Americans</p> <p>N= 569 Puerto Ricans and</p> <p>N=1,065 Other Hispanics</p>	Quantitative- Logistic regression analysis	College graduation or expected to graduate (persistence/attainment)
Strayhorn (2010)	<ul style="list-style-type: none"> <li>SES</li> <li>Parents' education</li> <li>Discussions with parents</li> <li>Parental expectations</li> <li>Participation in clubs and organizations</li> </ul>	<p>National representative sample from the NELS:88/00</p> <p>N= 171,936 Black Males</p> <p>N= 140,222 Latino Males</p>	Quantitative- Hierarchical linear regression	Academic achievement- College persistence Social (and cultural) capital is positively related to academic achievement and thus persistence.
Museus & Neville (2012)	<ul style="list-style-type: none"> <li>Faculty as institutional agents – trust and</li> </ul>	N=60 students (20 Asian-American, 21 Black, &19 Latino)	Qualitative -Thematic analyses techniques	College persistence Institutional agents (e.g.,

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	closure	in four PWIs). -Purposeful sampling - 60- to 90-minute, face-to-face, individual semi-structured interviews.		faculty) provided information and support that impacted the students' persistence in college.
Baker & Robnett (2012)	<ul style="list-style-type: none"> <li>Social support via school ties and <i>off campus</i> ties measured by participation in clubs and studying with other students and number of hours in family responsibilities</li> </ul>	N=1,502 (first year students in 2003-04 – follow up until their third year Fall of 2005) -Public research university in CA -Survey	Quantitative- logistic regression analysis	College retention/persistence College ties are strongly related to remaining in college for Hispanic students.

## APPENDIX G

### WORD ANALYSIS OF MAIN REASONS FOR CHOOSING IUP

Reasons/Themes	Sample quotes from on-line respondents	Frequency
1. Financial reason/cost	"They gave me the best scholarship possible, full tuition for 8 semesters." "...relatively cheap after scholarships." "It was the one that I was able to afford." "IUP was also affordable to me..." "Cost." "IUP offered me the full tuition scholarship which made going to college a financial possibility" "...because it was one of the most affordable than other colleges with my major." "...the cost was reasonable." "I have a scholarship that covers tuition"	34

Reasons/Themes	Sample quotes from on-line respondents	Frequency
	<p>"I chose to attend IUP over other colleges due to all the positive outcomes that came from it. Outcomes including a better financial system of payment for myself as well as getting the most help from financial loans."</p> <p>"I also received more financial aid than other colleges."</p> <p>"...relatively cheap after scholarships."</p>	
2. Strong program/department	<p>"I picked IUP over other colleges mostly because of the Cook Honors College."</p> <p>"I was admitted in to IUP's Honors College"</p> <p>"I choose to attend IUP because I heard it had a strong Criminology program."</p> <p>"Offer my major of interest, Communications Media."</p> <p>"I decided to attend IUP because they had my major"</p> <p>"The Beverly College of Business is very impressive."</p> <p>"IUP had the best Psychology department out of all of them"</p> <p>"I heard the academic programs are great."</p>	26
3. The atmosphere, diversity and the campus	<p>"I loved the atmosphere, the diversity, and the welcoming feeling that the school gave me when I came up for a tour."</p> <p>"IUP was a new start for me, my entire life I have seen and been around lower income and ghetto neighborhoods, this experience and change was something I've always dreamed about. I just wanted to make something of myself and have a better life."</p> <p>"The small town feel"</p> <p>"Upon seeing campus I noticed how well the grounds were taken care of."</p> <p>"Overall, when I was on my first tour of campus, all other things aside, it just felt right for me to be here. In my 4 years at IUP there has never been a second where I wished I had chosen another college." (same student above).</p> <p>"I loved the campus"</p> <p>"It reminded me a lot of my high school, a very open and welcoming community."</p> <p>"I like the environment and the beautiful campus. It made me feel comfortable here."</p> <p>"I thought IUP was beautiful and it took my breathe [sic] away. It felt like home, my home."</p> <p>"I liked the size of the campus and the campus in general..."</p> <p>"When I toured IUP compared to the other two schools I applied to, the tour included going in classrooms and taking tours of the residence halls. IUP felt like home, as opposed to the opposing schools felt very business-like."</p> <p>"I was really drawn in by the beautiful campus, the diverse courses available, and the kind and supportive people at IUP."</p> <p>"most diverse"</p> <p>"I like the campus"</p> <p>"Another reason was the campus; when I came to visit I knew that I fit here perfectly. The dorms and campus all around were beautiful."</p> <p>"All the colleges I applied to and visited offered a great education but I needed to pick a school that I felt at home at. IUP was my first college visit and I fell in love with the campus. Every college I went to</p>	22

