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and overall and academic resilience in higher education: A
refinement of Tinto's theory to stop Latinx oppression**

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LATINX CAREER SUCCESS AND RESILIENCE IN HIGHER ED

Quantitative Analysis of Contributing Factors of Career Success and Overall and Academic
Resilience in Higher Education: A Refinement of Tinto's Theory to Stop Latinx Oppression

by

Andreia Gendera

Dissertation

Submitted to the College of Education Eastern Michigan University

in partial fulfillment of the requirements for the degree of

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in

Educational Leadership

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Ypsilanti, Michigan

Dedication

I dedicate my work to my loving family.

My incredible children, Renan, Andre, Arthur, and Victoria, who always understood that “mom is busy doing homework”, making this whole process easier by always being so patient and supportive of me.

My beautiful mom, Marcia, whose good examples have taught me to work hard for the things that I aspire to achieve. Giving up was never an option.

My amazing sister, Ana, for always cheering me up, for relentlessly reading my survey, and for giving me precious feedback. You were, and you always will be, my first daughter, my first love.

My phenomenal husband, Thomas, who has always been a constant source of support, inspiration, and encouragement during all ups and downs of a day in a graduate student's life, showing me that anything is possible. You are my love, my light, my life, my eternal *Lovinho*.

Thank you all for always believing in me. Without you, I would not have achieved this arduous but incredible milestone.

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Abstract

It is indeed a fact that diversity helps to build a better economy, and diverse businesses are proven to be healthier and more successful, but the lack of diversity in the workforce and educational environment, shows that the pipeline is not moving Latinx people enough. Latinx community is the largest minoritized community in the United States, substantially impacting the country's economy and society, but the United States Census Bureau (2020) estimates that out of the 2% of the population 25 years and older who have a doctorate degree only 0.11% is Hispanic of any race, including Latinx. The purpose of this research was to investigate the relationship between students' attributes before entering college as well as their college environment and the outcomes of career success and overall and academic resilience among the Latinx community. Three hundred and one Latinx students were surveyed, and a structural equation model (SEM) was created, suggesting a refinement of Tinto's conceptual schema for dropout from college to better represent the Latinx community. This study showed that instead of exempting the educational institutions of their responsibilities, neglecting the importance of their supportive role by solely blaming the Latinx student and contributing to the historical actions of discrimination and oppression in the United States educational system, they should provide an equitable educational environment, address the deficit thinking experiences lived by Latinx students while in college, and understand the way Latinx students see themselves when compared to their non-Latinx peers (self-deficit thinking). These were the main environmental factors influencing Latinx academic resilience, overall resilience, and career success, and a new framework was observed to help stop Latinx oppression.

Keywords: Latinx students, higher education, academic resilience, overall resilience, career success, deficit thinking, self-deficit thinking, equity.

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Chapter 1: Introduction

This chapter aims to provide the background and significance of this study, discussing the research questions and the conceptual framework that was adopted as well as its rationale, a critique of Tinto's theory, and refinements made to it to help stop Latinx oppression and a de-stigmatization of the concept of resilience. The final refined conceptual framework is shared, and my positionality as a Latina student in the U.S towards this research is also discussed.

Background

Diversity is a big topic in the business environment. Griffin et al. (2020) define diversity as "the variety of observable and unobservable similarities and differences among people" (p. 40), and five types of diversity can be identified, (a) surface-level, where the differences can be seen directly (e.g., race, age, gender, physical characteristics); (b) deep-level, where the difference cannot be seen directly but still exists (e.g., goals, values, skills, abilities, attitudes, knowledge); (c) separation, where differences in position or opinion exist; (d) variety, where meaningful differences in a certain type or category can be found (e.g., knowledge, functional background); and (e) disparity, where differences in concentration of valuable social assets are noticed (e.g., authority, pay, status).

McKay et al. (2008) state that diversity awareness is a big concern for organizations. Companies that have their workforce presenting more positive behaviors towards diversity are more productive, having employees who show higher performance leading the companies to significant growth when compared to those that are not diverse.

Diversity in the workforce is a topic that is expected to keep growing over the years. According to the United States Census Bureau (2018), by 2050, the proportion of non-Hispanic White people in the U.S will decrease from 69.4% to 50.1%, and the proportion of Black, Asians

and Hispanic people will increase (from 12.7% to 14.6%, from 3.8% to 8%, and from 12.6% to 24.4%, respectively) showing that diversity is an issue that is more current than ever.

It is Triandis et al. (1993) and McLeos et al. (1996) who affirm that teams that are culturally diverse end up making better decisions over time than those who are homogeneous, and those organizations that care for diversity foster creativity, innovation, and greater competitive advantage when compared to those who do not.

Organizations should also care about diversity due to its legal implications. For instance, Title VII of the Civil Rights Act of 1964 prohibits discrimination based on race, color, religion, sex, or national origin. Employers who fail to hire employees, fire, segregate, or limit them based on what makes them diverse are practicing unlawful employment and shall be charged and penalized according to the law.

Besides the many advantages and several performance benefits for businesses that practice diversity and the legal implications for companies that do not, barriers to inclusion are still present in many organizations. According to the U.S. Equal Employment Opportunity Commission (2012), those barriers can be qualified as (a) the *like me* bias, where people rather be nearby others who they think are similar to them; (b) stereotypes, where beliefs about groups and individuals are based on the idea that all group members are the same; (c) prejudice, where intolerance for a diverse group is what drives one's actions; (d) perceived threat of loss, where impeding diversity efforts occur to prevent a perceived threat to one's own career opportunities; (e) ethnocentrism, where one believes their own culture, language, and/or country are better than others; and (f) unequal access to organizational networks, where minoritized people are excluded from networks, knowledge sharing, promotion opportunities, and resource accessibilities. Those barriers are especially true among the Latinx community.

It is indeed a fact that diversity helps to build a better economy, and diverse businesses are proven to be healthier and more successful, but the workforce's lack of diversity, just like the lack of diversity in the educational environment, shows that the pipeline is not moving Latinx people enough (Farley & Haaga, 2005).

According to the United States Census Bureau (2020), of the population 25 years and older, non-Hispanic White people make up 64.36% of the body, Black people make up 12.38%, Asians make up 6.30%, and Hispanic of any race make up 15.61% of the total, making them the second-largest community in the U.S. Even though the Hispanic community is the second-largest community in the U.S, the percentage of bachelor, master and doctorate completion is the lowest.

It is also the United States Census Bureau (2020) who estimates that just 2% of the population 25 years and older have a doctorate degree, where 1.47% is non-Hispanic White, 0.30% is Asian, 0.13% is Black, and only 0.11% is Hispanic of any race, including Latinx.

Saenz (2005) as cited in Farley and Haaga (2005), discusses that the Latinx community is the largest minoritized community in the United States, substantially impacting the country's economy and society. Latinx tend to be on the lowest end of the socioeconomic ladder in the U.S, presenting low-income levels, high levels of unemployment and poverty, low professional achievement, and low levels of education.

Saenz and Ponjuan (2008) alarmingly state that Latinx "students are vanishing from the American education pipeline, a trend that is especially evident at the secondary and postsecondary levels" (p. 54), even though they are the second-largest community in the U.S. It is important to note that the lack of resilience is, therefore, highly observed in the Latinx community.

Individuals that hold a bachelor's degree earn on average more than those who do not and, consequently, have better jobs and can spend more in their communities, automatically helping the economy to grow. Thus, understanding resilience and career success amongst the Latinx community is then fundamental (Torpey, 2018).

Destigmatizing the Concept of Resilience

Although there is an abundance of research involving resiliency, there are not many studies that examine this concept in Latinx students in higher education and successful professionals who live in the United States, nor are there many studies that look at the concept of resilience with lenses to stop oppression.

Goodkind, et al. (2020) mention that resilience is often utilized to show one who has positive adaptation to hardship, trauma, disturbances in life, and/or stress, but the actual problem resides in the White, male heteronormative environment that define resilience values and outcomes as well as its oppressive actions towards minoritized communities.

Resilience studies have a tendency to use its definition to downplay oppression, but resilience should rather mean re-envisioning the oppressive educational system and its underlying assumptions, and this study aims to emphasize that educational institutions should and can re-imagine their actions and decisions to promote effective change, proposing a non-oppressive approach to resilience in the Latinx community.

Research Questions

With the purpose of stopping the oppression Latinx students and professionals are constantly experiencing in their educational environment, the research questions that are addressed in this study are as follows:

1. To what degree do students' attributes before entering college and their college experiences influence Latinx overall resilience?
2. To what degree do students' attributes before entering college and their college experiences influence Latinx academic resilience in higher education?
3. To what degree do students' attributes before entering college and their college experiences influence Latinx career success?

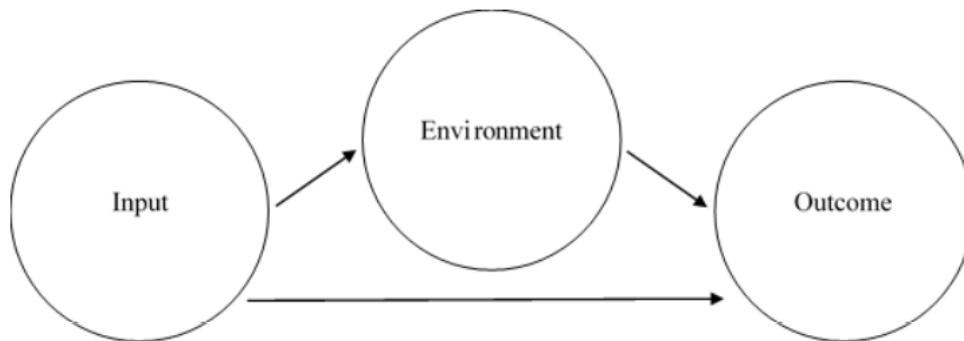
This study used Astin's (1993) input, environment and outcome model (I-E-O), shown in Figure 1, to build the conceptual framework. To address the three research questions, Tinto's (1975, 1993) schemas, shown in Figure 2 and Figure 3, were the starting point of this study, but unfortunately, however widely used by researchers over decades, Tinto's theory was created almost 30 years ago and no longer accurately depict today's reality, especially when related to minoritized communities. To stop Latinx oppression, three important theories were added in this study—Solorzano and Bernal (2001) and their discussion of equality in education through the lenses of Latinx critical race theory (LatCrit) and critical race theory (CRT), shown in Figure 4, deficit thinking (Valencia, 2010) shown in Figure 5, and community cultural wealth (Yosso, 2005) as shown in Figure 6. With these additions, the researcher built a modified and refined conceptual framework to explore Latinx overall and academic resilience and career success using a quantitative and non-experimental approach, while analyzing the data collected through a primary survey, finally creating a structural equation model (SEM).

Conceptual Framework: Rationale to Its Origins

The first conceptual framework used in this study is Astin's (1993) I-E-O model as shown in Figure 1.

Figure 1

Astin's I-E-O model (1993)



Note. This figure represents Astin's I-E-O model and its input, environment, and outcome variables. From "What matters in college? Four critical years revisited," by A. W. Astin, 1993. Copyright 1993 by Jossey-Bass.

Astin (1993) proposed one of the first exploratory models to show that students' outcomes are influenced by, what he calls, their individual inputs and the educational environment they are in.

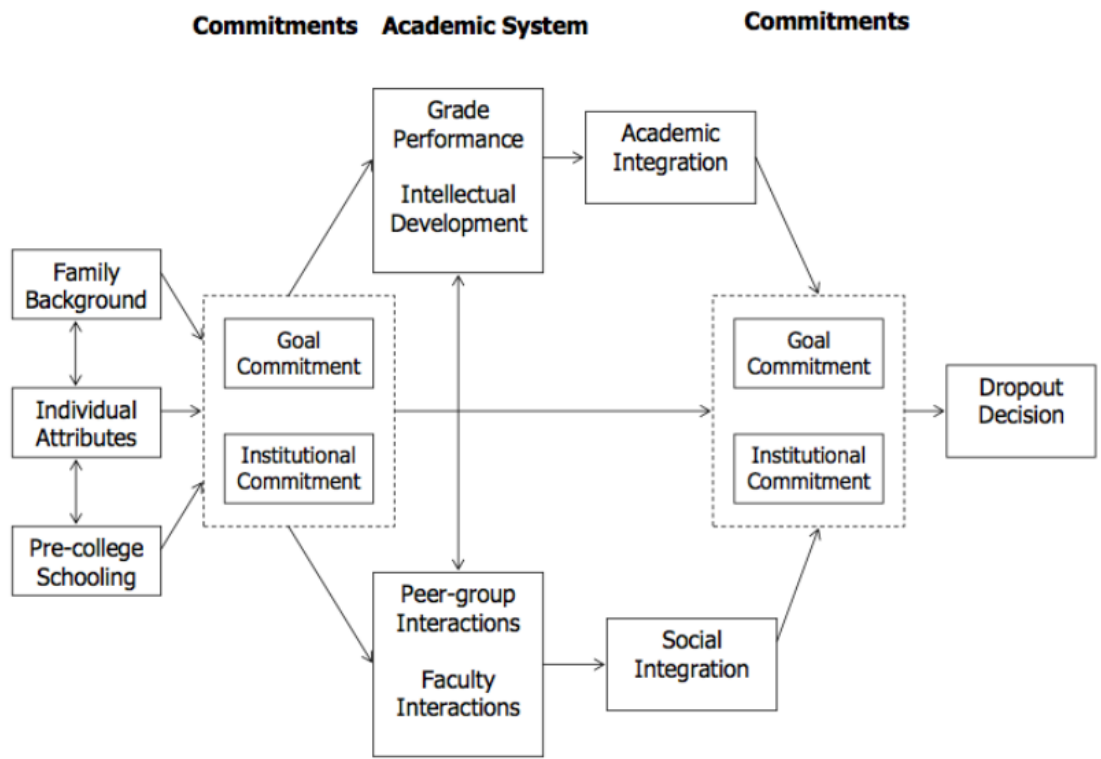
In this model, the (a) *input* refers to whatever students bring with them to the higher education institution, such as their previous experiences, attributes, and their background characteristics, at the time they start attending college; the (b) *environment* refers to what the student is exposed to, and what the student experience while in college is, such as the program of study, policies, academic facilities, residential learning community, interaction with peers, faculty, staff—among others; and the (c) *outcome* refers to the after college characteristics and attributes students will later present and experience, being a type of program assessment for the higher education institution, as well as a resilience check for the students (Astin, 1993).

Astin (1977, 1985) also suggests that the amount of student social and academic engagement invested in the college experience should be taken into consideration when studying

student resilience. Bean (1980) and Tinto (1975, 1993) discuss the importance of understanding background characteristics in academic resilience, as a subset of resilience in general, and degree attainment, pointing out that demographic and individual characteristics of students, family background, high school preparation, college experiences, and institutional characteristics are factors that deserve great focus. It is then Graff and Gomez-Vilchis (2013) who state that

resiliency as an ideology that focuses on success and promotes critical consciousness is beneficial in analyzing life stories related to the struggles and challenges historically underserved populations face and overcome in U.S. schools and educational institutions. Academic resilience is a process, acquired over time, of overcoming obstacles and developing coping skills needed to succeed academically. (p. 336)

With that in mind, to better understand resilience, the second framework this study looked into is Tinto's (1975) conceptual schema for dropout from college, focusing on 4-year college students, as shown in Figure 2, proposing the idea that students come to college with preset expectations and aspirations. Factors such as social and academic integration are deemed essential according to Tinto (1975) and Metz (2004), who suggest that environmental variables such as peer and faculty interaction, as well as participation in extra-curricular activities, assist in shaping the experiences students have while in college, therefore impacting their academic resilience. It is also Tinto (1975) who suggests that student outcomes, such as degree attainment, are influenced by the level of student engagement in college.

Figure 2*Dropout Decision From College Schema*

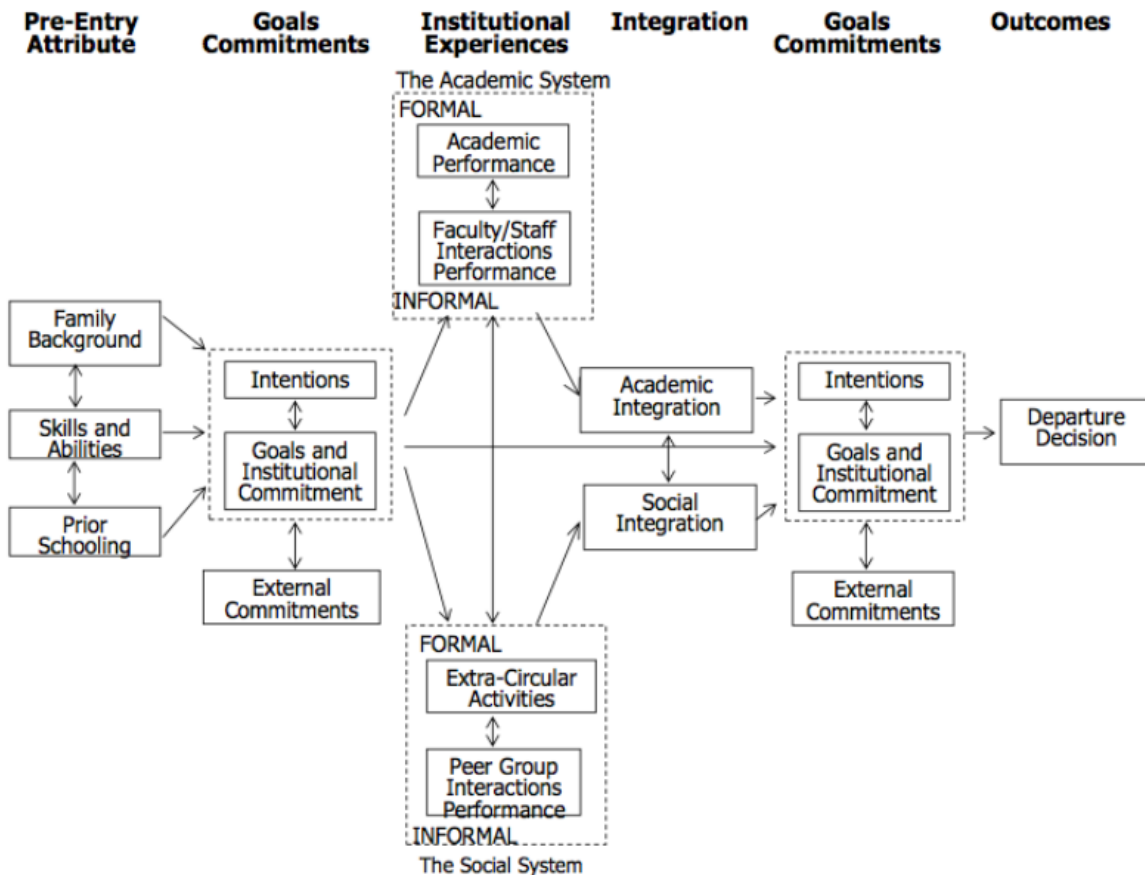
Note. This figure represents a schema of students who might drop out of college and variables that might lead them to that. From “Dropout from higher education: A theoretical synthesis of recent research,” by V. Tinto, 1975, *Review of Educational Research*, 45(1), 89-125 (<https://doi.org/10.3102/00346543045001089>). Copyright 1975 by American Educational Research Association.

The third framework used in this study is the departure decision from college schema by Tinto (1993), as shown in Figure 3, which was created with the intention of furthering even more the findings shown in his previous schema (1975), developing a more robust framework that addresses the departure decision from college, where the relationship between (a) inputs (pre-entry attributes), the (b) environment (institutional experience and integration), and the (c)

outcomes can be seen strongly connected to one’s goals and commitments. As seen, Tinto’s (1975, 1993) frameworks are based on Astin’s (1993) I-E-O model.

Figure 3

Departure Decision From College Schema



Note. This figure represents a revised version of the previous Tinto’s college dropout schema.

From “Leaving college: Rethinking the causes and cures of student attrition,” by V. Tinto, 1993, University of Chicago Press. Copyright 1993 by The University of Chicago.

Tinto’s (1993) revised schema added *intentions* and *external commitments* as an important part of the framework while discussing how students’ experiences and interactions with their campus environment are strong behavioral components that lead to academic resilience, called by educational institutions as student retention (Milem & Berger, 1997). Tinto

(1993) also decided that informal, social faculty-student interactions should be moved from the social system to the academic system, completely changing his first developed approach.

Although Tinto's model has been considered one of the most important frameworks to understand resilience in higher education, a deconstruction of the model is necessary due to its theoretical and practical limitations, especially towards minoritized students (French, 2017).

Critique of Tinto's Theory

Tinto's model is highly criticized in the educational field for its failure to acknowledge that there are adverse implications for ethnically and racially diverse groups that are forced to integrate into predominantly White environments to have a higher chance to succeed in life (Tierney, 2000; Rendon et al., 2000; Harper & Quaye, 2009; Wolf-Wendel et al., 2009).

Though widely used by researchers for decades, Tinto's theory was created almost 30 years ago and no longer accurately depicts today's reality. Tinto's theory of college student retention asserts that students must assimilate into their new cultural environment—predominantly White academic institutions—implicitly suggesting they should leave their ethnic identity behind if they want to succeed in college. Furthermore, Tinto's framework is solely based on the individual characteristics and behaviors of the student, neglecting the importance of the supportive role of the educational institution, contributing to the historical actions of discrimination and oppression in the United States educational system.

Hence, Tinto's model takes into consideration that, to decrease the chance of dropping out of college, students must have had previous access to a certain set of cultural norms and rules that are specifically applied in higher education institutions, failing to consider student's diverse experiences and backgrounds. Tierney (1992), Metz (2004), and Museus (2014) point out that this mindset leads to a perpetuation of cultural bias, mentioning that marginalized cultural groups

have different experiences from the non-minoritized students, and that affects how they experience college.

Museus (2014) affirms that besides (a) being culturally biased, Tinto's theory should also be critiqued because of its (b) self-determination perspective, focusing on student behavior while diverging the attention from as much relevant responsibility of higher education institutions; (c) integration viability position, arguing that both academic and social elements can be found simultaneously in several institutional activities; and (d) psychological dimension, neglecting the unique reality of culturally different students, mostly focusing on the social and academic activity itself rather than the student experience as a whole.

Hurtado (2007) also agrees with the aforementioned criticism, affirming that Tinto's model propagates normative congruence, which can be seen when marginalized groups must conform to the thinking of the dominant groups.

Refinements to Tinto's Theory

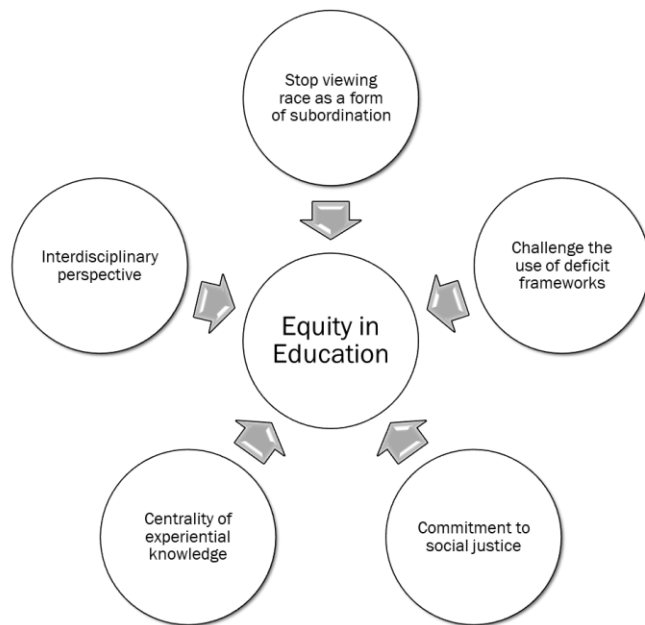
To address these concerns, this study is suggesting a refinement of Tinto's (1993) framework to better represent the Latinx community by adding a few but extremely important variables into the schema. The decision and explanation as to why it is imperative to include those new variables are explained below.

Refinement 1: Equity in Education: CRT and LatCrit Frameworks

During the 1950s and 1960s, Latinx students were graduating high school with a significantly lower average on their reading skills when compared to their White peers and were experiencing a dropout rate of 60% from high school. To try to mediate the statistics, some educational institutions in the U.S. decided to ban Spanish conversation at school, prohibiting Latinx students from speaking the language. Other schools decided to teach Latinx students

following the curriculum offered to mentally disabled students. Latinx voices have a history of not being heard, so in March of 1968, more than 10,000 Latinx students in East Los Angeles protested against the poor-quality education they were receiving. Latinx had walkouts, ultimately presenting a list of demands for curriculum and actions changes to bring more equity to the educational environment, which, unfortunately, were not fulfilled (Library of Congress, 2021). Twenty-five years later, at University of California Los Angeles, another protest happened with hundreds of Latinx students who occupied the faculty center to avoid the dismantling of the Chicano Studies Program. Since then, a few things have changed, but it is now 2021, and we are yet to find equity in education for Latinx students.

Solorzano and Bernal (2001) discuss a concept they called as transformational resistance of Latinx students, sharing five themes to lead to a more equitable educational environment, (a) the centrality of race and racism and intersectionality with other forms of subordination, (b) the challenge to dominant ideology, (c) the commitment to social justice, (d) the centrality of experiential knowledge, and (e) the interdisciplinary perspective, as shown in an adapted framework in Figure 4.

Figure 4*Equity in Education*

Note. This figure represents five themes that lead to a more equitable educational environment.

Adapted from “Examining transformational resistance through a critical race and Latcrit theory framework: Chicana and Chicano students in an urban context,” by D. Solorzano, and D. Bernal, 2001, *Urban Education (Beverly Hills, Calif.)*, 36(3), 308-342.

(<https://doi.org/10.1177/0042085901363002>). Copyright 2001 by Corwin Press, Inc.

Solorzano and Bernal (2001) and their focus on transformational resistance open a way to apply their findings towards this study and its emphasis on Latinx resilience and success. Latinx students have been involved and continue to be involved in resistance that is driven by a desire to build more just and equitable learning environments. Solorzano and Bernal (2001) use CRT (critical race theory) and LatCrit (critical race theory focused on the Latinx community) to understand Latinx resistance, which will ultimately help with their growth.

Tierney (1993) states that critical theory is “an attempt to understand the oppressive aspects of society in order to generate societal and individual transformation” (p. 4), especially because racism is experienced daily by minoritized population. Rolón-Dow and Davison (2021) point out that racism is “ingrained in policies, practices, structures, and institutions, including in U.S higher education” (p. 248).

LatCrit is a component of CRT, and it “brings attention to the intersections of race with elements particularly pertinent to Latinx communities such as ethnicity, language, culture, immigration/migration, and citizenship status” (Rolón-Dow & Davison, 2021, p. 248).

It is important to understand that “CRT and LatCrit theory challenge the dominant discourse on race and racism as they relate to education by examining how educational theory and practice are used to subordinate and marginalize Latinx students” (Solorzano & Bernal, 2001, p. 312), helping to add to the very much important equity discussion in educational environments.

To address issues related to race and racism in the Latinx community, this research added into the refined conceptual framework two variables related to academic and social integration while the Latinx student is in college—(a) equitable opportunities for student academic growth given by the institution and (b) equitable opportunities for student engagement given by the institution—looking to understand the importance of an equitable higher education environment in Latinx academic and overall resilience as well as their career success.

Refinement 2: Deficit Thinking Theory

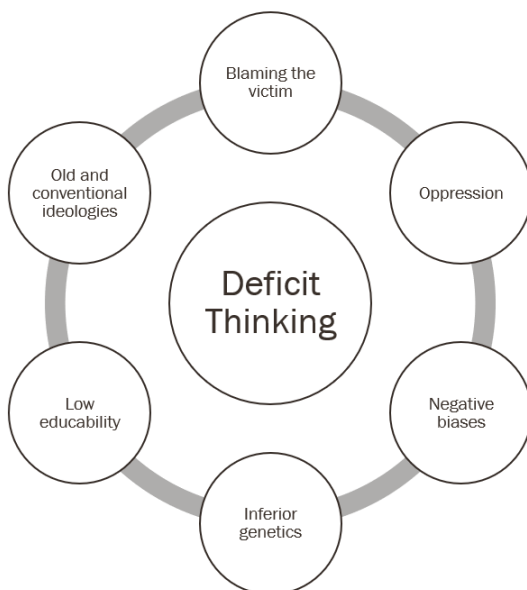
The failure of the K-20 school system among Latinx students is appalling. Valencia (2010) states that “school failure is the persistently, pervasively, and disproportionately low academic achievement among a substantial proportion of low-SES students of color” (p. 1), and

it is long-standing in the U.S. Deficit thinking is one theory that policymakers, educators, and scholars use to help with the understanding of these school failures.

Valencia (2010) states that those who look at Latinx students have a negative perspective of them and that their deficit thinking is characterized by (a) blaming the students for their failures; (b) oppressing them by unjustly using their power and authority, (c) showing negative biases towards Latinx students while using pseudoscience “as a process of false persuasion by scientific pretense” (p. 6); (d) believing they have inferior genetics and limited intelligence; (e) viewing Latinx as students with low educability; and (f) showing old and conventional ideologies, where dominant classes defend their, as they believe, superiority. A summary of Valencia’s (2010) six characteristics of deficit thinking can be seen in Figure 5.

