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XINACHTLI: EXPLORING THE EXPERIENCES OF YOUNG RESILIENT LATINAS IN A RURAL AND UNDER-RESOURCED COMMUNITY

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XINACHTLI: EXPLORING THE EXPERIENCES OF YOUNG RESILIENT
LATINAS IN A RURAL AND UNDER-RESOURCED COMMUNITY

A Dissertation
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
in
Educational Leadership

by
Deborah Hernandez

May 2023

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May 2023

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ABSTRACT

This interpretive phenomenology study aimed to explore the lived experiences of young Latinas in a rural and under-resourced community. The analysis of the messages received by young women in educational institutions, at home, and in science and math classes was necessary due to the underrepresentation of Latinas in STEM fields. Using an interpretive phenomenology lens, the researcher collected journals from seven participants. Additionally, semi-structured interviews were conducted with all seven participants every week for 16 weeks by the Xinachtli facilitator. The data collected from the journals were transcribed in a line-by-line analysis and affirmed using qualitative analysis. The codes were studied to determine how they connected to the research questions. An exit survey was completed by the seven participants, and this helped determine the most important elements of the Xinachtli program. The resulting data showed that: (1) Latinas navigate being labeled and silenced at school through resistance, despite this survival mechanism going against the gender socialization of their culture; (2) the relationships maintained between the participants and their families were complex, and this complexity was especially significant when it came to the relationships the participants held with their mothers; (3) rural and under-resourced schools experience shortages of qualified educators, which resulted in a lack of relatedness to science and math courses, limiting opportunities to prepare for college; (4) Xinachtli provided the young Latinas opportunities to

develop relationships with positive women role models, led to zero acts of violence during the 16 weeks, and improved self-regulation, (5) programs like Xinachtli are essential in developing young women's mindfulness, self-regulation, and self-efficacy. Holistic practices allow students to be seen, heard, and their realities acknowledged.

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I remember the doctoral program orientation so vividly, and it feels surreal that this journey has come to an end. I felt scared, per usual, given my history of imposter syndrome. I also felt excited to meet all the people in my cohort. One thing mentioned at orientation was how we would sacrifice our weekends to attend class on Saturdays, but quite frankly, it is difficult for me to think of a Saturday I didn't enjoy. Each lesson was different, I learned new strategies to implement in my classroom, and Jerry would convince me to try a new restaurant each weekend. Pursuing my doctoral degree was beautiful, and graduating was a dream come true. I would like to acknowledge those who helped me reach the conclusion of my doctoral journey.

The individuals in my cohort became friends and through this doctoral program, we shared great milestones together. Having their support and learning from them was a unique experience that I will never forget.

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DEDICATION

In memory of my grandfather, Sacramento, who left a beautiful impression on the value of education by accompanying me to school one step at a time.

To my mom Norma, dad Roberto, and brother Roberto Jr. Thank you for always believing in me and for all your love and support. *¡Los quiero mucho!*

To Jerry, thank you for joining me on this journey. I love you.

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CHAPTER ONE: INTRODUCTION

The Latino population in the United States is growing rapidly, but demographic trends indicate that this growth will not be reflected in the higher education student population while the Latino population in primary and secondary schools will continue to rise for years to come (Chapa & De La Rosa, 2006). Without the appropriate support, only a small percentage of Latinos will pursue higher education and even fewer will obtain graduate degrees (Chapa & De La Rosa, 2006).

In 2018, 23% of Latino children had parents who had not completed high school, in comparison to 3% of Whites; 21% of Latinos between 25-29 years of age had a bachelor's degree, in comparison to 45% of Whites; 9.5% of master's degrees were earned by Latinos, in comparison to 53.7% by Whites; and finally, 7.5% of doctoral degrees went to Latinos, in comparison to 57.4% to Whites (Latino Students – PNPI, 2021). The demographic data shows that, while the Latino population is the fastest-growing ethnic group in the United States, representation in higher education remains disproportionate.

Problem Statement

Accounting for gender further highlights the underrepresentation of the Latino population in higher education as, across the United States, Latinas remain underrepresented in science, technology, engineering, and mathematics (STEM) fields. Additionally, from 1997 to 2017, women in computer and

mathematical sciences declined from 31% to 27% (Science and Engineering Labor Force | NSF - National Science Foundation, 2021.).

The gender gap in STEM fields is often attributed to a lack of women role models and gender stereotypes that discourage women from being a part of STEM programs and careers. Throughout the history of the United States, social norms have considered women to be less intelligent or capable compared to their male counterparts (Banda & Flowers, 2018; Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013; Starobin & Bivens, 2014; Why Are There So Few Women In STEM, n.d.). As such, this dissertation focuses on young Latinas in STEM because the researcher works directly with this population in an academic setting, deems it essential for educators to understand the experiences shaping young Latinas' self-efficacy in STEM, given that, as of 2019, only 15% of Hispanics/Latinos met the secondary science standards, out of which only 21% were girls, and focuses on Latinas in STEM because the Latino/Hispanic population is the fastest-growing minority in the United States (2019 State, 2019; Frey, 2020). Due to the country's shifting demographics, Latinas must be empowered to navigate STEM fields.

By studying the experiences of young Latinas in secondary education, the researcher hopes to better understand what factors contribute to their academic success in STEM classes. Furthermore, by focusing on this group of young women, it will also be possible to understand some of the driving forces that empower young Latinas to succeed in school.

Purpose Statement

The purpose of this study is to explore the lived experiences of adolescent Latinas participating in a character development program called Xinachtli. Xinachtli (Nahuatl for “germinating seed”) is a youth character development program that provides a dialectic process of reflection, critical consciousness, creation, and action. Xinachtli incorporates indigenous principles to help young women transition into adulthood by giving them a safe space to explore cultural norms, traditions, and social expectations. The researcher decided to pursue this study because of their Latino roots, their completion of a bachelor's in science, and their profession as secondary science teachers. This study aims to contribute to the research exploring resilient Latinas' complexities, strengths, and hopes.

Research Questions

1. How do young Latinas who participate in Xinachtli navigate being labeled and silenced at school?
2. How do young Latinas who participate in Xinachtli navigate being labeled and silenced by their families?
3. How do young Latinas who participate in Xinachtli navigate being labeled and silenced in their science and math courses?
4. How do the self-efficacy beliefs of young Latinas who participate in Xinachtli and are part of a society that labels and silences women, change over 16 weeks?

5. What do young Latinas who participate in Xinachtli identify as the most meaningful elements?

Significance of the Study

The U.S. population is increasingly shifting towards a Latino majority, however, the demographics indicate that many Latino students have backgrounds that are considered “high-needs” and associated with low school attainment, including low-income households, low levels of parental education, and enrollment in underperforming schools (“Brown Paper: Lifting Latinos,” 2012; U.S. Latinos Suffer High Hunger, Poverty Rates, 2017; Chapa & De La Rosa, 2006; Gándara, 2010). To better support and prepare Latinos, there need to be appropriate interventions in place because, without such support, the greater degree of underrepresentation of Latinos in higher education programs will continue to magnify, soon making positions of influence and leadership inaccessible to Latinos (Chapa & De La Rosa, 2006; Gándara, 2010).

Theoretical Underpinnings

This research study focused on improving Latinas' self-efficacy beliefs through a character development program with the following theoretical frameworks:

Self-efficacy

Self-efficacy is when people understand how to exercise personal control of their lives toward having a greater likelihood of seeing desired outcomes. The

perceived self-efficacy a person has of themselves can be affected by mastery experiences, vicarious experiences, social persuasion, and psychological and emotional states (Bandura, 1995).

Self-efficacy is closely linked to resiliency and is used to study physical health, mental health, and risk-taking behaviors in adolescents (Beavers et al., 2015; Dupéré et al., 2012; Odaci, 2013; Schanen et al., 2017). Lowered self-efficacy affects the perceptions of the self and the environment, which indirectly impacts adolescent internalizing problems (Dupéré et al., 2012). Not only has self-efficacy been found to be an important factor in physical and mental health separately, but it has also been studied in relationships and been found to affect middle school students' sense of self-agency. Schanen et al. (2017) explain the importance of understanding the consequences of actions for preventing teenage violence, domestic violence, and sexual assault (Schanen et al., 2017).

Academic self-efficacy

In education, self-efficacy is measured in correlation to academic performance (Brady-Amoon & Fuertes, 2011; Manzano-Sanchez et al., 2018; Masud et al., 2016). It has been recommended that schools consider the self-beliefs of students, as these impact their self-efficacy and self-agency, ultimately affecting perspectives on academic and career planning and performance (Brady-Amoon & Fuertes, 2011). Unlike grade-point averages and standardized pre-college exams, self-efficacy has better accounted for the variance observed in college performance (Brady-Amoon & Fuertes, 2011). While schools and

educators play an important role in the development of students' self-efficacy, studies also point to parenting as a significant source of self-efficacy beliefs (Masud et al., 2016). Consequently, research recommends networking between parents and teachers to improve academic performance (Masud et al., 2016).

Assumptions

When studying the Latino population, the literature is extensively focused on: Latinas in undergraduate STEM programs; Latinas in higher education; Latino self-efficacy; Latino families, and Latino academic achievement. However, the connection of the Latino population with the future of the nation is explicitly explained by Gandara (2010). The research of Gandara (2010) found that Latino-focused interventions were most effective when there was: (1) a person within the program whose main focus was to get to know, connect, and monitored the growth of each student; (2) a peer group that reinforced program goals; (3) a college preparatory curriculum; (4) cultural relevance; and (5) financial education, such as the existence of scholarships (Gándara, 2010). Due to these findings in the literature, and how many of these characteristics are found in the Xinachtli program, the researcher believed that Xinachtli would positively impact the academic experiences of the participants.

Delimitations

The Xinachtli character development program was new to the site of study, and its novelty brought challenges with recruiting participants as the

researcher asked the participating young women to voluntarily attend meetings once a week during lunch, which was usually their free time to socialize with peers. Additionally, the participants were volunteers and were not financially compensated for their time. At many other sites within the district, Xinachtli was used as an intervention for troubled youth, this initially gave prospective students the impression that they were in this program for disciplinary purposes, which was not the case. As such, the timing of meetings, lack of financial compensation for the participants, and stereotypes of the program based on students' curiosity about other schools caused the number of participants to remain small.

Definitions of Key Terms

The following are some of the most frequently used terms throughout the study, as well as an explanation of their definition in this research study.

Xinachtli

In this study, Xinachtli (Nahuatl for “germinating seed”) was a youth character development program that provided a dialectic process of reflexión (reflection), concientización (critical consciousness), creación (creation), and acción (action). Xinachtli incorporated indigenous principles to help young women transition into adulthood by learning to advocate for themselves and others through the process of nurturing, germinating, or growing a seed, wherein the term “seed” symbolized cultural knowledge (Haskie-Mendoza (2012), Godina (1994), Romero (2009), Wolf & Gutierrez, (2012).

Latina

In this study, the term Latina is an umbrella term used to encompass the diversity of the participants, including immigrant and U.S.-born women from different Latin American countries (Bernal, 1998).

Self-efficacy

Bandura (1995) described self-efficacy as the understanding people develop when exercising personal control in their lives. Self-efficacy leads to a greater likelihood of seeing valued outcomes (Bandura, 1995). The perceived self-efficacy a person has of themselves can be affected by mastery experiences, vicarious experiences, social persuasion, and psychological and emotional states (Bandura, 1995).

Phenomenology

A phenomenology is an interpretive approach to research that seeks to describe the essence of a phenomenon by exploring it from the perspective of those who have experienced it (Neubauer, Witkop, Varpio).

Summary

There is a growing number of Latinos in the United States. This increase is not reflected in higher education institutions, which leads to many questions about why Latinos continue to be underrepresented. Understanding this underrepresentation has led many researchers to study lived experiences, self-efficacy, and self-regulation. Numerous studies exploring the academic journeys that shape the self-efficacy beliefs of Latinos show that increased self-efficacy

and self-regulation are linked to academic achievement (Bandura, 1995; Beavers et al., 2015; Bong et al., 2015; Brady-Amoon & Fuertes, 2011; Falco & Summers, 2019; Manzano-Sanchez et al., 2018).

An even greater problem than the Latino underrepresentation in higher education is the shortage of Latinas in STEM fields. Factors contributing to the marginalization of Latinas in STEM have been explored through the higher education lens, and it has been found that young women are discouraged from entering these fields due to lack of women role models with whom they identify, and the gendered stereotypes that society inflicts on them.

The Xinachtli youth character development program in this study hoped to understand the messages that young women received in secondary education, and how the words they heard influenced their self-efficacy beliefs. Xinachtli was a character development program that was culturally responsive, focused on the individual, encompassed topics of social justice, explored intersectionality, and informed the youth of hegemonic power. The Xinachtli program showed the young Latinas how to set boundaries in their lives, which empowered them. By exploring the complexities of young Latinas in a rural and under-resourced community, the researcher was able to share the role of educators and families in the self-efficacy beliefs of young Latinas.

This phenomenology study focused on the following qualitative research questions:

1. How do young Latinas who participate in Xinachtli navigate being labeled and silenced at school?
2. How do young Latinas who participate in Xinachtli navigate being labeled and silenced by their families?
3. How do young Latinas who participate in Xinachtli navigate being labeled and silenced in their science and math courses?
4. How do the self-efficacy beliefs of young Latinas who participate in Xinachtli and are part of a society that labels and silences women, change over 16 weeks?
5. What do young Latinas who participate in Xinachtli identify as the most meaningful elements?

CHAPTER TWO: LITERATURE REVIEW

The purpose of this study was to explore the academic journey of young Latinas through a program called Xinachtli. Xinachtli is a term in Nahuatl meaning germinating seed and is used throughout the literature to represent the fostering of cultural knowledge. Xinachtli provides various opportunities for the participants to learn through reflection, critical consciousness, creation, and action. In addition to this, Xinachtli incorporates indigenous principles to help young women transition into adulthood by learning about respect, communication, and their role in the communities they inhabit. Much research is done on Latinas in STEM when it comes to higher education, as well as in Latino self-efficacy. In addition to these common topics of research, quite often research focuses on la familia, for its positive correlations with Latino academic achievement. Due to these findings in previous literature, the researcher believed that this program could increase Latinas' self-efficacy, and possibly impact their performance in science and mathematics courses. This topic was pursued because the researcher is a Latina with a bachelor's in science and is a secondary science educator. Through this study, the researcher hoped to contribute to the research in the area of Latina academic self-efficacy.

Latinos in the United States

The Latino population in the United States is growing rapidly, however, demographic trends reveal that this growth will not be evident in higher education either as students, or faculty (Chapa & De La Rosa, 2006). Inevitably, the increase in the Latino population will be reflected in K-12 schools (Chapa & De La Rosa, 2006). However, without the appropriate support, only a small portion of Latinos will pursue higher education, and even fewer will obtain graduate degrees (Chapa & De La Rosa, 2006). The educational pipeline for Latinos is large but has massive leaks. The ultimate result is that graduate degree recipients from the nation's colleges and universities do not reflect the racial and ethnic diversity of the population (Chapa & De La Rosa, 2006, p. 203).

As of 2018, 23% of Hispanic children have parents who have not completed high school, in comparison to 3% of Whites; 21% of Latinos between 25-29 years of age have a bachelor's degree, in comparison to 45% in Whites; 9.5% of master's degrees were earned by Latinos, in comparison to 53.7% for Whites; and finally, 7.5% of doctoral degrees went to Latinos, in comparison to 57.4% for Whites (Latino Students – PNPI, 2022).

In the next ten years, the Hispanic population is expected to go from 62.3 million to 74.8 million, this would make the entire U.S. population 21% Latino (U.S. Census Bureau, 2018). In comparison to other minority groups, the percentage of Latinos obtaining bachelor's degrees does not seem to be increasing concurrently with a growing population. The Latino population is

becoming the largest and most rapidly growing ethnic minority, and yet continues to be an underrepresented group in many higher education programs (Gandara, 2010). This is a problem because the Latino population is closely tied to the nation's future (Gandara, 2010).

The U.S. population is increasingly becoming Latino, and with this transformation, it has become evident that many Latino boys and girls grow up in very challenging conditions. The demographics show that many Latino youth have backgrounds that are generally considered "high-needs," and associated with low school attainment ("Brown Paper: Lifting Latinos Up," 2012; U.S. Latinos Suffer High Hunger, Poverty Rates, 2017; Gándara, 2010). While not exclusive to the Latino population, it is common for Latinos to experience one or more of the following: low-income households, low levels of parental education, and enrollment in underperforming schools; factors that have been found to limit educational success ("Brown Paper: Lifting Latinos Up," 2012; U.S. Latinos Suffer High Hunger, Poverty Rates, 2017; Chapa & De La Rosa, 2006). To better support and prepare Latinos, there need to be appropriate interventions in place (Chapa & De La Rosa, 2006). Over time, populations change and grow, what stands out about the Latino demographics is that through international migration and increased birthrates, it will continue to grow much faster than the overall population in the upcoming decades (Chapa & De La Rosa, 2006). Therefore, higher education institutions across the nation need to explore ways in which they can recruit and graduate Latinos (Gándara, 2010). It has been observed that

the higher the education program, the greater the degree of underrepresentation (Chapa & De La Rosa, 2006). Unfortunately, if Latino underrepresentation in higher education continues, Latinos will be unable to obtain positions of influence and leadership (Chapa & De La Rosa, 2006).