Reasons/Themes	Sample quotes from on-line respondents	Frequency
	<p>after I came to IUP, I found myself comparing them to IUP. So I knew this was the school I wanted to go to.”</p> <p>“Because IUP is diverse and the campus is big, but not too big. It is the perfect size for me and IUP has a great Psychology program. Furthermore, the campus is absolutely beautiful.”</p>	
4. It was away from home/go away for college	<p>“It was far away from home”</p> <p>“I didn’t want to be too close to home.”</p> <p>“Didn’t want to stay home, experience the stereotypical college life away”</p> <p>“I also chose IUP because it isn’t too far from home, but it’s not too close.”</p> <p>“It was far from home”</p> <p>“I wanted to move away from my parents. They were too controlling.”</p> <p>“Far from home...”</p> <p>“I got accepted into [name of university], but it was too close to home”</p> <p>“I wanted to stay in state for college but wanted to get away at the same time.”</p> <p>“...it was far enough from home that I could learn to be on my own and independent”</p> <p>“The school is also far but not too far away from home”</p> <p>“it was away from home”</p> <p>“It was further”</p> <p>“and it was far away from home.”</p> <p>“it [<i>sic</i>] felt like a good idea to go away to college, gain some independence, and grow as a person.”</p>	19
5. Friends/parents/boyfriend	<p>“...one of my close friends used to attend IUP and was a major impact on my decision.”</p> <p>“My friend told me that I should come to college with him and I signed up without hesitation.”</p> <p>“My friends also were attending so I felt that it would be more enjoyable.</p> <p>“My friend convinced me to come to IUP, so i [<i>sic</i>] just came here with her.”</p> <p>“...also a couple of my friends went to iup [<i>sic</i>] with me.”</p> <p>“Parent wanted me to be close to home”</p> <p>“I am familiar with the campus because my sisters have previously attended IUP”</p>	8

Note: Some students mentioned more than one reason. Thus, the total does not equal n=107

## BIBLIOGRAPHY

- Alvarado, S. E., & López Turley, R. N. (2012). College bound friends and college application choices: Heterogeneous effects for Latino and white students. *Social Science Research*, 41(6), 1451-1468.
- Arana, R., Castañeda-Sound, C., Blanchard, S., & Aguilar, T. E. (2011). Indicators of persistence for Hispanic undergraduate achievement: Toward an ecological model. *Journal of Hispanic Higher Education*, 10, 237-251, first published on April 26, 2011. doi:10.1177/1538192711405058
- Arbona, C., & Nora, A. (2007). The influence of academic and environmental factors on Hispanic college degree attainment. *The Review of Higher Education*, 30(3), 247-269.
- Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development*, 40(5), 518-529.
- Aud, S., Wilkinson-Flicker, S., Kristapovich, P., Rathbun, A., Wang, X., & Zhang, J. (2013). *The Condition of Education 2013 (NCES 2013-037)*. U.S. Department of Education, National Center for Education Statistics. Washington, DC. Retrieved from <http://nces.ed.gov/pubs2013/2013037.pdf>
- Baker, S. C., & Robnett, B. (2012). Race, social support and college student retention: A case study. *Journal of College Student Development*, 53 (2): 325-335.
- Bennett, C. I. (1995). *Comprehensive multicultural education: Theory and practice*. (3rd ed.). Needham Heights, MA: Simon & Schuster.
- Berkner, L., & Chavez, L. (1997). Access to postsecondary education for the 1992 high school graduates. NCES publication #98-105.
- Blair, J., Czaja, R. F., & Blair, E. A. (2014). *Designing surveys: A guide to decisions and procedures*. (3<sup>rd</sup> ed.). Los Angeles, CA: SAGE.
- Bordes, V., & Arredondo, P. (2005). Mentoring and 1<sup>st</sup> year Latina/o college students. *Journal of Hispanic Higher Education*, 4, 114-133. doi: 10.1177/1538192704273855