Figure 5

Deficit Thinking



Note. This figure represents six characteristics present in behaviors that show deficit thinking.

Adapted from “Dismantling contemporary deficit thinking: Educational thought and practice,” by R. Valencia, 2010, Routledge. Copyright 2010 by Taylor & Francis.

As a substantial example, deficit thinking can be clearly seen through Ruby Payne's work. Ruby claims to be an expert on the mindset of social classes in education and has published a best-selling book, *A Framework for Understanding Poverty*, and has a lot of educators who agree and follow their work. With the culture of poverty, stereotyping, a nonscientific research base, and no consideration of alternative explanations (Valencia, 2010), Ruby blames that those who fail are the creators of their own problem.

Valencia (2002) affirms that deficit thinking is continuously shown through cultural deficit perspectives, and when it comes to Latinx culture, it has strengthened the detrimental stereotypes regarding Latinx communities. For example, it is normal to infer the lack of educational achievement due to the strong Latinx familial ties and the lack of degree attainment of Latinx parents, who would allegedly influence their children to not pursue a higher career and/or educational horizons: "The carriers of the deficit were frequently identified as inadequate mothers and fathers who ... seem to perpetuate their own conditions in their children through their child-rearing patterns ... [and who] ... produce a disproportionate incidence of academic failures and of lower socioeconomic memberships among their full-grown offspring" (Marans & Lourie, 1967, as cited in Valencia, 2002, p. 71).

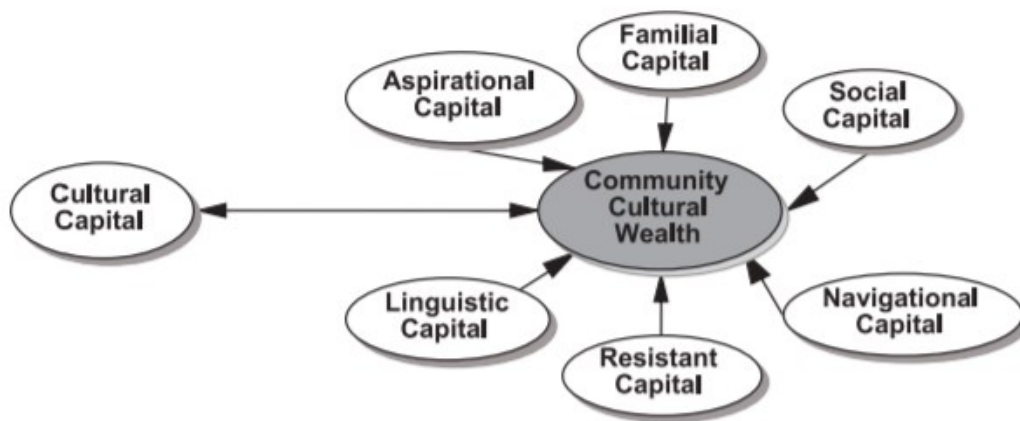
The addition of the variable called deficit thinking is important because it is looking at understanding how the stereotype of Latinx students by the education institution affects their overall and academic resilience and career success, as well as how Latinx students end up seeing themselves (self-deficit thinking, discussed in Chapters 4 and 5), breaking old paradigms.

Refinement 3: Community Cultural Wealth Theory

Discussing family assets and their importance on children's academic and career success, Yosso (2005) uses a critical race theory lens, proposing the community cultural wealth theory, as seen in Figure 6.

Figure 6

Community Cultural Wealth Theory



Note. This figure represents the six types of capital marginalized communities can have. From “Whose culture has capital? A critical race theory discussion of community cultural wealth,” by T. Yosso, 2005, *Race, Ethnicity and Education*, 8(1), p. 78 (<https://doi.org/10.1080/1361332052000341006>). Copyright 2005 by Taylor & Francis Group Ltd.

Community cultural wealth is divided into six types of capital: (a) social capital, which is the likelihood of children going to college according to the presence of resources around them who can provide emotional and instrumental support for that to happen; (b) navigational capital, which is the skills one needs and has to navigate social institutions; (c) resistant capital, which is what one needs to resist an inequitable environment; (d) linguistic capital, which refers to the value of a bilingual education and the social and intellectual skills gained from that; (e)

aspirational capital, which is the “ability to maintain hopes and dreams for the future, even in the face of real and perceived barriers” (Yosso, 2005, p. 77); and (f) familial capital, which is the “cultural knowledge nurtured among families that carry a sense of community history, memory, and cultural intuition” (Yosso, 2005, p. 77).

The third improvement to Tinto’s model revolves around the importance of keeping the Latinx culture alive for the Latinx population in the U.S and how that impacts Latinx resilience and career success. Therefore, Yosso’s (2005) community cultural wealth framework is incorporated in this study by analyzing Latinx (a) social capital and (b) navigational capital, measured by the combination of variables such as perception of the level of parental support, parental occupation, and parental education; (c) resistant capital, with the examination of equitable opportunities for the Latinx student engagement and academic growth given by the academic institution, as well as the occurrence of deficit thinking in the educational environment; (d) linguistic capital, depicted by the languages spoken by the Latinx student and parents; (e) aspirational capital, revolving the educational and career expectations and aspirations of the Latinx student; and (f) familial capital, through the analysis of cultural knowledge Latinx parents and family have and pass on to their children.

Latinx tend to have smaller social networks and are more connected to their family members, relying on them to help navigate life (Chang et al., 2013). Latinx have children at younger ages than their non-Latinx counterparts, and the number of children they have is also higher. That ends up leading the Latinx student and professional to a greater external commitment due to their family structure (Garza et al., 2003). Educational institutions should better understand the difference in culture among their students and should be aware of their

supportive role towards their Latinx students, tracing specific plans to better help Latinx students succeed academically.

Discussing the idea of *familismo* in the Latinx culture, Martinez (2013) explains that Latinx tend to place their family needs above their own, emphasizing the greater presence of family ties among that population. The concept of *familismo* discusses how familial capital is a strong force in Latinx lives, especially when they make decisions regarding their academic and career choices. In an empirical study, Jabbar et al. (2019) found that Latinx students are indeed influenced by their immediate and extended family members, especially because of the transfer of cultural values and beliefs.

Chavira and Vasquez-Salgado (2016) discuss the concept of social capital theory, which is a theory discussing the likelihood of children going to college, often measured by parent's education, connection with people who possess knowledge and resources, and their career. Chavira and Vasquez-Salgado (2016) state that when children have parents who go to college, they are more likely to go to college themselves and later find a college-based career. The reality of Latinx students is quite the opposite—although Latinx parents are caring and usually are present in their children's lives, they have a low level of education, face language barriers, and find it difficult to find external resources and connections who have the necessary knowledge to help their children. Therefore, Latinx parents are considered to have a lack of social capital by many researchers, with several of them pointing out the negative effect on the academic and career aspirations and, eventually, the potential success of Latinx students, but these researchers end up forgetting that Latinx parents/family members can and want to provide emotional support for their children. Educational institutions should then intervene, helping the Latinx students

better understand the system, as well as supporting them by providing opportunities for academic growth and engagement.

Therefore, as the third refinement to Tinto's schema, the variables of perception of the level of parental support, parental occupation, and parental education (social capital and navigational capital); equitable opportunities for the Latinx student engagement and academic growth given by the academic institution as well as the occurrence of deficit thinking in the educational environment (resistant capital); languages spoken by the Latinx student and parents (linguistic capital); educational and career expectations and aspirations of the Latinx student (aspirational capital); and cultural knowledge Latinx parents and family members have and pass on to their children (familial capital) were added to this study's refined conceptual framework.

Refinement 4: The Accountability of Educational Institutions

At last, the supportive role of educational institutions towards their students was added in a framework that studies resilience and career success, taking a different path from several already published studies.

Quaye and Harper (2015) discuss the importance of higher education institutions focusing on supporting student engagement with equity in mind, helping them be more resilient. At some point in time, responding to higher education student needs was not challenging since students were mainly the same—White, male, heterosexual, affluent, and had only a limited number of programs to choose from. With that in mind, higher education institutions could respond to multiple students in similar ways, and they were certain that their results would always be similar—but not anymore. Nowadays, the increased diversity American higher education is experiencing brings different challenges to both students and institutions, but more than ever, colleges and universities should embrace their responsibility in providing guidance

and support to increase equitable student engagement to help them better succeed (Quaye & Harper, 2015).

Higher education institutions have a tendency to neglect and deny their accountability towards the marginalized student, ignoring or minimizing the importance of their supportive role in helping minoritized students' success, contributing to the historical actions of discrimination and oppression in the United States educational system. Looking at the academic institution's role in helping Latinx students is then fundamental, making that an extremely important and relevant addition in this study.

The Final Refined Conceptual Framework

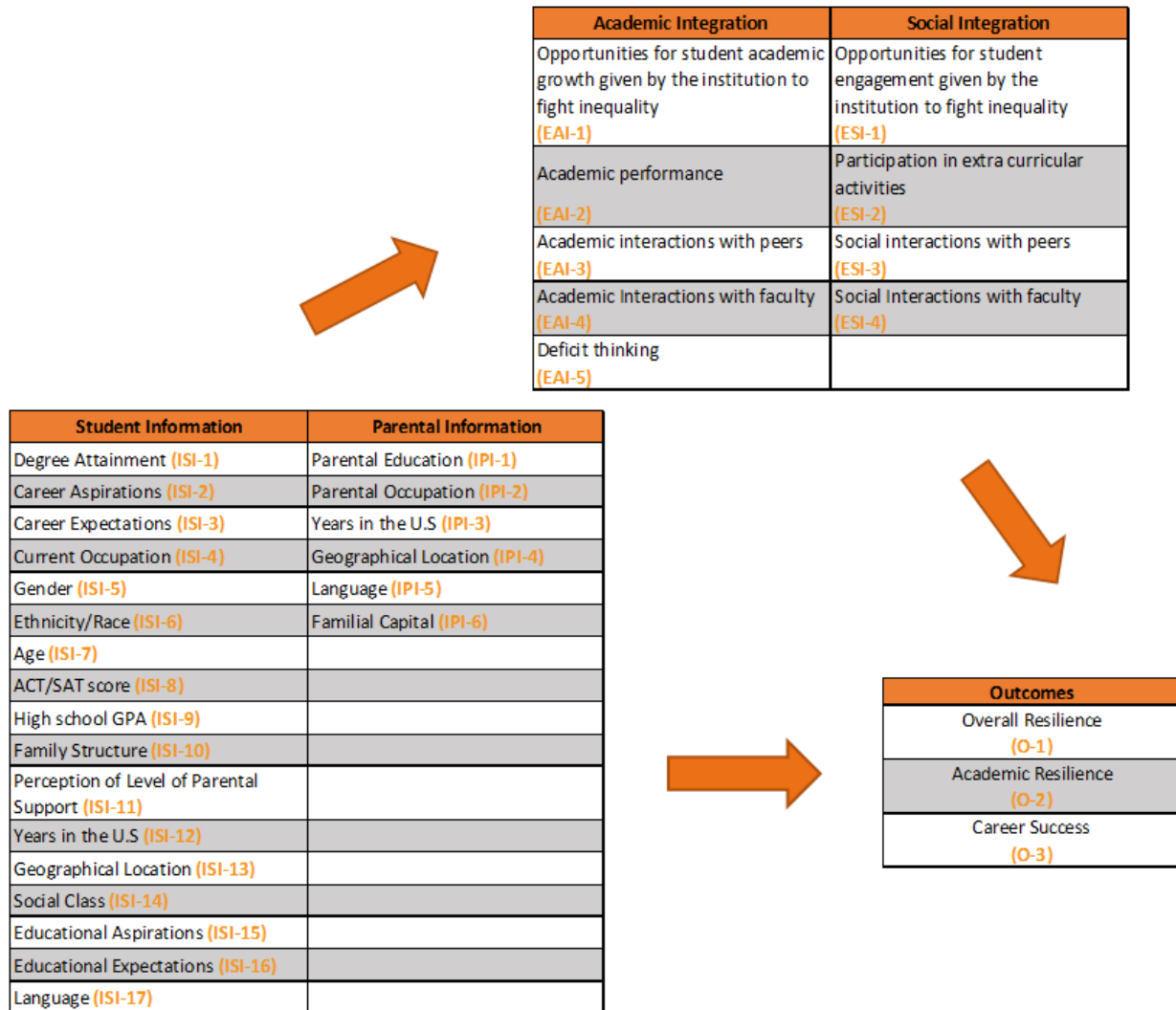
This study focused on analyzing Latinx career success as well as overall and academic resilience; therefore, an I-E-O model refining Tinto's (1993) framework using lenses to stop oppression was created, as shown in Figure 7, and is the base of this study.

To address the three research questions, (a) to what degree do students' attributes before entering college and their college experiences influence Latinx overall resilience, (b) to what degree do students' attributes before entering college and their college experiences influence Latinx academic resilience in higher education, (c) to what degree do students' attributes before entering college and their college experiences influence Latinx career success, the conceptual framework is represented by the *student's attributes before entering college*, divided into (a) Latinx student information, such as their degree attainment, career aspirations and expectations, current occupation, gender, ethnicity, age, ACT/SAT score, high school GPA, social class, family structure, years in the U.S, perceived level of parental support, geographical location, language, educational aspirations and expectations, and (b) Latinx parental information, such as parental education, parental occupation, years in the U.S, language, cultural knowledge as well as their

geographical information. The college *environment* in the model is divided into (a) *academic integration*, such as equitable opportunities for student academic growth and engagement given by the institution, academic performance, academic interactions with peers and faculty, and deficit thinking, and (b) *social integration* variables, such as the equitable opportunity for student engagement given by the institution, participation in extra-curricular activities, social interactions with peers and faculty. Finally, the *outcomes* in the model are (a) overall resilience, (b) academic resilience, and (c) career success of the Latinx student, as shown in Figure 7.

Figure 7

Latinx Academic and Overall Resilience, Career Success Conceptual Framework



Note. This figure represents the created conceptual framework and the variables that might influence the overall resilience, academic resilience, and career success of Latinx, the focus of this study. The code in an orange font color is a short representation of the variable in question. For example, ISI and its respective numbers represent variables that are part of the Latinx student information. IPI and its respective numbers represent variables that are part of the parental information of Latinx. EAI and its respective numbers represent variables that are part of the

academic integration of Latinx. ESI and its respective numbers represent variables that are part of the Latinx social integration. While O and its respective numbers represent variables that are part of the outcome of this study, being O-1 the representation of Latinx overall resilience, O-2 Latinx academic resilience, and O-3 Latinx career success.

Summary of the Refined Conceptual Framework

In summary, the refinement of Tinto's theory can be seen in this study through the proposed modified conceptual framework by (a) looking at the presence of equitable opportunities for student academic growth and student engagement given by the institution to the Latinx student who is experiencing the higher education institution environment, conversing the importance of an equitable educational system; (b) discussing deficit thinking Latinx student face in the academic environment from their professors, peers and academic institutions, therefore, offering extensive contributions to help to fill a gap in scholarly literature and educational practices towards the Latinx students; (c) incorporating Yosso (2005) community cultural wealth theory into the schema, noting that Latinx student have a strong cultural wealth; and finally by (d) bringing the accountability of the educational institutions, getting the burden of solely being responsible for their resilience off of the Latinx students' shoulders .

Definition of Terms

- *Academic Resilience*—The capacity of not giving up from school, recovering rapidly from downfalls to achieve higher and desired educational levels (Campa, 2010; Morales, 2010). Resilience studies have a tendency to use its definition to downplay oppression, but resilience should rather mean re-envisioning the oppressive educational system and its underlying assumptions, and this study aims to emphasize that educational institutions should and can re-imagine their actions and decisions to promote effective change, using

the term resilience with a proposition of a non-oppressive approach to empower the Latinx community.

- *Background Characteristics*—Everything students bring with them at the time college starts. Gender, ethnicity, age, high school GPS, act/sat scores, etc., are part of this category.
- *Career Aspiration*—Where people aspire and would like to be in the future, career-wise, not necessarily realistically or easily to be accomplished.
- *Career Expectation*—Where people would realistically expect to be in the future, career-wise.
- *Career Success*—Achieving a status position, as desired and defined by one’s values and dreams.
- *Connor-Davidson Resilience Scale (CD-RISC 25)*—A scale to measure resilience, shown in Table 1.
- *Connor-Davidson Resilience Scale (CD-RISC 10)*—A shorter version of the CD-RISC 25 scale, still being a scale to measure resilience, shown in Table 2 (Campbell-Sills & Stein, 2007).
- *Deficit Thinking*—“A mindset molded by the fusion of ideology and science that blames the victim, rather than holding oppressive and inequitable schooling arrangements culpable... It refers to the idea that students, particularly of low-SES background and of color, fail in school because they and their families have internal defects, or deficits, that thwart the learning process” (Valencia, 2002, p. 179).
- *Degree Attainment*—Highest educational degree obtained by an individual, following the classification of the United States Census Bureau (2020), as shown in Table 12.

- *Educational Aspiration*—Where people aspire and would like to be in the future, academic-wise, not necessarily realistically or easily to be accomplished (Carpenter, 2008).
- *Educational Expectation*—Where people realistically would expect to be in the future, education-wise.
- *Equitable Opportunities for Student Engagement Given by the Institutions*—Equitable experiences and actions, as well as possibilities available in college and in the program of study for students to deepen their learning experience, as perceived by the student.
- *Familismo* – in the Latinx culture, it is common to find out that Latinx tend to place their family needs above their own (Martinez, 2013).
- *Family Structure*—Size and type of family members living under the same roof, as well as if any family members were left behind in their home country.
- *Geographical Location*—The Latinx place of residency in the U.S, state-wise, and if living in rural or urban areas, as well as their (or their parents’) country of origin.
- *Latinx*—Ethnicity of Hispanic individuals who have roots in Latin America, independent of gender or race. No matter if other researchers are using different terminology in their research, in this study, the researcher uses Latinx even when quoting them.
- *Level of Parental Support*—Perceived parent behavior by the student, such as being emotionally present and consistently dependable for the student in times of need.
- *Occupation*—Based on 23 major standard occupations given by the U.S. Bureau of Labor Statistics (2018), as shown in Table 13.
- *Overall Resilience*—Effective adaptation to stress, adversity, or change lived by the human being (Brewer et al., 2019). Resilience studies have a tendency to use its

definition to downplay oppression, but resilience should rather mean re-envisioning the oppressive educational system and its underlying assumptions, and this study aims to emphasize that educational institutions should and can re-imagine their actions and decisions to promote effective change, using the term resilience with a proposition of a non-oppressive approach to empower the Latinx community.

- *Participation in Extra-Curricular Activities*—Number of times a student participates in an extra-curricular activity available in the college and in the program to deepen their learning experience, as perceived by the student.
- *Promotion*—Any significant increases in annual salary, or significant increases in the scope of responsibility, changes in job level or rank, or eligibility for bonuses, incentives, or stock plans (Shockley et al., 2016).
- *Structural Equation Modeling (SEM)*—Quantitative multivariate analysis technique that focuses on understanding the relationship between dependent and independent variables through a collection of statistical techniques, determining the degree to which a theoretical model is supported by the collected data (Ullman, 2006).
- *Subjective Career Success Inventory (SCSI)*—A scale to measure career success, as shown in Table 7 (Shockley et al., 2016).

Significance of the Research

Even though there are various researches involving resiliency in higher education, there are not many studies that examine this concept in the Latinx professional community. Resilience studies have a tendency to use its definition to downplay oppression, but resilience should rather mean re-envisioning the oppressive educational system and its underlying assumptions, and this study aims to emphasize that educational institutions should and can re-imagine their actions and

decisions to promote effective change, using the term resilience with a proposition of a non-oppressive approach to empower the Latinx community.

There are also various studies that focus on diversity, especially due to the fact that diversity helps to build a better economy, as well as the fact that businesses that are diverse are healthier and more successful (Triandis et al., 1993; McLeos et al., 1996). The problem resides with the lack of diversity in the workforce that, nevertheless, still exists, particularly among the Latinx community, especially because high qualified Latinx professionals are not being formed. The United States Census Bureau (2020) affirms that the Latinx community is the second-largest community in the U.S., but at the same time, it holds the lowest percentage of bachelor's, master's, and doctorate completion in the country so understanding resilience and career success in this community is then of huge relevance (Farley & Haaga, 2005).

More and more universities and colleges are worried about student retention. Davidson et al. (2009) argue that institutions have to be worried about individualized support to help students succeed, empirically proving that what works for a certain student population might not work for another.

The characteristics and needs of the Latinx population are unique, and this study is relevant and important because (a) it aims to open more doors to help Latinx students better understand their resilience, helping them increase their college completion rates, with the society and economy benefiting from the added diversity of qualified professionals. At the same time, (b) higher education institutions can take advantage of the provided tools and results of this study, applying them to improvement in student retention (Tello & Lonn, 2017), and (c) can be held accountable while focusing on supporting student engagement with equity in mind.

With this research, contributions can then be seen in four areas. First, more inclusive and diverse environments can be created, eventually leading to a healthier society and a more sustainable economy. The presence of diversity allows organizations to better solve problems and be more creative, and thus as the world adapts to challenges, problems get solved with greater diverse and more successful perspectives (McKay et al., 2008).

Second, the majority of Latinx students need to, unfortunately, overcome several obstacles to finish their higher education degrees if they want to be more qualified for a chance to compete for a decent job (Manzano-Sanchez et al., 2019; Marrero, 2016). This study has the intention of demonstrating the relationship between Latinx attributes before entering college, the characteristics of the environment they are in when in college, and the outcome of resilience and career success, pointing out a path to success for Latinx students that shows that their culture is not an impediment to their success, rather, the contrary, giving them hope to continue. By understanding what influences resilience and career success, this study aimed to help the Latinx community to see they are worth it, giving them tools to fight inequalities and to resist the system of oppression.

Third, this study intended to provide higher education institutions with crucial information and data on what is important to do to help a Latinx student succeed, therefore helping to move more Latinx in the pipeline. Higher education intuitions tend to aggregate data, and the Latinx students are just part of the bulk, just one more number, and are rarely treated according to their needs (Association of American Colleges and Universities, 2019). It is not enough to just enroll Latinx students in college but rather understand their perspectives, applying institutional changes to help them grow. This study showed how important it is to disaggregate institutional data for Latinx students so higher education institutions can approach the Latinx

community with more efficacy, transforming the institution into an important player in Latinx student success.

Lastly, there is a gap in scholarly literature discussing the uniqueness of the Latinx student and professional population. Understanding Latinx culture is important because it can help higher education institutions to provide culturally competent services to Latinx students (Tello & Lonn, 2017). Although there are several studies approaching resilience and numerous others discussing career success, no empirical research was found to address the outcome of career success, overall resilience, and academic resilience in the same model. How Latinx approach college and how competitive they are in the job market are seen by the majority of researches solely focusing on individual-level resilience (Martin & Marsh, 2006). The need for further research in the Latinx community is then of great relevance to the field.

My Positionality

When I started my Ph.D. program at Eastern Michigan University (EMU), I did not really know what I was signing up for, and looking back then, I also really did not fully comprehend who I was. I knew I was a resilient Brazilian woman who had moved to the U.S., lost her degree, and wanted to make it up by going back to school. Deep down, I thought I was the one who made the decision to move, so every challenge I was facing in the U.S. was my fault, and to fix that, I had to do everything on my own, and I should not expect that other people, the government or EMU would help me with that process. I admit, at that point in my academic career, I just wanted to be done with it, to get back what I lost, and I knew I was alone in that journey. With a strong business background, I always thought life was black and white; you either were resilient and would keep fighting, or you wouldn't. In my mind, resilience was like

genetic traits that cannot be modified. I knew my success was solely on me, and if I failed, I would be the only one responsible for my failure—or so I thought.

Now, here I am. A Latina researcher who aspires to help her amazing community close the aspirations-attainment gap, and who now understands that the challenges Latinx face are not because life is hard and you have to simply accept it and move on, but rather those challenges can be minimized by educating those who have the power to change the system, making a difference in the minoritized students and professionals in the U.S.

I want my study to show academic institutions that they must make Latinx student success a campus-wide priority instead of downgrading anything Latinx to an isolated, small, and understaffed international office. I want to scream out loud to all faculty members that they have to put aside their deficit-thinking, changing their mindset so that they have high expectations of success for Latinx students, always providing the help they need. I want to help Latinx students to transfer and translate their cultural wealth to their college experience and future academic and career success, making sure they don't let their amazingly beautiful ethnic identity behind them.

With my study, I seek to highlight and bring resilience to light, but rather than putting the weight in the Latinx shoulder, I want to point out that this is instead a collective effort and that the individual and the academic institution are both together responsible for the Latinx outcomes, making justice to all in my community, helping them to see they are brilliant, they are worth it, they are powerful, and they too can do it.

Chapter 2: Literature Review

This chapter aims to provide a review of the literature on institutional, academic, and non-academic factors of resilience and career success of Latinx students and professionals.

Following the created framework presented in Figure 7, Latinx students' outputs of overall and academic resilience and career success; educational environment; and Latinx attributes before entering college will be discussed, respectively.

Outputs

Overall resilience, academic resilience, as well as career success of Latinx students in higher education are the focus of this study, and the literature surrounding all three topics is discussed below.

Overall Resilience

According to Brewer et al. (2019), overall resilience is the effective adaptation and capacity to overcome stress, adversity, or change lived by the human being.

McMillan and Reed (1994) affirm that (a) individual attributes, (b) positive use of time, (c) school, and (d) family are four categories in which resilience can be organized. This study added to this scholarly literature by empirically discussing (a) individual attributes of Latinx students and professionals by looking at their demographics and individual characteristics as presented in the conceptual framework shown in Figure 7; both (b) positive use of time and (c) school, through the analyzes of social and academic integration; and (d) family, by addressing parental education, occupation, and support.

To measure resilience, Connor and Davidson (2003) created the Connor-Davidson Resilience Scale. With a good internal consistency (Cronbach's α for the full scale was 0.89) and high test-retest reliability (correlation coefficient of 0.87), CD-RISC 25 is a 5-point Likert scale

ranging from *not true at all* to *true nearly all the time*, that successfully tests general and university-related adversities that affect resilience (Connor & Davidson, 2003).

Table 1 embodies the 25 items that are present in the CD-RISC 25. Note that this is not a complete representation of the scale but rather an overview of its items.

Table 1*Connor-Davidson Resilience Scale (CD-RISC 25)*

Item Number	Item Description
1	Able to adapt to change
2	Close and secure relationships
3	Sometimes fate or God can help
4	Can deal with whatever comes
5	Past success gives confidence for new challenge
6	See the humorous side of things
7	Coping with stress strengthens
8	Tend to bounce back after illness or hardship
9	Things happen for a reason
10	Best effort no matter what
11	You can achieve your goals
12	When things look hopeless, I don't give up
13	Know where to turn for help
14	Under pressure, focus and think clearly
15	Prefer to take the lead in problem-solving
16	Not easily discouraged by failure
17	Think of self as strong person
18	Make unpopular or difficult decisions
19	Can handle unpleasant feelings
20	Have to act on a hunch
21	Strong sense of purpose
22	In control of your life
23	I like challenges
24	You work to attain your goals
25	Pride in your achievement

Note. This table represents the items asked in the CD-RISC 25 questionnaire. From

“Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC),” by

K. Connor, and J. Davidson, 2003, *Depression and Anxiety*, 18(2), p. 78

(<https://doi.org/10.1002/da.10113>). Copyright 2003 by Wiley-Liss, Inc.

Five dimensions are produced in this scale, (a) notion of personal competence, high standards, and tenacity, embodying items 10, 11, 12, 16, 17, 23, 24, and 25; (b) trust in one's instincts, tolerance of negative affect, and strengthening effects of stress, embodying items 6, 7,

14, 15, 18, 19, and 20; (c) positive acceptance of change, and secure relationships, embodying items 1, 2, 4, 5, and 8; (d) control, embodying items 13, 21, and 22; and (e) spiritual influences, embodying items 3, and 9 (Connor & Davidson, 2003).

A few years later, on the basis of factor analysis to justify the deletion of items, Campbell-Sills and Stein (2007) created the CD-RISC 10, a variation of the CD-RISC 25 scale comprising only items 1, 4, 6, 7, 8, 11, 14, 16, 17, 19, as shown in Table 2. With excellent psychometric properties, CD-RISC 10 provides an efficient measurement of resilience, reflecting one's ability to "tolerate experiences such as change, personal problems, illness, pressure, failure, and painful feelings. Endorsement of these items reflects an ability to bounce back from the variety of challenges that can arise in life" (Campbell-Sills & Stein, 2007, p. 1026). The CD-RISC 10 was utilized in this study to help with the survey creation and assessment of overall Latinx resilience.

Table 2*CD-RISC 10*

CD-RISC 10
1. I am able to adapt when changes occur.
2. I can deal with whatever comes my way.
3. I try to see the humorous side of things when I am faced with problems.
4. Having to cope with stress can make me stronger.
5. I tend to bounce back after illness, injury, or other hardships.
6. I believe I can achieve my goals, even if there are obstacles.
7. Under pressure, I stay focused and think clearly.
8. I am not easily discouraged by failure.
9. I think of myself as a strong person when dealing with life's challenges and difficulties.
10. I am able to handle unpleasant or painful feelings like sadness, fear, and anger.