During Donald Trump's presidency (2017-2021), there was an increase in animosity against Latino immigrants that further excluded and marginalized this minority group. Many Latinos were left feeling they didn't belong in the colleges they were (Sáenz, 2020). Similarly, to Chapa and De La Rosa (2006), Saenz (2020) points out some of the factors that make it difficult for Latinos to matriculate in college; like limited economic resources, covering tuition costs, and being the first to navigate the higher education system in their family. These challenges yield a huge loss of human capital and economic resources for the country because Latinos are underrepresented in higher education (Chapa & De La Rosa, 2006; Sáenz, 2020). Saenz (2020) analyzed the likelihood of Latinos enrolling in college and found that the Latino population is much more youthful in comparison to the aging White population. This means that Latinos are becoming increasingly important in the sustainability of the nation's many colleges.

Through a descriptive and inferential analysis of longitudinal data from 2003 to 2013, the public institutions of higher education in the U.S. studied the rapid growth of Latinos and their underrepresentation in higher education (Hatch et al., 2016). This study drew attention to the existing inequities not just in our education system, but in our society overall (Hatch et al, 2016). Hatch et al.

(2016) emphasized that while there is a disparity between Latino students in higher education, the disparity is even greater when it comes to Latinos in leadership ranks at two-year colleges and four-year universities. Hatch et al. (2016) explained that in California alone, the number of Latino faculty and administrators in public universities does not accurately reflect the growth of Latinos in the state or the undergraduate student body. In other words, inequities in the participation of Latinos exist when it comes to students, but even more so in faculty and administrator positions (Hatch et al., 2016). Further, Hatch et al. (2016) conclude that the gap between Latino students and the proportion of Latino faculty and administration across the states is rapidly growing. Hatch et al. (2016) further explain that in the foreseeable future, the gap between Latino students and faculty will not achieve equitable representation without exceptional effort and structural changes, which coincide with the interventions and supports recommendations made by Chapa and De La Rosa (2006).

Latinas in STEM Education

Since 1990, the number of occupations in science, technology, engineering, and mathematics has increased from 9.7 million to 17.3 million (Graff et al., 2013). This change in STEM occupations surpasses the average U.S. job growth (Graf et al, 2013). STEM jobs are those in computer, math, engineering, architecture occupations, physical science, life science, and health occupations (like health care practitioners and technicians) (Graf et. al, 2013). In the last thirty years, there has been an increase in the number of Latinos

pursuing Science, Technology, Engineering, and Mathematics (Cantú, 2012). In biology, as well as in biomedical sciences, the presence of Latinas has increased, however, in fields consisting of engineering and computer science, Latinas are still extremely underrepresented (Cantu, 2012). This gender gap between Latinas and their White, affluent counterparts continues to be an ongoing issue in STEM fields (Ruiz, 2013). Several studies have delved into the experiences of Latinas in STEM programs and discovered that discrimination, oppression, and a lack of strong women role models, influence how they feel about STEM courses (Banda & Flowers, 2018; Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013; Starobin & Bivens, 2014). This gender discrepancy in the STEM field is even more pronounced when it comes to poor and rural areas, highlighting the educational inequities within high-need communities (Starobin & Bivens, 2014). The double-bind Latinas face in STEM careers has been an ongoing issue, and despite numerous studies, their underrepresentation seems to be far from ending (Banda & Flowers, 2018; Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013; Starobin & Bivens, 2014). The oppression Latinas go through in academic institutions and the discouragement they experience because of cultural norms, continues to be a reality for many who pursue STEM fields (Banda & Flowers, 2018; Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013; Starobin & Bivens, 2014).

Latinas are one of the fastest-growing groups in the United States, yet they participate in STEM careers, overall, less than other minority women

(Harvin, 2016). While many studies point to institutions, professors, and affluent peers and their inability to adequately support and guide Latinas, there is also a cultural factor keeping Latinas from envisioning themselves in STEM fields. This occurrence draws attention to the Latino community. Latinos who are the first in their family to go to college, face many challenges in their journey to self-actualization (Ceballo et al., 2014; Mena, 2011; Simpkins et al., 2015). This is due to the conservative values that parents ingrain in them from their native countries (Ceballo et al., 2014; Mena, 2011; Simpkins et al., 2015). Some of these include conservative and gendered roles, the attachment and physical closeness that is conserved throughout their lives, the idea that women are not to leave their parents' house until they are married, and many others that interfere with the possibility of attending a four-year university overall (Araujo Dawson & Quiros, 2014; Harvin, 2016). In addition to this, Reinking and Martin's (2018) study emphasized the impact that gender socialization has on girls' liking of STEM fields. Reinking and Martin (2018) explain that gender socialization is an important factor because it might become an innate sentiment against STEM fields among young girls. These researchers believed that gender roles within the Latino community devote a more masculine perception to the STEM fields during early development, which leads girls to prefer non-STEM subjects as they enter adulthood (Reinking & Martin, 2018). Patriarchy, which is an imbricated system of privilege and oppression, is present in the United States, and Latinas face this multilayered marginalization through their racial/ethnic identity as well as through

their gendered identity (Alemán, 2018). The socialization of Latinas impacts their life course decisions; they can choose to go to college and have autonomy and independence, or they can subjugate to gendered familism, and give priority to family interests (Aleman, 2018). Reinking and Martin (2018) found that early gender socialization tends to infiltrate undermining attitudes about the intellectual abilities of girls (Reinking & Martin, 2018). The main takeaway of their study was that changing mindsets could increase girls' interest in STEM (Reinking & Martin, 2018). This is a difficult task because socialization involves the reproduction of social norms from one generation to the next; however, it is important because it has been found that socialization is associated with academic achievement, high self-esteem, and positive racial and ethnic identities; contributing to mental well-being and resiliency (Araujo Dawson & Quiros, 2014). Research suggests that talking with girls about the undermining stereotypes and about the gender disparity in STEM careers might lead to a gap closure sooner (Reinking & Martin, 2018). The underrepresentation of Latinas in STEM is one of many concerns in academia, due to there being presumed incompetence that accompanies women of color when they are judged as unfit for certain roles, majors, or careers (Gutiérrez y Muhs et al., 2012).

Research also analyzes the policies that are in place to diminish sexism and oppression in higher education institutions (Banda & Flowers, 2018). While one might hope that there are equitable opportunities in higher education for everyone, testimonies of minority women reveal the opposite, which is a sad

reality in the male-dominated fields of STEM (Banda & Flowers, 2018). The oppression faced by Latinas in STEM is not unique to the education setting; often, in the Latino culture families have different expectations of young men than they do of young women, ultimately considering STEM as masculine and more “appropriate” for males than females (Reinking & Martin, 2018). Latinas face many challenges as students in STEM programs. There is a multitude of factors negatively impacting the experiences of Latinas in science and mathematics courses within primary and secondary schools, as well as their commitment to STEM majors at the undergraduate and graduate levels (Banda & Flowers, 2018; Harvin, 2016; S. Rodriguez et al., 2019). For example, 18.5% of Latino households struggle financially compared to the average of 12.3% of households nationwide, and 19% of Latinos live below the poverty line compared to 12.7% overall (U.S. Latinos Suffer High Hunger, Poverty Rates, 2017). Given these statistics about the Latino population’s socioeconomic status, it is no surprise that pursuing higher education is a challenge and sometimes unattainable (U.S. Latinos Suffer High Hunger, Poverty Rates, 2017).

In pursuing an undergraduate degree, Latinas are beating the odds already, with only 15% of all Latinos obtaining a bachelor’s degree (Pew Research Center, 2017). During their journey through STEM education Latinas are commonly discouraged, have only a few to no role models, experience imposter syndrome, and live in isolation (Gutiérrez y Muhs et al., 2012). During their pursuit of STEM fields, Latinas are a gender, ethnic, and socioeconomic

minority (Banda & Flowers, 2018; Cantú, 2012; Gutiérrez y Muhs et al., 2012). Not surprisingly, many Latinas have encountered sexism, oppression, and a sense of not belonging at one point in their STEM studies (Cantu, 2012). This, along with inadequate preparation in secondary education, an absence of women role models, and exhausted motivation, is enough to discourage many from continuing in STEM (Cantu, 2012). For many Latinas STEM in higher education was not a positive experience (Ruiz, 2013). Ruiz (2013) challenges researchers to put forth practices that “motivate and support Latinas in their academic trajectory.” Like many other researchers, (Banda & Flowers, 2018; Cantú, 2012; Harvin, 2016; Reinking & Martin, 2018, 2018), Alarcon et al (2011) write about the experiences that Latina scholars live through during their academic journeys. Through testimonies, they uncover language assimilation, gender discrimination, racism, and the violence of patriarchy (Alarcon et al, 2011). The findings of these authors were as follows: (1) hegemony has played a huge role in the language developed in schools; (2) oppression and racist remarks have played a role in the way some Latinas dress or present themselves; and (3) testimonies can help Latinas disrupt the patriarchy present in the United States (Alarcon et. al, 2011). The literature studying the absence of Latinas within STEM fields has revealed many negative experiences, however, these challenges have been insufficient in pushing Latinas out of STEM fields, as many continue to push through adversity (Ruiz, 2013).

Despite gendered stereotypes that surround STEM, careers in these areas have many benefits that should be taken advantage of by both men and women. Consider, for example, the fact that STEM careers are well-paid, in high demand, and are not as physically demanding or laborious as others. Given the characteristics of STEM careers, there is a dire need to inform Latino parents so they can recognize the value of STEM careers and support their daughters through majors with systems that are not as welcoming to families of color (Chavez, 2019).

In 2012, Cantu shared the testimonies of successful Latinas in STEM. The common themes Cantu (2012) found concerning factors influencing perseverance in STEM positively included family, community, teachers, mentors, bilingualism, love of reading, and overcoming stigmas. Cantu (2012) also invited future researchers to focus on the stories of successful Latinas in STEM to propose a formula for what is working. The many stories shared in Cantu's (2012) study, helped identify the recurring problems in the STEM field, while also using an asset-based approach to uncover the success stories of Latinas in STEM. Like Cantu (2013), Ruiz (2013) emphasized the strategies that educators can implement to retain Latinas in STEM programs. The case study delineates the most valuable constituents in the academic successes of Latinas in STEM (Ruiz, 2013). Overall, it is found that parental support matters and that a strong and challenging mathematics background is necessary for preparing girls to succeed in STEM fields (Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013). The

main takeaway from this study was that high school math classes need to be rigorous, and girls need to be equipped with strong science and mathematics backgrounds to be confident in their STEM skills (Ruiz, 2013). Similar to Ruiz (2013), Reinking and Martin (2018) also focus on discovering techniques that are successfully mediating a better transfer of knowledge from STEM educators to students. Ultimately, Reinking & Martin (2018) recommend that educators incorporate an increased number of engaging theories, movements, and ideas into STEM curriculums.

Another factor that contributes to the Latinas' avoidance of STEM, is their struggle with identity development within STEM programs (Araujo Dawson & Quiros, 2014; S. Rodriguez et al., 2019). In the literature, it is seen that Latinas often feel that STEM programs do not reflect their intersectional identities (Rodriguez et. al, 2019). Intersectionality is the theoretical framework that studies the heterogeneity of processes, actions, and impacts of marginalization and empowerment (Alemán, 2018). Rodriguez's (2019) study focused on Latinas pursuing engineering majors specifically and discovered that family involvement must be valued by colleges for Latinas to feel a sense of belonging within university programs. This phenomenological study suggested that Latino families should be proactively welcomed on campuses and that more resources should be made available for parents (Chavez, 2019; Rodriguez et al., 2019). By doing this, schools provide families with a better understanding of what higher education is, and subsequently, families can support their children better

(Chavez, 2019; Rodriguez et al., 2019). The study suggests that family influences and interactions might be an important part of the identity development of Latinas in STEM and explains that this would need to be further studied, perhaps through a community cultural wealth or asset-based funds of knowledge lens (Rodriguez et. al, 2019).

In looking specifically for a relationship between parents and student science achievement, Johnson and Hull (2014) examined the role of parental participation. Their research was a longitudinal study focused on cultural and social capitalist theories (Johnson & Hull, 2014). In their study, they analyzed how parent involvement relates to student science achievement in elementary and early secondary education. What they found was that there are multiple forms of parental engagement, which they classify as parental involvement or parental expectations (Johnson & Hull, 2014). These two differ in the role that parents play in schools; parental involvement is described as a parental presence at sports games, performances, fundraisers, and other school events, whereas parental expectations refer to the level of education parents hold their children accountable for (Johnson & Hull, 2014). Additionally, parents of color participate in the lives of their children differently, for instance, by packing lunch, driving to school, and buying school supplies (Chavez, 2019). In other words, involvement is the physical presence of parents in school, while expectations are intrinsic, and reflect the values and principles tied to education. Johnson and Hull's (2014) study did not further explore these modalities of parent participation.

However, Mena's (2011) study also highlighted that, students with parents with high expectations performed better in science courses than parents who are only involved (Johnson & Hull, 2014). The literature also states that during their identity development as STEM majors in undergraduate programs, Latinas rely on peers and educators for validation (S. Rodriguez et al., 2019). This qualitative phenomenological study analyzed the acculturation process of Latinas in STEM programs through the science development and intersectionality models (Rodriguez et al, 2019). Rodriguez found that the likelihood of continuing a STEM major is associated with the self-identity that Latinas develop (Rodriguez et al, 2019). Latinas who felt validated by peers, who pursued despite challenging coursework, and who felt competent in the field, also acknowledged their feelings of overcoming systemic inequities (Rodriguez et al, 2019). This means that for these Latinas their persistence in the STEM programs was fueled by their wanting to overcome the odds. These odds were their gender, ethnicity, race, and socioeconomic status (Rodriguez et al, 2019). The awareness of the underrepresentation of Latinas in STEM was enough to motivate many research participants to overcome failures. However, they also shared a fear of losing their identity due to a lack of communal support in these competitive and patriarchally structured programs (Rodriguez et al, 2019). This study invited researchers to consider how parent involvement and recognition can impact Latinas pursuing STEM majors (Rodriguez et al, 2019).

The education system in The United States is far from perfect, and the testimonies shared throughout the literature expose some of the most uncomfortable realities that are present in the daily lives of Latinos and other minorities of color within numerous institutions (Alarcón et al., 2011; Cantú, 2012; Gándara, 2010; Guajardo et al., 2019). To bridge the transition from high school to higher education, and ultimately into STEM fields, there needs to be an understanding of what drives Latinas to pursue higher education; and most importantly, the intersectionality of Latinas needs to be honored by higher education institutions so that they can feel a sense of belonging (Alemán, 2018; Gutiérrez y Muhs et al., 2012). For many Latino students living in the United States, being of Mexican American descent leads them to be marginalized, this oppression causes an identity dilemma in which they do not feel like they belong in education (Vasquez, 2019). Through an ethnography, Vasquez (2019) describes a journey in college and the changes that occurred when shifting from high-school insecurities to honoring heritage and culture. Vasquez (2019) found that society played a huge role in the development of people, and acknowledged the popular mirroring that adolescents participate in during high school to fit in and survive. This study explains the internal conflicts that occur within many Latinas wanting to speak out, but not doing so; wanting to decide for themselves, but following prescriptions; wanting to exist authentically, but not having freedom (Freire et al., 2014). Time and again, the literature highlights the resiliency of Latinas, acknowledging the stories consisting of struggles and the success that

follows (Graff et al., 2013; Gutiérrez y Muhs et al., 2012; Vasquez, 2019). Critical consciousness is also mentioned in the literature surrounding Latinas in STEM and is considered essential in undoing the nature of oppression and domination (Freire et al., 2014; Graff et al., 2013; Vasquez, 2019). To empower Latinas, the culture of silence needs to be broken (Freire et al., 2014; Reza-López et al., 2014). Through a dialectic process, in which individuals critically engage in conversation about the experiences of those who are unheard, people can begin to understand the intersectionality of Latinas and begin filling the absence of Latinas in STEM fields (Freire et al., 2014; Reza-López et al., 2014; Vasquez, 2019).

Involvement and Expectations of La Familia

Studying the Latino population and its educational trends highlights the crucial role of parents and families in the social and academic development of Latino youth (Arellanes et al., 2019; “Brown Paper: Lifting Latinos Up,” 2012; Kuhlberg et al., 2010; Marrun, 2020). In 2011, Mena studied student persistence in the Latino community. Mena (2011) and Ceballo et al (2014) explained that high drop-out rates increase health issues, drug use, delinquency, unemployment, and overrepresentation in prisons. In Mena’s (2011) study, the aim was to explore the relationships between parental involvement and students’ school beliefs. Mena (2011) found that the influence of parents on children is an invisible, yet fundamental component in the academic performance of students. While the encouragement and expectations occur outside of school, this is a

significant factor that motivates Latinos to want to have a better life (Mena, 2011). Overall, Mena (2011) explains that parent expectations and support can be associated with increased academic outcomes.