- Bordes-Edgar, V., Arredondo, P., Robinson Kurpius, S., & Rund, J. (2011). A Longitudinal analysis of Latina/o students' academic persistence. *Journal of Hispanic Higher Education*, 10, 358-368. doi: 10.1177/1538192711423318
- Bourdieu, P. (1986). The forms of capital in Richardson, J. *Handbook of Theory and Research for the Sociology of Education*. Westport, CT: Greenwood, pp. 241-58.
- Braddock, J. H. (1980). The perpetuation of segregation across levels of education: A behavioral assessment of the contact-hypothesis. *Sociology of Education*, 53(3): 178-186.
- Braxton, J. M., Hirschy, A. S., & McClendon, S. A. (2004). *Understanding and reducing college student departure*. 30(3): ASHE-ERIC Higher Education Report.
- Brown, A., & Lopez, M. H. (2013). *Mapping the Latino population, by state, county, and city*. Pew Research Hispanic Center. Retrieved February, 28, 2016 from <http://www.pewhispanic.org/2013/08/29/mapping-the-latino-population-by-state-county-and-city/>
- Brown, A., & Patten, E. (2013). *Hispanics of Puerto Rican origin in the United States, 2011*. Pew Research Hispanic Center. Retrieved April 2, 2016 from <http://www.pewhispanic.org/2013/06/19/hispanics-of-puerto-rican-origin-in-the-united-states-2011/>
- Bryan, J., Moore-Thomas, C., Day-Vines, N. L., & Holcomb-McCoy, C. (2011). School counselors as social capital: The effects of high school college counseling on college application rates. *Journal of Counseling and Development*, 89(2), 190-199.
- Butler, D. (2010). Ethno-racial composition and college preference: Revisiting the perpetuation of segregation hypothesis. *The ANNALS of the American Academy of Political and Social Science*, 627, 36-58. doi: 10.1177/0002716209348738
- Cabrera, A., & La Nasa, S. M. (2000). Understanding the college-choice process. *New Directions for Institutional Research*, 107, 5-23.
- Carnevale, A. P., & Smith, N. (2012). *A decade behind: Breaking out of the low-skill trap in the Southern economy*. Georgetown Public Policy Institute: Center on Education and the Workforce. Georgetown University. Retrieved from <https://cew.georgetown.edu/wp-content/uploads/2014/11/DecadeBehind.FullReport.073112.pdf>
- Castillo, L. G., Conoley, C. W., Choi-Pearson, C., Archuleta, D. J., Phoummarath, M. J., & Van Landingham, A. (2006). University environment as a mediator of Latino ethnic identity and persistence attitudes. *Journal of Counseling Psychology*, 53(2): 267-271.
- Ceja, M. (2006). Understanding the role of parents and siblings as information sources in the college choice process of Chicana students. *Journal of College Student Development*, 47(1), 87-104.

- Cejda, B. D., Casparis, C. A., Rhodes, J. H., & Seal-Nyman, K. (2008). The role of social capital in educational decisions of Hispanic students attending Hispanic-serving community colleges. *Enrollment Management Journal: Student Access, Finance, and Success in Higher Education*, 2(1), 32-64.
- Cerna, O. S., Pérez, P. A., & Sáenz, V. (2009). Examining the precollege attributes and values of Latina/o bachelor's degree attainers. *Journal of Hispanic Higher Education*, 8, 130-157. doi: 10.1177/1538192708330239
- Choy, S. P., Horn, L. J., Nuñez, A., & Chen, X. (2000). Transition to college: What helps at-risk students and students whose parents did not attend college. *New Directions for Institutional Research*, 107, 45-63.
- Cole, D., & Espinoza, A. (2008). Examining the academic success of Latino students in science technology engineering and mathematics (stem) majors. *Journal of College Student Development*, 49(4), 285-300. doi: 10.1353/csd.0.0018
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, Supplement: Organizations and Institutions: Sociological approaches to the Analysis of Social Structure, S95-120.
- Creswell, J. W. (2014). (4<sup>th</sup> ed.). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
- Creswell, J. W., & Plano Clark, V. L. (2011). (2<sup>nd</sup> ed.). *Designing and conducting mixed methods research*. Los Angeles, CA: Sage.
- Crosnoe, R., & Turley, R. N. L. (2011). K-12 Educational outcomes of immigrant youth. *The Future of Children*, 21(1), 129-152. doi: 10.1353/foc.2011.0008
- Cunningham, A. F., & Santiago, D. A. (2008). *Student aversion to borrowing who borrows and who doesn't*. Washington, DC: Institute for Higher Education Policy and Excelencia in Education (IHEP). Retrieved from <http://www.ihep.org/assets/files/publications/s-z/studentaversiontoborrowing.pdf>
- Desmond, M., & López Turley, R. N. (2009). The role of familism in explaining the Hispanic-White college application gap. *Social Problems*, 56(2), 311-334.
- Dika, S. L. (2012). Relations with faculty as social capital for college students: Evidence from Puerto Rico. *Journal of College Student Development*, 53(4), 596-610. doi:10.1353/csd.2012.0051
- Dika, S. L., & Singh, K. (2002). Applications of social capital in educational literature: A critical synthesis. *Review of the Educational Research*, 72(1), 31-60.
- Dowd, A.C. (2008). Dynamic interactions and intersubjectivity: Challenges to causal modeling in studies of college student debt. *Review of Educational Research*, 78(2), 232-259.