Note. This table represents the items asked in the CD-RISC 10 questionnaire. Adapted from “Psychometric analysis and refinement of the Connor-Davidson Resilience Scale (CD-RISC): Validation of a 10-item measure of resilience,” by L. Campbell-Sills, and M. Stein, 2007, *Journal of Traumatic Stress*, 20(6), 1019-1028 (<https://doi.org/10.1002/jts.20271>). Copyright 2007 by International Society for Traumatic Stress Studies.

Jowkar et al. (2014) affirm that resilience can be divided into two sub-categories, (a) intrapersonal resilience, measured using CD-RISC 25 instrument, and (b) interpersonal resilience, which is related to the degree of satisfaction one has with the availability of social support.

Presenting good validity and reliability for assessing social support, to measure the interpersonal resilience sub-category, Sarason et al. (1987) created and validated the Social Support Questionnaire—Short Form (SSQ-6), a six-item instrument, as shown in Table 3. Responders indicate, for each of the items, who is available to support them according to the specified areas in the scale.

Table 3*Social Support Questionnaire—Short Form (SSQ-6)*

Social Support Questionnaire - Short Form (SSQ-6)
Item 1: whom can you really count on to be dependable when you need help
Item 2: whom can you really count on to help you feel more relaxed when you are under pressure or tense
Item 3: who accepts you totally, including both your worst and your best points
Item 4: whom can you really count on to care about you, regardless of what is happening to you
Item 5: whom can you really count on to help you feel better when you are feeling generally down-in-the-dumps
Item 6: whom can you count on to console you when you are very upset

Note. This table represents the six items asked in the Social Support Questionnaire. Adapted from “A brief measure of social support: Practical and theoretical implications,” by I. Sarason, et al., 1987, *Journal of Social and Personal Relationships*, 4(4), 497-510 (<https://doi.org/10.1177/0265407587044007>). Copyright 1987 by SAGE Social Science Collections.

After providing the relationship of the person the student perceives as supporting them the most (e.g., sister, mom, friend, daughter, etc. or none if no support is perceived), the responder assesses how satisfied with this support they are, using a 6-point Likert scale—*very satisfied, fairly satisfied, a little satisfied, a little dissatisfied, fairly dissatisfied, and very dissatisfied* (Sarason et al., 1987).

The difference between persistence and resilience, terminology-wise, should also be discussed. Resilience is related to the variations someone presents when responding to risk—a few people surrender to stressful situations and give up, while others overcome the hurdles they might face. Resilience is then seen as a protective mechanism that is triggered by challenges one faces when reaching a critical point in life rather than being considered a fixed attribute. When one receives no support, lives through negative experiences, disappointments in life, or fails to

achieve an important pre-set goal but yet decides to keep on going instead of giving up, it is an example of resilient behavior (Winfield, 1991). Resilience among Latinx is then one of the focuses of this study.

Persistence, on the other hand, is task-oriented and is related to the amount of effort one will dedicate to solve a particular problem or setback one is facing. Someone who is constantly persistent is building up on their resilience. Students who live in at-risk conditions, such as Latinx students, demonstrate low persistence in academic tasks, eventually leading to failure in school, culminating with their decision to drop out. Academic persistence, in this context, is the “complex interplay between the student and his/her ability to integrate academically, referring to student’s motivation to attend class and study, and socially, referring to student’s subjective sense of fitting in the university” (Hartley, 2011, p. 596). Academic persistence, for example, leads to the decision of school departure and is seen as a behavioral correlate of motivation (Jowkar et al., 2014).

Cavazos et al. (2010) affirm that rather than only individual factors attributed to the lack of academic resilience leading to high dropout rates of Latinx students, school and contextual factors are the actual villains in the story.

It is fundamental to note that this study uses the resilience terminology with the mindset of empowering Latinx students instead of exempting the educational institution of its responsibility while neglecting the importance of their supportive role, with the objective of stopping the contribution to the historical actions of discrimination and oppression in the United States.

As a subset of the overall resilience, the concept of academic resilience will be discussed below, with the same mindset discussed here—stopping the system of oppression is imperative for the utilization of the terminology.

Academic Resilience

Academic resilience relates to the capacity of not giving up after facing adversity in school, recovering rapidly from downfalls to achieve higher and desired educational levels (Campa, 2010; Morales, 2010).

Latinx students face several obstacles to earning an undergraduate and/or a graduate degree, with many of them giving up in the way. The United States Census Bureau (2020) estimates that among all the people 25 years of age and older from all races in the U.S, 9.9% do not even have a high school diploma, 2.6% have a GED, 25.5% have a High school diploma, 15.6% go to college but do not get a degree, 10.4% have an associate's degree, 22.6% have a bachelor's degree, 10% have a master's degree, 1.4% have a professional degree, and 2% have a doctorate degree.

Among the Asian, Non-Hispanic White, and Black population in the U.S, 58.1%, 40.2%, and 26.1%, respectively, completed undergraduate and graduate degrees successfully, whereas only 18.8% of the Hispanic population of any race accomplished the same goal, raising concerns about academic resilience among Hispanic students (United States Census Bureau, 2020). As shown in Table 4, the percentage of degree completion among Hispanic students is below their peers of other races in all categories (bachelor's, master's, professional, and doctorate).

Table 4*Degree Attainment in the U.S by Race*

Degree Completed	Non-Hispanic White (%)	Black (%)	Asian (%)	Hispanic (of any race) (%)
Bachelor's	25.0	16.6	33.3	13.1
Master's	11.2	7.7	17.5	4.4
Professional	1.7	0.7	2.4	0.6
Doctorate	2.3	1.1	4.9	0.7
<i>TOTAL</i>	<i>40.2</i>	<i>26.1</i>	<i>58.1</i>	<i>18.8</i>

Note. This table represents the percentage of degree attainment of the U.S. population by race.

Data are from “Educational Attainment in the United States: 2019,” by the United States Census Bureau, 2020 (<https://www.census.gov/content/census/en/data/tables/2019/demo/educational-attainment/cps-detailed-tables.htm>). In the public domain.

Cassidy (2016) contextualizes academic resilience as a construct that increases the likelihood of achieving educational aspirations despite adversities one is facing in life.

To predict academic resilience, Gloria and Kurpius (1996) created and validated a 7-point Likert scale (1, *not at all*; 7, *very true*), named University Environment Scale (UES), with the specific intent of analyzing the college experience of Latinx students, as seen in Table 5.

Table 5*University Environment Scale (UES)*

University Environment Scale (UES)
1. Class sizes are so large that I feel like a number.
2. The library staff is willing to help me find materials/books.
3. University staff have been warm and friendly.
4. I do not feel valued as a student on campus.
5. Faculty have not been available to discuss my academic concerns.
6. Financial aid staff has been willing to help me with financial concerns.
7. The university encourages/sponsors ethnic groups on campus.
8. There are tutoring services available for me on campus.
9. The university seems to value minority students.
10. Faculty have been available for help outside of class.
11. The university seems like a cold, uncaring place to me.
12. Faculty have been available to help me make course choices.
13. I feel as if no one cares about me personally on this campus.
14. I feel comfortable in the university environment.

Note. This table represents the items used in a questionnaire that was created to predict academic resilience, using a 7-point Likert scale ranging from 1, *not at all*, to 7, *very true*. From “The validation of the cultural congruity scale and the university environment scale with Chicano/a students,” by A. Gloria, and S. Kurpius, 1996, *Hispanic Journal of Behavioral Sciences*, 18(4), p. 541 (<https://doi.org/10.1177/07399863960184007>). Copyright 1996 by Sage Publications, Inc.

Solely focusing on an individual level rather than including the academic institution, Martin and Marsh (2006) built and validated an academic resilience instrument (while asking students to rate themselves on a scale of 1—*strongly disagree* to 7—*strongly agree*), as seen in Table 6, coming to the conclusion that five factors predict academic resilience, (a) self-efficacy, (b) control, (c) planning, (d) low anxiety, and (e) persistence, proposing a 5-C model of academic resilience—confidence (self-efficacy), coordination (planning), control, composure (low anxiety), and commitment (persistence).

Table 6*Martin and Marsh (2006) Academic Resilience Instrument*

Martin and Marsh (2006) Academic Resilience Instrument
I believe that I am mentally tough when it comes to exams.
I do not let study stress get on top of me.
I am good at bouncing back from a poor mark in my school work.
I think I am good at dealing with schoolwork pressure.
I do not let a bad mark affect my confidence.
I am good at dealing with setbacks at school (e.g., bad mark, negative feedback on my work, etc.)

Note. This table represents a validated instrument that measures academic resilience using a scale of 1, *strongly disagree* to 7, *strongly agree*. From “Academic resilience and its psychological and educational correlates: A construct validity approach,” by A. Martin, and H. Marsh, 2006, *Psychology in the Schools*, 43(3), p. 276 (<https://doi.org/10.1002/pits.20149>). Copyright 2006 by Wiley Periodicals, Inc.

As of now, there is no published research that looks into how academically and overall resilient the Latinx population is. Researchers either focus on academic resilience or resilience in general. Brewer et al. (2019) state that resilience and its subset of academic resilience are connected to the notion of thriving, going beyond the idea of simply surviving through the encountered adversities. The non-oppressive mentality of being academically resilient is, therefore, one of the focuses of this study.

Several Latinx people migrate to the U.S with hopes of achieving the American Dream, one that brings prosperity and success in life if hard work and courage are put into the equation by the immigrant, but the majority of Latinx do not achieve their previously set aspirations (Hill & Torres, 2010). Career success is then the mark of achieving a positive career outcome; consequently, it is also an important concept to be discussed.

Career Success

Super (1976), as cited in Patton and McMahon (2014), defined career as “the sequence of major positions occupied by a person throughout their pre-occupational, occupational and post-occupational life; includes work-related roles such as those of student, employee, and pensioner, together with complementary vocational, familial and civil roles” (p. 4), while Arthur et al. (1989) propose a broader definition by stating that career is “the evolving sequence of a person’s work experience over time” (p. 8). At the same time, they affirm that there is a lack of clarity and agreement between researchers, preventing common ground achievement, often derailing the attempts to further knowledge in this area. For example, the terms career, vocation, and occupation are often used interchangeably in the literature.

What is clear among career researchers is that even though the Latinx population is the fastest-growing ethnic (and minoritized) group in the U.S, Berrios-Allison (2011) affirms that they still concentrate their workforce in service-oriented and unskilled jobs. Career success for the Latinx population is more difficult, and it seems, a lot of the time, unachievable. Limiting underlying factors push this negative trend forward, and the lack of formal education plays a big role in that, preventing Latinx from achieving their desired career success.

Although there are a lot of studies that focus on the Latinx population, their characteristics, and their difficulties in, for example, completing a college degree, the lack of research involving Latinx career success is disheartening.

Career success happens when one achieves the desired career outcome, being defined as completing a previously set milestone in one’s career, fulfilling one’s career aspiration, and achieving a high-status position, as desired and defined by one’s values and dreams (Hoppe & Fujishiro, 2015).

Arbona (1995) discourses about career success, or the achievement of career outcome expectations, mentioning the career development theories, which involve the decision process and achievement of vocational plans, pointing out that the selection process of an occupational identity of an individual is tied to their identity development. For Latinx, the discussion of career success is important to better clarify the unique experiences lived by that population while examining to “what extent the process of ethnic identity formation becomes a developmental task in itself that affects the process of resolving more directly vocational tasks” (Arbona, 1995, p. 49).

Watson and Stead (2006), as cited in Patton and McMahon (2014), echoed this view, noting that “career theories reflect the times they were constructed in and emphasizing that they need to be refined over time to reflect the realities of an ever-changing macroenvironment” (p. 3).

In an empirical study that looked at ethnic identity and career development theory, Gushue (2006) discusses how self-efficacy is positively correlated to career exploration and career success, especially among minoritized populations.

Self-efficacy, which involves one’s positive behavior to discover, adjust and achieve one’s career choice, position, and/or job title, is particularly challenging to develop, especially when considering the minoritized population, such as Latinx (Miranda & Umhoefer, 1998). In an empirical study looking at twenty different occupations in the U.S job market, Betz and Hackett (1981) describe four components that influence one’s self-efficacy, (a) performance accomplishments, (b) vicarious learning, (c) emotional arousal, and (d) verbal persuasion, with three consequences arising from those factors, choice, which relates to the idea of approach versus the idea of avoidance; performance; and persistence. Therefore, the overall resilience of Latinx students and professionals, as well as

academic resilience, should also be studied and focused on when discussing and analyzing career success.

Career success is a multidimensional construct that entails both subjective and objective criteria. Subjective criteria include how one evaluates their own career progress, for instance, and objective criteria include more directly observed, easily measured, and verified variables, such as salary, number of times one receives a promotion and calculated institutional ranking (Shockley et al., 2016).

It is easy to find researches that conceptualize career success more objectively, but Shockley et al. (2016) affirm that this objectivity is no longer aligned with contemporary organizations and, since the complexity of the human being is high, subjectivity is taking place when measuring how successful one is in their career. Shockley et al. (2016) created and validated the Subjective Career Success Inventory (SCSI) as a way to quantitatively measure the subjectivity of career success, which helped with the survey creation of this study.

Taking into account the subjectivity that career success entails, Table 7 shows the SCSI as a twenty-four-item, eight-dimension, five-point Likert scale that ranges from *strongly disagree* to *strongly agree*, asking the responder about their career success according to the responder's own perception of success. Each item in the scale starts with the following sentence: Considering my career as a whole....

Table 7*SCSI Items and Categories*

SCSI Items and Categories
Recognition
...my supervisors have told me I do a good job.
...the organizations I worked for have recognized me as a good performer.
...I have been recognized for my contributions.
Quality Work
...I am proud of the quality of the work I have produced.
...I have met the highest standards of quality in my work.
...I have been known for the high quality of my work.
Meaningful Work
...I think my work has been meaningful.
...I believe my work has made a difference.
...the work I have done has contributed to society.
Influence
...decisions that I have made have impacted my organization.
...the organizations I have worked for have considered my opinion regarding important issues.
...others have taken my advice into account when making important decisions.
Authenticity
...I have been able to pursue work that meets my personal needs and preferences.
...I have felt as though I am in charge of my own career.
...I have chosen my own career path
Personal Life
...I have been able to spend the amount of time I want with my friends and family.
...I have been able to have a satisfying life outside of work.
...I have been able to be a good employee while maintaining quality non-work relationships.
Growth and Development
...I have expanded my skill sets to perform better.
...I have stayed current with changes in my field
...I have continuously improved by developing my skill set.
Satisfaction
...my career is personally satisfying.
...I am enthusiastic about my career.
...I have found my career quite interesting.

Note. This table represents the items of the validated Subjective Career Success Inventory scale that quantitatively measure the subjectivity of career success. From “Development of a new scale to measure subjective career success: A mixed-methods study,” by K. Shockley et al., 2016,

Journal of Organizational Behavior, 37(1), p. 152 (<https://doi.org/10.1002/job.2046>). Copyright 2015 by John Wiley & Sons, Ltd.

Up to this moment, there are no academic studies that utilize the SCSI scale to address Latinx career success, being this study the first one to utilize those lenses and take that perspective.

Educational Environment

As educational environmental variables presented in the conceptual framework seen in Figure 7, this study focuses on academic and social integration variables, (a) equitable opportunities for student engagement and academic growth given by the academic institution, (b) participation in extra-curricular activities, (c) academic and social interactions with peers, and faculty, (d) student academic performance throughout the Latinx higher education experience, and (e) deficit thinking and how that affects Latinx overall and academic resilience and career success.

Davidson et al. (2009) mentioned that there is no widely accepted instrument to measure social and academic integration of students in a higher education setting, but Pascarella and Terenzini (1980) empirically tested Tinto's (1975) model creating and validating five different scales.

Table 8*Empirical Test of Tinto's (1975) model—Five Institutional Integration Scales*

Empirical Test of Tinto's (1975) model—Five Institutional Integration Scales
<p>Scale I: Peer-Group Interactions</p> <p>Since coming to this university, I have developed close personal relationships with other students.</p> <p>The student friendships I have developed at this university have been personally satisfying.</p> <p>My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.</p> <p>My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.</p> <p>(*) It has been difficult for me to meet and make friends with other students.</p> <p>(*) Few of the students I know would be willing to listen to me and help me if I had a personal problem.</p> <p>(*) Most students at this university have values and attitudes different from my own.</p>
<p>Scale II: Interactions with Faculty</p> <p>My non-classroom interactions with faculty have had a positive influence on my personal growth, values, and attitudes.</p> <p>My non-classroom interactions with faculty have had a positive influence on my intellectual growth and interest in ideas.</p> <p>My non-classroom interactions with faculty have had a positive influence on my career goals and aspirations.</p> <p>Since coming to this university, I have developed a close, personal relationship with at least one faculty member.</p> <p>I am satisfied with the opportunities to meet and interact informally with faculty members.</p>
<p>Scale III: Faculty Concern for Student Development and Teaching</p> <p>(*) Few of the faculty members I have had contact with are generally interested in students.</p> <p>(*) Few of the faculty members I have had contact with are generally outstanding or superior teachers.</p> <p>(*) Few of the faculty members I have had contact with are willing to spend time outside of class to discuss issues of interest and importance to students.</p> <p>Most of the faculty I have had contact with are interested in helping students grow in more than just academic areas.</p> <p>Most faculty members I have had contact with are genuinely interested in teaching.</p>

Table 8 Continued

Empirical Test of Tinto's (1975) model—Five Institutional Integration Scales
<p>Scale IV: Academic and Intellectual Development</p> <p>I am satisfied with the extent of my intellectual development since enrolling in this university. My academic experience has had a positive influence on my intellectual growth and interest in ideas.</p> <p>I am satisfied with my academic experience at this university.</p> <p>(*) Few of my courses this year have been intellectually stimulating.</p> <p>My interest in ideas and intellectual matters has increased since coming to this university.</p> <p>I am more likely to attend a cultural event (for example, a concert, lecture, or art show) now than I was before coming to this university.</p> <p>I have performed academically as well as I anticipated I would.</p> <p>Scale V: Institutional and Goal Commitments.</p> <p>It is important for me to graduate from college.</p> <p>I am confident that I made the right decision in choosing to attend this university.</p> <p>It is likely that I will register at this university next fall.</p> <p>(*) It is not important to me to graduate from this university.</p> <p>(*) I have no idea at all what I want to major in.</p> <p>(*) Getting good grades is not important to me.</p>

Note. This table describes all items asked in the five scales that measure the social and academic integration of students in a higher education setting. From “Predicting freshman persistence and voluntary dropout decisions from a theoretical model,” by E. Pascarella, and P. Terenzini, 1980, *The Journal of Higher Education*, 51(1), p. 66 (<https://doi.org/10.1080/00221546.1980.11780030>). Copyright 1980 by Ohio State University Press.

Using 5-point Likert scales (with items scored 1, *strongly disagree* to 5, *strongly agree*), Pascarella and Terenzini (1980) affirm that the intercorrelation of all five scales was low, so it is safe to say they are assessing independent dimensions. When computing the scores, the items identified with a star (*) in the scale are inversely computed (5, *strongly disagree* to 1, *strongly agree*).

As students' attributes, Pascarella and Terenzini (1980) used similar variables as those chosen in this study, as shown in Table 9.

Table 9*Pascarella and Terenzini (1980) Input Variables*

Pascarella and Terenzini (1980) Input Variables
Sex
Racial/ethnic origin (nonminority or minority)
Initial program of enrollment (liberal arts or professional)
Academic aptitude (combined Scholastic Aptitude Test-SAT-scores)
High school achievement (percentile rank in high school class)
Number of high school extra-curricular activities (of two hours or more per week on the average)
Expected number of informal contacts with faculty (per month of ten minutes or more outside of class)
Parents' combined annual income (in thousands of dollars)
Mother's formal education (seven categories from "some grammar school" to "graduate degree")
Father's formal education (same categories)
Student's highest expected academic degree (Bachelors to Ph.D., Ed.D., M.D., J.D.)
Importance of graduating from college ("extremely important" to "not at all important")
Choice in attending this university (1st Choice to 4th or lower choice)
Confidence that choosing to attend this university was the right decision ("extremely confident" to "not at all confident").

Note. This table describes the pre-college characteristics that complement the measurement of social and academic integration of students in a higher education setting that correlate with their decision to drop out from college. From "Predicting freshman persistence and voluntary dropout decisions from a theoretical model," by E. Pascarella, and P. Terenzini, 1980, *The Journal of Higher Education*, 51(1), p. 63 (<https://doi.org/10.1080/00221546.1980.11780030>). Copyright 1980 by Ohio State University Press.

Pascarella and Terenzini's (1980) student attributes' factors helped the creation of this study's instrument.

Mannan (2007) also empirically validated Tinto's (1993) model by analyzing the relationship between social and academic integration constructs and academic resilience, as shown in Table 10.

Table 10

Mannan (2007) Validation Scale for Tinto's (1993) Model

Mannan (2007) Validation Scale for Tinto's (1993) Model
(A) Academic staff concern for students development and teaching
1. Attended departmental meetings
2. Genuinely concerned in my academic work
3. Willing to spend time outside class
4. Genuinely interested in teaching
5. Interested in alleviate my academic weakness
(B) Informal contact with academic staff on academic matters
6. Always available for obtaining information
7. Accessible to discuss matters of Intellect
8. Positive influence on personal growth
9. Accessible to discuss career goals
10. I am satisfied with opportunities
(C) Informal social contact with academic staff
11. Accessible to discuss campus issue
12. Interested for socialization
13. Accessible to solve personal problems
14. Involve to promote good relationship
(D) Extra curricular activities
15. Participation in clubs and organizations
16. Participate in sports and cultural events
17. Participate in public lecturers seminars

Table 10 continued

Mannan (2007) Validation Scale for Tinto's (1993) Model
(E) Peers and group interactions
18. Stud. bodies and groups promote friendship
19. Interpersonal relationship for personal growth
20. Interpersonal relationship for intellectual growth
21. Students helped in personal problems
22. Alcohol consumption helpful for socialization
23. Regional groups successful in socialization
24. Satisfied with socialization with peer groups

Note. This table represents the items asked in the questionnaire to validate Tinto's social and academic integration constructs that might lead to dropout from college. From "Student attrition and academic and social integration: Application of Tinto's model at the University of Papua New Guinea," by A. Mannan, 2007, *Higher Education*, 53(2), p. 162 (<https://doi.org/10.1007/s10734-005-2496-y>). Copyright 2007 by Springer Science + Business Media B.V.

Mannan (2007) show that five factors were generated from their proposed scale, (a) informal contact with academic staff, related to questions 8, 9, 10, 11, 12, 13, and 14; (b) academic staff concern for students' development and learning, related to questions 1, 2, 3, 4, 5, 6 and 7; (c) peer interaction, related to questions 19, 20 and 21; (d) extracurricular activities, related to questions 15,16, 17 and 18; and (e) peer group interactions, related to questions 22, 23, and 24. Interestingly, this study presented a strong negative correlation between the constructs of academic integration and social integration, indicating that students end up compensating for the lack of one integration for another.

Metz (2004) and Davidson et al. (2009) support the individualization of instruments, where different institutions and different populations should use different scales to analyze their institutional environment and how it affects, for example, the student decision of leaving college.

Equitable Opportunities for Student Engagement and Academic Growth

Researches about the Latinx population and their resilience show that several variables related to student engagement contribute to their academic resilience and success in undergraduate and graduate programs, including positive community networking, active participation in the program of study, the content of the program, and equitable resource access (Cabrera & Padilla, 2004; Cerezo & Chang, 2013).

The relationship between student engagement and academic resilience in higher education has been studied for decades with the objective of better understanding how to help students grow, increasing their academic and career outcomes. Student engagement happens when students make an investment in their learning process through psychological involvement while looking for and developing necessary skills to thrive in the academic environment, but that alone without the help of the educational institution is not enough.

Between empirical and scholarly studies, student engagement involves both the psychological state of mind that will lead one to have more energy and dedication to the performance and active participation in tasks and assignments (Ahmed et al., 2018), and educational institutions must understand their role in helping students to be more active by taking the students' culture in consideration, among other actions.

Kuh et al. (2007) affirm that two factors can be represented in student engagement, (a) their own dedication to their studies, including the amount of time and their efforts; and (b) how the higher education institution proposes its curriculum, how it prepares its learning opportunities, and how it supports and induces students to actively participate in offered activities.

Student engagement is, therefore, a two-way street—the student must be willing to engage, and the educational institution must be willing to provide the opportunities for the student to do it so.

Quaye and Harper (2015) discuss the importance of higher education institutions focusing on helping student engagement with equity in mind. At some point in time, responding to student needs was not challenging since students were mainly the same —White, male, heterosexual, affluent, and had only a limited number of programs to choose from. With that in mind, higher education institutions could respond to multiple students in similar ways, and they were certain that their results would always be similar. Nowadays, the increased diversity American higher education is experiencing brings different challenges to both students and institutions, but more than ever, colleges and universities should embrace their responsibility in providing guidance and support to increase equitable student engagement (Quaye & Harper, 2015).

The main purpose of student engagement while attending a higher education institution is, therefore, the achievement of increased learning, satisfaction, and eventually, graduation. Consequently, the interaction between student engagement and resilience and the role of an equitable academic environment should be studied (Kuh, 2001).

Participation in Extra-Curricular Activities

Tinto (2006) shares that educational institutions are made of academic and social systems. Peer interaction, discussed in the next section, and extra-curricular activities belong to the social integration schema at higher education institutions.

Participation in extra-curricular activities while in school and in college, both outside and inside the educational institution, has been identified to improve students' academic resilience (Peck, 2008).

Students who participate in extra-curricular activities are looking to distinguish themselves from their peers by building a better employee profile. Since employment relationships are no longer traditional, with long-term commitments being rare and with students managing their careers by themselves, those who participate in extra-curricular activities tend to be more competitive in the job market (Roulin & Bangerter, 2013).

By participating in extra-curricular activities, students receive more job offers when compared to those who don't participate (Chia, 2005). Extra-curricular activities are a big part of students' experiences in higher education. Participation in clubs, organizations, sororities/fraternities, and sports have shown a positive relationship with academic and career outcomes (Kaufman & Gabler, 2004; Mahoney et al., 2003).

Berger and Wild (2017) affirm that extra-curricular activities improve student performance and increase the development of critical reasoning skills, while Rubin et al. (2002) mentions that students who participate in extra-curricular activities have better interpersonal skills, which is a characteristic sought by various organizations looking to hire well-developed employees.

Academic and Social Interactions With Peers and Faculty

Holdsworth et al. (2018) state that there are three core relationships that lead to student resilience: (a) the environment the student is in when learning, (b) the construction and the delivery of the curriculum, and (c) the relationship that happens between the student and the educator and the educational institution.

Meaningful relationship developments among peers and mentors in a higher education institution are factors attributed to student success and academic resilience (Kim & Hargrove, 2013).

Anderson and Carta-Falsa (2002) stress how important it is to have an institution that provides a caring and safe environment to foster student growth and resilience and that the positive interaction between the students and their educators, nurtured by respect and empathy among all where different perspectives are respected are fundamental actions to achieve collaborative learning and academic resilience.

When discussing academic resilience and student interaction in higher education, the idea of positive adaptation when living stressful situations requires special attention. Since students react in ways that will help them overcome the short- and long-term periods of stress, academic resilience is more than simply bouncing back, being more of a “formal or informal learning experience which enables student progress, growth, and learning” (Holdsworth et al., 2018, p. 1848). Therefore, to enable successful coping mechanisms, interactions with peers, faculty, and staff become fundamental.

Latinx Student Academic Performance

Latinx are underperforming in higher education, and a big reason for that is the lack of their presence among the nation’s high school achievers and their underrepresentation in elite high schools, having a competitive disadvantage since the beginning of their academic lives. As a consequence, Latinx present lower GPAs as an indicator of poor academic performance, for example, when compared to White and Asian students when in college (Miller, 2005).

Ogbu (1993) discusses a theory of oppositional culture and how it affects academic performance and higher education experience among minoritized students, such as those

belonging to the Latinx community. In this theory, there are two main minoritized groups, involuntary and voluntary. Latinx (and Black) students are categorized in the involuntary minoritized group, which was created based on the idea that they came to the U.S against their will due to slavery and forced labor. Due to this condition, Latinx were not allowed to be fully part of the society and, therefore, they constantly experience a high level of discrimination when compared with other racial/ethnic groups. By not feeling like they belong, many of those who were minoritized experience a cultural inversion, whether they voluntarily or not, engage in cultural inversion, rejecting patterns and behaviors common in the society they now live in. According to Ogbu (1993), academic achievement is extremely important in the U.S culture, and when experiencing the oppositional culture, Latinx tend to reject that value. Ogbu's (1993) theory is extremely controversial, and several researchers affirm that it blames the minoritized student for their academic failure instead of focusing on what can be done to improve their success (Baker, 2008).