For many immigrants, education is the gateway to improving the family's socioeconomic status (Arellanes et al, 2019). Arellanes et al (2019) explored the transition of immigrant Latino families in the United States through an ethnographic study and found that the community, family values, and school practices affect the perceived accessibility of the education system. While as many as 86% of Latino adolescents express a desire or belief in college education to reach success; many are hesitant to set educational goals because of unattainable financial costs, unacquaintedness, and being blindsided by the college (Arellanes et al, 2019). An important ideal in overcoming the fear of the unknown college experience is the concept of familism, which is the "cultural mindset of a collectivist community with shared ideas of reciprocity, loyalty, and solidarity" engrained within Latino family members (Arellanes et al., 2019). Familism teaches Latinos to prioritize the unity of the family, over individual needs (Arellanes et. al., 2019). This aspect of familism is closely associated with the idea of sacrifice for the well-being of the group (Arellanes et. al., 2019). Arellanes et al (2019) study found that Latino parents bargain with their children, encouraging them to study, by asking them to reflect on their work schedule, which consists of waking up at dawn and operating until sunset. This aligns with familism because parents sacrifice their native country, language, and profession

to provide their children with more likable opportunities that can lead to positive and more prestigious roles in the community (Arellanes et. al., 2019). Arellanes et al (2019) also recommend that future researchers keep familism and education in mind when attempting to bridge cultures because these cultural values are essential in the social development of Latino adolescents. Arellanes et al (2019) hint at the potential increase in educational outcomes if community strengths are incorporated into the classroom. While Arellanes et al (2019) indications for future research are slightly different from Mena's (2011), a commonality between them is the familial relationships and expectations that are culturally instilled in the youth.

For many Latino families, living in the United States is perceived as a blessing, especially for those still connected to family in their Native countries. Ceballo et al (2014) explore the idea of gifts and sacrifices in the Latino community. Using a multidimensional conceptualization, Ceballo et al (2014) analyzed the relationship between parental involvement and academic outcomes in a 223 low-income, Latino adolescent sample. These researchers concluded their study by sharing that gifts, sacrifices, planning, academic socialization, and school involvement were positively associated with academics (Ceballo et al, 2014). Ceballo et al (2014) explain how parental involvement is popular in early education, but as children transition into adolescence, parents' involvement in education declines. Ceballo et al (2014) highlight the importance of respect and explain that earlier-generation youth perform more positively in school than later

generations. This is considered the immigrant paradox and is counterintuitive because as part of the acculturation process families gain social and economic resources, but students perform worse academically (Ceballo et al, 2014). In sum, Ceballo et al (2014) multidimensional construct, highlights the importance of sociocultural contexts in the academic performance of Latinos, including histories of immigration, work, and sacrifice (Ceballo et al, 2014). These findings give much credit to the family, which aligns with the findings of Mena (2011) and Arellanes et. al (2019).

Immigrant parents share with their children what it was like to cross the River, the fear of encountering border patrols, and the sacrifice it took for them to be in the United States (Guajardo et al, 2019). The parents of many first-generation college students left their parents behind and moved to a different country with nothing other than a desire to have a better life. They were unwanted guests in the houses of relatives they barely knew, worked the fields, and did whatever they could to give back to their families. For these generations of immigrants, the struggles of their now-American children seem insignificant, to which they often respond by saying “life is full of suffering” (Horner & Martinez, 2015). Horner and Martinez’ (2015) research is an interpretive essay about suffering and its meaning among Mexican American farmworkers. Through dialogue, Horner and Martinez (2015) discovered that, according to Mexican-American farmworkers, suffering is necessary to move toward growth. The participants explained that they never forgot how hard their experiences were as

Mexican American immigrants and that these stories will be inherited by their children (Horner & Martinez, 2015). Learning through suffering is a common theme found in the testimonies of their participants, and this concept is relevant when they explain that suffering to move up in life through education is preferable, to struggling in life without an education (Horner & Martinez, 2015). In addition to this cultural interpretation, suffering is also closely linked to a strong work ethic by many Latinos with immigrant parents (Horner & Martinez, 2015). Much like sacrifice in the description of familism by Arellanes et al (2014), Horner and Martinez (2015) discover that in the Latino culture, upward mobility comes through suffering, in this case meaning physical labor and/or education. Finally, Horner and Martinez explain, that the concept of suffering through discrimination, is closely linked with bettering the future of their children. The researchers describe how some of the immigrants that struggled the most raised their children to not speak Spanish so that they would be socially accepted by hegemonic cultural values (Horner & Martinez, 2015). This led to Mexicans not speaking Spanish in the '60s because they had denied their culture to avoid the experiences of their ancestors (Horner & Martinez, 2015).

Like Horner and Martinez' (2015) telling of the experiences of Mexican American immigrants and their children, Marrun (2020) too, describes stories, sayings, and advice given to first-generation Latino students from their families. Marrun's (2020) multi-sited ethnographic study, focused on challenging the deficit myths that portray Latino parents as unsupportive in educational matters. Marrun

(2020) discovers that much like the participants in Horner and Martinez' (2015) study, Latinos turn to support from their families as a constant reminder of the sacrifices that their families have made to provide them with an opportunity in higher education. This study shines a light on the expectations of Latino parents and like Mena (2011), it too uncovers how high expectations for a career, employment stability, and a better quality of life positively impacts the academic aspirations of Latino youth (Marrun, 2020). Together these stories of sacrifice, high expectations, and moral support served as motivation for Latinos to focus and experience college graduation (Marrun, 2020). Marrun (2020) used an asset-based approach to emphasize the resilient nature of Latino families. Marrun (2020) describes some of the common pressures that are encountered by first-generation Latinos, some of these include: working while in college, translating and interpreting, and fulfilling family obligations. The researchers elaborate on how these family obligations can be time-consuming and overwhelming and recommend that institutions inform Latino families of the time commitment that college represents, so that their sons and daughters may graduate (Marrun, 2020). Marrun (2020) explains that college completion is significant for many immigrant parents because it puts an end to the journey they began when they came to the United States in search of a better life for future generations. Marrun's (2020) study is very rich in its description of family stories and overall brings out the importance of intergenerational support when it comes to the academic journeys, aspirations, and success of Latinos.

The literature that explores motivating factors in Latino academic achievement consistently points to familism (Mena, 2011; Arellanes et al, 2019; Ceballo et al, 2014; Horner & Martinez, 2018; Marrun, 2020). Many studies provide a vivid picture of the hardships faced by immigrants in the United States; they explain possible explanations for underachievement; and define the meaning of sacrifice (Mena, 2011; Arellanes et al, 2019; Ceballo et al, 2014; Horner & Martinez, 2018; Marrun, 2020). Through these research findings, it is evident that the Latino community practices sharing experiences through anecdotes. This cultural tradition helps the youth appreciate where they are in life, as well as pushes them past obstacles to make the generational trauma worthwhile (Mena, 2011; Arellanes et al, 2019; Ceballo et al, 2014; Horner & Martinez, 2018; Marrun, 2020). Guajardo et al (2019) studied the experiences of Llano Grande Organization members, and mention the borderlands like California, Arizona, New Mexico, and Texas. These researchers (Guajardo et al, 2019) explain how these bordering states are representative of an open wound, and like Anzaldua (1987) they also mention the pain and suffering that comes from this open wound.

Holistic Approaches

As pioneers in the age of technology, students have some of the highest levels of connectivity, which has increased stress-induced environments, especially concerning academics, extracurriculars, and athletics (Breen, 2018). In efforts to better support students in managing this anxiety, many California

schools implemented social and emotional learning (SEL), positive behavior intervention strategies (PBIS), culturally relevant curriculum, and other strategies that focused on dialogue and positive interaction between the youth and adults (Breen, 2018; Pike, 2017). Studies in education found that specifying expectations, supporting students through emotional stressors, and nourishing relationships had an overall positive effect on school climate and character development (Breen, 2018; Pike, 2017). With the increased focus on SEL and PBIS in the last 20 years, schools started to shift their attention from content-only, to a more holistic approach (Gagnon et al., 2018; Greenberg et al., 2017). SEL involved the awareness of thinking, emotions, and behaviors throughout daily personal and social challenges (Greenberg et al., 2017), and PBIS consisted of strategies focused on positive behaviors which improved the overall climate of schools, reducing problematic behavior overall (Gagnon et al., 2018). SEL and PBIS helped students learn to be aware of their emotional and social interactions so they could cope and perform better in school (Gagnon et al., 2018; Greenberg et al., 2017). SEL and PBIS were beneficial interventions because they involved dialogue and positive communication, which were also linked to a reduction in conflict and suicidal actions in Latinas (Kuhlberg et al., 2010).

SEL and PBIS are important in education because studies have found they have empowered students to communicate better (Arellanes et al, 2019). By learning to advocate for themselves positively, students can better navigate

injustices that take place at academic institutions. Examples of this are shared by Arellanes et al (2019). This research study disseminated instances wherein the administration criminalized immigrants as gang members because of baggy clothes, rosaries, or colors in their clothing (Arellanes et. al, 2019), which often tend to be fashion choices in the Latino community (Arellanes et. al., 2019). As a result of this stereotyping, many Latinos were criminalized and unable to defend their point of view. One of the outcomes of stereotyping includes the disproportionate representation of Latinos in the United States juvenile justice system (Freiburger & Burke, 2011). Research shows that the groups with the highest risks of being adjudicated are Native American boys, followed by Black girls, and finally Hispanic girls (Freiburger & Burke, 2011). Marginalization is at the forefront of these statistics, and it is important to give students the right tools to navigate the social constructs they are part of (Freiburger & Burke, 2011). Initiatives such as SEL and PBIS, hold the possibility of transforming the communication and advocacy of minority groups, ultimately informing young men and women of inequities and ways to respond (Freiburger & Burke, 2011).

Schools need to be culturally competent and relevant when working with students of diverse backgrounds (Haskie-Mendoza et al., 2018). One example of a culturally relevant organization across the United States is led by the National Compadres Network (NCN) (Haskie-Mendoza et al., 2018). NCN is an organization that aims to heal marginalized groups, who are often most impacted by the systemic inequities present in our country (Haskie-Mendoza et al., 2018).

NCN reincorporates cultural traditions of extended family, practiced by Hispanic and Indigenous Latinos, to connect with “at-risk” youth (Haskie-Mendoza et. al., 2018). The organization offers character development for boys, known as Joven Noble, and for girls, known as Xinachtli (Haskie-Mendoza et al., 2018). Both, the Joven Noble and Xinachtli groups, honor families, culture, and the lived experiences of the participants (National Compadres Network, 2017). In the literature, these programs focused on shifting the mindset of the youth by connecting, building relationships, and transforming some of the ideas they grew up with in a safe space (National Compadres Network, 2017). These organizations were found to be important across the United States because they reinforced positive interactions between families and communities. NCN did this by connecting and highlighting cultural diversity (National Compadres Network, 2017). NCN’s focus was on cultural-based healing, which involved the healthy development of cultural identity (“Brown Paper: Lifting Latinos Up,” 2012). A commonality between SEL, PBIS, and culturally relevant programs is the intention of caring for the overall well-being of the student (Breen, 2018; “Brown Paper: Lifting Latinos Up,” 2012; National Compadres Network, 2017; Gagnon et al., 2018; Greenberg et al., 2017; Haskie-Mendoza et al., 2018; Pike, 2017). In several studies, it was found that deterring realities of many Latinos consisted of family violence, unsafe communities, gang affiliation, and unplanned teen pregnancy (Breen, 2018; “Brown Paper: Lifting Latinos Up,” 2012; National

Compadres Network, 2017; Gagnon et al., 2018; Greenberg et al., 2017; Haskie-Mendoza et al., 2018; Pike, 2017).

The research focused on empowering the Latino population and highlighted the importance of building trust, relationships, and safe environments of healing (Haskie-Mendoza et al., 2018). Haskie-Mendoza et al. (2018) recommended that youth be given opportunities to advocate for change, while at the same time informing them of healing practices relevant to their culture (Haskie-Mendoza et al., 2018). Researchers have also found that helping communities of color requires more than simply a focus on third-grade reading levels or juvenile justice system inequities (Philpart & Bell, 2015). Histories, cultural identities, communities, institutionalized racism, and trauma cannot all be considered under a single point of emphasis (Philpart & Bell, 2015). Instead, there is a need for focused cultural frameworks that promote conversations and healing (“Brown Paper: Lifting Latinos Up,” 2012; National Compadres Network, 2017; Guajardo et al., 2019; Haskie-Mendoza et al., 2018; Philpart & Bell, 2015).

Latino Focused Interventions

The literature dictates that cultural healing helps transform institutions and systems through dialogue (“Brown Paper: Lifting Latinos Up,” 2012; National Compadres Network, 2017; Guajardo et al., 2019; Haskie-Mendoza et al., 2018; Philpart & Bell, 2015). Some programs go further in differentiation and develop curriculums that are gender specific and provide a biological explanation of the physiological changes that occur throughout adolescence (Guajardo et al., 2019;

“Brown Paper: Lifting Latinos Up,” 2012; National Compadres Network, 2017; Haskie-Mendoza et al., 2018; Philpart & Bell, 2015). Regardless of this difference, however, a commonality between Latino-focused programs is the focus on talking and celebrating milestones through a culturally rich process (“Brown Paper: Lifting Latinos Up,” 2012; National Compadres Network, 2017; Haskie-Mendoza et al., 2018; Philpart & Bell, 2015). Preparing the youth to transition into adolescence, and eventually, adulthood is a huge responsibility, and the literature explains that facilitating these conversations requires adequate training; otherwise, instead of benefitting, talking about lived experiences can further propagate trauma (“Brown Paper: Lifting Latinos Up,” 2012; National Compadres Network, 2017; Haskie-Mendoza et al., 2018; Philpart & Bell, 2015). The literature has found that developing cultural connections within a predominantly Latino community is essential in building relationships because it helps restore the extended family traditions of ancestors (“Brown Paper: Lifting Latinos Up,” 2012; National Compadres Network, 2017; Haskie-Mendoza et al., 2018; Philpart & Bell, 2015; Prieto et al., 2015).

In Texas, a program that explored ways to strengthen cultural connections was Nepohualtzitzin Ethnomathematics Club (NEC) (Prieto et al., 2015). NEC incorporated a Nepohualtzitzin tool within predominantly Latino and low-income schools during after-school programs (Prieto et al., 2015). NEC was a transnational alliance between the University of Texas at San Antonio, the Secretaría de Educación Pública de México (Ministry of Public Education of

Mexico), Coahuiltecan Indian Nation, Aztlán Associates, Danza Azteca Xinachtli, and Tzicatli—Community Development Corporation (Prieto et al., 2015). NEC consists of the term *Nepohualtzitzin*, which was used by the Nahuatl peoples of Mesoamerica, to refer to an individual that held the knowledge of numbers and was able to share it with others (Prieto et al., 2015). This study explored *compadrazgo* (co-godparenting) to better understand Nahuatl education and discovered that it encompassed learning not just content, but also the lived experiences of ancestors (Prieto et al., 2015), which aligns with the values of other culturally efficacious programs (Haskie-Mendoza et al., 2018; Philpart & Bell, 2015; Prieto et al., 2015). The focus of this transnational effort was to train educators to better support Latinos in science, technology, engineering, and mathematics areas (Prieto et al., 2015). The researchers concluded by explaining that culturally relevant programs, like NEC, help students learn about the accomplishments of cultural groups in Mesoamerica, capitalize students' funds of knowledge, create home-school connections, and connect learning to the real world (Prieto et al., 2015).

Similar to NEC, NCN's *Xinachtli* program, empowered young Latinas throughout the United States ("Brown Paper: Lifting Latinos Up," 2012; National Compadres Network, 2017; Haskie-Mendoza et al., 2018). NCN trained many women in the *Xinachtli* curriculum, in hopes of producing a change within communities, schools, and justice systems ("Brown Paper: Lifting Latinos Up," 2012; National Compadres Network, 2017; Haskie-Mendoza et al., 2018). The

term *Xinachtli*, like *Nepohualtzitzin*, is also Nahuatl and it means germinating seed (Galiniier, 2004; Haskie-Mendoza et al., 2018; National Compadres Network, 2017). The literature showed a pattern wherein, *Xinachtli* programs reflected on traditional practices and values to revive the cultural capital of an individual through the reflection of purpose. *Xinachtli* was a healing-informed curriculum that focused on Chicano, Latino, and Indigenous communities (Haskie-Mendoza, 2018). In 2015, the National Compadres Network initiated the *Xinachtli* youth character development program that supported, specifically, system-involved young women (Haskie-Mendoza, 2018). This curriculum was used in probationary departments, mental health county agencies, schools, detention centers, community-based organizations, police departments, and tribal consortiums (Haskie-Mendoza, 2018). The *Xinachtli* curriculum focused on community violence, gang violence, teen pregnancy prevention, and other forms of oppression (Haskie-Mendoza, 2018). *Xinachtli* was based on indigenous life views that incorporated culturally grounded physical, emotional, mental, and spiritual principles (Haskie-Mendoza, 2018). *Xinachtli* used a racial justice, and anti-oppression framework to transform oppression into healing and advocacy (Haskie-Mendoza, 2018). *Xinachtli* groups in this research study used circles to facilitate the process of transformation and communication between the young women in the community (Haskie-Mendoza, 2018). The *Xinachtli* curriculum was found to be effective in providing social and emotional support in areas with large populations of Latinos because it highlighted cultural capital (Haskie-Mendoza et

al., 2018; Lopez, 2017; National Compadres Network, 2017). In Haskie-Mendoza's study (2018), participation and attendance were incentivized by providing food, transportation, and \$500 for the duration of the study (Haskie-Mendoza et al., 2018). One of the recommendations of this study was future researchers maintain small dialogue circles, specifically it mentioned that Xinachtli cohorts should be small enough to grant each member the opportunity to speak during the meeting time, given that voicing experiences help build relationships amongst the youth and with facilitators (Haskie-Mendoza, 2018). Although there was a program outline in the Xinachtli research study, the researchers stressed the importance of having a facilitator with a judgment that is focused on supporting the youth in a safe space and providing the resources they need at the moment (Haskie-Mendoza et al., 2018; National Compadres Network, 2017).