- Duggan, M. (2004). E-mail as social capital and its impact on first-year persistence of 4-year college students. *Journal of College Retention*, 6(2), 169-189.
- Engberg, M. E., & Wolniak, G. C. (2009). Navigating disparate pathways to college: Examining the conditional effects of race on enrollment decisions. *Teachers College Record*, 111(9), 2255-2279.
- Esparza, P., & Sánchez, B. (2008). The role of attitudinal familism in academic outcomes: A study of urban, Latino high school seniors. *Cultural Diversity and Ethnic Minority Psychology*, 14(3), 193-200. doi: <http://dx.doi.org/10.1037/1099-9809.14.3.193>
- Field, J. (2008). *Social capital*. (2<sup>nd</sup> ed.). Oxon, Great Britain: Routledge.
- Fischer, M.J. (2007). Settling into campus life: Differences by race/ethnicity in college involvement and outcomes. *The Journal of Higher Education*, 78(2), 125-156. doi:10.1353/jhe.2007.0009
- Foss, S. K., & Waters, W. (2007). *Destination dissertation: A traveler's guide to a done dissertation*. Lanham, MD: Rowman & Littlefield Publishers.
- Fry, R., & Taylor, P. (2013). Hispanic high school graduates pass Whites in rate of college enrollment: High school drop-out rate at record low. Pew Research Center. Accessed on May 9, 2013 from <http://www.pewhispanic.org/2013/05/09/hispanic-high-school-graduates-pass-whites-in-rate-of-college-enrollment/>
- Fukuyama, F. (2001). Social capital, civil society and development. *Third World Quarterly*, 22(1), 7-20.
- Gándara, P. (1995). *Over the ivory walls: The educational mobility of low-income Chicanos*. Albany, NY: State University of New York Press.
- Garcia, V. Q. (1997). *Mexican Enclaves in the U.S. Northeast: Immigrant and Migrant Mushroom Workers in Southern Chester County, Pennsylvania*, JSRI Research Report #27, The Julian Samora Research Institute, Michigan State University, East Lansing, Michigan.
- Gloria, A. M., Castellanos, J., López, A. G., & Rosales, R. (2005). An examination of academic non persistence decisions of Latino undergraduates. *Hispanic Journal of Behavioral Science*, 27, 202-223. doi: 10.1177/0739986305275098
- González, K. P., Stoner, C., & Jovel, J. E. (2003). Examining the role of social capital in access to college for Latinas: Towards a college opportunity framework. *Journal of Hispanic Higher Education*, 2, 146-170. doi:10.1177/1538192702250620
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360-1380.
- Guba, E. G. (1990). *The paradigm dialog*. Newbury Park, CA: Sage Publications.