Tinto (1993) presents in his proposed theory of student departure that student success in college is complex, and it involves the higher education institution to help students to feel integrated, and in return, that will help them to be more resilient. According to Tinto (1993), academic integration and social integration are fundamental to keep students moving forward in their degree achievement. In his eyes, higher education institutions must provide ample opportunity for student engagement, so interaction with peers, faculty, and staff, as well as extra-curricular activities, such as clubs and student organizations, are fundamental. But again, in this theory, Tinto does not take into consideration different cultures, and a model of one size fits all is what the educational institutions tend to take.

In their study, Fisher (2007) focuses on the enrolment of minoritized students in higher education and also proposes that participation in student organizations is important for enhancing student academic performance. Extra-curricular activities and the grades of minoritized students are found to have a positive relationship; however, it was discovered that the type of activity is what positively affects student academic performance, not the amount of time they spend participating in it.

Besides, Nunez and Sansone (2016) affirm that Latinx students face another struggle: They tend to work more to pay for college and keep surviving when compared to their peers of different races/ethnic groups, and that has a negative impact on their academic performance and higher education experience. And it is Astin (1993) who points out that the higher the number of hours a student works outside the educational environment while in college, the less resilient they will be.

No matter what path the institution and the student decide to take, it is important to note that the college cannot take one unique path and generalize it. The institution cannot believe that this one mainstream will help all students—understanding the different students and different cultures they come from is then fundamental to help with their academic performance (Fisher, 2007).

Deficit Thinking

Deficit thinking happens when one looks at specific individuals or cultures and sees them as inferior, full of limitations, deficiencies, and shortcomings. Valencia (2010) shares six characteristics of deficit thinking: (a) blaming the victim, where the more powerful blames the one with less power; (b) oppression, where the unjust use of authority from those who have the power can be seen; (c) pseudoscience, that is the embedded negative biases toward people of

color where people's work are guided by their assumptions; (d) temporal changes, where depending on the historical period, low-grade genes, inferior culture, and class, or inadequate familial socialization are believed to pass the alleged deficits; (e) educability (of low-SES students of color are less intelligent and less capable than their peers); and (f) heterodoxy, a discourse that is needed to break old, conventional ideologies, as shown in Figure 5.

Deficit thinking is well present in the education environment in the United States, and Valencia (1997) states that the strongest indication of that phenomenon is the action of labeling minoritized students as at-risk or simply calling them minority (Valencia, 1997; Bruton & Robles-Pina, 2009). Educational institutions started to use that terminology in the 1980s to categorize students that shared similar characteristics such as low academic performance, low achievement, low socioeconomic status, and those who were at higher risk to drop out of school. Using at-risk as a label, academic institutions disseminate and emphasize the idea that students are the only ones responsible for their outcomes while ignoring their strengths (Valencia, 1997; Valencia, 2010; Bruton & Robles-Pina, 2009).

Deficit thinking places the responsibility for lack of achievement solely on the student, lessening the academic institution's accountability while perpetuating the negative stereotype of Latinx students (Bruton & Robles-Pina, 2009).

With Latinx being exposed to situations where deficit thinking is constantly present, eventually, their own sense of self-accomplishment gets distorted, and they start to believe they are indeed what others think of themselves, even though that does not accurately describe their true reality, leading to self-deficit thinking.

Looking at one's self-deficit can be analyzed through the behavior of one who lacks self-affirmation. Self-affirmation theory is grounded on the principle that people want, need, and are

motivated to preserve the feeling of being worth, where “people can be affirmed by engaging in activities that remind them of who they are” (Sherman & Cohen, 2006, p. 2).

Understanding deficit thinking is then relevant to better comprehend Latinx resilience and career success, helping the academic institution to acknowledge its presence among faculty, staff and peers, therefore acting to stop this behavior, diminishing the chance of occurrence of self-deficit thinking among Latinx students and population.

Latinx Attributes Before Entering College

In the conceptual framework presented in Figure 7, the *student's attributes before entering college* of the developed conceptual framework of this study are; supportive family, degree attainment, career aspiration, current occupation, gender, ethnicity, age, ACT/SAT score, high school GPA, social class, family structure, years in the U.S., and their geographical location. The literature on these variables can be seen below.

Ethnicity

The definition of ethnicity and how it differs from the definition of race is still an obscure topic for many researchers.

According to Linwood (2014), ethnicity “denotes the link and identity of any person with any specific culture, region, race, belief, behavioral group, custom, or dialect” (p. 487), and three elements can be seen present in the realm of ethnicity: (a) descendance, where one’s ancestries come from; (b) history, what one’s past experiences were; and (c) homeland, where one comes from.

Berreman (1972), an American anthropologist and ethnographer, defines the difference between ethnicity and race by stating that ethnicity is related to social stratification and social inequities, with cultural characteristics being defined by the ones who belong in the group, and

that race is part of one's ethnicity, being birth attributed and based on characteristics defined by outsiders.

Grieco and Cassidy (2001), through a publication for the Census Bureau, affirm that the United States Office of Management and Budget (OMB) defines Hispanic, Spanish, or Latino (represented in this study as Latinx by not being gender-associated) as “a person of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin regardless of race” (p. 2). Latinx is, therefore, the ethnicity this study focuses on.

Latinx can be of any race. The OMB requires surveys to stipulate a minimum of five different categories as race options for the responders to select from (a) White, (b) Black or African American, (c) American Indian or Alaska Native, (d) Asian, and (e) Native Hawaiian or Other Pacific Islander, as shown in Table 11.

Table 11*Race Categories*

Race	Definition
White	A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.
Black or African American	A person having origins in any of the Black racial groups of Africa.
American Indian or Alaska Native	A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment.
Asian	A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
Native Hawaiian or Other Pacific Islander	A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Note. United States Office of Management and Budget (1997) in Grieco and Cassidy (2001)

Adapted from “Overview of Race and Hispanic Origin. Census 2000,” by E. Grieco, and R.

Cassidy, United States Census Bureau, 2001 (<https://www.census.gov/prod/2001pubs/cenbr01-1.pdf>). In the public domain.

As an ethnicity option, the OMB requires two options to be displayed in data collection of federal agencies: (a) Hispanic or Latinx and (b) Not Hispanic or Latinx.

This study followed the OMB standard, and it included the minimum two types of ethnicities and at least the five presented categories of race in the survey. Those who identify

their origin as Hispanic or Latinx may self-identify, consequently, as any one or more of the available race options.

Degree Attainment

Even though Latinx are the largest ethnic community in the whole U.S., the successful completion of their degree—also known as degree attainment—shows the lowest numbers (Ayala & Chalupa, 2016).

The United States Census Bureau (2020) looks at the degree attainment in the population following the categories shown in Table 12. Those categories were used in this study's survey when asking about Latinx degree attainment.

Table 12*Degree Attainment Classification*

Degree Attainment Classification
None
1st - 4th grade
5th - 6th grade
7th - 8th grade
9th grade
10th grade
11th - 12 th grade
High school graduate
Some college, no degree
Associate's degree, occupational
Associate's degree, academic
Bachelor's degree
Master's degree
Professional degree
Doctoral degree

Note. This table represents the types of degrees the U.S. population can receive. Data are from “Educational Attainment in the United States: 2019,” by the United States Census Bureau, 2020 (<https://www.census.gov/content/census/en/data/tables/2019/demo/educational-attainment/cps-detailed-tables.htm>). In the public domain.

Even though Latinx enrollment in higher education has increased over the past few years, especially because the community is substantially growing in numbers every year, the degree attainment of that population has not followed that trend, bringing to question an important notice of the degree achievement gap (Gross et al., 2014). The refusal by higher education institutions to accept that this gap is real brings a disservice to the economy and puts the U.S. in a position of losing power in the global marketplace (Elliott & Parks, 2018).

College attainment is impacted by the financial status of the student, with those coming from a family with a higher socioeconomic status having higher chances to graduate, presenting more academic resilience. Lack of financial resources and less educated family members make Latinx students more susceptible to being under-equipped for the rigor they face when in college (Elliott & Parks, 2018).

Besides all the challenges Latinx students face, lack of information leads to a lower higher education degree attainment in the community. Usually facing a less than adequate K-12 education and being first-generation students, Latinx are not regularly exposed to what it means to be in college. When facing the reality of a higher education experience, the lack of knowledge negatively influences their resilience and, therefore, their degree attainment (Contreras, 2011).

Educational Aspirations and Expectations

The concept of educational aspirations differs from educational expectations. Educational aspirations refer to where people aspire and would like to be in the future, academic-wise, and that aspiration does not necessarily have to be realistically or easily to be accomplished, while educational expectations are what one perceives that realistically one can accomplish (Carpenter, 2008).

Chavira and Vasquez-Salgado (2016) affirm that Latinx students have high educational aspirations, especially because they want to better provide for their family, with intentions of breaking the history of lived struggles. Although Latinx parents do not usually achieve high educational degrees, presenting low levels of formal education, they show high educational aspirations for their children.

At the same time, Latinx students find that their parents and/or close family members and/or significant others have a strong influence over their decision-making process (Carpenter, 2008).

Citing Boocok (1972), Carpenter (2008) stated that when their families have high educational expectations for their children, the students tend to achieve higher levels of education. Performing a longitudinal study with over one thousand Latinx students, Carpenter (2008) reported that 75% of them perceived their parents to have college aspirations for their children but yet, the United States Census Bureau (2020) states that even though the Hispanic community is the second-largest community in the U.S, the percentage of bachelor, master, and doctorate completion is the lowest, placing Latinx on the bottom of the educational chain.

To assess educational aspirations, Chavira and Vasquez-Salgado (2016) proposed the question “how far will you like your child to go in school” (p. 218) would be asked to parents, coding the question from 10, some high school; 12, graduate high school; 16, graduate college; to 18, postgraduate education to reflect the number of years in the educational system. Since this study interviewed Latinx students—and not their parents—the focus was on the Latinx perception of their parents’ aspirations, slightly modifying the proposed question.

Career Aspirations, Expectations, and Current Occupation

The desire to achieve one’s ideal future career is called career aspiration. Career aspiration is an important component of academic resilience since it sets the stage for a more motivated student who has a stronger desire to finish their studies to pursue their dreams (Chavira & Vasquez-Salgado, 2016).

Cooper (2011) affirms that when parents possess a higher education experience themselves, they are more likely to incentivize their children to dream about careers that involve

a college-based degree. It is known that Latinx parents' level of education is lower than their non-Latinx peers; consequently, necessary career knowledge is not as present when Latinx students are aspiring what their careers will be in the long run.

Although Latinx parents are not usually able to offer direct academic help and career guidance to their children, they still have a substantially positive influence in their sociocultural interactions, sharing with them the importance of their native language, cultural practices, and values, and by participating and being involved in their Latinx students' everyday lives, parents become a key asset alongside their children's academic and career paths (Cabrera & Padilla, 2004; Chavira & Vasquez-Salgado, 2016).

Discussing the idea of community cultural wealth, Yosso (2005) affirms that this concept, frequently present in socially marginalized groups, including the Latinx community, regularly stays unrecognized by the non-marginalized communities. That type of knowledge helps Latinx students to build their career aspirations, building on their chosen career path.

The U.S. Bureau of Labor Statistics (2018) proposes 23 types of occupations, which were used in this study survey, as shown in Table 13.

Table 13*Standard Occupational Classification*

Standard Occupational Classification
Management Occupations
Business and Financial Operations Occupations
Computer and Mathematical Occupations
Architecture and Engineering Occupations
Life, Physical, and Social Science Occupations
Community and Social Service Occupations
Legal Occupations
Educational Instruction and Library Occupations
Arts, Design, Entertainment, Sports, and Media Occupations
Healthcare Practitioners and Technical Occupations
Healthcare Support Occupations
Protective Service Occupations
Food Preparation and Serving Related Occupations
Building and Grounds Cleaning and Maintenance Occupations
Personal Care and Service Occupations
Sales and Related Occupations
Office and Administrative Support Occupations
Farming, Fishing, and Forestry Occupations
Construction and Extraction Occupations
Installation, Maintenance, and Repair Occupations
Production Occupations
Transportation and Material Moving Occupations
Military Specific Occupations

Note. This table represents a list of types of occupation the U.S. population can work at. Data are from “Standard Occupational Classification,” by the United States Census Bureau, 2018 (<https://www.bls.gov/soc/>). In the public domain.

Hill and Torres (2010) affirm that Latinx families usually work multiple low-paid jobs in an effort to reach their—and their children’s—aspirations, making great sacrifices that a lot of times end up steering them away from their goal.

Using a 5-point Likert scale ranging from 0, *not at all true of me*; 1, *slightly true of me*; 2, *moderately true of me*; 3, *quite a bit true of me*; to 4, *very true of me*, Gregor and O'Brien (2016) created and validated the Career Aspiration Scale (CAS), and years later they revised and validated the Career Aspiration Scale-Revised (CAS-R). Three factors emerged from the scale, (a) Leadership Aspirations—items 1, 2*, 4*, 5, 7, 12*, 15, 24; (b) Achievement Aspirations—items 3, 8, 9, 13, 17, 20*, 21, 22*; and (c) Educational Aspirations—items 6, 10, 11, 14, 16, 18, 19, 23, as shown in Table 14. Gregor and O'Brien (2016) discuss how interconnected career and educational aspirations are.

Table 14

Career Aspiration Scale-Revised (CAS-R)

Career Aspiration Scale-Revised (CAS-R)
1. I hope to become a leader in my career field.
2. (*) I do not plan to devote energy to getting promoted to a leadership position in the organization or business in which I am working.
3. I want to be among the very best in my field.
4. (*) Becoming a leader in my job is not at all important to me.
5. When I am established in my career, I would like to manage other employees.
6. I plan to reach the highest level of education in my field.
7. I want to have responsibility for the future direction of my organization or business.
8. I want my work to have a lasting impact on my field.
9. I aspire to have my contributions at work recognized by my employer.
10. I will pursue additional training in my occupational area of interest.
11. I will always be knowledgeable about recent advances in my field.
12. (*) Attaining leadership status in my career is not that important to me.
13. Being outstanding at what I do at work is very important to me.
14. I know I will work to remain current regarding knowledge in my field.
15. I hope to move up to a leadership position in my organization or business.
16. I will attend conferences annually to advance my knowledge.
17. I know that I will be recognized for my accomplishments in my field

Table 14 continued

Career Aspiration Scale-Revised (CAS-R)
18. Even if not required, I would take continuing education courses to become more knowledgeable.
19. I would pursue an advanced education program to gain specialized knowledge in my field.
20. (*) Achieving in my career is not at all important to me.
21. I plan to obtain many promotions in my organization or business.
22. (*) Being one of the best in my field is not important to me.
23. Every year, I will prioritize involvement in continuing education to advance my career.
24. I plan to rise to the top leadership position of my organization or business.

Note. This table represents the items asked in the revised Career Aspiration questionnaire. Items marked with a star (*) are reverse-scored items. The scale ranged from 0 = *not at all true of me*, 1 = *slightly true of me*, 2 = *moderately true of me*, 3 = *quite a bit true of me*, to 4 = *very true of me*.

From “Understanding career aspirations among young women: Improving instrumentation,” by M. Gregor, and K. O’Brien, 2016, *Journal of Career Assessment*, 24(3), p. 564

<https://doi.org/10.1177/1069072715599537>. Copyright 2015 by The Author(s).

When computing the scores, the items identified with a star (*) in the scale are inversely computed (0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0.). After summing the scores for each of the three factors, the higher the score received, the higher the aspiration in each domain, and the higher the total score received, the higher the career aspiration was.

Latinx face constant oppression by their White peers, and those racialized experiences have a negative impact on their career aspirations. For instance, Latinx critical race theory (LatCrit) addresses the subordination of the Latinx community due to their accent, immigration status, phenotype, surname, and culture (Stefencic, 1997). Exploitation and the use of power based on race and ethnicity lead to a discrepancy in the career aspiration of the Latinx student and the actual occupation they currently perform in the future. Teachers and peers often tell Latinx students their career aspirations are unrealistic, so their expectations end up meeting the harsh reality—discrimination negatively affects Latinx achievements (Hill & Torres, 2010).

Gender and Age

Tinto (1975), as shown in Figure 2, proposes that students come to college with preset expectations, aspirations, and individual attributes, such as gender and age, and that all those variables eventually affect the student's resilience and their decision to achieve their educational goals.

When discussing resilience, Morales (2008) affirms that, usually, researches focus on (a) risk factors such as schools that are providing inferior academic experiences, a culture of violence present in the students' lives, and low parental attention—also known as environmental issues; (b) protective factors such as a caring family member, strong positive values, and a community they can rely on; (c) compensatory strategies to incentive students to keep on going; and (d) vulnerability areas, such as aspects that manifest themselves when problems arise.

Morales (2008) also points out that even though gender has been identified as an important aspect of resilience, there are not enough studies focusing on it, and Hirani et al. (2016) mention that incorporating gender into the discussion of resilience is vital to better understand and create gender-sensitive success strategies.

When focusing on how age affects the resilience realm, Diehl and Hay (2010) state that age positively influences the degree one is resilient and that the older one gets, the more resilient one is, with the declination of daily stressors exposures declining with age.

When studying issues related to career success, Van der Heijden (2009) mentions that objectively and subjectively perspectives should be studied, and age and gender, as an objective perspective, must be evaluated.

Perceptions of age and gender discrimination are a constant part of American society, with over one-third of the nation reporting to have lived at least one major discrimination

experience in their life (Kessler et al., 1999). Harnois (2014) affirms that discriminatory perceptions are high, especially among minoritized populations.

Added to the already known racial and ethnic discrimination Latinx students and workers face, age and gender are also important considerations in this study.

High School GPA and ACT/SAT Scores

High school GPA and ACT/SAT scores are—very controversial—predictors of academic outcomes (Daniels, 2018).

Gonzalez and Padilla (1997), while studying Mexican American High School students, share that students who have higher GPAs present higher academic resilience and have a higher sense of belonging.

Gandara and Lopez (1998) affirm that Latinx students tend to score low in college entrance exams such as the ACT and SAT, with low-income Latinx students scoring even lower. Since admission to higher education programs and scholarship offers highly depend on those exam results, Latinx students have an added challenge in their education and future career life.

Social Class

Social class is an imminent topic in the U.S.A as immigrant families are more likely to experience poverty (De Feyter et al., 2020). Berreman (1981) affirms that social class is linked to membership and ranking, therefore is “based on attributes regarded as extrinsic to the people who comprise the class ... such as amount of income, occupation, education, consumption patterns, and lifestyle” (p. 15).

Gonzalez and Padilla (1997) state that there is a positive association between students’ social class and their academic performance, with those with low SES presenting poor performance in their academic lives. Low socioeconomic status (SES) is a recurrent issue among

the minoritized population, such as those who belong in the Latinx community. With low SES, poor schooling, inadequate living conditions, students face difficulties to academically thrive, presenting low academic resilience.

Pereira et al. (2006) mention that due to low SES, immigrants put their career success and their economic future at even higher risk than their native-born peers, so strategies to improve the change of Latinx student success should be discussed.

Geographical Location

Pereira et al. (2006) discuss the importance of the concept of community capital for families who migrate to the U.S, considering that different neighborhoods influence and define different opportunities for the development of immigrant children.

Massey and Denton (1990) separate the neighborhoods/communities immigrants live in into four categories: (a) disadvantaged and segregated, (b) disadvantaged and ethnically mixed, (c) advantaged and ethnically mixed, and (d) advantage and segregated. Massey and Denton (1990) then explain that disadvantaged neighborhoods are considered those that have (a) a below-average percentage of families who are married with children, (b) an above-average percentage of families living below the federal level of poverty, and (c) an above-average percentage unemployment rate. According to the U.S. Census Bureau (2020), the average percentage of families who are married with children is 78%, the average percentage of families who live below the poverty level is 10.5%, and the average percent of the unemployment rate is 6.9%.

Segregated neighborhoods are those that present themselves with a below average score on the racial dispersion index: When there is no racial/ethnic variation in the neighborhood, the scores equal zero, and when all races live in the neighborhood, the score is 100. According to

Pereira et al. (2006), the racial dispersion index of U.S neighborhoods, also known as the dissimilarity index, is 25.

Massey and Denton (1990) affirm that when children grow in impoverished and segregated communities, their school dropout rates increase while their academic resilience decreases.

Family Structure, Parental Support, Education, Occupation, and Years in the U.S.

Especially in Latin America, the inequity of the educational system does not provide enough opportunities for all students (Weinstein, 2021); therefore, families tend to leave their home countries looking for places that offer what their country is lacking. Pereira et al. (2006) affirm that Hispanic families end up migrating to the U.S to look for a better educational opportunity for their children.

With no intentions of returning to their country and without properly understanding the culture of the soon to be their new country, Latinx families have a long, challenging road, and being resilient is an essential skill to have (Massey & Pren, 2012). Morgan Consoli et al. (2011) state that the amount of time in years a Latinx is in the U.S is positively correlated to their resilience, so to understand how to approach Latinx students depending on the amount of time they or their family left their native country is then fundamental.

With only a small percentage of Latinx students succeeding academically and in their careers, Cabrera and Padilla (2004), as well as Cerezo and Chang (2013), point out that the constant presence of a supportive and more educated family is fundamental for their success.

Family structures are then known to aggravate racial inequalities (McLanahan & Percheski, 2008), contributing to child poverty among Latinx (Lichter & Landale, 1995).

In an empirical research study, Lichter and Landale (1995) discovered that depending on the family structure of the Latinx—(a) living with both parents, (b) with a single parent, (c) with other relatives, (d) with nonrelatives, (e) in groups, or (f) heading a family of their own—their well-being is influenced. The number of siblings, and the total number of individuals living in the same house, also plays a big role on the Latinx population, especially because the earnings are not enough to support the entire family, and, a lot of times, cannot even keep them above the poverty threshold, leading Latinx to suffer from limited human capital, such as low education and low wages (Lichter & Landale, 1995).

With 60% of immigrant parents being limited in the English language and 30% living in a household that English is barely spoken—if spoken at all—immigrant children start their lives with already a huge disadvantage over their American peers (De Feyter et al., 2020 in Capps et al., 2004).

De Feyter et al. (2020) state that immigrant parents, especially those from Latin America, achieve lower education levels, read less often to their children, have more stressors in their daily life, and are not aware of normative child development, so when their children reach school age, they are less linguistically and cognitively ready when compared to their peers who have American parents.

De Feyter et al. (2020) divide Latinx students into (a) first-generation student, when the student is born outside the U.S and then move to the U.S with their family, and (b) second-generation student, when the student is born in the U.S, but their parents are not Americans. Presenting a stronger behavioral, social, and emotional connection, first-generation students are usually more likely to present academic resilience (Pereira et al., 2006).

Gonzalez and Padilla (1997) affirm that family support within the Hispanic population is crucial to building higher academic resilience.

Chapter 3: Methodology

The purpose of this research was to investigate the relationship between students' attributes before entering college as well as their college environment and the outcomes of career success, overall resilience, and academic resilience among the Latinx community, as shown in Figure 7, to stop Latinx oppression.

Chapter 3 explores the methodology of this study, discussing the data collection, sample, and data analysis utilized to understand those relationships. This research used primary survey results to analyze descriptive and correlational quantitative statistics by using structural equation modeling (SEM).

Research Design

Structural equation modeling (SEM) is a quantitative multivariate analysis technique that focuses on understanding the relationship between dependent and independent variables through a collection of statistical techniques, determining the degree to which a theoretical model is supported by the collected data while combining factor analysis and multiple regression analysis (Ullman, 2006).

Tarka and Tarka (2018) discuss the importance of SEM being a quantitative tool that includes both social science practitioners and academic researchers needs, helping them to better understand the interactions as well as the structures of latent phenomena—which involves structures and variables that actually exist but are not directly observed, being an underlying phenomenon that leads to a hypothetical construct (Risvik, 1996).

Like all statistical methodologies, SEM has its own set of underlying assumptions, such as (a) sample size: SEM requires a large sample to get a good factor model; (b) power: is estimated according to either the creation of an alternative hypothesis based on the idea of lack

of fit, or when calculating the degrees of freedom (*df*) of the model and the root mean square error approximation (RMSEA); (c) missing data: SEM assumes the data is complete but since SEM requires large number of variables, problems of missing data are magnified so the utilization of an expectation–maximization algorithm (EM algorithm) or multiple imputation approach (MI) to input the missing data can be done when the data is normally distributed; (d) multivariate normality and outliers: SEM needs to draw observations from a normal distributed population to make sure the estimates are efficient and unbiased, so evaluating the skewness and kurtosis of the distribution of variables to check for non-normality or outliers is important—if finding significant skewness, the researcher can later attempt transformation; and (e) residuals: residual covariances (and not the score) need to be small and centered around zero (Ullman & Bentler, 2012).

Attending issues of validity and reliability, this study used a strong theoretical guidance to avoid yielding identical results with contradictory models - for example, two models that differ only by the hypothesized direction of one path (Bowen & Guo, 2011). Also, alternative models were tested to make sure that the created SEM model supported its validity. The exploratory factor analysis (EFA) and the use of confirmatory factor analysis (CFA) helped establish construct validity by

demonstrating that observed variables were adequate indicators of proposed latent variables, that latent variables measured distinct dimensions, and that the dimensions were substantively consistent with theory and prior research. CFA also evaluated the presence or absence of more complex relationships among factors—such as second-order factor structures and correlated error structures within or between factors. It was also used to test criterion validity, that is, that scores from a new measure were highly

correlated with scores from an existing measure of the same construct. (Bowen & Guo, 2011, p. 75)

Still considering issues of validity of the model, a chi-square test was done to make sure the de model was a good fit when an insignificant value of the chi-square was expected, and a minimum of one incremental fit index and one badness of fit index met the predetermined criteria. At the same time, symmetrically residuals were expected to be found, also signaling a good fit model (Ullman & Bentler, 2012).

Data Collection

A primary data survey invitation was e-mailed in May 2021 to several Latinx educational and career centers and higher education institutions in the U.S, and data collection occurred between May 2021 and August 2021.

The study data were collected and managed using REDCap electronic data capture tools hosted at Eastern Michigan University.^{1,2} REDCap (Research Electronic Data Capture) is a secure, web-based software platform designed to support data capture for research studies, providing (a) an intuitive interface for validated data capture, (b) audit trails for tracking data manipulation and export procedures, (c) automated export procedures for seamless data downloads to common statistical packages, and (d) procedures for data integration and interoperability with external sources. No hard copies of the survey were printed or distributed; just the online version was given out to responders. The survey was done in English, and all fields/questions were mandatory to be answered.

¹ PA Harris, R Taylor, R Thielke, J Payne, N Gonzalez, JG. Conde, Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, *J Biomed Inform.* 2009 Apr;42(2):377-81.

² PA Harris, R Taylor, BL Minor, V Elliott, M Fernandez, L O’Neal, L McLeod, G Delacqua, F Delacqua, J Kirby, SN Duda, REDCap Consortium, The REDCap consortium: Building an international community of software partners, *J Biomed Inform.* 2019 May 9 [doi: 10.1016/j.jbi.2019.103208]

Since an SEM was generated and considering the necessity to ensure a high response rate for the survey, and since the survey was expected to take fifteen to thirty minutes to be completed, a \$10 (ten dollars) Amazon gift card was offered to the respondent after successful completion and successful submission of the survey.

The full data collection instrument can be seen in Appendix A: The 6-point Likert scale used in the survey ranged from (a) *strongly disagree*, (b) *disagree*, (c) *slightly disagree*, (d) *slightly agree*, (e) *agree*, and (f) *strongly agree*.

Sample

Since this study used structural equation modeling (SEM)—better explained in the Data Analysis section below—sample size should be discussed. When using SEM, Wolf et al. (2013) state that sample size determination is very debatable and challenging and that generalized sample sizes are difficult to be stated. Usually, a large sample size is recommended, although Wolf et al. (2013) affirm that more does not always mean better.

It is also Wolf et al. (2013) that encourage that three considerations should be examined when determining a sample size (a) statistical power, which is the likelihood of not making a type II error by rejecting the null hypothesis when the null hypothesis is indeed false; as well as (b) sample size bias, which is the over or underestimation of the sample size when establishing a parameter that is actually different from the population; and (c) solution propriety, which is the existence of enough number of cases, so the model works without improper solutions or parameters, providing a good model fit.

Several researchers believe that when using SEM, the ideal sample size should be anything between ten to twenty times the number of variables present in the model. This study analyzed 35 different variables in its original conceptual framework—23 variables representing

students attributes before entering college, nine variables in the educational environment, and three variables in the outcome, as shown in Figure 7. About 35 to 700 surveys were intended to be collected.

To make sure a large number of survey responses was achieved, several Latinx Centers and over one hundred colleges and universities in the U.S were contacted by the researcher in an effort to recruit Latinx students to participate in this study. A flyer was distributed, and it can be seen in Figure 8.

Figure 8*Survey Flyer*

WE ARE ONE AMAZING COMMUNITY

WITH YOUR HELP

Are you Latinx? Are you 18 years or older? Do you live in the U.S? Have you studied or are you studying in a U.S college and achieved at least a Freshman status? If you answer "yes" to all above questions, you can help me better understand our community. Do you want to be part of a change movement? I am looking for Latinx students in higher education as well as Latinx professionals who will be interested in participating in my research study.