Much like NEC and Xinachtli, which focus on cultural relevance and capital, some literature focused on granting value to the knowledge possessed by students, their families, and communities through a critical race theory (CRT) lens (Romero et al., 2009). Critically compassionate intellectualism (CCI) consists of six elements: Xinachtli (blossoming intellectualism), pedagogy de los barrios, students as creators of knowledge, collective and individual agency, organic intellectualism, and finally, academic and personal transformation (Romero et al., 2009). In this study, the Nahuatl term Xinachtli is used to refer to blossoming intellectualism. Xinachtli was the first element in this study because it

developed the academic voices and lives of the participants, ultimately nurturing the *semillas* (seeds) of knowledge (Romero et al., 2009). This study concluded with a tri-dimensionalization of the critically compassionate intellectualism model of transformative education (Romero et al., 2009). The base of this pyramid consists of curriculum, pedagogy, and student-teacher-parent interaction; the middle of the pyramid is academic proficiency and academic identity, and finally, the top is increased academic achievement (Romero et al., 2009).

By sharing lived experiences, Latinos can support each other (Haskie-Mendoza et al., 2018; Lopez, 2017; Prieto et al., 2015; Romero et al., 2009). When connecting with others who have experienced similar forms of oppression, Latinos can develop their cultural identity and push for social justice (Haskie-Mendoza et al., 2018; Lopez, 2017; Prieto et al., 2015; Romero et al., 2009). There are a wide variety of culturally relevant programs that challenge heteronormativity, patriarchy, and homophobia, ultimately empowering participants; some include M.E.Ch.A. (Movimiento Estudiantil Chicana/o de Aztlán), *Xinachtli*, environmental justice organizations, and queer organizations (Haskie-Mendoza et al., 2018; Lopez, 2017; Prieto et al., 2015; Romero et al., 2009). As a coping mechanism, many minorities are quiet about the systemic inequities they exist in, ultimately allowing the erasure of the long history of battles for labor rights, just education, and social justice (Télliez, 2016). However, despite the temporary coping, there is a dire need for transformation and healing within Latino communities, and these cannot occur without the validation and

appreciation of the lived experiences of ancestors (Haskie-Mendoza et al., 2018; National Compadres Network, 2017; Prieto et al., 2015; Romero et al., 2009; Téllez, 2016).

Self-Efficacy and Self-Regulation

Many researchers have studied the social and emotional aspects of Latino youth development and education (Breen, 2018; “Brown Paper: Lifting Latinos Up,” 2012; National Compadres Network, 2017; Ceballos et al., 2014; Gagnon et al., 2018; Greenberg et al., 2017, 2017; Haskie-Mendoza et al., 2018; Kuhlberg et al., 2010; Pike, 2017). Much of the literature focused on better understanding students by analyzing social reproduction, educational values and beliefs, the role of the family, culturally relevant interventions, and even the role of stress and suffering (Araujo Dawson & Quiros, 2014; Arellanes et al., 2019; Haskie-Mendoza et al., 2018; Horner & Martinez, 2015; Stevenson et al., 2019). Some of these concepts have been studied since 1995 and are important in the study of self-efficacy (Bandura, 1995). Self-efficacy is when people understand ways in which they can exercise personal control in their lives, to have a greater likelihood of seeing the outcomes they want (Bandura, 1995). The perceived self-efficacy a person has of themselves can be affected by mastery experiences, vicarious experiences, social persuasion, and psychological and emotional states (Bandura, 1995).

Self-efficacy is closely linked to resiliency and is used to study adolescents' physical health, mental health, and risk-taking behaviors (Beavers

et al., 2015; Dupéré et al., 2012; Odaci, 2013; Schanen et al., 2017). Self-efficacy and food safety (SEFS) are common topics of research, for instance, one study analyzed the effect of an intervention on self-efficacy and food safety (Beavers et al., 2015). Through several repeated ANOVAs, the data indicated that increased SEFS can be used to predict positive behavior changes (Beavers et al., 2015). In addition to SEFS, self-efficacy also plays an important role in the development of mental health and relationships (Dupéré et al., 2012; Schanen et al., 2017). A study found that adolescents living in violent communities live in fear, which results in low self-efficacy (Dupéré et al., 2012). This lowered self-efficacy affects their perceptions of themselves and their environment, which indirectly impacts adolescent internalizing problems; this is known as the condition-cognition-emotion model (Dupéré et al., 2012). Not only has self-efficacy been found to be an important factor in physical and mental health separately, but it has also been studied in relationships, and found to affect middle school students' sense of self-agency (Schanen et al., 2017). These researchers explained the importance of understanding the consequences of actions in preventing teenage violence, domestic violence, and sexual assault (Schanen et al., 2017).

Adolescent self-efficacy has been studied by numerous researchers (Bandura, 1995; Beavers et al., 2015; Dishman, 2004; Dupéré et al., 2012; Falco & Summers, 2019; Flowers & Banda, 2016; Odaci, 2013; Schanen et al., 2017). In education, self-efficacy is measured in correlation to academic performance

(Brady-Amoon & Fuertes, 2011; Manzano-Sanchez et al., 2018; Masud et al., 2016). It has been recommended that schools consider the self-beliefs of students, as these impact the self-efficacy and agency of students, ultimately affecting perspectives on academic and career planning and performance (Brady-Amoon & Fuertes, 2011). Unlike grade-point averages and standardized pre-college exams, self-efficacy has better accounted for the variance observed in college performance (Brady-Amoon & Fuertes, 2011). While schools and educators play an important role in the development of students' self-efficacy, studies also point to parenting as a significant source of self-efficacy beliefs (Masud et al., 2016). Consequently, research recommends networking between parents and teachers to improve academic performance (Masud et al., 2016). An analysis of self-efficacy in Latino students found that there exists a significant positive relationship between various forms of self-efficacy and academic performance across all levels of education, ultimately leading students to engage in less risky behavior (Manzano-Sanchez et al., 2018).

Self-efficacy studies have found that high levels of self-efficacy, are positively correlated with academic performance, and indirectly related to risk behavior (Bandura, 1995; Beavers et al., 2015; Brady-Amoon & Fuertes, 2011; Dishman, 2004; Dupéré et al., 2012; Falco & Summers, 2019; Flowers & Banda, 2016; Manzano-Sanchez et al., 2018; Masud et al., 2016; Odacı, 2013). Tied to high self-efficacy and positive academic outcomes is self-regulation (Gaskill & Hoy, 2002). A self-regulated person metacognitively plans, sets goals, organizes,

self-monitors, and self-evaluates (Bandura, 1995; Gaskill & Hoy, 2002). Levels of self-regulation are studied in education and reveal that together with self-efficacy; impact the effort and persistence put forth by students (Gaskill & Hoy, 2002). Muenks et al. (2017) studied grit, conscientiousness, self-control, cognitive self-regulation, effort regulation, behavioral engagement, and behavior disaffection, to determine which is the most powerful independent predictor of grades (Muenks, et. al., 2017). In their study, metacognitive self-regulation was measured using a Motivation Strategies for Learning Questionnaire (Muenks, et. al., 2017). In answering the questionnaire, students were asked to think about their science and math courses (Muenks, et. al., 2017). Questionnaires were given in January and grades were collected at the end of the semester from school records (Muenks, et. al., 2017). Similar to the findings in previous literature (Brady-Amoon & Fuertes, 2011), Meunks (2017) found that self-regulation predicted students' grades stronger than other factors (Muenks, et. al., 2017). Along the lines of STEM education, another study focused on self-regulation, found that when effort, diligence, the endurance of hardship, and concentration are highly valued there are higher levels of cognitive self-regulation in mathematics (Xu et al., 2017).

The research surrounding the underrepresentation of Latinas in STEM fields points to many possible solutions, but given the findings in the literature factors worth focusing on are self-efficacy and the metacognitive skills of self-regulation (Banda & Flowers, 2018; Cantú, 2012; Falco & Summers, 2019;

Harvin, 2016; Manzano-Sanchez et al., 2018; Reinking & Martin, 2018; S. Rodriguez et al., 2019; Ruiz, 2013; Stevenson et al., 2019). Self-efficacy and -regulation have been predictors of occupational development and pursuit commitment (Bong et al., 2015). This explains the disproportion of boys and girls in science and math courses, given the fact that boys maintain stronger self-efficacy in these topics than girls (Bong et al., 2015). In comparison to other areas of study, in science and math, self-efficacy is more strongly correlated with interest (Bong et al., 2015). In other words, the perceived competence in science and math is the greatest factor discouraging young women from these careers (Bong et al., 2015).

Summary

Overall, the gender gap between men and women in STEM fields is complex. Exploring the gender gap brings out disappointing truths about academic institutions. At the forefront of the underrepresentation of Latinas in STEM are discrimination, inequities, and a lack of support. Through testimonies, researchers uncover challenges tied to language assimilation, gender discrimination, racism, and the violence of patriarchy in the lives of Latinas pursuing STEM (Alarcon et al, 2011).

In the Latino culture, it is common for adults to assign certain responsibilities to their children. Some examples include working while in college, translating and interpreting, and fulfilling family obligations. This makes the family an important component in the development of young Latino men and women.

As such, schools must be proactive in welcoming families of color and informing them of the immense workload that college students are put through. Doing this will honor the intersectionality of young Latino men and women, making them want to continue in the STEM fields.

Various steps need to be taken to challenge hegemonic power and develop programs that are more diverse, inclusive, and welcoming. Various Latino-focused programs exist that guide academia through the work that is needed to empower, lift, and help young people explore their potential. Throughout history, many Latino men and women have rejected their culture for survival purposes, and it is time to revisit these measures and discard them, as their diversity and culture are living proof of Latino resiliency. Helping Latinas navigate the double bind that being a woman in STEM imposes, requires listening to their experiences and grasping the magnitude of their complexities, strengths, and hopes.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

Research Design

Numerous statistics indicate that Latinas are an underrepresented minority group in the STEM fields (Harvin, 2016; S. Rodriguez et al., 2019; Starobin & Bivens, 2014; Stevenson et al., 2019). Some studies gave women the opportunity to share retrospectively what it was like to be an undergraduate woman in the field of engineering (Starobin & Bivens, 2014). These testimonies highlighted the importance of a support system, the differences between those who believed that they could thrive in unfavorable situations from those who did not, and the importance of identifying within a program of study (Alarcón et al., 2011; Cantú, 2012).

This research study was driven by the experiences of the researcher as an undergraduate STEM student, as a first-generation college graduate, and as a Latina growing up in the low-income parts of Southern California. It was important to carry out the research in a way that separated the interpretations of the researcher as a Latina in STEM herself, from the experiences of the young Latina women in the Xinachtli program (J. W. Creswell & Poth, 2016).

To study what Xinachtli meant to the students as well as how they experienced this character development program, data was collected weekly through semi-structured group interviews, known as *circulo* throughout the

entirety of the Xinachtli program. These conversations led to written reflections, that were recorded in journals. These experiences were transcribed and organized into significant quotes, which ultimately led to themes. This analysis resulted in a thorough understanding of how the participants experienced school, home, science, and math during their time in the Xinachtli program. This study was a phenomenology and it focused on textural and structural descriptions to obtain the overall essence of young Latinas living in a rural community with insufficient resources.

Research Paradigms

In the literature, research has been classified into four paradigmatic families, them being: positivism, interpretivism, critical theory, and poststructuralism (Glesne, 2016).

The positivism paradigm is used to predict using logic (Glesne, 2016). This type of research is often practiced in experimental, quasi-experimental, and causal-comparative studies (Glesne, 2016).

The interpretivism paradigm is a family in which the purpose is to understand; some of the methodologies that fall into this category include ethnography, phenomenology, symbolism, interactionism, narrative analysis, and grounded theory (Glesne, 2016).

The critical theory paradigm hopes to emancipate, some examples of critical theory would be critical ethnography, feminism research, participatory action research, and critical discourse (Glesne, 2016).

Finally, the poststructuralism paradigm aims to deconstruct; some of the research studies that fall in this category include deconstruction, genealogy, rhizoanalysis, and paralogic legitimation (Glesne, 2016).

Interpretive Research

The interpretive approach assumes that reality is socially constructed, complex, interwoven, and with little measurability. Through personal involvement and empathetic understanding, interpretive researchers contextualize, understand, and interpret. Due to these designated qualities of interpretive studies, the philosophical framework of this research study was interpretivism (Glesne, 2016).

Interpretivism was ideal for this study because it focused on explaining the daily lived experiences of young Latinas through the conversations exchanged in the Xinachtli youth character development program. At the same time, the Xinachtli program focused on the phenomena that made these young women similar. Interpretive research studies the realities of the world through both a natural and social perspective, arguing that the world cannot exist independently of the mind (Glesne, 2016). Additionally, these research methods are considered qualitative due to their descriptive nature (Glesne, 2016). Qualitative research studies share stories, paint pictures with words, and allow researchers to experience the life of participants as closely as ever (Glesne, 2016).

Phenomenologies, ethnomethodologies, symbolic interactionism studies, and ethnographies differ in their focus and disciplinary association, yet they all

have an interpretive framework because their goal is to understand human mindsets, actions, and interactions (Glesne, 2016). This study's orientation was considered one of phenomenology due to its analysis of events, situations, circumstances, experiences, and incidents in the young Latinas' lives. In addition to this, another phenomenon of focus was the self-efficacy beliefs of the participants.

Phenomena of Study

This research study focused on the educational journeys of young Latinas from a small rural secondary school in southern California. The facilitator worked with the young Latina women every week over six months following the guidance of a program called Xinachtli. The name of the program, Xinachtli, translates to germinating seed in Nahuatl. Xinachtli is a culturally responsive program with semi-structured activities that occur with a group of up to ten young women. The Xinachtli program was implemented with young Latinas on campus who had displayed behavioral issues, profane language, or who had been involved in physical altercations within the first month of the academic school year. Regular conversations in Xinachtli circles and the trust that emerged from these regular meetings allowed for this study to narrate the experiences of these Latinas holistically.

Research Setting

This study took place in a school located in Southern California. The secondary school is in a rural area, is Title I, and has a total enrollment of fewer

than 500 students, of which 94% are minority students, with 83% considered economically disadvantaged. In this population, 89% of students are Hispanic, 6% are White, 3% are two or more races, 1% are Black, and the remainder is other. The participants were selected non-probabilistically, meaning that they were recruited for the Xinachtli treatment based on gender and ethnicity. The reason for this was that the curriculum has teachings relevant to Hispanic/Latino/Native American cultures and consists of reproductive health education for young women. The group selected was a combination of convenience and purposive sampling (Terrell, 2015). It was convenience sampling because the demographics of this community offer a large opportunity to work with Hispanic/Latino/Native American students given the demographics; and it was also purposive because the curriculum content is designed to inform the physiological development of young women (Terrell, 2015).

Throughout this study, it was essential to develop close relationships between the young Latina participants, their families, and the school; therefore, the researcher selected a site that was already planning to implement Xinachtli. It was important to establish regular contact with the young women and their families to initiate dialog about the following: personal reflection, critical consciousness, biological reproduction, and action within the community. These topics, along with the trichotomy between the young women, their families, and the school, were selected because they closely resemble the following assets: family, role models, and high academic self-efficacy; assets which have regularly

led Latinas to succeed in academia within the last ten years (Bong et al., 2015; Manzano-Sanchez et al., 2018; Marrun, 2020; S. Rodriguez et al., 2019)

Research Sample

Through statistical data, the literature shares that there is an underrepresentation of young minority women in STEM fields throughout the United States. This is an issue because careers in STEM fields have highly desirable benefits, salaries, and schedules. To study the absence of minority women in STEM fields, this research focused on the self-efficacy beliefs of young Latinas in a rural and under-resourced community. The sample for this research was homogenous, meaning that the young Latina women shared similar characteristics, with these commonalities, it was possible to focus more specifically on the evolution of their self-efficacy beliefs (Glesne, 2016). Homogenous sampling was selected because having too many variables can be distracting, making it difficult to understand what is going on (Glesne, 2016). Most of the women in the *Xinachtli* program came from non-traditional households, meaning that parents were divorced or separated, they lived with just mom or dad, and some of the participants lived with grandparents. The average household size of the participants was seven. The seven participants attended the same school in the rural community of Southern California, within a community that had a 30% poverty rate.

The participants of this study were young Latina women who showed signs of needing character development and social and emotional support.

These students were selected due to behavioral issues including fights, verbal abuse towards staff, and a lack of connection with an adult on campus. The overall school population of Southern California School was 315, with the sample being limited to 10 secondary school students per cohort. This sample was selected because the district and site administration felt it was imperative to provide the students with an intervention that would hopefully decrease the number of fights, suspensions, and expulsions.