- Hagy, A. P., & Staniec, F. O. (2002). Immigrant status, race, and institutional choice in higher education. *Economics of Education Review*, 21, 381-392.
- Hallinan, M. T., & Williams, R. A. (1990). Students' characteristics and the peer-influence process. *Sociology of Education*, 63(2), 122-132.
- Hernandez, J. C. (2000). Understanding the retention of Latino college students. *Journal of College Student Development*, 41 (6), 575-584.
- Hossler, D., & Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. *College and University*, 62(3), 207-221.
- Hossler, D., Schmit, J., & Vesper, N. (1999). *Going to college: How social, economic, and educational factors influence the decisions students make*. Baltimore, MD: The John Hopkins University Press.
- Hu, S., & Ma, Y. (2010). Mentoring and student persistence in college: A study of the Washington state achievers program. *Innovative Higher Education*, 35(5), 329-341. doi: <http://dx.doi.org/10.1007/s10755-010-9147-7>
- Hu, S., & St. John, E. P. (2001). Student persistence in a public higher education system: understanding racial and ethnic differences. *Journal of Higher Education*, 72(3), 265-86.
- Huck, S. W. (2008). *Reading statistics and research*. (5<sup>th</sup> ed.). Boston, MA: Pearson Education.
- Hurtado, S., Inkelas, K., Briggs, C., & Rhee, B. (1997). Differences in college access and choice among racial/ethnic groups: Identifying continuing barriers. *Research in Higher Education*, 38(1), 43-75.
- Hurtado-Ortiz, M.T., & Gauvain, M. (2007). Postsecondary education among Mexican American youth: Contributions of parents, siblings, acculturation, and generational status. *Hispanic Journal of Behavioral Science*, 29(2), 181-191. doi:10.1177/0739986307299584
- Indiana University of Pennsylvania (IUP). (2007-2014a). *Brief history*. Retrieved November 4, 2014 from <http://www.iup.edu/upper.aspx?id=2067>
- IUP. (2007-2014b). *Crimson: Snapshot enrollment*. Retrieved December 10, 2014 from <http://www.iup.edu/page.aspx?id=120990>.
- IUP. (2007-2014c). *IUP Punxsutawney*. Retrieved December 12, 2014 from <https://www.iup.edu/punxsutawney>.
- IUP. (2007-2014d). *First Latino recruiter at IUP*. Retrieved November 5, 2014 from <http://www.iup.edu/page.aspx?id=140356>.
- IUP. (2016). *Enrollment*. Retrieved April 11, 2016 from <http://www.iup.edu/snapshot/enrollment/>.

- Jackson, G. A. (1982). Public efficiency and private choice in higher education. *Educational Evaluation and Policy Analysis*, 4(2), 237-247. doi: 10.3102/01623737004002237
- Jensen, L. (2001). The demographic diversity of immigrants and their children. In R.G. Rumbaut & A. Portes (Eds.). *Ethnicities: Children of immigrants in America* (pp.21-56). Berkeley and Los Angeles, CA: University of California.
- Jez, S. Y. (2008). The influence of wealth and race in four-year college attendance. *Research & Occasional Paper Series: CSHE*.18.08. (ED503340).
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L.A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2): 112-133. doi: 10.1177/1558689806298224
- Kao, G., & Rutherford, L. T. (2007). Does social capital still matter? Immigrant minority disadvantage in school specific social capital and its effects on academic achievement. *Sociological Perspectives*, 50 (1), 27-52.
- Kao, G., & Thompson, J. (2003) Racial and ethnic stratification in educational achievement and attainment. *Annual Review of Sociology*, (29) 417-42. doi:10.1146/annurev.soc.29.010202.100019
- Kena, G., Aud, S., Johnson, F., Wang, X., Zhang, Wilkinson-Flicker, S., Rathbun, A., Wilkinson-Flicker, S., & Kristapovich, P. (2014). *The Condition of Education 2014* (NCES 2014-083). U.S. Department of Education, National Center for Education Statistics. Washington, DC. Retrieved August 5, 2014 from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2014083>
- King, N., & Horrocks, C. (2010). *Interviews in qualitative research*. Los Angeles, CA: SAGE.
- Klasik, D. (2012). The college application gauntlet: A systematic analysis of the steps to four-year college enrollment. *Research in Higher Education*, 53(5), 506-549.
- Kuh, G. D., Cruce, T.M., Shoup, R. Kinzie, J., & Gonyea, R. M. (2008). Unmasking the effects of student engagement on first-year college grades and persistence. *The Journal of Higher Education*, 79(5), 540-563.
- Kurlaender, M. (2006). Choosing community college: Factors affecting Latino college choice. *New Directions for Community Colleges*, 133, 7-19.
- Lavin-Loucks, D. (2006). The academic achievement gap. Dallas, TX: The J. McDonald Williams Institute.
- Lee, V. E., Mackie-Lewis, & Marks, H. M. (1993). Persistence to the baccalaureate degree for students who transfer from community college. *American Journal of Education*, 102(1): 80-114.