Being Latina myself, this research is very important to me and to our community.

TAKE THE SURVEY

The survey will take 15 to 30 minutes to be completed. A **\$10 Amazon gift card** will be awarded upon submission of the survey.

Click below to take the survey:

<https://redcap.emich.edu/redcap/surveys/?s=AJ3CTNNXD>

DOCTORAL RESEARCH

"QUANTITATIVE ANALYSIS OF CONTRIBUTING FACTORS OF CAREER SUCCESS, OVERALL AND ACADEMIC RESILIENCE IN HIGHER EDUCATION: A REFINEMENT OF TINTO'S THEORY TO STOP LATINX OPPRESSION"

QUESTIONS?

Andrea Gendera (Ph.D. Candidate)
adecarva@emich.edu
 Help me show that our community matters.

A LITTLE BACKGROUND

THE LATINX COMMUNITY

Latinx tend to be on the lowest end of the socioeconomic ladder in the U.S, presenting low levels of education, low professional achievement, low-income levels, and high levels of unemployment and poverty. Latinx community is the largest minoritized community in the United States, having a substantial impact on the country's economy and society.

Saenz (2005) in Farley, and Haaga, (2005)

THE NUMBERS

Just 2 percent of the population 25 years and older have a doctorate degree in the U.S., where 1.47 percent is non-Hispanic White, 0.30 percent is Asian, 0.13 percent is Black, and only 0.1 percent is Hispanic of any race, including Latinx.

(Census, 2020)

IRB approval: UHSRC-FY20-21-210

Note. This figure represents the flyer sent to colleges, universities, and Latinx centers in the U.S with the purpose of recruiting participants to this study.

The survey yielded a total of 430 entries, with 118 participants who did not finish the survey and 11 fraudulent responses, having their answers discarded. The final sample size of this study was large (301 valid responses) and was evaluated and determined satisfactory after the structural equation model was created. Out of the 301 valid responses, 213 participants claimed the \$10 Amazon gift card.

Fraud Detection Algorithm

On April 20, 2021, this research received Institutional Review Board (IRB) approval, and the survey was launched on May 05, 2021, at 10:12 pm using REDCap. At 11:10 pm, the first response was recorded, and by May 06, 01:45 am, in a time-lapse of only 2 hours and 33 minutes, 232 entries occurred. When the researcher noticed the unusual number of responses in so little time, the survey was immediately put offline for further analysis.

The researcher was able to track down the majority of the responses and discovered that they came from several countries in Asia, which was not the objective of this research. Since the number of responses was too high, it became impossible for the researcher to analyze the authenticity of the answers one by one, so a fraud detection algorithm was created to automate the process. It was discovered that none of the 232 entries were legit; therefore, all entries were discarded, and a new survey link was created. Luckily no gift cards were given to any of the fraudulent participants.

To avoid future fraudulent responses, the researcher added a few items in the survey to create an even more robust anti-fraud algorithm, as seen in Table 15.

Table 15*Anti-Fraud Questions*

Anti-Fraud Questions
After reading this question, check “slightly agree.”
After reading this question, check “disagree.”
After reading this question, check “strongly agree.”
Where do you live?
Do you speak Spanish?
Do you speak Portuguese?
Type “I successfully finished the survey” in the text box.
Translate “I successfully finished the survey” to Spanish and type it in the text box.
Translate “I successfully finished the survey” to Portuguese and type it in the text box.

Note. This table represents the items present in the middle of the survey to help later find potential fraud responses. All questions were spread across the questionnaire.

The added anti-fraud questions were made basically to match up the answers from previously responded questions, improving the fraud algorithm to catch those that were lying and/or were not fully reading the questions, compromising the integrity of the survey. Depending on the anti-fraudulent question, it would appear according to what was previously picked as a choice by the responder. For example, if a participant previously affirmed to be a Portuguese speaker, the question to translate “I successfully finished the survey” would be required. If a participant previously affirmed to live in Michigan, they would have to pick the option “Michigan” by the end of the survey once more, etc., so the algorithm could match the answers and find inconsistencies. The “after reading this question check (...)” were present in everyone’s survey and were mandatory to be answered by all participants.

A system of points was assigned, and entries with 8 points or more were marked as fraudulent and were automatically discarded. Any entries getting 1-7 points were marked as

suspicious, and the researcher took a closer look at them to make sure that the entries were indeed valid or not. The algorithm checks and their points can be seen in Table 16.

Table 16

Fraud Detection Algorithm

Fraud Detection Algorithm	Points
Unusual Email Address	2
Same begin and end - timestamp (+- 1 minute)	3
Duration of survey less than 8 min	3
Duration of survey less than 5 min	5
At least one parent must speak Portuguese or Spanish	5
At least one person (participant, mother, or father) must be born outside the U.S	2
If parents taught their native language, the number of languages must be higher than one	2
If parents taught their language, at least one must have been or is present in their life	3
If parents taught native language, at least one must speak other than English	3
Survey not completed	1000
Participant born in Brazil and less than five years in the US not speaking Portuguese	3
Mother is Brazilian but does not speak Portuguese	3
Father is Brazilian but does not speak Portuguese	3
Participant born in Spanish speaking country not speaking Spanish	3
Mother born in Spanish speaking country not speaking Spanish	3
Father born in Spanish speaking country not speaking Spanish	3
If living with both parents, both parents are alive; all three must live in the same state and rural	5
If living with one parent, at least one parent must be alive and must live in the same state and rural	5
People in the household	3
Must speak another language than English if less than five years in the US	5
Speaking English	5
Actual Education should be greater than or equal to Aspiration	1
Higher degree achieved and educational expectations must be greater than high school graduate	5
Educational aspirations should be greater than high school graduate	2
Actual Education should be greater than or equal to Realistic Educational Expectation	1
Educational aspiration must be equal to or higher than expectation	2
“Slightly agree” must be checked in this question	5
“Disagree” must be checked in this question	5
“Strongly agree” must be checked in this question	5
“Where do you live” must be equal to the previous “where do you live” answer	5

Table 16 continued

Fraud Detection Algorithm	Points
Spanish must match the choice of language previously picked	5
Portuguese must match the choice of language previously picked	5
Translation Accuracy of “I successfully finished the survey” according to the known languages picked	3
Check number of languages match the previous selection for the participant	3
Check number of languages match the previous selection for the mother	3
Check number of languages match the previous selection for the father	3

Note. This table represents the items present in the created fraud algorithm and the points

assigned to each of the items. Responses with 8 points or more points are marked as fraudulent and are automatically discarded.

Data Analysis

Descriptive statistics were used to calculate frequencies of demographic variables such as gender, class, high school GPA, college GPA, ACT/SAT scores, importance to graduate, educational aspiration, degree, presence of familial capital, academic performance, and career aspiration to better understand the population that was studied, indicating tendencies in general (Creswell, 2012). Then, a structural equation modeling (SEM) was created, being the base method of this study.

To successfully use SEM, this study first performed an (a) exploratory factor analysis (EFA), a more exploratory approach to identify latent variables (indirectly observed and measured factors) that are assessed by directly observed variables targeted, followed by an (b) confirmatory factor analysis (CFA), which is a special type of SEM that is used to confirm the created factor structure (Ullman, 2006). Just after generating the EFA and CFA, the SEM model was constructed. In this study, the indirectly and directly observed variables can be seen in Table 17.

Latent variables are variables that are not directly observed nor directly measured. Only indicators of latent constructs can actually be measured using specific instruments, for example, scales, questionnaires, inventories, etc. (Hoyle, 2012), while manifest or observed variables are those that are directly observed, those being actually measured (Hoyle, 2012; Raykov & Marcoulides, 2006) such as GPA and SAT/ACT. Dummy-coded variables also needed contemplation, and it happened when the researcher assigned a value of zero across codes to represent a reference group, such as gender, which was dummy-coded to female (Hoyle, 2012). The dummy-coded variables can also be seen in Table 17.

Table 17*SEM Latent, Manifest, and Dummy-Coded Variables*

Code	Variable	Latent / Manifest	Dummy-Coded?
ISI-1	Degree Attainment	Manifest	Yes
ISI-2	Career Aspiration	Latent	No
ISI-3	Career Expectation	Manifest	Yes
ISI-4	Current Occupation	Manifest	Yes
ISI-5	Gender	Manifest	Yes
ISI-6	Ethnicity / Race	Manifest	Yes
ISI-7	Age	Manifest	No
ISI-8	ACT/SAT score	Manifest	No
ISI-9	High school GPA	Manifest	No
ISI-10	Family Structure	Manifest	Yes
ISI-11	Perception of Level of Parental Support	Latent	No
ISI-12	Years in the U.S.	Manifest	No
ISI-13	Geographical Location	Manifest	Yes
ISI-14	Social Class	Latent	No
ISI-15	Educational Aspiration	Latent	No
ISI-16	Educational Expectations	Manifest	Yes
ISI-17	Language	Manifest	Yes
IPI-1	Parental Education	Manifest	Yes
IPI-2	Parental Occupation	Manifest	Yes
IPI-3	Years in the U.S.	Manifest	No
IPI-4	Geographical Location	Manifest	Yes

Table 17 continued

Code	Variable	Latent / Manifest	Dummy-Coded?
IPI-5	Language	Manifest	Yes
IPI-6	Cultural Knowledge	Latent	No
EAI-1	Equitable Opportunities for student academic growth given by the institution	Latent	No
EAI-2	Academic performance	Latent	No
EAI-3	Academic interactions with peers	Latent	No
EAI-4	Academic Interactions with faculty	Latent	No
EAI-5	Deficit thinking	Latent	No
ESI-1	Equitable Opportunities for student engagement given by the institution	Latent	No
ESI-2	Participation in extra-curricular activities	Latent	No
ESI-3	Social Interactions with peers	Latent	No
ESI-4	Social Interactions with faculty	Latent	No
O-1	Overall Resilience	Latent	No
O-2	Academic Resilience	Latent	No
O-3	Career Success	Latent	No

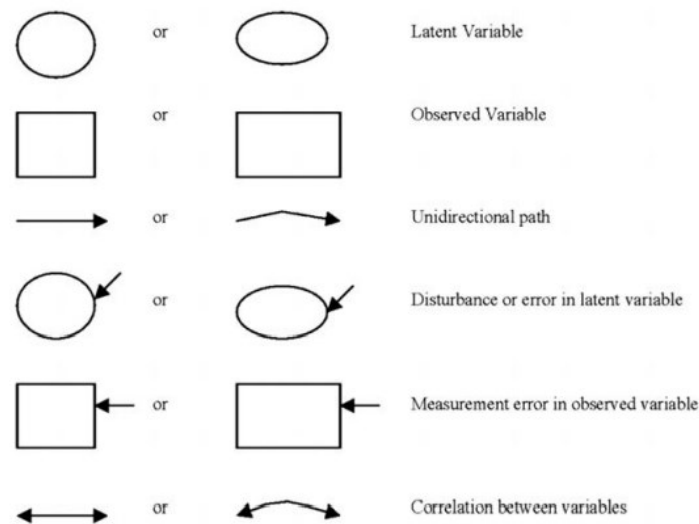
Note. This table represents the list of dummy-coded, latent, and manifest variables present in the survey.

SEM also takes into consideration the effects of the variables. Direct effects are the effects that go directly from one variable to another one (Raykov & Marcoulides, 2006). Indirect effects are the effects that happen between two variables that are facilitated by one or more intervening variables, often known as mediators or mediating variables (Raykov & Marcoulides, 2006). Moderating effects are associated with a variable that ends up affecting the strength and/or direction of the relationship between an independent and a dependent variable (Baron & Kenny, 1986). Total effect happens with the combination of direct and indirect effects of an explanatory variable on a dependent variable. So it is important to note that if proper attention is not given to the indirect effect, the relationship between the two variables will be incomplete and not fully considered (Raykov & Marcoulides, 2006). After modeling the collected data, these effects were seen, explained, and interpreted and can be found in Chapter 4 of this dissertation.

As a form of graphically representing the model under consideration in this study, a path diagram was constructed to show the relationship that occurs among the variables. Figure 9 depicts the most commonly used symbols/graphical notations when creating a path diagram using SEM.

Figure 9

Commonly Used SEM Symbols in Path Diagrams



Note. This figure represents the possible symbols used in a path diagram. From “A First Course in Structural Equation Modeling,” by T. Raykov, and G. Marcoulides, 2006, p. 9. Copyright 2006 by Lawrence Erlbaum Associates, Inc.

In this study, the final SEM model used these symbols to represent observed variables only (no latent variables were used in the final model) since a common latent factor (CLF) was used to avoid response bias. CLF and its process are explained in Chapter 4. Unidirectional paths and correlation between variables were also seen and represented in the final SEM.

Ethical, Moral, and Legal Considerations

Polonsky and Waller (2005) affirm ethical consideration is a critical topic in research. Even though the researcher has good intentions, inadvertently, harm may still happen. Johnson

and Christensen (2012) state that, in social science, there are three ethical concern areas that a researcher needs to take into consideration: (a) the relationship between society and science, concerning which cultural values and societal events should be taken into consideration; (b) professional issues, revolving issues of research misconduct such as plagiarism, falsification, and fabrication of data; and (c) the treatment of research participants, to avoid any type of harm to the responder.

Table 18

Strategies for Preventing Scientific Misconduct

Strategies for Preventing Scientific Misconduct
1. Have the researcher make it clear that he or she has checked and verified data that are collected and then make sure that some of the data are checked.
2. Ask some of the research participants who should have been seen by each data collector if you can recontact them. Then recontact them to ensure that they participated in the study.
3. Make sure there are no deviations from the approved study design.
4. Watch for data collectors who complete data collection in record time. Make sure you review the work of every person who collects the study data.
5. Teach ethical standards of conducting research in classes. Include reviews of cases of misconduct and discuss ethical issues and the ramifications of misconduct for the researcher, the field, and public trust.
6. Provide guidelines for handling cases of suspected misconduct.

Note. This table represents strategies that can be used to prevent scientific misconduct. From “Educational research: Quantitative, qualitative, and mixed approaches,” by B. Johnson and L. Christensen, p. 102. Copyright 2012 by Sage Publications.

To deal with ethical and legal issues, this study closely followed the strategies for preventing scientific misconduct, as shown in Table 18, as well as the five proposed principles of the American Educational Research Association (AERA): (a) professional competence, by acting solely in competence areas; (b) integrity, by being honest and trustworthy; (c) professional scientific and scholarly responsibility, by following AERA’s (2011) 22 ethical standards shown in Table 19; (d)

respect for people's right, dignity and diversity; and (e) social responsibility, by putting the society and the world in first place during this research (Johnson & Christensen, 2012).

Table 19

AERA Ethical Standards

AERA Ethical Standards	
1.	Scientific, Scholarly, and Professional Standards
2.	Competence
3.	Use and Misuse of Expertise
4.	Fabrication, Falsification, and Plagiarism
5.	Avoiding Harm
6.	Nondiscrimination
7.	Nonexploitation
8.	Harassment
9.	Employment Decisions
10.	Conflicts of Interest
11.	Public Communications
12.	Confidentiality
13.	Informed Consent
14.	Research Planning, Implementation, and Dissemination
15.	Authorship Credit
16.	Publication Process
17.	Responsibilities of Reviewers
18.	Teaching, Training, and Administering Education Programs
19.	Mentoring
20.	Supervision
21.	Contractual and Consulting Services
22.	Adherence to the Ethical Standards of the American Educational Research Association

Note. This table represents the ethical standards a researcher is expected to hold. From "Code of

Ethics," by American Educational Research Association, 2011, p. 145

([https://www.aera.net/Portals/38/docs/About_AERA/CodeOfEthics\(1\).pdf](https://www.aera.net/Portals/38/docs/About_AERA/CodeOfEthics(1).pdf)). Copyright 2011 by

AERA.

Attending to all those ethical, legal, and moral issues, this study fully adhered to the highest possible standards by obtaining written voluntary informed consent that discussed the purpose, procedures, any psychological discomforts that might happen when answering the

survey, the ten-dollar (\$10) Amazon gift card given to fully completed and valid responses, as well as the limits of confidentiality; by checking and verifying the collected data; by making sure that no deviation from the approved study design happened; and by submitting and strictly following instructions from the Institutional Review Board (IRB).

The IRB approval letter of this study can be seen in Appendix B: and the informed consent letter signed by all participants can be seen in Figure 10.

Figure 10*Informed Consent*

Consent Form

Project Title: Quantitative Analysis of Contributing Factors of Career Success, Overall and Academic Resilience in Higher Education: A Refinement of Tinto's Theory to Stop Latinx Oppression

Principal Investigator: Andreia Karina De Carvalho Gendera, Eastern Michigan University

Faculty Advisor: Dr. David Anderson, Eastern Michigan University

Purpose: The purpose of the study is to investigate Latinx Career Success, Overall and Academic Resilience.

Study Procedures: Participation in this study involves completing an online survey. It should take between 15 and 30 minutes to complete the survey.

Types of Data Collected: We will collect data about your career, education, gender, ethnicity and race, age, ACT/Sat/GPA, family structure, perception of parental support, number of years in the U.S., geographical location, social class, parental education, and occupation, as well as academic and social interactions while in college.

Risks: There are no expected physical or psychological risks to participation. Some of the survey questions are personal and may make you feel uncomfortable. You do not have to answer any questions that make you uncomfortable or that you do not want to answer, stopping the survey at any time.

Benefits: You will not directly benefit from participating in this research. Benefits to society include better knowing about the Latinx community, their overall and academic resilience, and career success.

Figure 10 continued

Confidentiality: You will generate a unique code within the survey and you will send an email to the Principal Investigator with that information, which will temporarily identify you. After 7 days of your submission, your email will be permanently deleted and your responses will be de-identified. We plan to publish the results of this study. We will not publish any information that can identify you. We will keep your information confidential by having all data collection and storage computer devices password-protected; having up-to-date antivirus software protection; having the data file used for data analysis free of IP addresses or other electronic identifiers; and if a portable device is necessary to carry the data, all files will be encrypted. We will store your information indefinitely. We will make every effort to keep your information confidential; however, we cannot guarantee confidentiality. The principal investigator and the research team will have access to the information you provide for research purposes only. Other groups may have access to your research information for quality control or safety purposes. These groups include the University Human Subjects Review Committee, the Office of Research Development, the sponsor of the research, or federal and state agencies that oversee the review of research, including the Office for Human Research Protections and the Food and Drug Administration. The University Human Subjects Review Committee reviews research for the safety and protection of people who participate in research studies.

Compensation: You will be given an Amazon gift card for \$10 (ten dollars) for participating in this research study upon successfully completing and submitting the online survey. For that, you need to copy and paste the URL of the survey completion as well as a unique generated code, sending an email to the Principal Investigator (Andreia Gendera at adecarva@emich.edu) who will respond back in 5 business days with the gift card attached. An automated algorithm will analyze the responses, and a fraud score will be assigned to each submission. If it is determined that false data were given (such as robot survey completion, answers that do not match with responses given in previous fields, invalid unique generated code, invalid URL of survey completion, or multiple submissions from the same participant, etc.), the submission will be classified as fraudulent and no gift card will be issued.

Figure 10 continued

If a fraudulent submission is identified, no response from the Principal Investigator will be given (you will not receive an email). All emails will be permanently deleted after 7 days of their submission. Amazon gift cards must be redeemed in thirty (30) days after their issuance or the recipient forfeits the gift card.

Contact Information: If you have any questions about the research, you can contact the Principal Investigator, Andreia Gendera, at adecarva@emich.edu or by phone at 734-730-6272. You can also contact my adviser, Dr. David Anderson, at danderson@emich.edu. For questions about your rights as a research subject, contact the Eastern Michigan University Human Subjects Review Committee at human.subjects@emich.edu or by phone at 734-487-3090.

Voluntary Participation: Participation in this research study is your choice. You may refuse to participate at any time, even after signing this form, without repercussion. You may choose to leave the study at any time without repercussion. If you leave the study, the information you provided will be kept confidential. You could request, in writing, that your identifiable information be destroyed but no identifiable information will be collected. However, we cannot destroy any information that has already been published.

Statement of Consent

I have had an opportunity to ask questions and am satisfied with the answers I received. I click “I consent” below to indicate my consent to participate in this research study. By checking this box, I give my consent to participate in this study.

Note. This figure represents the informed consent participants needed to sign before taking the survey.

Chapter 4: Results

The purpose of the study was to investigate the relationship between students' attributes before entering college as well as their college environment and the outcomes of career success, overall and academic resilience among the Latinx community. The study sought to refine Tinto's Theory to stop Latinx oppression. The research has striven to answer the following research questions:

1. To what degree do students' attributes before entering college, academic and social integration while in college influence Latinx overall resilience?
2. To what degree do students' attributes before entering college, academic and social integration while in college influence Latinx academic resilience in higher education?
3. To what degree do students' attributes before entering college, academic and social integration while in college influence Latinx career success?

The subsequent represents the data results and significant findings.

Descriptive Statistics

This study had a total of 301 valid responses. There were more female participants (68.1%, $n = 205$) than male participants (31.9%, $n = 96$) in this study, averaging 27.88 years old (min = 18, max = 73) with 90.7% being 41 years old or younger.

The vast majority of respondents belonged to the middle class (82.4%, $n = 248$), while only a fraction of them classified themselves in the lower (11.6%, $n = 35$) and upper classes (6%, $n = 18$). It is important to note that according to the Pew Research Center (2018), 29% of the Latinx in the U.S. are in the lower class, only 52% of Latinx are in the middle class, and 19% are

in the upper class, while 23% of Latinx are below the line of poverty—almost 80% of those who are in the lower class are below the line of poverty.

With a nationwide average of 57th percentile in the ACT/SAT, Latinx in this study reported scoring an average of 50th-75th percentile, showing to correctly represent the population. Nevertheless, participants had a higher than the national average of high school and college GPA of 3.0 and lower, according to Inside Higher Ed (2017) and Way-Up (2019), with the average GPAs in this study ranging from 3.0 to 3.49. Respondents in this study also reported being highly satisfied with their academic performance while in college, averaging a score of 5.05 on the proposed Likert scale. This scale consists of three items on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) and can be seen in Table 20.

Table 20

Academic Performance Final Survey Questions

Academic Performance
My academic performance has had a positive influence on my intellectual growth.
I am satisfied with my academic performance at my college.
I have performed academically as well as I anticipated I would.

Note. This table represents the items that measured the Latinx academic performance.

Johnson-Hess (2019) discusses that college graduates in the U.S earn 80% more than those who do not have an undergraduate degree, but only 51% of Americans see college as a very important step in their lives. In this study, 95.1% of Latinx reported believing in the importance of graduating from college, while Pew Research Center (2009) affirm that almost 88% of Latinx affirm that a college degree is important for getting ahead in life. Participants also demonstrated high educational aspirations, with 88.3% of the respondent expressing the desire to achieve a master's degree and 51.8% selecting a doctoral degree as their highest educational

aspiration, but the majority of the participants (72.7%) have only completed or are in the process of completing their bachelor's degree.

Educational aspirations and educational expectations had no significant difference amongst Latinx respondents and ended up becoming a latent variable composed of two items on a 15-point scale ranging from 1 (*none*) to 15 (*doctoral degree*), as seen in Table 21.

Table 21

Educational Aspiration Final Survey Questions

Educational Aspiration
What is your educational aspiration, even if not realistic?
What is your realistic educational expectation?

Note. This table represents the items that measured the Latinx educational aspiration.

As for Latinx careers, in a qualitative study, Roman (2015) discovered that Latinx have high career ambitions and highly value their professional growth. Similarly, in this study, 94.7% of the respondents stated to have high realistic career expectations, averaging a score of 5.34 on a manifest variable (only one item being measured) measured using a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The same goes for Latinx career aspirations, averaging a score of 5.45 on the proposed Likert scale. This scale consists of three items on a 6-point Likert scale, also ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), and can be seen in Table 22.

Table 22

Career Aspiration Final Survey Questions

Career Aspiration
I want to be among the very best in my field, even if I think this is not realistic.
I want my work to have a lasting impact on my field, even if I think this is not realistic.
High achievement in my career is important to me, even if I think this is not realistic.

Note. This table represents the items that measured the Latinx career aspiration.

Familial capital, that according to Yosso (2005) is “the cultural knowledge nurtured among families that carry a sense of community history, memory, and cultural intuition” (p. 79), is a strong force in Latinx lives, especially when they make decisions regarding their academic and career choices. Jabbar et al. (2019) found that Latinx students are indeed influenced by their immediate and extended family members, especially because of the transfer of cultural values and beliefs, and the same was found in this study with an average of 86.27% of the respondents stating that their parents or those who raised them passed on to them the cultural knowledge, encouraging them to learn more about their history, culture, and values.

All descriptive statistics above mentioned can be seen summarized in Table 23.

Table 23*Descriptive Statistics of Students' Attributes*

Students' attributes		Scale
Female	205	205 female (68.1%), 96 male (31.9%)
Class	1.95 (11.6% low, 82.4% middle, 6% upper)	1 (Lower), 2 (Middle), 3 (Upper)
High School GPA	4.67 (240 participants)	1 (Less than 2.0), 2 (2.01 - 2.49), 3 (2.50 - 2.99), 4 (3.00 - 3.49), 5 (3.50 - 3.89), 6 (3.90 - 4.00)
College GPA	4.92 (288 participants)	1 (Less than 2.0), 2 (2.01 - 2.49), 3 (2.50 - 2.99), 4 (3.00 - 3.49), 5 (3.50 - 3.89), 6 (3.90 - 4.00)
ACT/SAT	3.2 (126 participants)	1 (less than 25th%), 2 (25th - 50th%), 3 (50th - 75th%), 4 (above 75th%)
Importance Graduate	5.52 (95.1% important)	1 (Strongly Disagree) - 6 (Strongly Agree)
Educational Aspiration	13.63 (88.3% Master or higher; 51.8% Doctoral)	8 (High school graduate), 9 (Some college, no degree), 10 (Associate's degree, occupational), 11 (Associate's degree, academic), 12 (Bachelor's degree), 13 (Master's degree), 14 (Professional degree), 15 (Doctoral) degree
Degree	11.32 (72.7% Bachelor or less)	
Familial Capital	4.81	1 (Strongly Disagree) - 6 (Strongly Agree)
Academic Performance	5.05	1 (Strongly Disagree) - 6 (Strongly Agree)
Career Aspiration	5.45 (94.7% high career expectations)	1 (Strongly Disagree) - 6 (Strongly Agree)

Note. This table represents the descriptive statistics of Latinx attributes collected in this study.

As for the college environment, three latent variables were discovered to influence Latinx academic and professional lives—deficit thinking, self-deficit thinking, and equity—with their descriptive statistics shown in Table 24.

Table 24*Descriptive Statistics of College Environment*

College Environment		Scale
Deficit Thinking	3.03	1 (Strongly Disagree) - 6 (Strongly Agree)
Self-deficit Thinking	1.89	1 (Strongly Disagree) - 6 (Strongly Agree)
Equity	4.02	1 (Strongly Disagree) - 6 (Strongly Agree)

Note. This table represents the descriptive statistics of the Latinx college environment collected in this study.

Deficit thinking unfolded in two dimensions: (a) deficit thinking itself, what others think about Latinx, and (b) self-deficit thinking, what Latinx think about themselves.

With an average score of 3.03 on a 6-point Likert scale consisting of eight items ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), participants reported experiencing some type of deficit thinking while in college, with 45% of the participants reporting to experience deficit thinking coming from their classmates, 40.23% sharing the feeling of deficit thinking coming from their professors, and 33.25% stating that deficit thinking was felt coming from their academic institution as a whole. The items that composed the deficit thinking as a latent variable can be seen in Table 25.

Table 25*Deficit Thinking Final Survey Questions*

Deficit Thinking
I have had professors who blamed me for my lack of success in a failed assignment, even if I gave my all to succeed.
I believe my academic institution sees non-Latinx students as more academically capable than Latinx students.
I believe my professors see non-Latinx students as more academically capable than Latinx students.
I believe my classmates see non-Latinx students as more academically capable than Latinx students.
I have had professors who assumed negative things about my academic skills that are, in fact, not real.
I have met classmates who assumed negative things about my academic skills that are, in fact, not real.
I have had professors who unjustly used their power over me.
My academic institution labels Latinx students as “at-risk of failure”.

Note. This table represents the final items that collectively measured Latinx deficit thinking in this study.

Different from deficit thinking, self-deficit thinking received an average score of only 1.89 on a 6-point Likert scale consisting of two items ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), as shown in Table 26. Participants in this study demonstrated low self-deficit thinking, with only 17.6% agreeing with the belief that non-Latinx students are more academically capable than Latinx students and only 8.4% agreeing with the belief that they don't have what it takes to succeed in college.

Table 26*Self-Deficit Thinking Final Survey Questions*

Self-Deficit Thinking
I believe non-Latinx students are more academically capable than me.
I believe I do not have what it takes to succeed in college.

Note. This table represents the final items that collectively measured Latinx self-deficit thinking in this study.