Amelia participated in the Xinachtli program when she was thirteen years old. She grew up in her maternal grandparent's home, and while she saw her mother often, she expressed that she had never really lived with her. An average of six people occupied the household in which she lived, and she held a part-time job. Amelia identified as Latina and shared that being part of this ethnic group was very important to her, however at times, she felt life would be better if she was part of another ethnic group.

Renata participated in the Xinachtli program when she was thirteen years old. She grew up in her paternal grandparents' home, where her father also lived. An average of nine people occupied the household in which she lived, and she was looking for work. Renata identified as Latina and shared that being part of this ethnic group was very important to her and that she never thought being part of another ethnic group would make life better.

Noreen participated in the Xinachtli program when she was thirteen years old. She grew up in her mother's home. An average of five people occupied the

household where she lived, and she was looking for work. Noreen identified as Latina and shared that being part of this ethnic group was very important to her and that she never thought being part of another ethnic group would make life better.

Athena participated in the Xinachtli program when she was thirteen years old. She grew up with her mother and father in the same household. An average of six people occupied the household where she lived, and she was not looking for work. Athena identified as Latina and shared that being part of this ethnic group was very important to her and that once in a while, she thought about ways in which life would be better if she belonged to another ethnic group.

Isaura participated in the Xinachtli program when she was thirteen years old. She grew up in her mother's home and only saw her father on weekends. An average of seven people occupied the household where she lived, and she was looking for work. Isaura identified as Latina and shared that being part of this ethnic group was very important to her and that she never thought being part of another ethnic group would make life better.

Noelia participated in the Xinachtli program when she was thirteen years old. She grew up with her mother and father in the same home. An average of nine people occupied the household where she lived, and she held a part-time job. Noelia identified as multiracial and shared that being part of this ethnic group was somewhat important to her and that she hardly ever thought that being part of another ethnic group would make life better.

Galilea participated in the Xinachtli program when she was thirteen years old. She grew up with her mother and saw her father on weekends sometimes. She lived in a home with seven other people and was looking for a part-time job. Galilea identified as Latina and shared that belonging to this ethnic group was very important to her. Galilea never thought that being part of a different ethnic group would make her life any better.

Research Data

To understand the experiences of the Xinachtli participants as Latinas in education, the following forms of data were collected throughout the program: initial and final surveys, weekly conversations between the young women and the facilitator, occasional letters, observations, visual materials, fieldnotes, memos, reflections, and the use of the Xinachtli curriculum handbook as a secondary source. The various forms of data helped capture closely the different experiences that participants lived. These methods were used to produce more multidimensional findings (Glesne, 2016).

Following the conversations, the documentation was stored in a locked filing cabinet and the transcriptions were organized in a password-protected electronic file. The transcriptions were analyzed using computer analysis. After the preliminary exploratory analysis, computer analysis was used to code the data, which helped formulate themes. The findings were reported through a narrative discussion with dialogue included to draw on the themes presented.

The findings were checked for accuracy by asking the participants to study the transcriptions within 48 hours, regularly.

Data Collection

The qualitative data was obtained through purposeful sampling and semi-structured questions, initially, throughout the 16 sessions of the character development program, and in the form of an exit interview (J. Creswell & Guetterman, 2018). The participants and the site were selected because the Xinachtli curriculum was culturally relevant to this population and provided information about the experiences of young Latinas (J. Creswell & Guetterman, 2018; Haskie-Mendoza et al., 2018). The use of semi-structured questions allowed there to be flexible dialogue throughout the interview process and helped uncover realizations and common themes among the participants. This cohort approach to the study was important, as it allowed the participants' experiences to be encapsulated and their stories to be shared. These experiences were important in understanding the students holistically.

Data Analysis

The Xinachtli program consists of approximately 16 sessions: youth orientation, parent/guardian orientation, my codex, personal gift, nuestra palabra (our word), reproductive health 1, reproductive health 2, my shield, tortilla de mi vida (tortilla of my life), honoring myself, knowing and guiding my fire, la joven

noble (the noble youth), acquiring tools, human rights, community action plan, and a rite of passage celebration (Haskie-Mendoza, 2018).

Each of these meetings, though unique in their content, followed a similar structure. On Fridays, the young women would pick up their school lunch and meet up in a classroom to eat together with the facilitator for an hour. The facilitator regularly brought dessert for the students so that they could take it with them after they had their meal. The group then gathered into a circle, and this was where the activities began. First, the young women checked in and shared whatever was on their minds that day. One by one they each shared something stressful and a celebration about that week. After this, they moved on to cover the content of the week. After the group learned about the topic of the week, they engaged in hands-on activities connected to the topic. These were later shared individually around the circle, with students commenting and asking questions. This led the group to the end of the meeting, students reflected and shared some thoughts about the content covered, the projects they worked on, and anything they had learned about themselves that day. Throughout the program, students kept a folder in which they reflected, took notes, and kept their assignments, photos, or projects, and these were stored in a locked cabinet.

After each meeting, the researcher analyzed the collected data and transcribed the findings. The semi-structured interviews and the journals were the main sources of data throughout the study. After the transcription, horizontalization took place, and clusters were formed. This analysis was shared

with each of the students, for verification purposes. The participants had 48 hours to make any correction, in cases where students did not respond within 48 hours, the transcript was considered correct. In addition to the analysis of the Xinachtli participants, the facilitator, and the researcher also maintained a journal of the shared phenomenon.

Limitations and Delimitations

The researcher of this study was a fellow Latina in STEM from Southern California. The researcher bias influenced the push to conduct this research in efforts to understand and contribute to the closing of the gender gap in science and math self-efficacy, as well as in STEM higher education. The researcher felt that allowing young Latina women to share their experiences, having mentors to whom they could relate, and understanding their emotions and the way these affect their decisions would result in a positive impact on the participants' self-efficacy. Given this bias, the researcher intentionally reflected on their feelings throughout the research to separate their own experiences from those of the participants in the study. In addition to this, the researcher also sought the insight of other professionals in the field to keep from portraying research under the impressions of their personal experiences and feelings.

Positionality of the Researcher

The researcher of this study is a woman who finds herself in her late-20s. She is a science educator in Southern California, where she grew up. The

researcher pursued an undergraduate degree in the biological sciences in hopes of attending medical school one day. However, she fell out of love with this field when she realized that she did not identify with her program of study. During her undergraduate studies, she realized that she was more different than she had ever thought; she was a first-generation college student, Latina, low-income, and a native Spanish speaker. These undergraduate years in Los Angeles, California led her to return to her community and bring along her passion for the sciences to be a mentor, guide, and ally in this underserved community.

These experiences turned the researcher into an advocate for young women. The researcher understands the importance of relationships, community, and family when attending college, but also realizes that without the proper tools and academic preparation, it is difficult for students to succeed in higher education. Due to her background in the sciences, she values a curriculum that focuses on the fundamentals of each topic to be able to advance to more complex issues. Her essentialism and progressivist views of education led the researcher to conduct a study that highlighted the importance of education and knowledge, while at the same time emphasizing the individuality of the participants. The *Xinachtli* phenomena in this study allowed each young woman to learn more about her Latina identity and to navigate the world better aware of the role they play in society.

Summary

In the literature, research has been classified into four paradigmatic families, them being: positivism, interpretivism, critical theory, and poststructuralism (Glesne, 2016). Through personal involvement and empathetic understanding, interpretive researchers contextualize, understand, and interpret. Qualitative research studies share stories, paint pictures with words, and allow researchers to experience the life of participants as closely as ever (Glesne, 2016). This study's orientation is considered one of phenomenology due to its analysis of events, situations, circumstances, experiences, and incidents that took place in the young Latinas' lives before and during their participation in the Xinachtli youth character development program.

The Xinachtli program was implemented with young Latinas on campus who had displayed behavioral issues, profane language, or who had been involved in physical altercations within the first month of the academic school year. Regular conversations in Xinachtli circles and the trust that emerged from these regular meetings allowed for this study to narrate the experiences of these Latinas holistically. Participants were selected due to the feasibility and intersectionality of the phenomena of interest. All seven participants were young women, Latinas, who grew up in a rural community, had problematic initiation of the school year, and had low socioeconomic status.

CHAPTER FOUR:

RESULTS

The purpose of this chapter is to present the data related to the research questions of this phenomenology study. The purpose of conducting this research was to explore the experiences of young Latinas in a rural and under-resourced community and to gain insight into how their gender, ethnicity, and self-efficacy beliefs impacted them in their academics. The analyzed results gathered through interviews, focus groups, observations, document analysis, and surveys were synthesized into significant statements to yield rich and meaningful phenomenological descriptions. After a thorough consultation with the text, the data were categorized as textural statements, and structural interpretation, per the methodology (Moustakas, 1994). The chapter begins with a description of the participants' demographics and is followed by significant quotes. The qualitative research questions were the overarching inquiry that directed the study.

The research questions guided the development of this study as well as the analysis of the data. Throughout this study, many themes emerged from the data analysis process that both complemented and supported the research question. Consequently, those same themes and research questions guided the organization of the manuscript. This chapter closes with a discussion of themes by data source, a review of member checking which adds to the credibility of the

study, and finally a summary of findings which re-emphasizes the essence of the study.

Amelia

Amelia introduced herself on the first day of the Xinachtli program, this is what she shared about herself in writing. Amelia was a 13-year-old female born in California. Amelia had never lived with her biological mother, and in the section asking about the time she lived with her father she wrote “only...” but then erased it and left it blank. In 2022 Amelia lived with her maternal grandmother in a home of seven people. At the time of the program, Amelia was an 8th grader, and she maintained a part-time job working in agricultural fields. Amelia knew that her mother graduated high school but was unsure of her father’s education. Amelia’s ethnicity was Latina, and this ethnic group was very important to her. Amelia thought about how life could be better if she was part of another ethnic group occasionally. Amelia shared that her mother was born in the U.S. and that her father was born outside of the U.S. The relationship Amelia maintained with her father and mother was good. Amelia also knew where all four of her grandparents were born and she spent time with them often. Amelia learned to speak English first, and by the 8th grade could express herself best in both English and Spanish. When she was growing up, Amelia did not attend church very often but was able to say that she was Catholic. By the 8th grade, Amelia never attended religious ceremonies, she never prayed, meditated, or practiced spiritual rituals. When Amelia faced problems, she would talk to no one, she

shared that there were no adults she could trust to talk about personal problems at home, but that at school there were teachers that she could go to.

Textural Statements

Challenges.

During the first Xinachtli meeting the group created a codex about each of their lives. In her codex, Amelia described a series of experiences throughout her educational journey, and she shared some of her early challenges. These are some of the challenges that emerged during the sharing of her codex with the group. In her codex, Amelia drew a girl, hearts, and her name in blue. There were not very many drawings on her codex at the time when she shared, but when it was her turn to describe her life using the codex, she painted a picture of her lived experiences with words.

“I was always a slow learner. It took me forever to learn anything. For a long time, I didn't even know how to brush my own hair. I couldn't brush my hair until I was like seven years old. I remember that it took me forever to learn how to brush my hair.”

Amelia shared that the first challenge she recalled from her childhood was standing out due to her inability to manage her hair. Later, she shared that she struggled with math.

“...then Lorenzo used to do my math homework for me, it just got to the point where I had to have other people help me with my work because I figured I was stuck on the problems anyways.”

Part of the academic challenges she faced was also connected to Amelia's communication skills, she shared the following regarding the way she felt peers and adults around her perceived her:

"Everyone thinks that just because I am loud, I am rude! But just because I am loud, it doesn't mean I am rude! I am so nice to everyone, and people just swear like I am a horrible person..."

In sharing how she felt misunderstood in school, Amelia moved on to discuss the challenges she encountered with her mother:

"... even the relationship with my mom is a challenge nowadays! My relationship with my mom has gotten worse. My mom is so mean. She swears like I am going to be a low life. She doesn't have any faith in me."

Amelia went on to describe her frustration over her mother's low expectations of her:

"...but she didn't go to college, she has no job, and she lives with my grandparents!"

Amelia explained her mother's inability to see good in her, but quickly compensated this negative experience with a positive one and shared:

"... but whatever, some teachers love me so, yeah! Some teachers are my support like Ms. V."

Ms. V was a Latina leader on campus. Ms. V was responsible for the after-school program where Amelia stayed to eat, do homework, and play sports. Ms.

V was also one of the biggest supporters of the Xinachtli program on campus from 2020-2022.

In one of the focus groups, Amelia took a moment to share the following:

“I just don’t know how to shut up. I feel like I have gotten worse over the years. But it’s just when I know that I am right, I want my point to be validated. My mom tells me to just listen. But I hate when teachers don’t acknowledge that I am right. I feel like I struggle more with women teachers. Most girls just hate me. Maybe I am better, maybe they are jealous of my confidence, or it could be, that maybe I don’t fit the mold of a pick-me-girl.”

A pick-me-girl is a reference to a TikTok word that refers to a soft girl. A girl who is pretty, smart, and quiet. Being a pick-me-girl is connected to gender roles and stereotypes of how women should behave simply because of their gender.

During the eighth session, the Xinachtli program covered a lesson titled “My Shield” (Haskie-Mendoza et al., 2018). During this meeting, Amelia talked about boundaries, and in doing so she shared how some people on campus fail to respect her boundaries and the way this makes her feel.

“I hate that I am not Latina enough, I don't even know correct Spanish. I am a no-sabo-kid. I don’t go to Mexico; I don’t really look Mexican or Hispanic or whatever.”

This reminded me of Anzaldua’s *Nepantlera* ideology. Where Chicanas are not really accepted in Mexico due to them being born and raised in the

United States. Despite Amelia's inner insecurity about her lack of awareness about her culture, she was not able to explain why it was challenging to be Latina. She just knew that she felt like people disrespected her boundaries by saying things to her and that she did not belong. During this meeting, she described the challenge of being a Latina.

"... I don't know why I never cared enough about my Spanish. But like, we don't go to Mexico. I want to go to where my family is from like all these other people who are proud to be from Sinaloa. I know my grandpa is from Zacatecas, but I have no idea where that's at! Now they live in the Ejido in Mexicali (a small town, ex-urban area), but they don't like me there. They are all so judgmental, they always say something about me, and I don't feel welcome..."

Mexicali, Baja California is on the border of Calexico, California. Grandparents and extended family had immigrated from Zacatecas to Mexicali, B.C. for a better life and a greater probability of reaching the American Dream.

Gains.

When asked about what the Xinachtli program was like and about her participation in the Xinachtli program, Amelia shared the following:

"Initially I thought that I was in trouble! I mean, all of a sudden, they call me out of class, just a couple of days after we got back from suspension, don't tell me it doesn't look like we were in trouble. Then, they made us sit in a room in a circle talking about our feelings. Oh, my lord! I even told my mom about it, but she didn't care. I told my mom we were talking about feelings and all she said

was, “good for you.” I swear sometimes I just want to fight that lady! Anyways, during Xinachtli I was with all my friends, that I had got suspended with. All because I snitched on myself, (pauses). I told the principal that I hit someone during the fight when they started hitting my friend. But I just intervened as a separator, but they hit me, so I hit them back. It was technically not me fighting, but I still got suspended.”

Amelia described subsequent improvement in her self-control and behavior due to her participation in the Xinachtli program, “I guess, Xinachtli helped me become calmer. If I would've not been in the Xinachtli program, I would have gotten into at least four more fights in the school year. But when I was ready to fight those people, I would ask myself, what did Ms. Facilitator tell me? She would tell me to stay calm. I was even falsely accused of telling someone to kill themselves, and I was ready to fight them for lying. In Xinachtli, I learned about self-control, and how to pick my battles, for example, why would I fight someone who thinks I want their boyfriend when I know I don't want their boyfriend?”

This interview with Amelia was connected to the guiding my fire lesson, in which students are introduced to a wheel of emotions, and they understand what the original emotions are, and how they trigger other emotions if not addressed early on. Students learned to assess how they were feeling and consider the different factors influencing how they felt. She described the Xinachtli program as

a space where she could vent because there was a person who would listen without judgment.

“In Xinachtli I got advice on how to improve the way I saw things, not everything has to be solved with violence, and learning to talk to adults became better.”

After the Xinachtli program concluded, Amelia was asked to share how the Xinachtli program had impacted her as part of an exit interview. During this semi-structured interview, Amelia said:

“... it affected me because I knew myself more, I was able to know where everyone was coming from. Like when we would sit in circulo, I would get the chance to see how everyone’s week went. It made me realize that they were going through things outside of school too, and they weren’t necessarily meaning to hurt me. It even reached the point, where we were able to apologize for hurting each other’s feelings.”

Structural Interpretation

Although personal care is not necessarily related to a subject in academics, this was one of the first challenges Amelia shared with the group. She expressed feelings of shame due to a difference in her hairstyles and those of other girls. As a little girl, Amelia felt neglected by her mother and this feeling quickly overruled any concern over academics in elementary education. Amelia explained that not having anyone to do her hair, led her to take the initiative and

responsibility of combing her hair herself, expressing that it wasn't until she was seven that she finally learned to comb her own hair for school.

This concern for personal care and hygiene was followed by a struggle in mathematics classes. Amelia was not able to keep up in school, but she realized that others could, so she gave up on this responsibility, and would cheat on math assignments. As Amelia grew older, the school expectations continued to become more difficult as she developed socialization challenges due to her inability to adjust volume and tone with peers and adults on campus. This led to increased feelings of being misunderstood and judged both by peers and teachers. Amelia felt that the way others perceived her was not coherent with her intentions.