- Lin, N. (2001). *Social capital: A theory of social structure and action*. Cambridge, UK: Cambridge University Press.
- Litten, L.H. (1982). Different strokes in the applicant pool: Some refinements in a model of student college choice. *The Journal of Higher Education*, 53(4), 383-402.
- Lugo Steidel, A.G., & Contreras, J.M. (2003). A new familism scale for use with Latino populations. *Hispanic Journal of Behavioral Science*, 25, 312-329.
- Martinez, M. A. (2012). Wealth, stereotypes, and issues of prestige: The college choice experience of Mexican American students within their community context. *Journal of Hispanic Higher Education*, 11(1), 67-81.
- Melguizo, T. (2009). Are community colleges an alternative path for Hispanic students to attain a bachelor's degree? *Teachers College Record*, 111(1), 90-123.
- Mertens, D. (2010). (4<sup>th</sup> ed.). *Research and evaluation on education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. Los Angeles, CA: Sage.
- Monkman, K., Ronald, M., & Théràmène, F. D. (2005). Social and cultural capital in an urban Latino community. *Urban Education*, 40 (1), 4-33.
- Montiel, A. (2009). The effects of structured mentoring on enrollment and success rates of a cohort of education paraprofessional. *College and University*, 84(3), 26-33.
- Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research*, 1(1), 48-76. doi: 10.1177/2345678906292462
- Morrow, V. (2006). Conceptualizing social capital in relation to children and young people: Is it different for girls? In B. O'Neil, & E. Gidengil (Eds.), *Gender and social capital* (pp. 127-150). New York, NY: Routledge.
- Museus, S. D., & Neville, K. M. (2012). Delineating the ways that key institutional agents provide racial minority students with access to social capital in college. *Journal of College Student Development*, 53(3), 436-452. Retrieved from <http://search.proquest.com/docview/1019049706?accountid=11652>
- National Center for Education Statistics (NCES). (2015). *Digest of Education Statistics, 2013*. Washington, DC: NCES, U.S. Department of Education.
- Nora, A. (2004). The role of habitus and cultural capital in choosing a college, transitioning from high school to higher education, and persisting in college among minority and non-minority students. *Journal of Hispanic Higher Education*, 3(2), 180-208.
- Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students to college. *The Journal of Higher Education*, 67(2), 119-148. Retrieved from <http://search.proquest.com/docview/205337866?accountid=11652>.

- Núñez, A. (2009). Latino students' transitions to college: A social and intercultural capital perspective. *Harvard Educational Review*, 79(1), 22-48, 168. Retrieved from <http://search.proquest.com/docview/212269363?accountid=11652>
- Núñez, A. & Bowers, A. J. (2011). Exploring what leads high school students to enroll in Hispanic-Serving institutions: A multilevel analysis. *American Educational Research Journal*, 48(6), 1286-1313.
- Núñez, A., Sparks, P. J., & Hernández, E. A. (2011). Latino access to community colleges and Hispanic-serving institutions: A national study. *Journal of Hispanic Higher Education*, 10(1), 18-40.
- O'Connor, N., Hammack, F., & Scott, M. A. (2010). Social capital, financial knowledge, and Hispanic student college choices. *Research in Higher Education*, 51(3), 195-219.
- Ojeda, L., Castillo, L.G., Rosales Meza, R., & Piña-Watson, B. (2014). Mexican-Americans in higher education: Cultural adaptation and marginalization as predictors of college persistence intentions and life satisfaction. *Journal of Hispanic Higher Education*, 13(3): 3-14. doi: 10.1177/1538192713498899
- Ojeda, L., R., Navarro, R.L., & Morales, A. (2011). The role of La Familia on Mexican American men's college persistence intentions. *Psychology of Men and Masculinity*, 12(3), 216-229.
- Oseguera, L. & Malagón, M. (2011). For-profit colleges and universities and the Latina/o students who enroll in them. *Journal of Hispanic Higher Education*, 10(1), 66-91.
- Otero, R., Rivas, O., & Rivera, R. (2007). Predicting persistence of Hispanic students in their 1st year of College. *Journal of Hispanic Higher Education*, 6 (2), 163-173, doi: 10.1177/1538192706298993
- Padilla, A. M. (2004). Quantitative methods in multicultural research. In J.A. Banks, J.A., & C.A. McGee Banks (Eds.). *Handbook of research on multicultural education* (2<sup>nd</sup> ed., pp. 127-145). San Francisco, CA: Wiley.
- Parra Cardona, J. R., Busby, D. M., & Wampler, R. S. (2004). No soy de aquí ni soy de allá: Transgenerational cultural identity formation. *Journal of Hispanic Higher Education*, 13(3), 322-377. doi: 10.1177/1538192704268374
- Patton, M. (1990). *Qualitative evaluation and research methods*. Beverly Hills, CA: Sage.
- Perez, P. A., & McDonough, P. M. (2008). Understanding Latina and Latino college choice: A social capital and chain migration analysis. *Journal of Hispanic Higher Education*, 7(3), 249-265.
- Perna, L.W (2000). Racial and ethnic group differences in college enrollment decisions. *New Directions for Institutional Research*, 2000 (107) 65 -83.