Latinx in this study presented high levels in all three outcomes of career success ($M = 5.17, n = 259$), overall resilience ($M = 5, n = 301$), and academic resilience ($M = 4.33, n = 301$), as shown in Table 27, when using a Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

Table 27

Descriptive Statistics of Latinx Outcomes

	Outcomes	Scale
Career Success	5.17 (259 participants)	1 (Strongly Disagree) - 6 (Strongly Agree)
Overall Resilience	5	1 (Strongly Disagree) - 6 (Strongly Agree)
Academic Resilience	4.33	1 (Strongly Disagree) - 6 (Strongly Agree)

Note. This table represents the descriptive statistics of Latinx outcomes of career success and overall and academic resilience collected in this study.

For a quicker visualization, Table 28 shows the descriptive statistics found in this study with a comparison of the statistics for the Latinx population in the U.S.

Table 28

Summary of Descriptive Statistics With Population Comparison

	Students' attributes	Scale	Comparisons
Female	205	205 female (68.1%), 96 male (31.9%)	
Class	1.95 (11.6% low, 82.4% middle, 6% upper)	1 (Lower), 2 (Middle), 3 (Upper)	29% low, 52% middle, 19% upper (23% Latinx below poverty)
High School GPA	4.67 (240 participants)	1 (Less than 2.0), 2 (2.01 - 2.49), 3 (2.50 - 2.99), 4 (3.00 - 3.49), 5 (3.50 - 3.89), 6 (3.90 - 4.00)	3.38 for all students; Latinx <3.0
College GPA	4.92 (288 participants)	1 (Less than 2.0), 2 (2.01 - 2.49), 3 (2.50 - 2.99), 4 (3.00 - 3.49), 5 (3.50 - 3.89), 6 (3.90 - 4.00)	Latinx 3.0; White 3.3; all 3.07 (5 million, self reported platform)

Table 28 continued

Students' attributes		Scale	Comparisons
ACT	3.2 (126 participants)	1 (less than 25th%), 2 (25th - 50th%), 3 (50th - 75th%), 4 (above 75th%)	Latinx average 57th%
Importance Graduate Educational Aspiration Degree	5.52 (95.1% important) 13.63 (88.3% Master or higher; 51.8% Doctoral) 11.32 (72.7% Bachelor or less)	1 (Strongly Disagree) - 6 (Strongly Agree) 8 (High school graduate), 9 (Some college, no degree), 10 (Associate's degree, occupational), 11 (Associate's degree, academic), 12 (Bachelor's degree), 13 (Master's degree), 14 (Professional degree), 15 (Doctoral) degree	51% for all students - nationally
Familial Capital Academic Performance Career Aspiration Educational Environment	4.81 5.05 5.45 (94.7% high career aspirations)	1 (Strongly Disagree) - 6 (Strongly Agree) 1 (Strongly Disagree) - 6 (Strongly Agree) 1 (Strongly Disagree) - 6 (Strongly Agree) Scale	
Deficit Thinking Self Deficit Thinking Equity Outcomes	3.03 1.89 4.02	1 (Strongly Disagree) - 6 (Strongly Agree) 1 (Strongly Disagree) - 6 (Strongly Agree) 1 (Strongly Disagree) - 6 (Strongly Agree) Scale	
Career Success	5.17 (259 participants)	1 (Strongly Disagree) - 6 (Strongly Agree)	42.9% of participants chose "student" as their main occupation
Overall Resilience Academic Resilience	5 4.33	1 (Strongly Disagree) - 6 (Strongly Agree) 1 (Strongly Disagree) - 6 (Strongly Agree)	

Note. This table represents the descriptive statistics of Latinx collected in this study compared to the Latinx population in the U.S.

Career success was formed by eight items using a 6-point Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), as shown in Table 29. Only 259 participants (86.05%)

answered questions related to their careers, with 42 respondents (13.95%) stating they had never worked before—so questions about career success didn't even open for them during the survey.

It is also important to note that 42.9% of the participants ($n = 129$) stated that their main occupation at the moment is to be a student, implying that their work right now is secondary in their lives.

Table 29

Career Success Final Survey Questions

Career Success
Considering my career as a whole, the organizations I have worked for have recognized me as a good performer.
Considering my career as a whole, I have been known for the high quality of my work.
Considering my career as a whole, I think my work has been meaningful.
Considering my career as a whole, the organizations I have worked for have considered my opinion regarding important issues.
Considering my career as a whole, I have chosen my own career path.
Considering my career as a whole, I have been able to be a good employee while maintaining quality non-work relationships.
Considering my career as a whole, I have continuously improved by developing my skill set.
Considering my career as a whole, my career is personally satisfying.

Note. This table represents the final items that collectively measured Latinx career success in this study.

Overall resilience was formed by three items using a 6-point Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), as shown in Table 30, with Latinx stating they are strong and can deal with unpleasant feelings and difficult situations.

Table 30*Overall Resilience Final Survey Questions*

Overall Resilience
I can deal with whatever comes my way.
I think of myself as a strong person when dealing with life's challenges.
I am able to handle unpleasant feelings (like sadness, disappointment, fear, anger, etc.).

Note. This table represents the final items that collectively measured Latinx overall resilience in this study.

Latinx also affirmed they are not affected by academic hurdles they might face, such as a bad grade, study stress, or setbacks in college, stating they keep on fighting, nevertheless.

Academic resilience was then a latent variable formed by three items using a 6-point Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), as shown in Table 31.

Table 31*Academic Resilience Final Survey Questions*

Academic Resilience
I do not let study stress get on top of me.
I do not let a bad mark affect my confidence.
I am good at dealing with setbacks at my college (e.g., bad mark, negative feedback on my work, etc.)

Note. This table represents the final items that collectively measured Latinx academic resilience in this study.

After looking at the descriptive statistics, this study then performed two types of factor analysis, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), to help build the Structural Equation Model (SEM). The steps, analysis, and subsequent relevant findings are detailed below.

Exploratory Factor Analysis (EFA)

The first step done in this study was to perform an EFA to identify potential latent variables. Using IBM SPSS Statistics software version 27, fifteen factors were discovered—

Career Success, Deficit-Thinking, Peer Interaction, Academic Resilience, Extracurricular Activities, Equity (in the educational environment), Career Aspiration, Overall Resilience, Father Support, Familial Capital (knowledge of Latinx culture), Academic Performance, Mother Support, Educational Aspiration, Faculty Interaction, and Self-Deficit Thinking—and can be seen in Appendix C:.

The extraction method used was principal component analysis, with a Promax rotation converged in eight iterations. The Kaiser-Meyer-Olkin (KMO) measure verified the sampling adequacy for the analysis, $KMO = .830$, $p = .000$, $\chi^2 = 16056.38$, $df = 2145$, with 74.377% of the variance being explained by those factors. All loadings were greater than .5, showing convergent validity, and no strong cross-loadings were found ($< .36$), proving discriminant validity. The reliability was achieved with $CR > .7$ for all factors besides self-deficit thinking with $CR > .6$, which is still acceptable for having only two items composing the factor.

Confirmatory Factor Analysis (CFA)

Using IBM SPSS AMOS Graphics version 27, the second step done in the study was a CFA and all 15 factors found when the EFA was performed were confirmed, as seen in Appendix D:.. For more clarity, all standardized regression weights of the CFA can be seen in Appendix E:.

The discriminant validity of the CFA can be seen because the square root of the average variance extracted ($AVE = .428$)—which is a measure of the amount of variance captured by a construct in relation to the amount of variance due to measurement error—was greater than any inter-factor correlation for each latent variable (square root of $AVE = .654$; no covariances were greater than .654). The CFA also had good configural invariance with $SRMR = .0458$, $CFI = .950$, $RMSEA = .042$, $\chi^2 = 3977.6$, $df = 1974$, and with all Cronbach alphas higher than .7, with Self-deficit Thinking $\alpha = .636$, as seen in Table 32.

Table 32*CFA Factors Cronbach's Alpha*

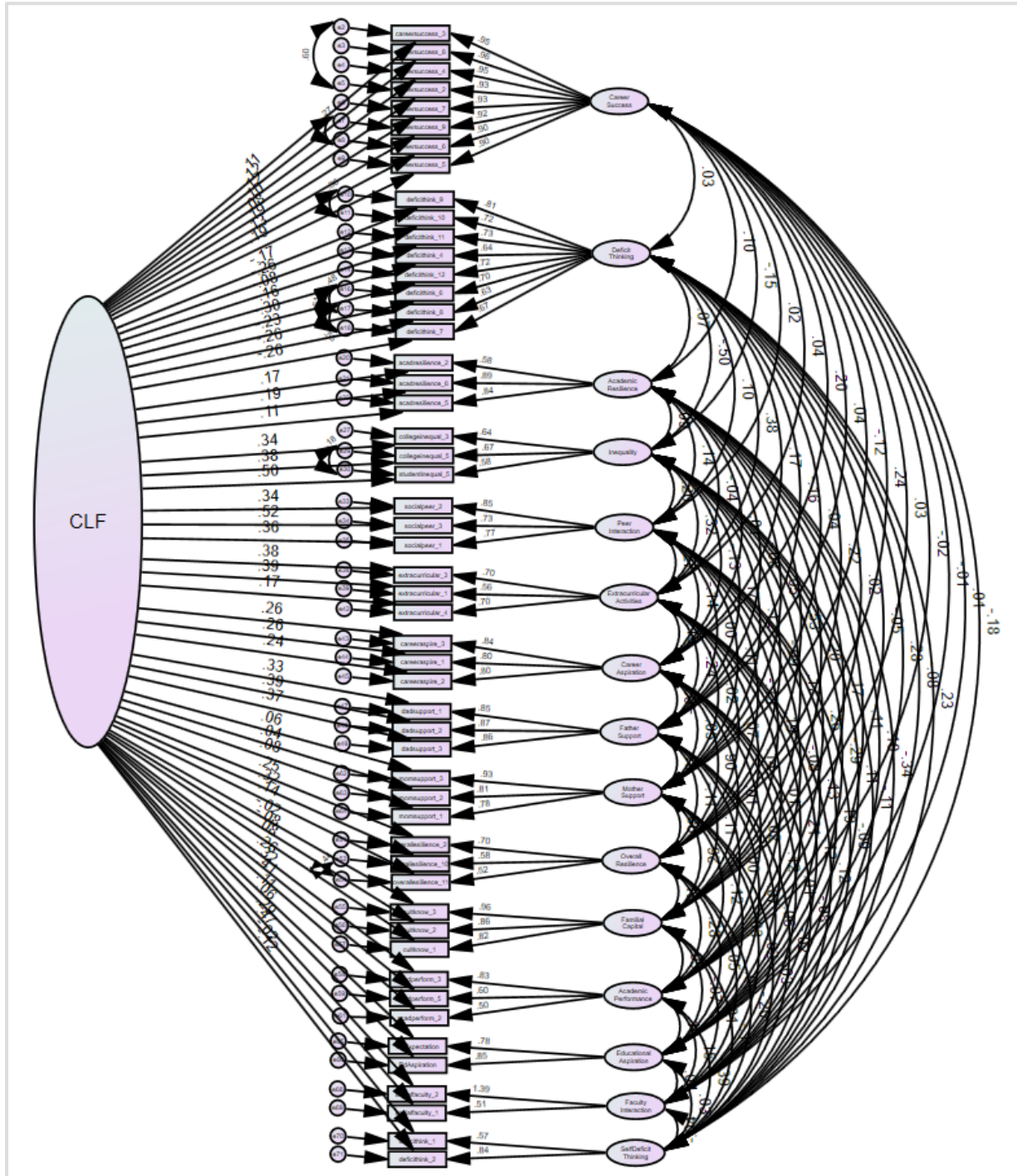
Factors	Cronbach's Alpha
Career Success	0.984
Deficit Thinking	0.911
Academic Resilience	0.813
Equity	0.803
Peer Interaction	0.908
Extra Curricular Activities	0.758
Career Aspiration	0.885
Father Support	0.953
Mother Support	0.88
Overall Resilience	0.742
Familial Capital	0.907
Academic Performance	0.757
Educational Aspiration	0.803
Faculty Interaction	0.92
Self-deficit Thinking	0.636

Note. This table represents the Cronbach's Alpha of all factors found in the CFA.

When using the chi-square difference test to examine if the variance across all the items was significantly different from zero, the constrained and unconstrained models presented themselves to be significant, and the difference between both degrees of freedom was 52. That means that the CFA had significant shared variance, so the full latent model shown in Appendix D: presented bias. To correct that, a common latent factor (CLF) was created and retained in this study, as shown in Figure 11.

Figure 11

Common Latent Factor



Note. This figure represents the Common Latent Factor (CLF) generated after it was found that the CFA had significant shared variance.

The new standardized regression weights of the CLF can be seen in Appendix F:

The adequacy of the CLF was as good as the CFA, presenting great configural invariance with SRMR = .0417, CFI = .958, RMSEA = .039, $X^2 = 1620.0$, $df = 1109$. A Cook's distance analysis was done, and there were no records that exhibited any abnormal cook's distances, so no records were removed.

The SEM was then created and will be explained in the next section.

Structural Equation Model (SEM)

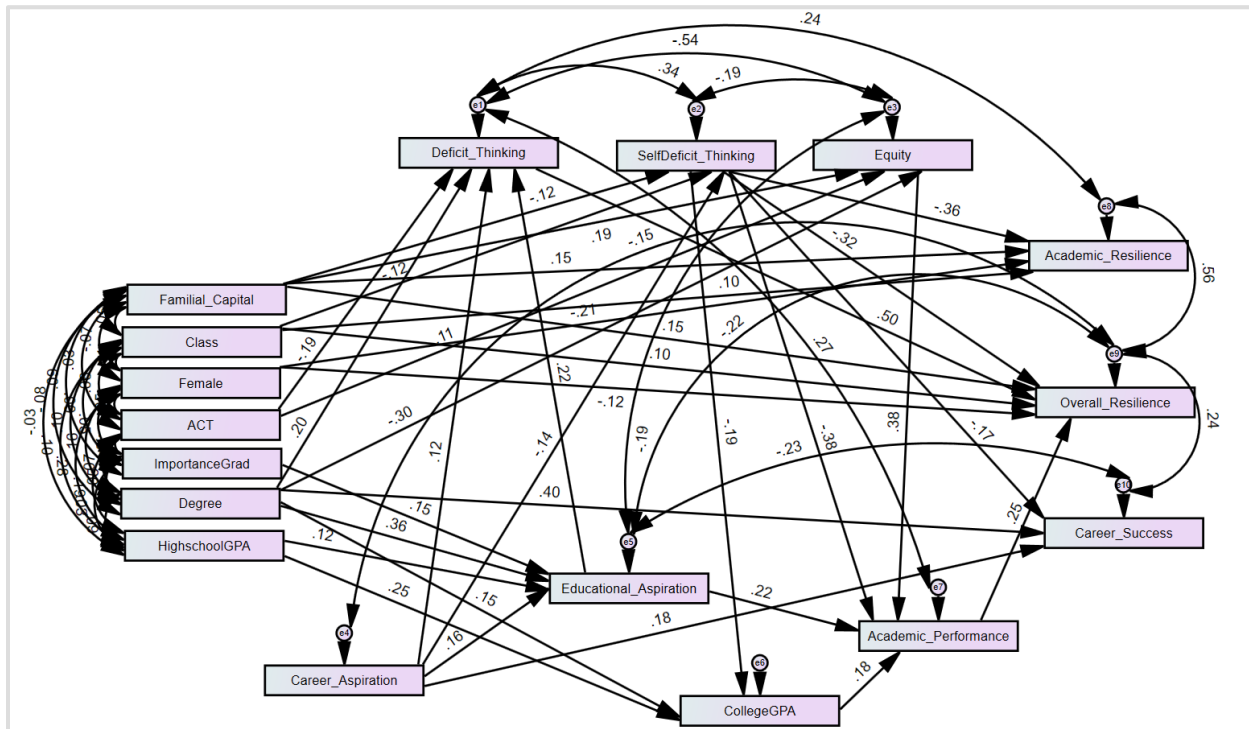
SEM is a multivariate analysis technique that explores the relationship between both observed and latent variables, confirming the factors discovered through the EFA and CFA, determining the degree to which a theoretical model is supported by the collected data (Crockett, 2012).

Out of the 15 factors in the CFA, only nine were significant in the model—Familial Capital, Deficit Thinking, Self-Deficit Michigan, Equity, Career Aspiration, Educational Aspiration, Academic Resilience, Overall Resilience, and Career Success—as shown in Figure 12. All other variables that did not correlate or covary at the statistically significant level of at least $p < 0.05$ were dropped from the model.

Since the CLF was retained, all previous latent variables were imputed, being then represented in rectangles (manifest variables) in the model.

Figure 12

Final Structural Equation Model



Note. This figure represents the structural equation model (SEM) generated in this study and the three outcomes of Latinx academic resilience, overall resilience, and career success and their direct and mediating effects.

The model fit measurements for the final SEM model were SRMR = .0387, CFI = .994, RMSEA = .018, $\chi^2 = 76.7$, $df = 70$. SEM is capable of showing directionality, with the straight arrows showing the positive or negative influence of the variable in the left, over the variable in the right. Only one-directional relationships were found (bi-directional relationships were not found), and the path analysis of all factors can be seen in Table 33.

Table 33*SEM Path Analysis*

SEM Path Analysis			Standardized β	<i>p</i> -value
			Beta	
SelfDeficit Thinking	<-	Familial Capital	-0.124	0.019
SelfDeficit Thinking	<-	Class	-0.119	0.024
SelfDeficit Thinking	<-	Career Aspiration	-0.136	0.014
Equity	<-	Familial Capital	0.194	***
CollegeGPA	<-	SelfDeficit Thinking	-0.192	***
CollegeGPA	<-	HighschoolGPA	0.254	***
CollegeGPA	<-	Degree	0.15	0.006
Equity	<-	Degree	-0.305	***
Equity	<-	ACT	0.111	0.031
Educational Aspiration	<-	ImportanceGrad	0.155	***
Educational Aspiration	<-	Degree	0.362	***
Educational Aspiration	<-	HighschoolGPA	0.123	0.009
Educational Aspiration	<-	Career Aspiration	0.164	0.001
Academic Performance	<-	Educational Aspiration	0.224	***
Academic Performance	<-	CollegeGPA	0.178	***
Academic Performance	<-	SelfDeficit Thinking	-0.384	***
Academic Performance	<-	Equity	0.383	***
Deficit Thinking	<-	Career Aspiration	0.116	0.005
Deficit Thinking	<-	Educational Aspiration	0.218	***
Deficit Thinking	<-	Degree	0.198	***
Deficit Thinking	<-	ACT	-0.187	***
Academic Resilience	<-	Familial Capital	0.151	0.002
Career Success	<-	SelfDeficit Thinking	-0.173	***
Overall Resilience	<-	Academic Performance	0.254	***
Overall Resilience	<-	SelfDeficit Thinking	-0.324	***
Overall Resilience	<-	Familial Capital	0.145	***
Overall Resilience	<-	Deficit Thinking	0.496	***
Overall Resilience	<-	Female	-0.116	0.007
Overall Resilience	<-	Class	0.1	0.022
Career Success	<-	Degree	0.398	***
Academic Resilience	<-	SelfDeficit Thinking	-0.364	***
Academic Resilience	<-	Female	-0.207	***
Academic Resilience	<-	Class	0.102	0.035
Career Success	<-	Career Aspiration	0.176	***

Note. This table represents the standardized β and *p* values of the generated SEM.

*** *p* < .001

SEM Findings and Research Questions

The first research question this study aimed to look at was to what degree do students' attributes before entering college and their college experiences influence Latinx overall resilience?

Students' attributes before entering college that had a direct effect on Latinx overall resilience were familial capital ($\beta = .145, p < .001$), class ($\beta = .100, p = .022$), and gender/female ($\beta = -.116, p = .007$). College experiences that affected the outcome of overall resilience were deficit thinking ($\beta = .496, p < .001$), and self-deficit thinking ($\beta = -.324, p < .001$). Academic performance also had a positive direct effect on overall resilience ($\beta = .254, p < .001$).

Deficit thinking, self-deficit thinking, and academic performance were strong mediators of Latinx overall resilience. Deficit thinking mediated the indirect effect of ACT/SAT ($\beta = -.045, p = .001$), degree ($\beta = .027, p = .001$), career aspiration ($\beta = .037, p = .003$), and educational aspiration ($\beta = .059, p = .001$) on Latinx overall resilience. Self-deficit thinking mediated the indirect effect of familial capital ($\beta = .017, p = .015$), class ($\beta = .045, p = .044$) and career aspiration ($\beta = .028, p = .006$) on Latinx overall resilience. Academic performance mediated the indirect effect of college GPA ($\beta = .023, p = .001$), educational aspiration ($\beta = .031, p = .001$), self-deficit thinking ($\beta = -.063, p = .001$), and equity ($\beta = .055, p < .001$) on Latinx overall resilience.

The second research question this study looked into was to what degree do students' attributes before entering college and their college experiences influence Latinx academic resilience in higher education?

Students' attributes before entering college that had a direct effect on Latinx academic resilience in higher education were familial capital ($\beta = .151, p = .002$), class ($\beta = .102, p = .035$),

and gender/female ($\beta = -.207, p < .001$). The only college experiences that affected the outcome of academic resilience in higher education was self-deficit thinking ($\beta = -.364, p < .001$), negatively affecting it.

Self-deficit thinking was a strong mediator of Latinx academic resilience in higher education, mediating the indirect effect of familial capital ($\beta = .039, p = .019$), class ($\beta = .100, p = .050$), and career aspiration ($\beta = .062, p = .006$) on Latinx academic resilience in higher education.

The third research question was to what degree do students' attributes before entering college and their college experiences influence Latinx career success?

Students' attributes before entering college that had a direct effect on Latinx career success were degree ($\beta = .398, p < .001$) and career aspirations ($\beta = .176, p < .001$). Again, the only college experience that affected the outcome of career success was self-deficit thinking ($\beta = -.173, p < .001$).

Self-deficit thinking was a strong mediator of Latinx career success, mediating the indirect effect of familial capital ($\beta = .036, p = .013$), class ($\beta = .092, p = .029$), and career aspiration ($\beta = .057, p = .005$) on Latinx career success.

Deficit thinking and academic performance were also found to play a role as an outcome in the model when looked at separately. Educational aspiration was a mediator of deficit thinking, mediating the indirect effect of importance to graduate ($\beta = .040, p = .004$), degree ($\beta = .055, p = .001$), high school GPA ($\beta = .025, p = .006$), and career aspiration ($\beta = .059, p = .001$) on deficit thinking. As for academic performance, four mediators were found. Self-deficit thinking was a strong mediator of academic performance, mediating the indirect effect of familial capital ($\beta = .032, p = .020$), class ($\beta = .084, p = .050$), and career aspiration ($\beta = .052, p$

= .006) on academic performance of Latinx students. Equity was a strong mediator of academic performance, mediating the indirect effect of familial capital ($\beta = .051, p = .001$), ACT/SAT scores ($\beta = .033, p = .020$), and degree ($\beta = -.050, p = .000$) on academic performance of Latinx students. Educational aspiration was a strong mediator of academic performance, mediating the indirect effect of importance to graduate ($\beta = .025, p = .002$), degree ($\beta = .034, p = .000$), high school GPA ($\beta = .016, p = .006$), and career aspiration ($\beta = .037, p = .001$) on academic performance of Latinx students. Lastly, college GPA was also a strong mediator of academic performance, mediating the indirect effect of degree ($\beta = .011, p = .007$), high school GPA ($\beta = .026, p = .001$), and self-deficit thinking ($\beta = -.034, p = .001$) on academic performance of Latinx students.

All estimates and p -values of all mediators discussed above can be found in Table 34.

Table 34

Mediators

Mediation	Outcome 1		Outcome 2		Outcome 3		Outcome 4	
Deficit Thinking	Overall Resilience							
	Estimate	<i>p</i> -value						
ACT	-0.045	0.001						
Degree	0.027	0.001						
Career Aspiration	0.037	0.003						
Educational Aspiration	0.059	0.001						
Self-deficit Thinking	Academic Resilience		Overall Resilience		Career Success		Academic Performance	
	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value
Familial Capital	0.039	0.019	0.017	0.150	0.036	0.013	0.032	0.020
Class	0.100	0.050	0.045	0.044	0.092	0.029	0.084	0.050
Career Aspiration	0.062	0.006	0.028	0.006	0.057	0.005	0.050	0.006
Equity	Academic Performance							
	Estimate	<i>p</i> -value						
Familial Capital	0.051	0.001						
ACT	0.033	0.020						
Degree	-0.050	0.000						
Educational Aspiration	Academic Performance		Deficit Thinking					
	Estimate	<i>p</i> -value	Estimate	<i>p</i> -value				
Importance to Graduate	0.025	0.002	0.040	0.004				
Degree	0.034	0.000	0.055	0.001				
High School GPA	0.016	0.006	0.025	0.006				
Career Aspiration	0.037	0.001	0.059	0.001				
College GPA	Academic Performance							
	Estimate	<i>p</i> -value						
Degree	0.011	0.007						
Highschool GPA	0.026	0.001						
Self-deficit Thinking	-0.034	0.001						
Academic Performance	Overall Resilience							
	Estimate	<i>p</i> -value						
College GPA	0.023	0.001						
Educational Aspiration	0.031	0.001						
Self-deficit Thinking	-0.063	0.001						
Equity	0.055	0.001						

Note. This table represents the estimate and *p* values of all mediators found in the SEM.

Other SEM Findings

The SEM model also showed what affected the factors of (a) self-deficit thinking, (b) deficit thinking, (c) equity, (d) educational aspiration, (e) college GPA, and (f) academic performance.

Self-deficit thinking was negatively affected by familial capital ($\beta = -.124, p = .019$), class ($\beta = -.119, p = .024$), and career aspiration ($\beta = -.136, p = .014$). Deficit thinking was positively affected by career aspiration ($\beta = .116, p = .005$), educational aspiration ($\beta = .218, p < .001$), and degree ($\beta = .198, p < .001$) and was negatively affected by ACT ($\beta = -.187, p < .001$). Equity was positively affected by familial capital ($\beta = .194, p < .001$), and ACT ($\beta = .111, p = .031$) was negatively affected by degree ($\beta = -.305, p < .001$). Educational aspiration was positively affected by importance to graduate ($\beta = .155, p < .001$), degree ($\beta = .362, p < .001$), high school GPA ($\beta = .123, p = .009$), and career aspiration ($\beta = .164, p = .001$). College GPA was negatively affected by self-deficit thinking ($\beta = -.192, p < .001$) and positively affected by high school GPA ($\beta = .254, p < .001$) and degree ($\beta = .150, p = .006$), while academic performance was negatively affected by self-deficit thinking ($\beta = -.384, p < .001$) and positively affected by educational aspiration ($\beta = .224, p < .001$), college GPA ($\beta = .178, p < .001$), and an equitable higher education environment ($\beta = .383, p < .001$).

Although all findings are important and relevant to be discussed, it is vital to note that all factors present in this SEM ended up positively or negatively affecting the overall resilience of Latinx students, while self-deficit thinking was the only factor that negatively affected all three outcomes of academic resilience ($\beta = -.364, p < .001$), overall resilience ($\beta = -.324, p < .001$), and career success ($\beta = -.173, p < .001$), as well as college GPA ($\beta = -.192, p < .001$) and academic performance ($\beta = -.384, p < .001$), of Latinx students in this study.

Chapter 5: Conclusions, Implications, and Limitations

Chapter 5 reviews conclusions of this research; implications for practice, theory, and future research; and limitations faced in this study. The SEM model shows that the academic resilience, overall resilience, and career success of Latinx are not influenced by only one factor but rather the combination of students' attributes before entering college and their college experiences, especially experiences related to deficit thinking, self-deficit thinking, and equity in the academic environment. This study shows that, different from Tinto's theory assumptions, the responsibility of Latinx success is not defined solely by their own behavior while in college, and rather the focus should shift towards the supportive role of the educational institution in stopping actions of discrimination and oppression that are historical in the United States educational system towards the Latinx population.

Conclusions

There are six main conclusions of this study, and they are discussed next.

Conclusion 1: The Role of Deficit Thinking on Latinx Overall Resilience

Conclusion 1 aims to partially answer Research Question 1: To what degree do students' attributes before entering college and their college experiences influence Latinx overall resilience? Latinx overall resilience is directly, or indirectly, positively or negatively affected by all factors present in the final SEM model, but deficit thinking was the key factor affecting Latinx overall resilience.

Deficit thinking had a positive influence on the overall resilience of Latinx respondents, meaning the more deficit thinking Latinx experienced in college, the more overall resilience they presented. That was an unfortunate finding of this study, showing that Latinx have to fight to prove they are worth it—but that should not be that way.

Goodkind et al. (2020) mention that resilience is often utilized to show one who has positive adaptation to hardship, trauma, disturbances in life, and/or stress, but the actual problem resides in the White, male heteronormative environment that define resilience values and outcomes, as well as their oppressive actions towards minoritized communities.

Resilience studies have a tendency to use its definition to downplay oppression, but resilience should rather mean re-envisioning the oppressive educational system and its underlying assumptions, and the findings of this study emphasize that educational institutions should and can re-imagine their actions and decisions to promote effective change. Deficit thinking views should not be seen solely as mere opinions but rather as a powerful tool that can influence how Latinx are treated within education systems because they lead to real consequences for policy and practice at educational institutions (Carales & Lopez, 2020).