Amelia's transition to middle school came with new challenges, given the increased workload. Increased expectations from her mother, who had been absent for a long time, and was attempting to be involved during the start of her adolescence, now led to conflict between Amelia and her mother. Amelia's behavior and grades at school began to take a dip in middle school and her mother's concern was expressed in a negative manner leading to resentment from Amelia. Amelia's mother expressed to her that without the education she could only get so far in life, but the words that she used made Amelia feel as though her mother did not expect much from her.

Amelia's life had mostly been in the absence of her mother due to her mother's drug and substance abuse, so in addition to feeling hurt, Amelia also

faulted her mother for the mistakes she made. Not having a mother who believed in her along with the continuous absence led Amelia to look for support from adults in school. Amelia shared that she strongly wished for her thoughts and ideas to be heard and validated. Interestingly, not even at home was Amelia able to have a voice, her mother asked her to just be quiet and listen.

Amelia learned to survive in school, she spoke up when she felt unheard and compensated for neglect by taking care of herself. Due to the nature of her childhood, Amelia had clear boundaries by the time she was an adolescent, she made it known when she felt disrespected. Some of the insecurities that became triggers for Amelia were comments about her culture, and the roles she had to abide by because she was a woman. During *circulo*, she shared that when people made comments about her language and her inability to stay quiet, she felt unwelcome.

Amelia became increasingly problematic at school until she was introduced to the *Xinachtli* program. The *Xinachtli* program was used as a way of informing Amelia of ways to cope with her emotions. It also gave Amelia the opportunity to be heard without judgment. For Amelia, the *Xinachtli* program offered her advice and gave her a new perspective on the world. Amelia discovered new ways to communicate with others and how to differentiate her tone from adults and peers. During the 16 weeks in the *Xinachtli* program, Amelia was able to learn more about herself, and about other young women, and she

was able to see that many of the young women were experiencing similar things. Finally, Amelia learned to apologize and healthily communicate her emotions.

Noreen

Noreen was a thirteen-year-old who identified as a female. She was born in California and lived with her mother most of her life and at the time of this study, her household consisted of six people. During the 8th grade, Noreen was not employed but was interested in finding a job. Noreen's mother did not complete high school, and she did not know anything about her father's education. Noreen shared that her ethnicity was Mexican, and this ethnic group was significant to her. Noreen never thought that life would be easier if she belonged to a different ethnic group. Noreen shared that her parents were both born outside of the United States. Noreen shared that her relationship with her father was good and that her relationship with her mother was very good. Noreen was aware of where all four of her grandparents were born, and she spent time with two of them. Noreen's first language was Spanish, and she was able to express herself best in Spanish. As she was growing up, Noreen attended church or other religious ceremonies occasionally but was unsure of the name of her religion. In 2021, Noreen attended church and prayed occasionally. When she encountered problems, Noreen mostly talked to family and friends. Noreen did not have an adult that she felt she could trust, but she trusted her aunt, who was not an adult at the time.

Textural Statements

Challenges.

Throughout the study, the participants shared some of their experiences during the weekly circulo, summarized how the weekly lessons were relevant to their lives, and they wrote reflections. The following testimonies are used to share some of the most impactful moments in Noreen's life.

During one of the semi-structured group interviews, Noreen shared the following about schooling experiences that shaped her academic attitudes to this day.

"I remember I had a tall, White, skinny, young teacher that I hated so much. I started not liking teachers because of the way Ms. T treated me. Ms. T would always put me on red in the behavior chart! Red was the color used when you were bad. I remember that at the time, I was nice to all my friends, and I was also nice to the teacher. But she always made me feel like I was a bad kid. No matter what day or year I had her, she would always put me in the red. I would even ask why I was in the red, and she would say I was always behaving badly. She just never gave me the opportunity to fix this. I was with her for three years."

In this statement, Noreen shares that being labeled as a "bad kid" made her hate teachers overall. She shared that the stigma that followed the red marker on the behavior chart made her upset and that the way her behavior was categorized made her feel segregated from her peers. During circulo, Noreen proceeded to describe how she resisted this labeling:

“I started hating and yelling at teachers just because they were teachers. To this day I struggle with showing respect to adults at school.”

In the weekly platicas, Noreen also shared some of the academic challenges she had in math classes and shared that when she started secondary education, she began to have further problems interacting with peers.

“I struggle to get good grades. I have commitment issues with my work (laughs). I want to be good at math, but I suck at math. I know you need math to be someone in life. I feel like if you are going to study something good, your job will require math, like for example calculating how much time a patient will take something. I want to be a nurse miss! (Pauses for a moment looking at her hands and the facilitator with exhaustion). But, in middle school, I started getting into drama (referring to fights).”

During this meeting, Noreen expresses for the first time her desire to be a nurse. This was powerful because, in addition to this, she shared that she wanted to get better at math so that she could have the opportunity to pursue nursing. Noreen’s comment during the platicas revealed that despite some of the negative encounters she had faced in school, she valued education. This hinted at the possibility of her acting out in school as a form of assimilation, resistance, and survival. Ultimately, highlighting the strength that has emerged from Noreen’s experiences.

In one of the written reflections after the Xinachtli platicas, Noreen shared that she had been asked by a White male teacher on campus whether she had

ever been tested for special needs. The teacher asked the student, one-on-one, after math tutoring, this was Noreen's Testimonio.

"...I am a slow learner in every subject. For me to learn you must talk to me slowly, even when I am fully focused, it takes time. I am getting tested for learning needs/special ed. Mr. K referred me to this test. Mr. K referred me to this test because when we were talking one day in his class, he noticed I was slow. He was explaining everything slowly and I still didn't get it. Then, he recommended I take the test because I am a slow learner. So, I think I have problems. But I am okay with it."

This makes me sad and upset. This student had already expressed a desire to become better at math, she was attending tutoring, and her questions led the teacher to assume that the student had a learning deficiency. It is difficult to understand how or why Noreen's math questions were perceived as a learning deficiency. Noreen then finishes off by saying she is okay with it, but what else can she say? This person, of authority, who should want the best for students, is flagging this student as a potential special education student with a learning deficiency because he has tried teaching this student slowly, one-on-one, and she is still confused. In academia, educators tell students to ask questions, but why would anyone want to ask for help when they are going to be treated with microaggressions?

In one of the meetings, students talked about their culture and what it meant to them to be part of that culture. Noreen expressed the following about what it meant to be Latina.

“...soy (I am) Latina. No, soy pocha miss mentiras (No, I am lying, I think I am more pocha). I am happy to have Mexican parents. Their culture is so beautiful. Imagine, if I was White, I wouldn't be eating tacos (laughs)! I feel like every time we have a party, I love the music, and the celebrations are just fun. We have Christmas, Halloween, turkey, easter, Bautizos, quinceañeras, día de la Virgen, baby showers, and just so many close family customs.”

Noreen shared that being Latina was a beautiful thing for her because so many parts of her culture were so special and unique. She alludes to her love for the food, the music, the traditions, and the culture overall. This testimony was unique because most participants struggled to describe the ways that their culture impacted them, and Noreen was the first one who was attuned to this part of herself. After discussing the characteristics of her culture, Noreen shared that despite some of the challenges she faces because of her culture, she is still very content with the way it has shaped her.

“Sometimes, I feel at a disadvantage because my parents throw things in my face, but I tell them times are different. They were raised having to do so much cleaning, chores, and other responsibilities. Sometimes, they kind' of expect me to be able to do the same things they had to do, but they were not in school at my age anymore. Since freshman year my mom dropped out. Even

though she tries, she still struggles to understand me. But I do get that I can't just be lazy at the house. Sometimes I must be at home to take care of my siblings when she's working or just out and about. I need to be there with them, watching them.”

When she was describing what her culture means to her, Noreen started to also share some of the high expectations that her parents had of her concerning taking care of her siblings. In doing so, one of the other participants in the group joked about the role of the older sibling. The other participant said that mostly the role of the eldest is not burning the house down. After the other participant said this, Noreen recalled a memory from when she was ten years old.

“... actually, my house was burnt down one time. My parents were going through a separation when I was 10 and my dad was in the house. They called my mom to say that my dad was in the hospital due to a burn. Accidents happen. To be honest, I never paid much attention to that event, I always thought that my dad did this to get my mom's attention, he would do so much, and for what?”

In sharing about the beautiful parts of her culture, Noreen transitioned to her responsibilities, and the conversation led her to share some of the hardships she faced growing up with her parents going through a divorce.

During another focus group meeting, Noreen shared the following about being in Xinachtli.

“My first thought about Xinachtli was what did I do wrong? Why am I here? I was pretty scared because, I thought I was going to go to jail, or a group for help, or therapy. I was scared but wasn't sure why. At the time I was just having a lot of problems with girls. None of the teachers liked me. I thought I was in trouble because everyone saw me as a bad person (shares the names of her science and math teachers). I thought they referred me so I would get in trouble.

Gains.

After sharing the fear of being placed in a classroom where she would be further punished for her behavior, Noreen started talking about the way that her perspective changed once Xinachtli started.

“In Xinachtli I could express my feelings, and this made me feel comfortable, and more like myself. Now I know how to share my feelings, and how to talk things out. The community service we did in Xinachtli made me feel happy because I got so much love from the senior ladies! In just one hour, I got so comfortable with them. I remember that a lady said you don't need a man, all you need is a dog! That day I was going through some rough times, and she made me laugh and made me happy. I have old people in my family, but it is not that close. I don't see them a lot, so I benefited from working with the viejitas (little old ladies).”

In Spanish, instead of adding the adjective small or little, the diminutive suffix -ito, -ita, -itos or -itas is added to a word. The suffix not only indicates a

diminutive size, but in some cases, it can add a nuance of affection, or soften the meaning of the actual word.

Structural Interpretation

In elementary education, Noreen had a teacher with whom she did not identify at all. This teacher would label her with red on the behavior chart posted for the class, which led Noreen to feel like a “bad kid.” Noreen shared that she repeatedly was placed in this teacher’s class and that no matter what she did, this teacher did not move her from the red. Noreen hated the stigma that was linked to the red label. Although she initially wanted this label to be removed, the hopelessness turned into an embrace of the label. Noreen developed behavioral habits that were aligned with the red label because she felt that no matter how hard she tried she was always going to be perceived as a bad student.

In her academic journey, Noreen began to realize that despite the issues she faced in elementary school, she needed the education to fulfill her dream of becoming a nurse. This high regard for education revealed that the misconduct and truancy she demonstrated in early education was a form of resistance. When Noreen entered secondary school, she was aware that her performance in the upcoming years could dictate the options she would have in the future. Noreen was aware that her classes and grades were important for her to go to college, so she began going to tutoring when she needed it. Noreen shared that after one of her tutoring sessions, her teacher commented to her about her learning patterns, insinuating that she might have a learning disability.

Noreen was proud of her culture, and she embraced it. She shared on several occasions that her family customs were special and important to her. Despite the generational differences and those in the roles of young men versus young women, Noreen was still very happy with her culture, and she would communicate with her parents when she felt the responsibilities for her, and her siblings were not being distributed fairly.

Noreen was placed in the Xinachtli program by the administration because she had been verbally disrespectful or abusive to teachers on campus. Although her initial thoughts on the program were associated with discipline, she shared that when the program concluded, she had learned to express her feelings and that she found comfort in that. Noreen said knowing how to talk things out through Xinachtli made her feel more like herself. For Noreen, the most impactful part of the Xinachtli program was the community action plan. Noreen enjoyed working with senior citizens and expressed that there were no elders in her family that she could get close to in the United States, so working with the senior community was extra special.

During this observation, something that stood out to the researcher was Noreen's sharing of how she felt like herself in Xinachtli. During the Xinachtli program, there was a section that talked about the masks that women put on for society and how these masks are used to protect themselves from things that caused trauma in the past. This part of the curriculum is aligned with Dolores Delgado Bernal (1998). Delgado Bernal shares that in Chicana Feminist

Epistemology research, past life experiences inform why and what might happen in a particular setting and conditions. Noreen had her guard up until she was able to take off her shield and feel and be herself (Bernal, 1998).

Galilea

Galilea identified as a thirteen-year-old female. Galilea was born in California and lived Monday through Friday with her mother and weekends with her father. When she participated in the Xinachtli program, Galilea was, primarily, living with her mother. The home where Galilea lived housed eight people. In the 8th grade, Galilea was looking for employment. Galilea did not know her parents' education. Galilea reported her ethnicity as Latina, and she shared that this ethnic group was very important to her. Galilea never thought that being part of another ethnic group would make her life better. Galilea's mother was born in the United States and her father was born outside the U.S. Galilea disclosed that the relationship she sustained with her mother and father was good. Galilea did not know where her grandparents were born, and she left the remaining questions about her grandparents unanswered. She also omitted responses regarding her native language but shared that she expressed herself best in English. As she was growing up Galilea attended church or other religious ceremonies occasionally, but she was unsure of the name of the religion her family practiced. At the time of the Xinachtli program, Galilea did not attend church or other religious ceremonies. Galilea shared that she never practiced

prayer or meditation. When facing problems, Galilea mostly talked to her family, and an adult she trusted was her Nina (godmother).

Textural Statements

Challenges.

The Xinachtli program took place over approximately sixteen weeks and during this time the students would share various experiences of their lives that impacted them. The following statement by Galilea explains some of the difficulties she experienced in school.

“A problem I always had was bringing my grades up and trying not to get into fights. I feel like this started in middle school, due to girls assuming stuff. They said they were going to mess me up. What would happen was that they assumed that I was talking about them or looking at them dirty. Now, I feel like school is good. Back then, if there was a fight, I was probably in it. I would also fall behind in school because I would slack. I would say I would do it at home, then, when I got home, I wouldn't do it.

During another circulo, Galilea expressed how important her grandmother was to her throughout her childhood, along with the heartbreak she experienced when she passed away.

“...my grandma passed away and my grades went down badly. We had burned my grandmother when I was in the 8th grade and this year, we dug her up because it is bad for her ashes. We buried her in her ash urn. My tía who

used to live with her is moving out of state and they don't want to give her to my dad because we have a baby and the baby is going to grab it so they buried her.”

During this conversation, there was confusion as to what Galilea meant when she said that they dug her grandmother up, but as she continued it became clear that this was Galilea’s way of saying that they had to bury her grandmother’s ashes. In other moments of Xinachtli Galilea Also shared that her grandmother was very present in her life and that the role she played was very significant.

“I was close to my grandma, when I was 10-11, she was my second mom. She raised me because at one point my mom was living with her boyfriend, and I was with my grandma in Los Angeles. I was so close to her, and she was reliable she was always there. Even though my mom and dad might have been going through stuff, I knew that I could count on her.”

Throughout the Xinachtli program, Galilea shared multiple times the important role of her grandmother in her life along with the need for adults to be reliable and consistent. Next are some of the moments that stood out about Galilea's academic beliefs and the role they play in socioeconomic status. She also touches on accountability and demonstrates the ability to take responsibility for her actions. She also shares how one of her peers from the Xinachtli program is one of her main supporters and encouragers.

“Well, my grades stress me out cus like I know it's my fault but it's like I need to try harder cus of credits and everything. Amelia tells me grades are

important, and they matter to me too. I know my grades are my education and graduating can help me be something in life.”

This was a moment that highlighted the power of forming connections with peers who face similar challenges in school and their personal lives. Amelia and Galilea had been friends for several years, but through Xinachtli they developed a sisterhood in which they felt comfortable holding each other accountable and they were able to communicate effectively. In addition to this, together their academic self-efficacy developed further, highlighting the power of Banduras’ observational learning and the significance of role models. Galilea also shared that she had a fear of turning out like her older brother, who was home ever since he graduated high school. She explained that in her opinion his lifestyle was not interesting and that the way he went through the days made her want to better herself, so she didn’t turn out the same.

“I don’t want to be like my brother. I don't want to be like him, not to be mean, but like he doesn't have a job (pauses for a long moment). I tell him to get up and do something. He doesn't have anything to do. I think his life is boring. Now he’s going to do school or something. But I don't want to be like him. My mom would tell him to do chores and she would pay him, but this is not realistic. When my parents pass away, what is he going to survive off?”

Through her testimony, Galilea uncovered the fear of losing her parents. After losing her grandmother and experiencing abandonment and the need to cope and figure things out without her. Galilea had made peace with the idea that

one day her elders will pass, and it almost seemed like she didn't want to be caught off guard again. Although this is a very impactful statement, Galilea was determined to be self-sufficient, which highlighted the ability she had to overcome her suffering and use the suffering as strength and empowerment.

During another meeting, Galilea also shared that when she was initially asked to be part of Xinachtli, she believed she was in trouble.

"I thought I was in trouble because, after the fight, they right away put me in this group. I had never been in a group like this. It helped me control my anger and helped me control myself. I was like I've never been in a group like that before. What is this for? I wasn't scared, but I was confused about what it was for and why I was put in it."

In a reflection following the Xinachtli program ceremony, Galilea was asked to think about some of the things she gained from participating and to mention some people with whom she was able to get closer than ever. To this, she responded with the following:

"Xinachtli made me feel good with the viejitas because I liked them, and the party was so cool too! Just seeing the teachers there and seeing that I made it through the group helped me. Xinachtli was the first time I started something and went through with it and finished it. I remember I was feeling accomplished, I was happy! The teachers I invited were Ms. S. and Ms. M; Ms. M., she's like my school mom and Ms. S. was my favorite 8th-grade teacher because we just got

along. She was nicer to me than most of my other teachers. When I got into the fight, she was still there for me she didn't change. She was not judgmental.”