- Perna, L.W. (2007). The Sources of racial-ethnic group differences in college enrollment: A critical examination. *New Directions for Institutional Research*, 2007 (133) 51-66.
- Perna, L. W., & Titus, M.A. (2005). The relationship between parental involvement as social capital and college enrollment: An examination of racial/ethnic group differences. *The Journal of Higher Education*, 76(5), 485-518. doi: 10.1353/jhe.2005.0036
- Person, A.E., & Rosenbaum, J.E. (2006). Chain enrollment and college enclaves: Benefits and drawbacks of Latino college students' enrollment decisions. *New Directions For Community Colleges*, 133, 51-60. doi:10.1002/cc.227
- Pew Research Hispanic Center (2009). *IV. Education: The gap between expectations and achievement*. Retrieved from <http://www.pewhispanic.org/2009/12/11/vi-education-the-gap-between-expectations-and-achievement/>
- Pew Research Hispanic Center (2011). *Demographic profile of Hispanics in Pennsylvania, 2011*. Retrieved from <http://www.pewhispanic.org/states/state/pa/>
- Pew Research Hispanic Center (2013). *Second-generation Americans: A portrait of the adult children of immigrants*. Retrieved from <http://www.pewsocialtrends.org/2013/02/07/second-generation-americans/>
- Pew Research Hispanic Center (2015). *Statistical portrait of Hispanics in the United States, 1980-2013*. Retrieved December 11, 2015 from <http://www.pewhispanic.org/2015/05/12/statistical-portrait-of-hispanics-in-the-united-states-2013-key-charts/>
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24, 1-24.
- Portes, A., & Rumbaut, R.G. (2001). *Ethnicities: Children on immigrants in America*. Berkeley, CA: University of California Press and Russell Sage Foundation.
- Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65-78.
- Putnam, R. D. (2000). *Bowling Alone: The collapse and revival of American community*. New York, NY: Simon & Schuster.
- Ream, R. K. (2005). *Uprooting children: Mobility, social capital, and Mexican-American underachievement*. New York, NY: LFB Scholarly Publishing LLC.
- Riegle-Crumb, C. (2010). More girls go to college: Exploring the social and academic factors behind the female postsecondary advantage among Hispanic and White students. *Research in Higher Education*, 51(6), 573-593. doi:10.1007/s11162-010-9169-0

- Robles, B.J. (2009). Exploring the wealth returns to Latino higher educational attainment: Estimates of work-life earnings profiles. *Journal of Hispanic Higher Education*, 8(1), 5-22.
- Ross, T., Kena, G., Rathbun, A., KewalRamani, A., Zhang, J., Kristapovich, P., & Manning, E. (2012). *Higher Education: Gaps in Access and Persistence Study* (NCES 2012-046). U.S. Department of Education, National Center for Education Statistics. Washington, DC: Government Printing Office.
- Saenz, V. & Ponjuan, L. (2011). *Men of color: Ensuring the academic success of Latino males in higher education*. Institute for Higher Education Policy. (ED 527060)
- Sánchez, B., Reyes, O., & Singh, J. (2006). Makin' it in college: the value of significant individuals in the lives of Mexican American adolescents. *Journal of Hispanic Higher Education*, 5(1), 48-67. doi: 10.1177/1538192705282570
- Saunders, M., & Serna, I. (2004). Making college happen: The college experiences of first-generation Latino students. *Journal of Hispanic Higher Education*, 3(2), 146-163.
- Sideman, I. (2006). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. (3<sup>rd</sup> ed.). New York, NY: Teachers College, Columbia University.
- Stanton-Salazar, R. D. (1997). A social capital framework for understanding the socialization of racial minority children and youth. *Harvard Educational Review*, 67(1), 1-40.
- Stanton-Salazar, R. D., & Dornbough, S.M. (1995). Social capital and the reproduction of inequality: Information networks among Mexican-origin high school students. *Sociology of Education*, 68, 116-135.
- Strayhorn, T. L. (2010). When race and gender collide: Social and cultural capital's influence on the academic achievement of African American and Latino males. *The Review of Higher Education* 33(3), 307-332. Retrieved May 30, 2013, from Project MUSE database.
- Tashakkori, A., & Creswell, J.W. (2007). Exploring the nature of research questions in mixed methods research [Editorial]. *Journal of Mixed Methods Research*, 1(3): 207-2011.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89-125.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. (2<sup>nd</sup> ed.). Chicago, IL: The University of Chicago Press.
- Tinto, V. (2012). *Completing college: Rethinking institutional action*. Chicago, IL: The University of Chicago Press.
- Torres, V. (1999). Validation of a bicultural orientation model for Hispanic college students. *Journal of College Student Development*, 40(3), 285-298.