It is also lamentable to note that this study showed that the higher the Latinx degree, career aspiration, and educational aspiration, the more Latinx experienced deficit thinking coming from their peers, professors, and academic institutions as a whole. It seems that those from other ethnic backgrounds get threatened by Latinx who aspire to be big, and to counterpart that, they retaliate with unjustified actions that minimize the Latinx, forcing Latinx students to fight a war that should not exist in the first place.

Conclusion 2: The Role of Latinx Self-Deficit Thinking on All Outcomes

Conclusion 2 aims to partially answer all three research questions of this study: To what degree do students' attributes before entering college and their college experiences influence Latinx overall resilience? To what degree do students' attributes before entering college and their college experiences influence Latinx academic resilience in higher education? To what degree do

students' attributes before entering college and their college experiences influence Latinx career success?

While mediating the positive effect of familial capital, class, and career aspiration on all three outcomes, there was a negative direct effect of self-deficit thinking on overall resilience, academic resilience, and career success.

Self-deficit thinking was the first key factor affecting academic resilience, the second key factor affecting overall resilience, and the third key factor affecting career success. In all instances, self-deficit thinking presented a negative effect on the outcomes; the more Latinx believe they are not as good as non-Latinx, the less resilient they are and the less career success they have. Believing that one cannot perform as well as someone else ultimately might lead one to give up—deep down thinking they are not good enough, so why bother trying?—and that inner belief of being incapable of performing like others end up influencing their decision of quitting, ultimately leading one to not achieve their goals.

In this study, it was noted that self-deficit thinking was negatively affected by three factors—the higher the Latinx class, career aspiration, and familial capital, the lower the self-deficit thinking.

Martin et al. (2018) state that the rhetoric on class in higher education institutions depicts students from low SES as lacking, deficient, and shortcoming, while placing the burden of social class inequalities on the minoritized communities rather than on the oppressive system that shaped the intrinsic advantages or disadvantages of it. Latinx students commonly hear such words and are around people who permeate those types of thoughts, and that might end up influencing the views they have of themselves, hence creating and enhancing the idea of self-deficit thinking.

The same goes for career aspiration, where the higher the Latinx career aspiration, the lower the self-deficit thinking presented itself. Yosso (2005) states that aspirational capital is the ability to “maintain hopes and dreams for the future, even in the face of real and perceived barriers” (p. 77). In this study, it was seen that Latinx have high career aspirations, showing that the aspirational capital is well alive in the Latinx community. Latinx are maintaining their hopes and dreams, searching for a better future. When setting a high goal, Latinx work hard to accomplish it, so they tend to believe in themselves more, decreasing their self-deficit thinking and increasing their overall and academic resilience as well as their career success.

Conclusion 3: The Role of Academic Performance on Latinx Overall Resilience

Conclusion 3 aims to partially answer Research Question 1: To what degree do students’ attributes before entering college and their college experiences influence Latinx overall resilience? For that, this study showed that the higher the Latinx academic performance, the more resilient the Latinx are, being the third key factor affecting overall resilience.

Academic performance was positively influenced by Latinx educational aspiration, college GPA, and an equitable college environment, indicating that educational institutions must stop solely blaming the Latinx student for their lack of academic success and start acting to stop inequities in the education environment to help Latinx succeed.

It is also important to note that, just like all three outcomes of this study, academic performance was negatively affected by self-deficit thinking as the most influenceable factor of academic performance in this study. When Latinx students see themselves as inferiors, as not capable, as lacking necessary skills to succeed, they indeed have their academic performance affected, and that is one more reason for systemic changes in educational institutions—helping Latinx see their value and their worthiness is fundamental for their success.

As the second most influential factor in this study, it was shown that an equitable educational environment leads to higher academic performance, which ultimately leads to a higher Latinx overall resilience. Jones et al. (2020) discuss how the equity gap at educational institutions are affecting the academic performance of minoritized students stating that “racial inequities in student performance are the outcome of a long history of the education debt whereby students of color have been systematically denied access to equal education through a variety of mechanisms” (p. 1).

Disparities in academic outcomes of minoritized students can also be controlled when educational institutions allow and incentivize students to have high educational aspirations. As the third most influenceable factor of academic performance in this study, the higher the Latinx educational aspiration, the higher their academic performance.

Latinx educational aspirations, as in Yosso’s (2005) aspirational capital and the ability to hold on to future goals besides challenges students of color might face, were very high in this study, with more than half of the Latinx respondents aspiring to achieve their doctoral degree.

In the original conceptual framework, educational expectations were suggested to be different from educational aspirations—being one realistically what Latinx could achieve and the other what they would like to accomplish, but they see as unrealistic. In this study, it was seen that Latinx expectations and aspirations joined themselves in one factor only, meaning what Latinx want to accomplish, they believe they will succeed. That shows that Latinx have their aspirations as an important asset to move on and are trying to do their part to make it happen, but educational institutions are not supporting their goals. According to the United States Census Bureau (2020), only 18.8% of Latinx are actually receiving their bachelor’s degree, so why

aren't the educational institutions doing their part of helping Latinx students to move through the academic pipeline?

Helping Latinx perform better academically, creating an equitable educational environment, allowing them to dream high, and removing the full onus of their success off Latinx shoulders are then fundamental. Instead of asking, "What the Latinx student did wrong?" educational institutions should start asking themselves questions like "What procedure, policies, processes, plans, and strategies did I, as a powerful academic institution, set up that shaped or aggravated these disparities?" and "What can I as a higher education institution do to stop those inequities from happening?" Besides asking those crucial questions, the data in this study corroborate that actions must be taken by educational institutions to stop the equity gap, that way helping to improve Latinx academic performance.

Conclusion 4: The Role of Latinx Familial Capital on Overall and Academic Resilience

Conclusion 4 aims to partially Research Questions 1 and 2 of the study: To what degree do students' attributes before entering college and their college experiences influence Latinx overall resilience? To what degree do students' attributes before entering college and their college experiences influence Latinx academic resilience in higher education?

Cavazos et al. (2010) affirm that rather than only personal student factors attributed to the lack of academic resilience leading to high dropout rates of Latinx students, educational institutions and their contextual factors are the actual villains in the story, which was confirmed in this study through the presence of self-deficit thinking being the most important factor negatively affecting academic resilience, and the second most important factor also negatively affecting overall resilience.

On the other hand, one positive key component of Latinx overall and academic resilience that emerged in this study was Latinx familial capital. Familial capital is the “cultural knowledge nurtured among families that carry a sense of community history, memory, and cultural intuition” (p. 79) presented by Yosso (2005), who emphasizes that those who spread the idea of a dominant White culture, forcing others to change and to adapt to this cultural hegemony instead of looking at the beauty and the value of diverse cultures, mask the amazing cultural assets that marginalized students have.

Valenzuela (1999) presents the concept of subtractive schooling, discussing the idea of culturally subtractive institutions, where educational organizations discourage cultural knowledge coming from minoritized students, undermining their opportunities of growth while pushing for cultural de-identification, instead of leveraging Latinx success and potentially enhancing Latinx resilience outcomes. Yosso (2005) critiques those oppressors stating that students of color have “an array of knowledge, skills, abilities, and contacts (...) to survive and resist macro and micro-forms of oppression” (p. 78), just as Latinx students presented in this research—a high familial capital score.

In an empirical study, Jabbar et al. (2019) found that Latinx students are indeed influenced by their immediate and extended family members, especially because of the transfer of cultural values and beliefs. *Familismo*, a concept that discusses the strength of familial capital, was shown in this study as a strong force in Latinx lives, especially when helping them achieve higher overall and academic resilience while positively influencing Latinx educational pathways.

Conclusion 5: The Gender Effect

Conclusion 5 aims to partially answer Research Questions 1 and 2 of this study: To what degree do students’ attributes before entering college and their college experiences influence

Latinx overall resilience? To what degree do students' attributes before entering college and their college experiences influence Latinx academic resilience in higher education?

Gender inequality is “the tendency to provide one gender or another different opportunities in their lives” merely on how their gender is perceived (Newton, 2019, p. 5). Dinzey-Flores et al. (2019) affirm that “like society, the U.S. Latinx academic community shows a preference for male Latinx individuals and their scholarship” (p. 321), while Newton (2019) demonstrates how gender is affecting career success—based on the income comparison between male and female—in the U.S, sharing the differences in income for males and females from 2015 to 2020, as shown in Table 35.

Table 35

Differences in Income for Males and Females From 2015 to 2020 in the U.S.A

Year	Male		Female		Female-to-male earnings ratio
	Number of workers (thousands)	Median earnings (dollars)	Number of workers (thousands)	Median earnings (dollars)	
	Total	Estimate	Total	Estimate	
2020	87,656	49,389	79,335	35,838	0.830
2019	89,061	49,378	80,862	36,273	0.823
2018	88,165	48,182	79,493	33,661	0.816
2017	88,069	47,589	78,359	33,671	0.817
2017	88,140	46,893	78,260	33,379	0.805
2016	86,945	45,541	77,813	33,311	0.805
2015	86,466	45,468	77,066	33,046	0.796

Note. This table represents the difference in income between males and females in the U.S

between the years 2015 to 2020. Adapted from “Number and Real Median Earnings of Total Workers and Full-Time, Year-Round Workers by Sex and Female-to-Male Earnings Ratio: 1960 to 2020,” by the U.S. Bureau of Labor Statistics, 2020

(<https://www.census.gov/data/tables/2021/demo/income-poverty/p60-273.html>). In the public domain.

Although the female-to-male earning rate has been slightly improving in the past 5 years, there is a long way to achieve gender equality in the U.S.

Unfortunately, but not surprising, this study also found out effects related to gender differences: Latinas presented lower academic resilience as well as lower career success than Latinos.

Just as with other ethnic groups, gender inequality is present in Latinx communities and needs as much attention as other variables presented in the model. One can argue that eliminating gender gaps will not produce equal outcomes for the female counterpart, but it is, indeed, an important step towards the right direction, as shown in the structural equation model generated by this research.

Conclusion 6: ACT x Equity x Degree

Conclusion 6 aims to partially answer Research Questions 1 and 3 of this study: To what degree do students' attributes before entering college and their college experiences influence Latinx overall resilience? To what degree do students' attributes before entering college and their college experiences influence Latinx career success?

The results of the SEM model in this study showed that the higher the ACT score of Latinx students, the higher their perception of an equitable educational environment. That might be explained by the idea of one thinking like "if I can get a high score, I don't see inequities happening because I am thriving," and being a high schooler might mask the way Latinx view the inequitable reality of the educational system. The interesting finding of this study is that the moment that Latinx achieves a high degree, the perception of an equitable educational environment changes, and it gets lower; the higher the degree, the lower the equity perception of the educational environment.

That might depict a picture that Latinx, when getting older and when putting into practice their high educational aspirations, start to experience what, unfortunately, appears to be the common rule for minoritized students—inequitable education environments that will strongly contribute to lower academic performance, leading to less resilience in the Latinx community, as shown in this research. Carey (2004) corroborates that when stating that higher education institutions are one of the main instruments for overcoming social and economic inequalities, which Latinx—as well as other minoritized populations—are regularly facing.

Another important finding of this study was that the higher the Latinx high school GPA and the more they think it is important to graduate, the higher their educational aspiration is, leading to a higher academic performance, which ultimately leads to a higher Latinx overall resilience. Making sure that Latinx aspire to achieve high educational outcomes proved itself to be crucial for the resilience of the Latinx population. But how to make sure that Latinx students are aspiring to fly high? The role of high schools and higher education institutions appears to be crucial.

Anyon (1980) discusses the idea of a hidden curriculum while looking at different elementary schools with students coming from predominantly different social classes. It was noted that classroom experiences and the taught curriculum differ depending on the student social class and the school they tended to attend, divided as working-class school, with an average family income of at or below \$12,000; middle-class school, with an average family income between \$13,000 to \$25,000; affluent professional school, with an average family income between \$40,000 and \$80,000; and executive elite school, with a minimum family income of over \$100,000 with some families in the \$500,000 range. Anyon (1980) notes that while working-class children are being prepared by the school system to be ready for future

works that are mechanical and involve simple routine procedures, middle-class children are leaned towards bureaucratic work; the affluent professional students are being given the opportunity to develop scientific, artistic and linguistic skills that will prepare them to be successful legal, intellectuals and scientific experts; while executive elite schools are exposing them to analytical and planning skills, helping them gaining symbolic capital. Lack of equitable educational environment for minorities population is then imminent.

As immigrants in the U.S., Latinx students mainly belong to the working class and are more likely to experience poverty (De Feyter et al., 2020), therefore having a tendency to attend working-class schools. Being exposed to a subpar curriculum and being expected to have lower performance than their non-Latinx peers, Latinx students might have their educational aspirations diminished, therefore directly affecting their academic performance and their overall resilience.

Implications and Limitations of the Study

This study has some limitations, and it has implications for practice, theory, and future research. These considerations are thoroughly discussed below.

Implications for Practice

It is clear that the job of educational institutions is determinant for Latinx overall and academic resilience, as well as career success.

Based on the role of deficit thinking on the Latinx overall resilience in this study, it is recommended that educational leaders should work on programs and policies to stop deficit thinking towards the Latinx population. Staff development and training could be a good starting point to teach educational personnel (K-12 teachers, higher education faculty members, support staff, etc.) and spread the reality of Latinx students—they are as wonderful and as capable as

their non-Latinx peers. But since changes usually occur if the top of the organizational pyramid sees it as a necessary action, educational leaders should educate themselves on anti-deficit thinking first to better understand the impact of their discourse on the Latinx population.

This study shows that, just as Yosso (2005) mentioned, aspirational capital is a great asset of the Latinx community, and it will positively influence their outcomes. Schools should, therefore, discuss the importance of having big educational and career aspirations since early on in Latinx life, helping them see that their high dreams are valid and possible to achieve. Schools and colleges should include Latinx stories in the curriculum, bringing in guest speakers, hiring more Latinx teachers, etc., that way showing to the Latinx community that they can—and should—dream big because it is indeed possible to get there.

To avoid self-deficit thinking being installed in the Latinx mind, schools and colleges should stop rejecting Latinx culture and values, listening to their experiences instead of silencing them by oppressive systems. Educational institutions as a whole, their leaders, and their staff also should challenge their language of deficiency (e.g., minority, at-risk) and should start changing their deficit mentality, understanding that the Latinx students are as capable as non-Latinx students, making sure that all who are involved in the educational system share the same mentality. Based on this study findings of all assets possessed by Latinx students, it is also another suggestion of this research that educational institutions focus on a rigorous curriculum, the availability of support services free of deficit perspectives, and high expectations for Latinx students should then be offered since as early as the Latinx student reaches Kindergarten, and should be carried on until Latinx's aspirations are successfully achieved.

An equitable educational environment proved itself to positively influence Latinx academic performance, which leads to higher Latinx overall resilience. This study strongly

recommends that all educational institutions should revisit their educational activities, thoughts, and actions towards the Latinx community, permeating and incentivizing an equitable school/college environment while focusing on accountability at all levels when the results are not achieved accordingly.

Finally, this research recommends that colleges should incentivize more equity-focused, anti-deficit research, helping spread the necessity of equitable educational environments and anti-deficit thoughts and the right verbiage through the educational pipeline.

Implications for Theory

This research presented two important findings that have big implications for theory: (a) A second dimension of deficit thinking emerged (self-deficit thinking), and (b) the onus of Latinx success in college and in their career is not solely of the student, rather the educational institution thoughts and actions.

Schill (1990, 1992) developed a scale to measure what he called self-defeating personality, which refers to a prevalent pattern of self-sabotage and self-criticism, and that could happen because one does not believe to be capable of succeeding. In this research, self-deficit thinking was observed as a second dimension of deficit-thinking and proved itself to be a big villain of Latinx academic and overall resilience as well as their career success. Its concept might help add to Schill's framework. Unfolding deficit thinking into two dimensions (composed of deficit thinking itself and self-deficit thinking) might also provide grounds to understanding why lack of resilience and career success occurs in the Latinx population, destigmatizing the idea of educational institutions that believe in the lack of potential of Latinx students—therefore thinking that they cannot be accountable for students' failures or dropping out decisions coming from that population—just to justify maintaining the idea of their dominant White culture,

forcing Latinx to change and to adapt to this cultural hegemony instead of changing their deficit perspectives. The strong finding of deficit thinking and self-deficit thinking in this research might help educational institutions to look at the beauty and the value of Latinx culture, stopping masking the amazing cultural assets that Latinx students have and their potential to succeed.

Dismantling the language of deficit on research (e.g., Latinx are not at risk of failure but rather educational institutions are at-risk of failing them) is another implication of this research. It is unsettling to see that 61.8% of this study participants' educational institutions use the word "minority" instead of "minoritized," while 67.8% of participants' educational institutions label Latinx students as "minority." Including a clear understanding of the role of deficit thinking and self-deficit thinking and how they play out on existing theories, especially success and resilience theories, will contribute to disrupting the deficit paradigm, revisiting underlying, unexamined assumptions, and creating a better environment that can be applied towards Latinx students and can potentially be extrapolated to other minoritized populations.

Lastly, one of the most important implications for theory in this research was the discovery of a reframed Tinto's theory to stop Latinx oppression. French (2017) affirmed that, even though Tinto's model has been considered one of the most important frameworks to understand resilience in higher education, a deconstruction of the model was necessary due to its theoretical and practical limitations, especially towards minoritized students.

Tinto (1993) affirmed that students' background, skills and abilities, prior schooling, and their academic and social integration while in college were the reasons why a college departure decision was made. In this research, the findings were different, and academic resilience (or the decision of a Latinx student to finish college) was actually due to different factors. When an educational institutions values Latinx cultural richness; implements an equitable educational

system; gets rid of deficit perspectives; cultivates high aspirations; discusses more the impact of self-deficit thinking among minoritized populations focusing on how damaging self-deficit thinking for Latinx students is; stops blaming the Latinx student, shifting the focus away from individual characteristics; and focus on systemic problems and influences that end up shaping disparities, Latinx students have a great chance of succeeding in the academic, life and career goals.

Implications for Future Research

When survey questions were put together, deficit thinking was one of the factors this study was looking at. Fifteen items were present in the survey, and 10 of them presented significant correlation and were kept in the final model. Out of the 10 final deficit thinking items, eight joined together to form the factor of deficit thinking, and two of them joined as self-deficit thinking (“I believe non-Latinx students are more academically capable than me” and “I believe I do not have what it takes to succeed in college”). While running an SEM, a two-item factor may impose some challenges such as the reliability of the created factor, so, as a suggestion for future research, when building a new survey to analyze self-deficit thinking, more than two items are recommended.

Another recommendation for future research is to look at the power of language and discourse, suggested with the appearance of the factors titled equity, deficit thinking, and self-deficit thinking. It was discovered in this study that 61.8% of participants’ educational institutions use the word “minority” instead of “minoritized,” but how that deficit verbiage affects minoritized students’ success could not be fully analyzed. Qualitative research to dig into reasons for high correlated items in this research is also suggested.

This research focused on the Latinx population, but the importance of understanding different minoritized populations is also imminent, such as Black and African Americans, American Indians, non-binary students, etc. Testing if this framework also applies to those marginalized populations is also advised.

Rourke and Lakner (1979) noted that male under-representation in surveys is common, an event that also happened in this research. Future researchers should try balancing gender bias in forthcoming studies with more of a fifty-fifty impression of males and females, trying to avoid disproportionately gender bias answers (e.g., 68.1% were female respondents in this survey).

Another recommendation for future research is to expand the sample size, aiming for a model that can potentially present fully latent variables in the SEM instead of only computed variables, as noted in this study.

Finally, a smaller and more focused survey is proposed. Participants in this research responded to one hundred and thirty-three questions, but the final SEM was composed of only fifty-eight questions, which accounted for only about 43% of the originally presented questions.

Limitations

This research presented five limitations, listed below.

First, this study only looked at the Latinx population, although other minoritized students are also important to be observed.

Second, the length of the online survey (15-30 minutes, 133 questions to be responded to), as well as the reward of a \$10 Amazon gift card, could have impacted the responses.

Third, a fully latent model could not be generated because of the presence of shared variance, which led the researcher to retain the CLF (Common Method Bias Test was then performed).

Fourth, the presence of gender bias was found, with more female respondents (68.1%) than male respondents (31.9%), which led to an overrepresentation of females in the survey answers.

And finally, Saenz (2005), as cited in Farley and Haaga (2005), discusses that the Latinx community tends to be on the lowest end of the socioeconomic ladder in the U.S, presenting low-income levels, high levels of unemployment and poverty, low professional achievement, and low levels of education. But the sample of this study presented the majority of the respondents (82.4%) belonging to the middle class, and that could potentially skew the findings of this study.

Summary of Conclusions

This study looked at 301 Latinx students and their outcomes of overall and academic resilience and career success. An SEM was created, and six conclusions were drawn.

First, Latinx overall resilience is directly, or indirectly, positively or negatively affected by all factors present in the final SEM model, but deficit thinking was the key factor affecting Latinx overall resilience, unfortunately positively affecting it—the higher the deficit thinking experienced by the Latinx student, the more overall resilience they presented—forcing Latinx to face and fight an unnecessary war to prove their worthiness.

Second, while mediating the positive effect of familial capital, class, and career aspiration on all three outcomes, there was a negative direct effect of self-deficit thinking on overall resilience, academic resilience, and career success. If educational institutions worked on passing the idea that Latinx are worth it, they would help Latinx see they, just like non-Latinx students, can also do it.

Third, this study showed that the higher the Latinx academic performance, the more resilient the Latinx are, being the third key factor affecting overall resilience. Academic

performance was positively influenced by Latinx educational aspiration, college GPA, and an equitable college environment, indicating that educational institutions must stop solely blaming the Latinx student for their lack of academic success and start acting to stop inequities in the education environment to help Latinx succeed.

Fourth, a positive key component of Latinx overall and academic resilience that emerged in this study was Latinx familial capital, showing that Latinx students have a great set of skills they can bring to college and should not be brainwashed into a White dominant culture.

Fifth, unfortunately, but not surprising, this study also found out effects related to gender differences—Latinas presented lower academic resilience as well as lower career success than Latinos. Just as with other ethnic groups, gender inequality is present in Latinx communities and needs as much attention as other variables presented in the model.

And lastly, the results of the SEM model in this study showed that the higher the ACT score of Latinx students, the higher their perception of an equitable educational environment. That might be explained by the idea of one thinking like “if I can get a high score, I don’t see an equitable problem happening because I am thriving,” and being a high schooler might mask the way Latinx view the inequitable reality. The interesting finding of this study is that the moment that Latinx achieves a high degree, the perception of an equitable educational environment changes, and it gets lower; the higher the degree, the lower the equity perception of the educational environment. Another important finding of this study was that the higher the Latinx high school GPA and the more they think it is important to graduate, the higher their educational aspiration is, leading to a higher academic performance, which ultimately leads to a higher Latinx overall resilience. Making sure that Latinx aspire to achieve high educational outcomes proved itself to be crucial for the resilience of the Latinx population.

This study unfolded a framework that goes beyond what Tinto's (1993) believed to be true: Issues of equity in the educational environment, deficit thinking experiences, and self-deficit thinking thoughts are the actual villains, removing the burden of the Latinx students' shoulders, asking for accountability of educational institutions.³

There is much more value in being a Latinx student than others can see. In this study, the role of high schools and higher education institutions appear to be crucial. Now, let's break the paradigms, throw away deficit perspectives and let's get the work done.

Final Remarks

My journey researching the Latinx community started almost one and a half years ago. I remember talking to Dr. Anderson about my educational path: "As a Latina, if I can make it, why can't others?" Dr. Anderson looked at me and said, "There you go; this can be an amazing dissertation topic, Andreia." It was love at first sight—between my dissertation and myself. The first thing I did was to go back to the literature, looking at theories that discussed resilience. I quickly found out that Tinto was, and actually still is, THE name on the field. In my mind, it was clear I would use Tinto's theory as a base for my study. Then, I remember like it was yesterday, my committee members asked me, "Andreia, why Tinto?" Back then, my answer was simple: I said—"Well... because he is THE ONE when it comes to studying resilience in higher education." Then, they asked me, "Does his theory also apply for minoritized students?" Then, right there, my journey REALLY started. When putting my survey together, I brought in, Yosso, Solorzano and Bernal, Valencia, among other researchers who had a different point of view about the world we are living in. And what was my surprise when the results of my research showed

³ It is important to note that there are different relationships that were not discussed in this research for not being the focus of this study. Subsequent publications will address these relationships.

that, in reality, the world is looking at resilience with wrong eyes and is blaming the minoritized instead of those with a power position; it is oppressing them (us, actually!) by unjustly using their power and authority while believing Latinx have inferior genetics, limited intelligence, low educability, defending their, as they believe, superiority.

My study tried to emphasize that educational institutions should and can re-imagine their actions and decisions to promote effective change, and with that in mind, I propose a non-oppressive approach to resilience when it comes to the Latinx community.

I hope my research can help others see what I couldn't see before, especially helping those with a position of power to shift the failure focus away from Latinx characteristics while finally focusing on systemic problems and influences that end up shaping the disparities we, as Latinx, are facing.

I, more than anyone else, am so proud of the educator my research helped me become. I am so excited to almost be part of the 0.1% Latinx Ph.D. in the U.S.

Thank you, Dr. Anderson, Dr. McCallum, Dr. Grewal, and Dr. Leibold, for helping me get where I always knew I could be. Thank you for believing in me, for opening my eyes, for enlightening me. Thank you for making a difference in this very proud Latina who always dreamed big and who always wanted to make a difference in this crazy world. I am now ready to scream out loud: We are worth it, we are amazing, and we can also touch the sky.