This response summarizes the importance of programs like Xinachtli where students are given space and time to be heard, to be their authentic selves, and to be given a chance to be part of something rather than to be pushed out. Xinachtli was the first program that Galilea had the opportunity to be part of. For whatever reason, she did not meet the criteria for other groups/sports/clubs, and thus she had never started and finished anything. This is also connected to a testimonial shared by Galilea about the ways that her academics were evolving six months after the program concluded.

“Xinachtli helped my grades because after the group my grades started going up. I gained confidence and improved overall. This year I started missing Xinachtli. I feel like it was a great time with everyone. It kept me entertained because I would do stuff it helped me with a lot.”

Galilea explains that after being part of the Xinachtli program she gained confidence, ultimately the Xinachtli program impacted her self-efficacy, making it possible for her to believe that she can do well in school. She also shared that she had a great time. The time spent in the Xinachtli program was mostly spent talking, and listening to other young women, the circulo was mostly checking in to see how they felt. This was interesting to the researcher because although nothing was amusing about the meetings the structure and ability to talk with each other and the facilitator was fun. When Galilea talked about doing stuff, she

referred to the different activities presented by the Xinachtli program. Xinachtli presents a variety of hands-on activities revolving around the life experiences of young women, the meanings of their lives, the important people in their lives, and representative of their mental, physical, and spiritual selves.

Structural Interpretation

Galilea was a student who was involved in school violence very often throughout her academic journey. When Galilea was growing up, her parents got divorced. During this process, there were moments in which the only place Galilea could be safe and well cared for was with her grandmother. Once her grandmother died, Galilea lost a reason to do well in school. It appeared that her grandmother was one of the people who pushed her to be better, in addition to being one of the only adults in her life that were reliable. For Galilea, Xinachtli was important because she had never joined a program, club, or sport. Galilea was especially proud of her commitment from start to finish. For Galilea, this was a major milestone. She expressed gratitude for the ceremony organized for Xinachtli. In addition to this, she also shared that her grades improved when she was in Xinachtli. Although academic achievement was not the focus of Xinachtli, it is a positive outcome for this student's development.

Throughout Xinachtli Galilea shared her stand on the role of an adult. She often highlighted how the important people in her life gave her comfort by providing stability, a home, and consistency. Galilea also seemed to have a fear of losing loved ones, and an awareness of the repercussions that follow the

death of a loved one. Overall, the loss of her grandmother impacted the way that Galilea viewed the world, and this often brought out feelings of resentment and a desire to be self-sufficient. Like Noreen, for Galilea, the community action plan was also one of the highlights of the program. But in addition to this, she was also marked by the ceremony and the way that some of the women on campus showed up to support her.

Noelia

Noelia was thirteen years old when she participated in the *Xinachtli* program. Noelia identified as a female and she was born in California. Noelia grew up with her biological mother and father, and she lived with both of them. Noelia lived in a home with 10 people, and she held a part-time job. Noelia's mother and father graduated high school. Noelia described her ethnicity as mixed, but she did not specify. Noelia shared that her ethnicity was somewhat important to her and that she hardly ever thought that life would be better if she was part of another ethnic group. Noelia was unable to disclose where her mother and father were born. When asked about her relationships with her mother and father she said "good, I guess..." Noelia was unaware of where her grandparents were born, but she spent time regularly with two of them. Noelia's first language was English, and this was the language she expressed herself best. Growing up, Noelia never went to church or attended religious ceremonies, and was unsure of her family's religious affiliation. In 2021 she did not go to church very often, and she shared that she never prayed or meditated. When

facing problems, Noelia talked to no one, and she shared that she did not talk about her feeling with anyone. She also disclosed that there were no adults that she trusted enough to discuss personal problems.

Textural Statements

Challenges.

In various instances throughout the Xinachtli program, Noelia would express concern for her academics and explain the importance of a high school diploma. In various instances, she shared that she knew she had to take school more seriously so that she could fulfill her dream of going to beauty school to become a nail technician. Another challenge that Noelia discussed during circulo was the duality of her persona. Noelia's mom was White and her dad was Hispanic, and while Noelia was able to understand some Spanish due to the population she grew up in, she struggled to speak it, and this caused frustration for her. During circulo, Noelia shared the following:

“I used to be enrolled in a Spanish class, and I was excited to learn how to speak Spanish like all my friends. Then they changed my schedule and placed me in read-180, which is a class for dumb kids.”

In this quote, Noelia expresses that although she wanted to speak fluent Spanish, she was not able to take the class. Despite this, she was also not fluent in English given that the reading class she was placed in was to support her in her reading skills. Noelia's statement about the read-180 class showed that the did a poor job of immersing students of all different learning levels in all the

classes. Separating students because of their reading fluency makes the students perceive the class as negative.

Gains.

Noelia was a participant who was often absent. However, ever since the Xinachtli program started, she did not miss school on Fridays anymore. When she was asked about what made her attend school more frequently on Fridays, she mentioned that she enjoyed the program because she liked hanging out with [her] friends and getting closer to them. She also explained that this was a space where she liked being because she was heard and because everyone took time to listen to how her week had gone and how she was doing.

Structural Interpretation

The Xinachtli meetings were led by the Xinachtli facilitator and at the end of the program students were asked to express how the facilitator impacted them in the program. Noelia shared that the facilitator was an adult on campus who treated her kindly and with respect. In comparison to other adults on campus, she was one of the few who took the time to get to know her. After the Xinachtli program concluded, Noelia shared that she was going to miss sharing a snack. Noelia shared that the best part about her week was Xinachtli.

Isaura

Isaura was thirteen years old when she started the Xinachtli program. She identified as a female born in California and grew up with her mother and father. Her home consisted of a total of four people. This participant was in the 8th

grade and had a part-time job. Both of Isaura's parents graduated from college or university. Isaura shared that her Mexican ethnicity was very important to her and that she never thought about how life would be better if she were part of a different ethnic group. Isaura knew of her parents' upbringing sharing that they were both born outside of the United States. Isaura shared that the relationship she maintained with her mother and father was good. Isaura shared that she knew one of her grandparents and that she regularly spent time with this one grandparent. Isaura's first language was Spanish, nonetheless, she expressed herself best in English. Isaura was Catholic and attended religious ceremonies often throughout her childhood. Isaura shared that she prayed/meditated occasionally. Isaura shared that when problems came up, the people she confided in were her friends. She shared that an adult she trusted to discuss personal problems was a family friend.

Isaura was the only participant who decided to answer questions about risk behaviors in the pre-survey. Isaura was conscious of areas that were not safe for her, and she stayed away from these places. Isaura shared that she would not follow friends to dangerous places. Isaura was somewhat comfortable expressing her feeling with guys and was completely comfortable doing so with other women. Isaura's opinion about guys turning down sex was that it was completely ok and the same was true about girls refusing sex with their partner. Isaura agreed with the statement "it is OK to have sex with someone you just met," and she was not satisfied with the partner she had at the time of the study.

Isaura answered the questions about violence, and she shared that she completely agreed that sometimes people deserve to get hit, if you want something you should go for it no matter whom it hurts, and she also completely agreed to respect a person who backs down from a fight. In assessing her attitude about her health, Isaura shared that she tried to eat food that was good for her, and she was satisfied with the way that she looked. Isaura shared that having a career was very important and that she got along with people of all races and religions. Lastly, Isaura completely agreed to be proud of being a woman.

Next are the responses given by Isaura regarding her behavior in the month before the start of the Xinachtli Program. In the pre-survey, Isaura shared that she had ditched school, been suspended, tagged a public wall, drank alcohol, smoked cigarettes, turned down marihuana, and practiced unprotected sex. She responded yes to participating in the following: arguing with a teacher, yelling at her parents, arguing with her parents, breaking something out of anger, getting into a physical fight, walking away from a fight, taking care of siblings, bullying, stealing something, smoking marihuana, writing a poem, taking prescription drugs for recreational use, complimenting someone, and crying. Isaura's academic beliefs before the start of the Xinachtli program consisted of a strong desire to graduate high school and college. Isaura sometimes tried her hardest in school, and sometimes she would rather not be in school. She did not think that school was a waste of time and she never wanted to quit school

completely. Isaura's responses to family beliefs showed that she felt as though her family expected too much from her and that she sometimes liked spending time with her family and talking. Isaura did not feel ashamed of her parents, nor did she feel they had let her down. Isaura answered questions about aggressive behavior sharing that she did whatever she wanted all the time. Isaura also shared that she sometimes got mad easily, yelled at people, and would break things on purpose. Isaura answered questions about self-efficacy by strongly agreeing that if you work hard, you can get what you want. Isaura agreed that it was important to think before acting, that if she studied hard, she would get better grades, that when she was nice people would notice, and that she was responsible for what happened to her. Isaura strongly disagreed with the idea that others decide what happens to her. Isaura answered the questions about drug use by sharing that she agreed that drinking alcohol is bad for a person's health but expressed that if she was given the chance to try drugs, she would.

Textural Statements

Challenges.

In one of the Xinachtli focus groups Isaura shared that one of the first challenges that she faced in school was the following:

"I struggled with waiting my turn. I was a blurting kid. If I knew the answer, I would get mad if I wasn't the first chosen. To this day, I have that problem. The people who were selected were always the kids who never spoke, so the teacher wanted to hear from them. The teachers always knew I knew the right answer. I

never understood why they didn't just call me. I was the obvious choice and I felt like the teachers were wasting time. It was also a waste of my time! I already knew the answer and I just wanted to move on."

Some of the challenges Isaura talked about during Xinachtli circulo concerning high school were the following:

"Having to balance social life and education has been so difficult. Before, I didn't try so hard and I was doing just fine. But before it didn't matter, and now that it does matter, I am struggling. To be able to understand and make good grades, I have to attend tutoring and do my homework. I have learned to prioritize, and my social life comes last."

One of the topics covered in the Xinachtli program is related to the identity, culture, and origins of the students. During circulo, Isaura shared the following about her roots and culture:

"... I'm more (pauses), I was born here and raised here. Everyone around here is mostly like me (referring to the other people she knows on campus). And they are still Latino because they have family that is Mexican. I have an advantage due to my Spanish and I am bilingual. It's an advantage. It helps me in life now, and it will also help me when getting a job later."

The Xinachtli program covered a lesson titled "My Shield" (Haskie-Mendoza et al., 2018). By this lesson, the students had been meeting for about 8-10 weeks, and the facilitator and students shared how they created personal

and relationship boundaries. During this lesson the students shared testimonies, Isaura shared the following:

“Boundaries are always there. For example, when I started coming to the Xinachtli meetings, I thought I was in trouble. I thought to myself, I am a trouble-making student, I disrespect teachers sometimes. So, I really thought I was here so that I could be taught to put my attitude away. At the time the school reached out to my parents to tell them I was going to be attending Xinachtli meetings once a week, I had a huge issue with Ms. F (her math teacher). Ms. F and I didn't talk much, but when we did it was about extensions. And, no matter what I asked for, she always said no. I would go ask for help at lunch, and even to that she would shut down. According to her, we had already gone over it in class, and it was my fault that I didn't take notes. I felt like she wasn't here for the students, and when I asked for anything, she pushed me away. This affected me in other classes because I started getting scared of my teachers. So, I guess our life experiences make us create boundaries. Before I met the facilitator or anyone in the Xinachtli program I had a wall up because I didn't know how you were going to treat me (referring to the facilitator).”

Gains.

Isaura stopped attending the Xinachtli program shortly after this testimony. The reason for this was not clear at the moment, but the following school year, Isaura went up to the facilitator to say hello and catch up.

“Hello Ms. Facilitator, I am sorry I just stopped coming to the Xinachtli meetings. Being here, I realized that I really didn’t have anything going on to make me act out. There were others in the Xinachtli program who actually had problems, they were homeless, they lived with their grandparents, they didn’t have their parents, their parents were on drugs, and just they were going through so much. It made me realize that I had no excuse for how I was acting. I live with both of my parents, they both have jobs, and they both want me to have a bright future. I complain about my sister for having Down syndrome and not helping out with chores and work around the house, but I am so blessed.”

This was the first time the student reached out to the facilitator to have a conversation in a long time. The facilitator thanked the student for taking the time to have a conversation and catch up. Though the program had concluded, this opened the door for Isaura to stop by every week after that. Isaura visited the facilitator regularly to talk about her life. Next are some of the conversations Isaura and the facilitator shared during lunch.

“Ms. Facilitator, I want to graduate top of my class. I want a biliteracy award. My dream school is SDSU. I want to major in criminology and be a detective.”

This day Isaura had recently visited a college and she was excited to talk to the facilitator about her goals and dreams.

“I heard you are starting a new group. I am excited about the new group. I want to join, and I want to finish the program this year. I have so much I want to

share, I am in ASB and it's difficult because I feel like my opinion is not welcome. In Xinachtli, I am encouraged to speak what I think. Xinachtli is different from other programs because I am not hushed or asked to keep my ideas and comments to myself. In ASB, even though my comments may help I feel unheard and unwelcome.”

On this occasion, Isaura had come across the school principal discussing plans to start a new cohort of Xinachtli circles for students and she wanted to know if the facilitator was going to lead the program again, as well as express a desire to be considered for participation. Here is the last interaction with the facilitator before she started a new Xinachtli cycle with a new group of students a year later.

“I felt like you were a fun teacher. I trusted you because your energy is very up! I like how you socialize with people and how you listen to our situation, no matter how dumb what we are going through may be, you always give us advice and are nurturing.”

These conversations were obtained after the Xinachtli program concluded, but the facilitator recorded them in her reflection journal because she felt that there had been a connection with the student because of Xinachtli. The purpose of the program was to grow through personal reflection, and consciousness, and by taking action, and Isaura had done exactly that. She reflected on why she discontinued the program but also thought about how it impacted her, she reflected on how her sudden abandonment from the group might have made the

facilitator feel, and she took the initiative to apologize and started nurturing this relationship because she missed the interaction with the facilitator. She was in the program for a short time, but she learned the purpose of the facilitator was to be there for them no matter what. She knew the space was a place to come to when she wanted to be heard, and she also learned that it was safe for her to put her shield down when it came to her relationship with the facilitator.

Structural Interpretation

Isaura was the only participant in the group whose mother and father had graduated college. Isaura was also the only participant who decided to answer the optional questions regarding risk behaviors. Through the pre-survey, it becomes clear that Isaura often participated in risky behavior including ditching school, being suspended, vandalizing school property, drinking alcohol, and many others. These behaviors could be associated with low levels of self-efficacy and self-regulation. Isaura expressed feeling pressured by family expectations and shared that all her life she helped care for her younger sister who was diagnosed with Downs Syndrome at birth. The pressure of pursuing higher education was present in her life, and Isaura knew she had to develop her math skills. However, developing a relationship with her math teacher proved to be impossible, resulting in low marks and stress. The math teacher at the site was a permanent substitute teacher and as a result, the students lacked relatedness to the content and teachers. Isaura expressed that after experiencing so many negative encounters with the math teacher, she eventually started developing a

fear when interacting with other teachers on campus. Isaura started to expect the same negative response and began creating boundaries.

Isaura dropped out of the program without notice, but the following school year she approached the facilitator to apologize and to nourish that relationship. Isaura learned that she could trust the facilitator. Isaura acknowledged that her behavior at home and school had been uncalled for and demonstrated critical consciousness when describing the positive aspects of her life in comparison to those of her peers. Isaura learned to empathize with other young women and expressed that she realized how fortunate she was to have so much in her life.

Athena

Athena was a thirteen-year-old, who identified as a female. Athena was born in California and lived with her mother and father all her life. Seven people were living in the household she inhabited at the time of the Xinachtli program. Athena was an 8th grader and she shared that she was not employed, nor was she looking for a job. Athena did not know much about her mother's education, but she knew her father graduated high school. Athena shared that she was Mexican and that being Mexican was very important to her. At the time of the Xinachtli program, Athena did not know where her parents were born, she could not specify if they were born in the United States or not. Athena's relationship with her father was bad, and the relationship she had with her mother was very good. Athena knew where one of her grandparents was born, but she was unable to provide detailed information. Athena spoke English and Spanish and

was able to express herself best using both languages. When Athena was growing up, she did not attend church or other religious ceremonies very often and was unable to share the name of the religion her family was affiliated with. During the time of the Xinachtli program, she never attended religious or spiritual ceremonies and she never prayed, meditated, or followed spiritual practices. When Athena had problems, she mostly spoke to her family and friends, and an adult that she trusted was her mother.

Textural Statements

Challenges.

One of the first Xinachtli meetings focused on creating a codex. For this workshop, the students created a codex of their life sharing details about events that impacted them. This project was the first step towards realizing that young women face similar and different experiences. This session was so important because it allowed the young women to tell their life stories to the group. Athena talked about some of the challenges in her life, particularly the following.

“I have always struggled to focus, with having friends, and socializing. I have always been really shy. When I started secondary school, the workload changed. There was so much more work. I also had to come to terms with the fact that people are constantly staring at me when I am walking around school.”