- Torres, V. (2003). Mi casa is not exactly like your house: *About Campus*, 8(2), 2-7.
- Torres, V. (2006). A mixed method study testing data-model fit of a retention model for Latino/a students at urban universities. *Journal of College Student Development*, 47(3), 299-318.
- Tourangeau, R., Rips, L. J., & Rasinski, K. (2000). *The psychology of survey response*. Cambridge, UK: Cambridge University Press.
- Turley, R. N. L. (2009). College proximity: Mapping access to opportunity. *Sociology of Education*, 82:126-46. doi: 10.1177/003804070908200202
- Turley, T.N.L., Desmond, M., & Bruch S.K. (2010). Unanticipated educational consequences of a positive parent-child relationship. *Journal of Marriage and Family*, 72(5), 1377-1390. doi: 10.1111/j.1741-3737.2010.00771.x
- U.S. Census Bureau (2010). *Population of Pennsylvania: Census 2010 and 2000, interactive map, demographics, statistics, quick facts*. Retrieved February 28, 2016, from <http://censusviewer.com/state/PA>
- U.S. Census Bureau (2012). *U.S. Census Bureau projections show a slower growing, older, more diverse nation a half century from now*. Retrieved October 15, 2014 from <https://www.census.gov/newsroom/releases/archives/population/cb12-243.html>
- U.S. Census Bureau (2013). *Foreign Born*. Retrieved December 8<sup>th</sup>, 2015 from <https://www.census.gov/topics/population/foreign-born/about.html>
- U.S. Census Bureau (2014a, July 8). *State and county Quickfacts: USA*. Retrieved October 15, 2014 from <http://quickfacts.census.gov/qfd/states/00000.html>
- U.S. Census Bureau (2014b, July 8). *State and county Quickfacts: Indiana County, PA*. Retrieved August 2014, from <http://quickfacts.census.gov/qfd/states/42/42063.html>
- Valenzuela, A., & Dornsbuch, S. (1994). Familism and social capital in the academic achievement of Mexican origin and Anglo adolescents. *Social Science Quarterly*, 75(1), 18-36.
- Wells, R. (2008-2009). Social and cultural capital, race and ethnicity, and college student retention. *Journal of College Student Retention*, 10(2), 103-128. Retrieved from <http://search.proquest.com/docview/196726640?accountid=11652>
- Wengraft, T. (2001). *Qualitative research interviewing: Biographic narrative and semi-structured methods*. London, UK: Sage.
- Westlund, H. (2006). *Social capital in the knowledge economy: Theory and Empirics*. Berlin, Germany: Springer-Verlag.

- Willis, G. B. (2005). *Cognitive interviewing: A tool for improving questionnaire design*. Thousands Oak, CA: SAGE.
- Wohn, D. Y., Ellison, N. B., Khan, M. L., Fewins-Bliss, R., & Gray, R. (2013). The role of social media in shaping first-generation high school students' college aspirations: A social capital lens. *Computers & Education*, 63:424-436.
- Yin, R. K. (2009). *Case study research: Design and methods*. (4<sup>th</sup>, ed.). Thousand Oaks, CA: Sage.
- Zarate, M. E., & Gallimore, R. (2005). Gender differences in factors leading to college enrollment: A longitudinal analysis of Latina and Latino Students. *Harvard Educational Review*, 75(4), 383-489