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APPENDICES

Appendix A:
Data Collection Instrument

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
ISI-1	What is your highest degree achieved?	15 degree attainment classifications shown in Table 12	Degree Attainment - United States Census Bureau (2018)
ISI-2	I want to be among the very best in my field, even if I think this is not realistic.	Likert Scale	CAS-R - Gregor and O'Brien (2016)
ISI-2	I want my work to have a lasting impact on my field, even if I think this is not realistic.	Likert Scale	CAS-R - Gregor and O'Brien (2016)
ISI-2	High achievement in my career is important to me, even if I think this is not realistic.	Likert Scale	CAS-R - Gregor and O'Brien (2016)
ISI-3	My realistic career expectations are high.	Likert Scale	CAS-R - Gregor and O'Brien (2016)
ISI-4	What is your current occupation?	23 major occupations shown in Table 13	Standard Occupational Classification - U.S Bureau of Labor Statistics (2020)
ISI-5	What is the gender you identify with?	(a) Male; (b) Female; (c) Other; (d) Prefer not to answer	
ISI-6	What is your race?	(a) White; (b) Black or African American; (c) American Indian or Alaska Native; (d) Asian; and (e) Native Hawaiian or Other Pacific Islander	United States Office of Management and Budget (OMB)
ISI-7	What is your age?	Continuous variable	
ISI-8	What was your ACT/SAT score?	(a) less than 25 th percentile; (b) 25 th – 50 th percentile (c)	

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
		50 th – 75 th percentile; (d) above 75 th percentile; (e) I don't know / I don't have one	
ISI-9	What was your High school GPA?	(a) Less than 2.0; (b) 2.01 – 2.49; (c) 2.5 – 2.99; (d) 3.0 – 3.49; (e) 3.5 – 3.89; (f) 3.9 – 4.0; (g) Prefer not to answer; (h) I don't know; (i) I didn't attend high school	
ISI-10	How is your family structure?	(a) living with both parents, (b) with a single parent, (c) with other relatives, (d) with nonrelatives, (e) in groups, or (f) heading a family of their own	Lichter and Landale (1995)
ISI-10	Including you, how many people live in your house?	(a) Just me; (b) 2; (c) 3; (d) 4; (e) 5; (f) 6 or more	Lichter, and Landale (1995)
ISI-11	I can rely on my father figure to be dependable when I need help	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	While alive, I could rely on my father figure to be dependable when I needed help.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	My father figure accepts me totally, including both my worst and my best points	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	While alive, my father figure accepted me totally, including both my worst and my best points.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	I can rely on my father figure to help me feel better when I am generally feeling down-in-the-dumps	Likert scale	SSQ-6 - Sarason et al. (1987)

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
ISI-11	While alive, I could rely on my father figure to help me feel better when I was generally feeling down-in-the-dumps.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	I can rely on my mother figure to be dependable when I need help.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	While alive, I could rely on my mother figure to be dependable when I needed help.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	My mother figure accepts me totally, including both my worst and my best points.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	While alive, my mother figure accepted me totally, including both my worst and my best points.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	I can rely on my mother figure to help me feel better when I am generally feeling down-in-the-dumps.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	While alive, I could rely on my mother figure to help me feel better when I was generally feeling down-in-the-dumps.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-11	I have someone I can rely on when I need help, who is not my mother figure or father figure.	Likert scale	SSQ-6 - Sarason et al. (1987)
ISI-12	For how many years are you living in the U.S.?	(a) Less than 1 year; (b) 1 to 2 years; (c) 2 to 3 years; (d) 3 to 5 years; (e) 5 to 8 years; (f) 8 to 10 years; (g) more than 10 years; (h) I don't know	
ISI-13	What is your country of origin?	Latin countries	
ISI-13	Where do you live?	(a) Not in the U.S (b) List of U.S states; (c) Other	
ISI-13	Do you live in a rural, urban, or suburban area?	(a) Rural; (b) Urban; (c) Suburban; (d) I don't know	

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
ISI-13	I live in a neighborhood that is ethnically diverse.	Likert scale	Massey and Denton (1990)
ISI-14	What is your social class?	(a) Lower class; (b) Middle class; (c) Upper class; (d) I don't know	
ISI-15	It is important to me to graduate from college.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
ISI-15	What is your educational aspiration, even if not realistic?	15 degree attainment classifications shown in Table 12	Carpenter (2008) Degree Attainment - United States Census Bureau (2018)
ISI-16	What is your realistic educational expectation?	15 degree attainment classifications shown in Table 12	Carpenter (2008) Degree Attainment - United States Census Bureau (2018)
ISI-17	How many languages do you speak?	(a) 1; (b) 2; (c) 3; (d) 4 or more	Yosso (2005)
ISI-17	My parent figures (or those who raised me) taught me their Latin language (Spanish or Portuguese).	(a) yes; (b) no	Yosso (2005)
ISI-17	What are the languages you speak? Mark all that apply	(a) English; (b) Spanish; (c) Portuguese; (d) Other	Yosso (2005)
IPI questions are done separately: mother, father, alive, passed away			
IPI-1	What is your mother figure's highest degree?	15 degree attainment classifications shown in Table 12	Carpenter (2008) Degree Attainment - United States Census Bureau (2018)
IPI-1	What was the highest degree your mother figure achieved before passing away?	15 degree attainment classifications shown in Table 12	Carpenter (2008) Degree Attainment - United States

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
IPI-1	What is your father figure's highest degree?	15 degree attainment classifications shown in Table 12	Census Bureau (2018) Carpenter (2008) Degree Attainment - United States Census Bureau (2018)
IPI-1	What was the highest degree your father figure achieved before passing away?	15 degree attainment classifications shown in Table 12	Carpenter (2008) Degree Attainment - United States Census Bureau (2018)
IPI-2	What is your mother figure's current or most recent occupation?	23 major occupations shown in Table 13	Standard Occupational Classification - U.S Bureau of Labor Statistics (2020)
IPI-2	When alive, what was your mother figure's last occupation?	23 major occupations shown in Table 13	Standard Occupational Classification - U.S Bureau of Labor Statistics (2020)
IPI-2	What is your father figure's current or most recent occupation?	23 major occupations shown in Table 13	Standard Occupational Classification - U.S Bureau of Labor Statistics (2020)
IPI-2	When alive, what was your father figure's last occupation?	23 major occupations shown in Table 13	Standard Occupational Classification - U.S Bureau of Labor Statistics (2020)
IPI-3	For how long is your mother figure living in the U.S.?	(a) Less than 1 year; (b) 1 to 2 years; (c) 2 to 3 years; (d) 3 to 5 years; (e) 5 to 8 years; (f) 8 to 10	

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
IPI-3	For how long was your mother figure living in the U.S. before passing away?	years; (g) more than 10 years; (h) I don't know (a) Less than 1 year; (b) 1 to 2 years; (c) 2 to 3 years; (d) 3 to 5 years; (e) 5 to 8 years; (f) 8 to 10 years; (g) more than 10 years; (h) I don't know	
IPI-3	For how long is your father figure living in the U.S.?	(a) Less than 1 year; (b) 1 to 2 years; (c) 2 to 3 years; (d) 3 to 5 years; (e) 5 to 8 years; (f) 8 to 10 years; (g) more than 10 years; (h) I don't know	
IPI-3	For how long was your father figure living in the U.S. before passing away?	(a) Less than 1 year; (b) 1 to 2 years; (c) 2 to 3 years; (d) 3 to 5 years; (e) 5 to 8 years; (f) 8 to 10 years; (g) more than 10 years; (h) I don't know	
IPI-4	What is your mother figure's country of origin?	Latin countries; born in the U.S; other	
IPI-4	What is your father figure's country of origin?	Latin countries; born in the U.S; other	
IPI-4	What was your mother figure's country of origin?	Latin countries; born in the U.S; other	
IPI-4	What was your father figure's country of origin?	Latin countries; born in the U.S; other	
IPI-4	Does your mother figure live in a rural, urban, or suburban area?	(a) Rural; (b) Urban; (c)	

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
IPI-4	Does your father figure live in a rural, urban, or suburban area?	Suburban; (d) I don't know (a) Rural; (b) Urban; (c) Suburban; (d) I don't know	
IPI-4	Before passing away, did your mother figure live in a rural, urban, or suburban area?	(a) Rural; (b) Urban; (c) Suburban; (d) I don't know	
IPI-4	Before passing away, did your father figure live in a rural, urban, or suburban area?	(a) Rural; (b) Urban; (c) Suburban; (d) I don't know	
IPI-4	Where does your mother figure currently live?	(a) Not in the U.S (b) List of U.S states; (c) Other; (d) I don't know	
IPI-4	Where does your father figure currently live?	(a) Not in the U.S (b) List of U.S states; (c) Other; (d) I don't know	
IPI-4	Where did your mother figure live before passing away?	(a) Not in the U.S (b) List of U.S states; (c) Other; (d) I don't know	
IPI-4	Where did your father figure live before passing away?	(a) Not in the U.S (b) List of U.S states; (c) Other; (d) I don't know	
IPI-5	How many languages does your mother figure speak?	(a) 1; (b) 2; (c) 3; (d) 4 or more	Yosso (2005)
IPI-5	How many languages does your father figure speak?	(a) 1; (b) 2; (c) 3; (d) 4 or more	Yosso (2005)
IPI-5	When alive, how many languages did your mother figure speak?	(a) 1; (b) 2; (c) 3; (d) 4 or more	Yosso (2005)
IPI-5	When alive, how many languages did your father figure speak?	(a) 1; (b) 2; (c) 3; (d) 4 or more	Yosso (2005)
IPI-5	What are the languages your father figure can speak? Mark all that apply	(a) English; (b) Spanish; (c) Portuguese; (d) Other	Yosso (2005)

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
IPI-5	What are the languages your mother figure can speak? Mark all that apply	(a) English; (b) Spanish; (c) Portuguese; (d) Other	Yosso (2005)
IPI-5	When alive, what used to be the languages your mother figures could speak? Mark all that apply	(a) English; (b) Spanish; (c) Portuguese; (d) Other	Yosso (2005)
IPI-5	When alive, what used to be the languages your father figure could speak? Mark all that apply	(a) English; (b) Spanish; (c) Portuguese; (d) Other	Yosso (2005)
IPI-6	My parents (or those who raised me) encourage me to learn about my family's history.	Likert Scale	Yosso (2005); Sablan (2019)
IPI-6	My parents (or those who raised me) have passed down stories about my family.	Likert Scale	Yosso (2005); Sablan (2019)
IPI-6	I know about my family history because of my parents (or those who raised me).	Likert Scale	Yosso (2005); Sablan (2019)
IPI-6	My parents (or those who raised me) are good role models.	Likert Scale	Yosso (2005); Sablan (2019)
EAI-1	My professors have been always available to discuss my academic concerns.	Likert Scale	UES - Gloria and Kurpius (1996)
EAI-1	I am satisfied with the number of opportunities my college has given me that were focused on my academically growth.	Likert Scale	Yosso (2005)
EAI-1	I am satisfied with the academic opportunities given to me by my college to fight inequality	Likert Scale	Yosso (2005)
EAI-1	I believe racism is a major issue in academia	Likert Scale	Yosso (2005); Sablan (2019)
EAI-1	I believe my academic institution does their part to stop racism in academia from happening.	Likert Scale	Yosso (2005); Sablan (2019)
EAI-2	What is (was) your college GPA?	(a) Less than 2.0; (b) 2.01 – 2.49; (c) 2.5 – 2.99; (d) 3.0 – 3.49; (e) 3.5 – 3.89; (f) 3.9 – 4.0; (g) I	

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
		don't know / I don't have one	
EAI-2	I am satisfied with the extent of my intellectual development since enrolling in college.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-2	My academic performance has had a positive influence on my intellectual growth and interest in ideas.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-2	I am satisfied with my academic performance at my college.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-2	My interest in ideas and intellectual matters has increased since starting college	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-2	I have performed academically as well as I anticipated I would.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-2	Getting good grades is important to me.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-3	My academic interactions with my classmates/peers have had a positive influence on my career aspirations.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-3	My academic interactions with my classmates/peers have had a positive influence on my personal growth.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-4	My academic interactions with my professors have had a positive influence on my career aspirations.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
EAI-4	My academic interactions with my professors have had a positive influence on my personal growth.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
EAI-5	I believe non-Latinx students are more academically capable than me.	Likert Scale	
EAI-5	I believe I do not have what it takes to succeed in college.	Likert Scale	
EAI-5	If I fail, I believe I am the only one to blame.	Likert Scale	
EAI-5	I have had professors who blamed me for my lack of success in a failed assignment, even if I gave my all to succeed.	Likert Scale	Valencia (2010)
EAI-5	I have had classmates who blamed me for my lack of success in a failed assignment, even if I gave my all to succeed.	Likert Scale	Valencia (2010)
EAI-5	I believe my academic institution sees non-Latinx students as more academically capable than Latinx students.	Likert Scale	Valencia (2010)
EAI-5	I believe my professors see non-Latinx students as more academically capable than Latinx students.	Likert Scale	Valencia (2010)
EAI-5	I believe my classmates see non-Latinx students as more academically capable than Latinx students.	Likert Scale	Valencia (2010)
EAI-5	I have had professors who assumed negative things about my academic skills that are, in fact, not real.	Likert Scale	Valencia (2010)
EAI-5	I have met classmates who assumed negative things about my academic skills that are, in fact, not real.	Likert Scale	Valencia (2010)
EAI-5	I have had professors who unjustly used their power over me.	Likert Scale	Valencia (2010)
EAI-5	My academic institution labels Latinx students as “at-risk of failure”.	Likert Scale	Valencia (2010)
EAI-5	My academic institution uses the word “minority student” instead of “minoritized student”.	Likert Scale	Valencia (2010)

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
EAI-5	My academic institution labels Latinx students as “minority”.	Likert Scale	Valencia (2010)
EAI-5	My institution has created programs to compensate for deficiencies they believe Latinx students have.	Likert Scale	Valencia (2010)
ESI-1	I am satisfied with the opportunities to meet and interact informally with faculty members	Likert Scale	Empirical Test of Tinto’s model - Pascarella & Terenzini (1980)
ESI-1	Faculty have been available for help outside of class.	Likert Scale	UES - Gloria and Kurpius (1996)
ESI-1	I am satisfied with the number of opportunities to participate in extra-curricular activities given by my college.	Likert Scale	Validation of Tinto’s model – Mannan (2007)
ESI-1	I believe there are social ethnic injustices in my academic community.	Likert Scale	Sablan (2019)
ESI-1	I believe my college does their part to stop social ethnic injustices in my academic community from happening.	Likert Scale	Sablan (2019)
ESI-1	I have faced discrimination in my social interactions while on campus.	Likert Scale	Sablan (2019)
ESI-2	I participate in extracurricular clubs at my college.	Likert Scale	Validation of Tinto’s model – Mannan (2007)
ESI-2	I participate in sports events at my college.	Likert Scale	Validation of Tinto’s model – Mannan (2007)
ESI-2	I participate in cultural events at my college.	Likert Scale	Validation of Tinto’s model – Mannan (2007)
ESI-2	I participate in public lecturers’ seminars at my college.	Likert Scale	Validation of Tinto’s model – Mannan (2007)
ESI-2	I am satisfied with the number of extracurricular I participate in.	Likert Scale	Validation of Tinto’s model – Mannan (2007)
ESI-2	Participation in extra-curricular activities is important to me.	Likert Scale	Validation of Tinto’s model – Mannan (2007)

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
ESI-3	Since coming to college, I have developed close personal relationships with other students.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
ESI-3	The student friendships I have developed at my college have been personally satisfying.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
ESI-3	My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
ESI-3	(*) It has been difficult for me to meet and make friends with other students.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
ESI-3	(*) Few of the students I know would be willing to listen to me and help me if I had a personal problem.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
ESI-3	(*) Most students at my college have values and attitudes different from my own.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
ESI-4	My non-classroom interactions with faculty have had a positive influence on my personal growth.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
ESI-4	My non-classroom interactions with faculty have had a positive influence on my career aspirations.	Likert Scale	Empirical Test of Tinto's model - Pascarella & Terenzini (1980)
O-1	I am able to adapt when changes occur.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	I can deal with whatever comes my way.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	I try to see the humorous side of things when I am faced with problems.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
O-1	Having to cope with stress can make me stronger.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	I tend to bounce back after illness, injury, or other hardships.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	I believe I can achieve my goals, even if there are obstacles.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	Under pressure, I stay focused.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	Under pressure, I think clearly.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	I am not easily discouraged by failure.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	I think of myself as a strong person when dealing with life's challenges.	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-1	I am able to handle unpleasant feelings (like sadness, disappointment, fear, anger, etc.).	Likert Scale	CD-RISC 10 - Campbell-Sills and Stein (2007)
O-2	I believe that I am mentally tough when it comes to exams.	Likert Scale	Academic Resilience Instrument - Martin & Marsh (2006)
O-2	I do not let study stress get on top of me.	Likert Scale	Academic Resilience Instrument - Martin & Marsh (2006)
O-2	I am good at bouncing back from a poor mark/grade in my college work.	Likert Scale	Academic Resilience Instrument - Martin & Marsh (2006)
O-2	I think I am good at dealing with college homework pressure.	Likert Scale	Academic Resilience Instrument - Martin & Marsh (2006)

Code	Proposed Survey Questions	Possible Answer	Adaptation from the Literature
O-2	I do not let a bad mark affect my confidence.	Likert Scale	Academic Resilience Instrument - Martin & Marsh (2006)
O-2	I am good at dealing with setbacks at my college (e.g., bad mark, negative feedback on my work, etc.)	Likert Scale	Academic Resilience Instrument - Martin & Marsh (2006)
O-3	Considering my career as a whole, the organizations I have worked for have recognized me as a good performer.	Likert Scale	SCSI - Shockley et al. (2016)
O-3	Considering my career as a whole, I have been known for the high quality of my work.	Likert Scale	SCSI - Shockley et al. (2016)
O-3	Considering my career as a whole, I think my work has been meaningful.	Likert Scale	SCSI - Shockley et al. (2016)
O-3	Considering my career as a whole, the organizations I have worked for have considered my opinion regarding important issues.	Likert Scale	SCSI - Shockley et al. (2016)
O-3	Considering my career as a whole, I have chosen my own career path.	Likert Scale	SCSI - Shockley et al. (2016)
O-3	Considering my career as a whole, I have been able to be a good employee while maintaining quality non-work relationships.	Likert Scale	SCSI - Shockley et al. (2016)
O-3	Considering my career as a whole, I have continuously improved by developing my skill set.	Likert Scale	SCSI - Shockley et al. (2016)
O-3	Considering my career as a whole, my career is personally satisfying.	Likert Scale	SCSI - Shockley et al. (2016)

Note. This table represents all questions asked in this study survey, pointing out where from the literature the questions are based from. The 6-point Likert scale ranged from (a) strongly disagree; (b) disagree; (c) slightly disagree; (d) slightly agree; (e) agree; and (f) strongly agree.

Appendix B:
IRB Approval Letter



University Human Subjects Review Committee

Apr 20, 2021 2:51:47 PM EDT

Andreia de Carvalho Gendera
Eastern Michigan University, Leadership and Counsel

Re: Exempt - Initial - UHSRC-FY20-21-210 Quantitative Analysis of Contributing Factors of Career Success, Overall and Academic Resilience in Higher Education: A Refinement of Tinto's Theory to Stop Latinx Oppression

Dear Andreia de Carvalho Gendera:

The Eastern Michigan University Human Subjects Review Committee has rendered the decision below for Quantitative Analysis of Contributing Factors of Career Success, Overall and Academic Resilience in Higher Education: A Refinement of Tinto's Theory to Stop Latinx Oppression. You may begin your research.

Decision: Exempt

Selected Category: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Renewals: Exempt studies do not need to be renewed. When the project is completed, please contact human.subjects@emich.edu.

Modifications: Any plan to alter the study design or any study documents must be reviewed to determine if the Exempt decision changes. You must submit a modification request application in [Cayuse IRB](#) and await a decision prior to implementation.

Problems: Any deviations from the study protocol, unanticipated problems, adverse events, subject complaints, or other problems that may affect the risk to human subjects must be reported to the UHSRC. Complete an incident report in [Cayuse IRB](#).

Follow-up: Please contact the [UHSRC](#) when your project is complete.

Please contact human.subjects@emich.edu with any questions or concerns.

Sincerely,

Eastern Michigan University Human Subjects Review Committee

Appendix C:

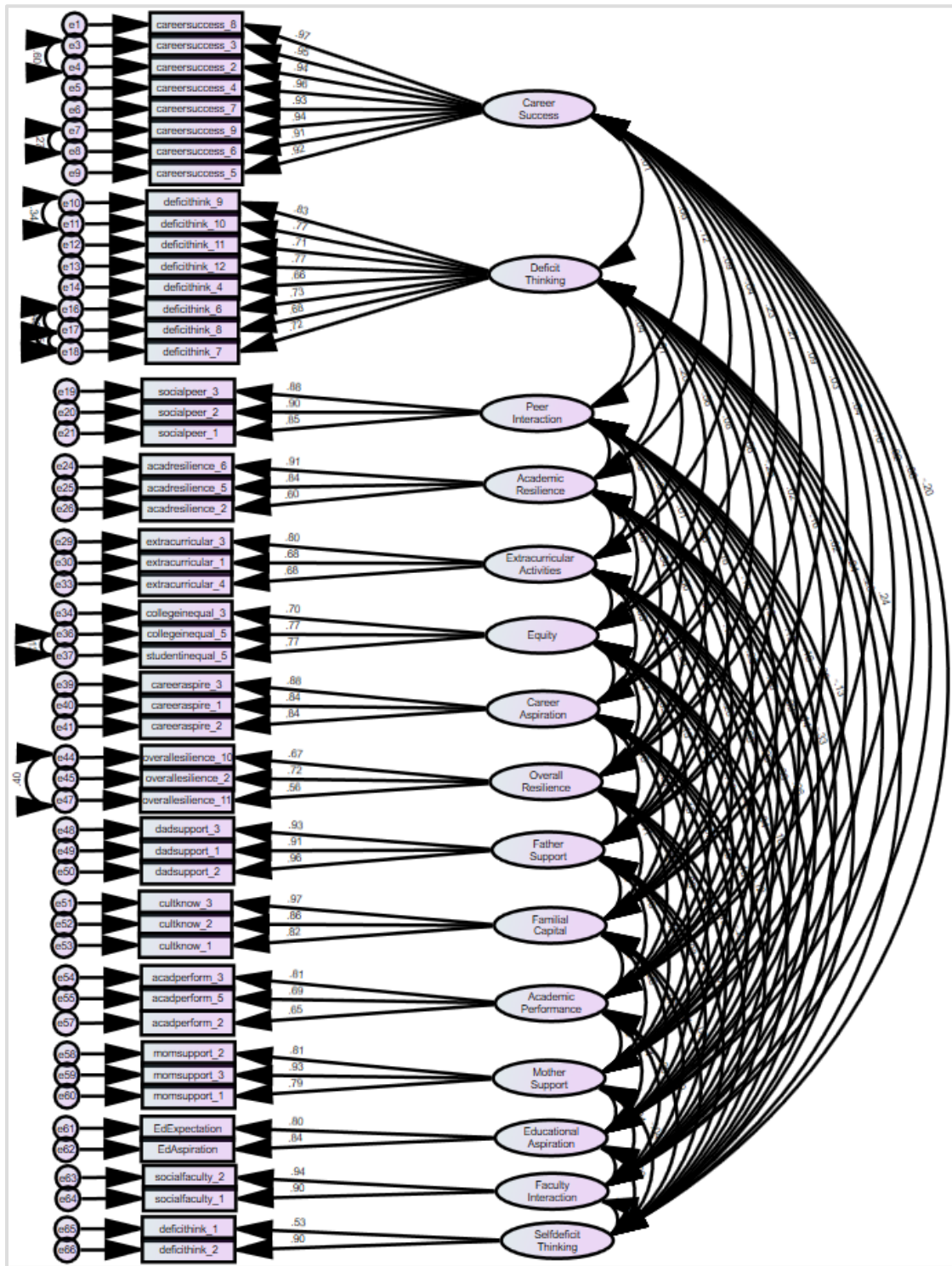
Exploratory Factor Analysis Pattern Matrix

Pattern Matrix	
	Component
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
careersuccess_8	0.969
careersuccess_1	0.969
careersuccess_3	0.964
careersuccess_2	0.959
careersuccess_4	0.953
careersuccess_7	0.944
careersuccess_9	0.930
careersuccess_6	0.929
careersuccess_5	0.912
deficithink_9	0.924
deficithink_10	0.869
deficithink_11	0.798
deficithink_12	0.753
deficithink_4	0.705
deficithink_5	0.692
deficithink_6	0.655
deficithink_8	0.627
deficithink_7	0.576
socialpeer_3	0.872
socialpeer_2	0.860
socialpeer_1	0.839
acadpeer_2	0.742
acadpeer_1	0.639
acadresilience_6	0.844
acadresilience_5	0.824
acadresilience_2	0.798
acadresilience_3	0.665
acadresilience_4	0.653
extracurricular_3	0.811
extracurricular_1	0.758
extracurricular_5	0.706
extracurricular_6	0.693
extracurricular_4	0.679
collegeinequal_3	0.837
collegeinequal_2	0.806
collegeinequal_5	0.742
studentinequal_5	0.705
studentinequal_3	0.596
careeraspire_3	0.928
careeraspire_1	0.868
careeraspire_2	0.827
careerexpect	0.676
overallesilience_1	0.798
overallesilience_10	0.747
overallesilience_2	0.742
overallesilience_3	0.698
overallesilience_11	0.605
dadsupport_3	0.952
dadsupport_1	0.951
dadsupport_2	0.944

Pattern Matrix	
cultknow_3	0.950
cultknow_2	0.944
cultknow_1	0.842
acadperform_3	0.804
acadperform_5	0.772
acadperform_6	0.653
acadperform_2	0.591
momsupport_2	0.902
momsupport_3	0.900
momsupport_1	0.851
EdExpectation	0.904
EdAspiration	0.864
socialfaculty_2	0.868
socialfaculty_1	0.854
deficithink_1	0.868
deficithink_2	0.705

Note. This table represents the items present in each of the 15 EFA's factors and their loadings.

Appendix D:
Confirmatory Factor Analysis



Note. This figure represents the generated CFA in this study.

Appendix E:**CFA Standardized Regression Weights**

Standardized Regression Weights			Estimate
careersuccess_8	<---	Career_Success	0.973
careersuccess_3	<---	Career_Success	0.954
careersuccess_2	<---	Career_Success	0.936
careersuccess_4	<---	Career_Success	0.96
careersuccess_7	<---	Career_Success	0.934
careersuccess_9	<---	Career_Success	0.935
careersuccess_6	<---	Career_Success	0.911
careersuccess_5	<---	Career_Success	0.916
deficithink_9	<---	Deficit_Thinking	0.827
deficithink_10	<---	Deficit_Thinking	0.769
deficithink_11	<---	Deficit_Thinking	0.714
deficithink_12	<---	Deficit_Thinking	0.774
deficithink_4	<---	Deficit_Thinking	0.656
deficithink_6	<---	Deficit_Thinking	0.732
deficithink_8	<---	Deficit_Thinking	0.675
deficithink_7	<---	Deficit_Thinking	0.72
socialpeer_3	<---	Peer_Interaction	0.88
socialpeer_2	<---	Peer_Interaction	0.904
socialpeer_1	<---	Peer_Interaction	0.852
acadresilience_6	<---	Academic_Resilience	0.913
acadresilience_5	<---	Academic_Resilience	0.842
acadresilience_2	<---	Academic_Resilience	0.6
extracurricular_3	<---	Extracurricular_Activities	0.801
extracurricular_1	<---	Extracurricular_Activities	0.679
extracurricular_4	<---	Extracurricular_Activities	0.677
collegeinequal_3	<---	Equity	0.703
collegeinequal_5	<---	Equity	0.772
studentinequal_5	<---	Equity	0.77
careeraspire_3	<---	Career_Aspiration	0.876
careeraspire_1	<---	Career_Aspiration	0.838
careeraspire_2	<---	Career_Aspiration	0.835
overallresilience_10	<---	Overall_Resilience	0.674
overallresilience_2	<---	Overall_Resilience	0.719
overallresilience_11	<---	Overall_Resilience	0.559
dadsupport_3	<---	Father_Support	0.934
dadsupport_1	<---	Father_Support	0.912
dadsupport_2	<---	Father_Support	0.957
cultknow_3	<---	Familial_Capital	0.968
cultknow_2	<---	Familial_Capital	0.856
cultknow_1	<---	Familial_Capital	0.815

Standardized Regression Weights			Estimate
acadperform_3	<---	Academic_Performance	0.812
acadperform_5	<---	Academic_Performance	0.695
acadperform_2	<---	Academic_Performance	0.653
momsupport_2	<---	Mother_Support	0.807
momsupport_3	<---	Mother_Support	0.935
momsupport_1	<---	Mother_Support	0.787
EdExpectation	<---	Educational_Aspiration	0.804
EdAspiration	<---	Educational_Aspiration	0.836
socialfaculty_2	<---	Faculty_Interaction	0.941
socialfaculty_1	<---	Faculty_Interaction	0.905
deficithink_1	<---	Selfdeficit_Thinking	0.528
deficithink_2	<---	Selfdeficit_Thinking	0.904

Note. This table represents the standardized regression weights of the CFA in this study.

Appendix F:**CLF Standardized Regression Weights**

Standardized Regression Weights			Estimate
careersuccess_3	<---	Career_Success	0.948
careersuccess_8	<---	Career_Success	0.965
careersuccess_4	<---	Career_Success	0.952
careersuccess_2	<---	Career_Success	0.931
careersuccess_7	<---	Career_Success	0.932
careersuccess_9	<---	Career_Success	0.918
careersuccess_6	<---	Career_Success	0.902
careersuccess_5	<---	Career_Success	0.899
deficithink_9	<---	Deficit_Thinking	0.814
deficithink_10	<---	Deficit_Thinking	0.722
deficithink_11	<---	Deficit_Thinking	0.727
deficithink_4	<---	Deficit_Thinking	0.637
deficithink_12	<---	Deficit_Thinking	0.722
deficithink_6	<---	Deficit_Thinking	0.695
deficithink_8	<---	Deficit_Thinking	0.626
deficithink_7	<---	Deficit_Thinking	0.671
acadresilience_2	<---	Academic_Resilience	0.577
acadresilience_6	<---	Academic_Resilience	0.889
acadresilience_5	<---	Academic_Resilience	0.842
collegeinequal_3	<---	Equity	0.637
collegeinequal_5	<---	Equity	0.665
studentinequal_5	<---	Equity	0.578
socialpeer_2	<---	Peer_Interaction	0.85
socialpeer_3	<---	Peer_Interaction	0.726
socialpeer_1	<---	Peer_Interaction	0.767
extracurricular_3	<---	Extracurricular_Activities	0.697
extracurricular_1	<---	Extracurricular_Activities	0.556
extracurricular_4	<---	Extracurricular_Activities	0.702
careeraspire_3	<---	Career_Aspiration	0.838
careeraspire_1	<---	Career_Aspiration	0.797
careeraspire_2	<---	Career_Aspiration	0.798
dadsupport_1	<---	Father_Support	0.852
dadsupport_2	<---	Father_Support	0.871
dadsupport_3	<---	Father_Support	0.86
overallesilience_2	<---	Overall_Resilience	0.696
overallesilience_10	<---	Overall_Resilience	0.58
overallesilience_11	<---	Overall_Resilience	0.52
cultknow_3	<---	Familial_Capital	0.964
cultknow_2	<---	Familial_Capital	0.859
cultknow_1	<---	Familial_Capital	0.82

Standardized Regression Weights			
acadperform_3	<---	Academic_Performance	0.827
acadperform_5	<---	Academic_Performance	0.601
acadperform_2	<---	Academic_Performance	0.505
momsupport_3	<---	Mother_Support	0.933
momsupport_2	<---	Mother_Support	0.806
momsupport_1	<---	Mother_Support	0.783
EdExpectation	<---	Educational_Aspiration	0.782
EdAspiration	<---	Educational_Aspiration	0.852
socialfaculty_2	<---	Faculty_Interaction	1.394
socialfaculty_1	<---	Faculty_Interaction	0.511
deficithink_1	<---	SelfDeficit_Thinking	0.565
deficithink_2	<---	SelfDeficit_Thinking	0.839

Note. This table represents the standardized regression weights of the CLF of this study.