Athena expressed discomfort with talking and sharing how she feels. She also expressed discomfort with being looked at by peers when she is moving across campus.

Gains

As Athena continued to attend the Xinachtli circles, she started to share more and more about herself. This young lady was very hesitant to talk in most of the meetings, but she was always present. An important moment for Athena occurred during the “tortilla de mi vida” session. In this session, the young women had to choose four people who they considered to be the most important in their lives.

“I think my entire family is important to me. We go to San Diego to the beach a lot of times. I grew up in another city, then we moved to this city at the end of 4th grade. We moved here because of my parents’ work. But they are all important to me.”

Athena was quiet for most of the circles, but in this particular discussion, she seemed to be more passionate and open to voicing how she felt. This was approximately the ninth week that the young women had met with the facilitator.

During the eleventh meeting, the Xinachtli program covered the anger escalation process. This meeting is titled “knowing and guiding my fire.” In this meeting, the young women talked about their physical response to anger, then the facilitator explained what happens in the body physiologically. This resulted in the participants feeling like their emotions were valid. During this meeting Athena shared the following during the focus group.

“When I feel anger, I think I also feel fear. I think our anger is our fire because it can harm us, but it can also be embraced to make something

beautiful. A situation I feel I could have handled differently was coming to Xinachtli. When I first started attending these meetings, I felt a little upset. I thought Xinachtli was weird because I had never been here before. Little by little my fear stopped. I started telling myself, I am in Xinachtli to learn how to be kind and respectful. I had never been in a program like Xinachtli, so it took time for me to start enjoying it. I think a lot of my anger and fear came from being in my head. Now I am more out there, I am less shy. I learned to have a voice because I felt safe, and I trusted everyone in the circle.”

Renata

Renata was a 13-year-old female who was born in California. Renata had never lived with her mother, only with her father her whole life. At the time of the study, Renata lived with her father and grandparents in a home occupied by 10 people. Renata was an eighth grader and was already looking for employment. Renata did not know either of her parents' educational backgrounds. Renata identified as being Latina and expressed that this ethnicity was very important to her. Renata shared that she never thought about how life could be if she were part of another ethnic group. Renata did not know where her parents were born, and she could not even say for certain whether they were born in the United States or not. Renata had a good relationship with her father, but her mother was in prison at the time and she was unsure where their relationship stood. Although she lived with her grandparents, Renata did not know where her grandparents were born. Renata's first language was English, and she expressed herself best

in English, too. As a child, Renata was never affiliated with any religion or spiritual practices, and at the time of the study, she did not practice any religion, meditation, or spirituality. When Renata encountered personal problems, she didn't talk to anyone about them, but if she had to, the adults she would go to for support were her father and grandparents.

Textural Statements

Challenges.

Renata was absent from school very often. She was not removed from the Xinachtli program despite her absenteeism because she needed the support of the group. During the time that she was in Xinachtli, Renata's mother was released from prison. In the meetings leading up to her mother's release, Renata had so much to share in the opening circle. This was the time when the participants discussed current challenges, stressors, highlights, and accomplishments. Renata explained that in previous releases from prison, her mother had promised to stay clean, out of the streets, and spend more time with her. Renata was upset about her mother's continued return to jail. Renata explained that time and time again her mother did not keep her word and would flake. Renata shared that this time was going to be different. She explained that she was not happy to see her mother and that she was not going to go with her aunt to pick her up.

The facilitator and the participants listened to Renata for most of the meeting during this time in her life. One day Amelia shared that she was sorry

about the situation she was facing and shared challenges with substance abuse in her family and how that had impacted her relationship with her mother. Amelia said:

“I am not telling you what to do here, but my mom is a person in long-term recovery who previously used drugs, too and she is one person when she is off drugs, but when she has a relapse, she runs away from everyone. Maybe that is better for us not to see them that way. Amelia continued, I am grateful for my grandparents even though it’s not perfect, but I think you should take time to think about what you want to do. That’s your mom, and you don’t know when the next time you will see her will be.”

Renata responded positively to Amelia and stayed quiet thinking and contemplating what she wanted to do. After Renata’s mother was released, Renata was absent from a few meetings.

Gains.

Renata returned to school after the program concluded and she visited the facilitator one day during lunch. During this meeting, the facilitator expressed happiness to see Renata and Renata smiled. She then explained that she missed the Xinachtli meetings.

“I miss coming to the Xinachtli meetings Ms. Facilitator! When we used to meet, I got to miss class for a little bit. You made me talk about being thankful... and grateful... and those things. Because of you, I am grateful when we have money and I have new friendships. I am also grateful for you Ms. Facilitator!

Before I used to get into fights and be mad, and now if someone makes me mad, I stay quiet, or else it escalates, it's not worth the trouble anymore. Honestly, Xinachtli was the only reason why I would even come to school in the first place. I just came to school for that, the rest of the week I didn't care much to be here."

The facilitator cried that day. Teaching is a profession in which the outcomes are seen in later years. Educators help raise young men and women, and very few times do they get to see them as grown adults, nor do they hear a thank you like the one Renata gave. It was so special. Renata did not have an easy life, she carried so much pain, burden, and hurt, and she was still fighting to spread kindness in the world. The facilitator thought about her relatives who had gotten lost in drugs, especially one of her favorite cousins. The facilitator could feel the pain Renata felt to a certain extent. She could relate to the pain of losing someone so special to substance abuse in a rollercoaster pattern.

Summary

This chapter presented the results of this phenomenology. The data collected showed how complex the lives of the young Latinas were, the heavy loads they carried in and out of school, and how significant the Xinachtli program was in their lives. Studying the participant journals allowed the researcher to understand the various phenomenon shaping the self-efficacy beliefs of the young Latinas. This chapter demonstrated the huge impact that teachers have on students' academic beliefs as early as elementary school. The results also highlighted the importance of mothers during the adolescent years of young Latinas. In the absence of positive women role models, it was possible to see the huge benefit of offering programs like Xinachtli that bridge healthy relationships between women in school and adolescent Latinas. Furthermore, the findings in this chapter presented a problem that was discussed in the literature review, the shortage of qualified teachers within high-need communities, especially in math and science courses. The results in this study also show a change in the self-efficacy and self-regulation of the young Latinas over the course of 16 weeks. Finally, this chapter shared the importance of Xinachtli to the seven young Latinas and revealed what their participation in the Xinachtli program was like. The next chapter will describe the results further and provide an explanation of how the findings related to the literature.

CHAPTER FIVE: RECOMMENDATIONS AND CONCLUSIONS

In summary, the previous chapters of this dissertation presented an introduction to the problem, the literature review, the research methodology, the research process, the methodology, and the data analysis. Chapter five will discuss how the findings of this research contribute to the understanding of how Latinas navigate STEM education in a society that labels, silences, and misunderstands them. Using phenomenological qualitative research and multiple modes of data collection, it was possible to obtain a rich interpretation of what the seven Latinas experienced in the public education system, at home, in science classes, and in math classes, and how their self-efficacy beliefs and self-regulation changed over the 16 weeks.

The Latino population in the United States is one of the fastest-growing minority groups, however, this increased population is often accompanied by large family homes, which was true for most of the participants who completed the Xinachtli program in this study. The demographic data show that oftentimes, young Latino men and women grow up in a high-needs environment (U.S. Latinos Suffer High Hunger, Poverty Rates, 2017), and this was true for most of the Xinachtli participants as well. The literature focusing on empowering Latinos repeatedly recommends implementing support and interventions to help young men and women thrive and achieve their academic potential, and the introduction

of the Xinachtli program at a rural school in Southern California did this with a group of young women (Chapa & De La Rosa, 2006). The deep analysis of the lived experiences of the participants showed that common phenomena are affecting young Latinas in the schools they attend, their homes, and within themselves. The social and emotional challenges faced by the seven young Latinas in this study were intricate but could be best understood from a self-efficacy perspective (Bandura, 1995).

Research Question 1: How do young Latinas who participate in Xinachtli navigate being labeled and silenced at school?

Labeled at School

The Xinachtli character development program was implemented at Southern California Secondary School to help resolve violence and conflict. The participants were selected after getting into school fights and being suspended repetitively. The data from the study uncovered that for many of the young women being labeled from a young age caused them to feel resentment and anger. These built-up emotions ultimately impacted the self-efficacy beliefs of the young Latinas. Some of the participants shared having their names publicly marked with a certain color by educators in primary education. The colors they were given in the classroom management chart could be green, yellow, or red. Green was indicative of an exemplary student, yellow meant that there was room for improvement, and red meant that the student was underperforming, or as the students explained, “a bad kid.” This labeling and the inability to change such

labels caused more than one of the young Latinas to embrace what was being said of them.

Bandura explains that the perceived self-efficacy a person has of themselves is dictated by mastery experiences, vicarious experiences, social persuasion, psychological states, and emotional states (Bandura, 1995). This research demonstrated that from an early age, these young Latinas were greatly influenced by the words that were used to describe them. During one of the interviews, Noreen mentioned that no matter how hard she tried to change this label, her teacher would not change it. She explained that the first few times she noticed she was red, she inquired about ways she could improve. However, she was told that there was no way to change it repeatedly, so she eventually stopped caring. Something powerful about this shared experience is how much it aligns with Bandura's self-efficacy (Bandura, 1995). Bandura states that the levels of motivation, affective states, and actions are based more on what people believe than on what is objectively the case (Bandura, 1995). Initially, Noreen did not believe she was a bad kid and wanted to prove otherwise, but after a while, she honored the label. This caused her to have a negative attitude toward all adults in school, ultimately costing her the ability to develop healthy relationships with educators.

The seven young Latinas who participated in *Xinachtli* were affected by labels. Some were considered rude because they were too loud, and others were too loud and eventually felt like their voice did not matter because they were

constantly told to be quiet. Overall, the constant judgment led to emotions that were expressed through school violence. The phenomenon that caused all participants to be placed into the Xinachtli character development program was repetitive school fights in the first months of school. However, the Xinachtli program helped uncover the lived experiences that gave rise to the violent behavior the young Latinas engaged in. After a thorough analysis of the data acquired, the common theme among adolescent Latinas is the stigma associated with the labels given to their names in school.

Silenced at School

Xinachtli also uncovered the effects of silencing on the Xinachtli participants. During the semi-structured interviews and during *circulo*, the young women revealed that throughout their entire lives, they had always been asked to be quiet. They shared that people assumed that they were rude simply because they were too loud. From the researcher's perspective, it seems that volume and tone were used to obtain attention in the large houses that saw these women grow up. However, their communication skills did not translate positively in the school setting. During several of the Xinachtli interviews, the young Latinas shared that school made them feel invalid. Further, they explained that they did not see the point of school, when the focus was always on other students, and never really on them. This common phenomenon of being told to not speak, made all seven of the Latinas feel unheard, pushed away, and unwelcome.

This request to be quiet even left some of the participants feeling judged, uncomfortable, and with a feeling of anxiety. The young women who took part in this research study, could not articulate why being told to be quiet was so upsetting and belittling, but the literature focused on Latinas in STEM highlights these systems of oppression (Banda & Flowers, 2018; Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013; Starobin & Bivens, 2014). The literature focused on studying the gender gap in STEM shows that young Latinas face oppression in academic institutions because of cultural norms, and also states that being silenced is a form of domination and oppression (Freire et al., 2014). Being silenced from an early age took away these young women's emotional, experiential, and mental self-efficacy beliefs.

Research Question 2: How do young Latinas who participate in Xinachtli navigate being labeled and silenced by their families?

Labeled by family

When analyzing the labeling phenomenon, it became evident, that another significant form of labeling was happening in the homes of the participants. Many of these young women were neglected throughout their childhood by their biological parents. An initial note of this was made when analyzing the household sizes ranging from four to ten, with the average being seven. However, as the participants and facilitator grew closer, more and more of the details pertaining to household size unfolded. Through conversations and stories shared in Xinachtli, it was uncovered that these large-sized homes were the product of substance

abuse, incarceration, divorced parents, grandchildren living with grandparents, and other complex home situations. The young Latina women experienced trauma, abandonment, and pain when they were children and were seen as a burden by the people who raised them.

When the fights and problems at school made it to their homes, these young women were confronted with the reality that their misconduct cost their homes money, as their guardians had to leave work to sit in meetings discussing their behavior. At home, parents who themselves felt like failures, said verbally abusive things out of frustration with the adolescents. La Familia is an important part of the upbringing of Latino men and women (Marrun, 2020), and having supportive families, who have high expectations of their children leads to successful careers, employment stability, and a better quality of life (Marrun, 2020). Based on the findings from the literature and the complexities of the homes of the Latinas, it is understandable why adolescent Latinas displayed so much anger throughout their education.

Silenced by family

Furthermore, the silencing experienced by the young women was also happening at home. One of the participants was an outlier when it came to family size in this research study. Isaura's family size was only four, but the silencing that she experienced was no less than any of the other participants. Isaura had a younger sister with Downs syndrome. For Isaura's parents, the needs of their youngest daughter always came before the needs of their oldest, Isaura. Isaura's

parents did not do this intentionally, but given the health condition of their youngest daughter, it just happened to be that way. For Isaura being a healthy, strong, and able child, resulted in her always being told to be quiet and pushed away. For the seven participants, it was so immensely important to be heard, acknowledged, seen, accepted, and welcomed. These were actions that were seldomly done for them. To compensate for the invisibility they existed in, the Latinas spoke out, they screamed, asked questions, and got into trouble; only to be labeled even further. The misbehavior was a coping mechanism that allowed the young Latinas to be relevant to the adults at home. Finally, as other researchers have suggested, there needs to be better communication and the voices of young men and women need to be heard and validated (Haskie-Mendoza et al., 2018).

Research Question 3: How do young Latinas who participate in Xinachtli navigate being labeled and silenced in their math and science courses?

Math

This phenomenology study took place over approximately five months. During these months, the young Latinas grew close to each other and to the facilitator, which eventually led to more experiences shared. In retrospect, the participants were especially vulnerable and open in the last few weeks of the Xinachtli program. Some of the final Xinachtli meetings were the most impactful to the facilitator as these revealed the most about each of the young Latinas.

By the fourth month, the young Latinas had already shared their life stories, developed trust, learned from their experiences, knew that it was safe to put their guard down for an hour a week, and were able to embrace their emotions in a positive and healthy way. During the last month of the Xinachtli program, the program felt like coming home for the facilitator and the adolescent Latinas. Consequently, the young women would talk about challenges openly.

When the young Latinas talked prior to starting the círculo, the researcher would take notes and just listen to the latest drama affecting each of their lives. Sometimes the conversation would be about boys, other times they would be about home, and at the end of each quarter, it was about their grades. The classes they would complain about the most were their math and science classes. The facilitator would invite them over for tutoring and help, but the young women always seemed to not care enough about science class to dedicate extra time and effort. One day Isaura shared that she was stressed out because her math teacher and she had gotten into a verbal altercation. She explained that the expectations the math teacher had of her were unrealistic and that although she knew it was wrong to be disrespectful, she had not been able to handle her anger and had made the math teacher cry.

The facilitator explained to Isaura that words can be hurtful and that teachers and other adults on campus have the role of teaching and keeping everyone safe. The facilitator explained that, despite teachers appearing strong, they are still human. When the facilitator explained this to the student, Isaura was

still upset but managed to accept that she had been wrong in making her math teacher cry. Later that day the student and the facilitator spent time together at lunch and Isaura explained that she just felt so much frustration with her math teacher because she was inflexible. At this point, the facilitator started wondering if there was another math class the student could be switched to, given the shattered relationship between the young Latina and her current math teacher. Upon taking a closer look at other math options for Isaura, the facilitator realized that the math class Isaura was enrolled in, was the only option for all students in that grade. The failure to provide more options to students was a socioeconomic issue. The literature had already acknowledged this existence in rural communities, but it was eye-opening to see it directly impact the liking developed in a particular subject (Starobin & Bivens, 2014). Southern California Secondary School was a small school in a poor and rural area. Consequently, there was only one math class for each grade, meaning that students had no option but to take that class with that math teacher, and at the time of the study the students had a long term-substitute teacher. There were no math electives or alternatives because the master schedule would not allow it due to the small school size. In other words, the relationship developed with mathematics was heavily dependent on the relationship a student maintained with the current substitute teacher.

The facilitator reached out to the math substitute teacher, her colleague, to invite her to lunch, and quickly realized why there had been so much conflict between the substitute math teacher and the Xinachtli Latinas. The math teacher

was an elderly woman, with a thick Filipino accent, with whom it was difficult to communicate in English. When the facilitator invited the math teacher to lunch, she politely turned the facilitator down. At this moment the facilitator understood how the young Latinas felt when trying to nurture a relationship with someone who had no interest. Perhaps there was a cultural barrier between the substitute math teacher and the young Latinas, or perhaps the language had been a hurdle, but one thing was clear; the connection between the math teacher and her students was not happening. This is an educational inequity in this high-needs community, and like the research states, there are greater discrepancies in the number of young women interested in STEM when focusing on poor and rural areas (Reinking & Martin, 2018) and at this site, it might have been due to the students having such few options in math elective classes and/or math teachers.

Science

The issues the young Latinas encountered in science class were different from those in math but also highlighted some of the inequities of a small and rural school (Starobin & Bivens, 2014). The science teacher at the site of the study was like the math teacher, the only teacher that students would have for science. Ms. Science, a substitute teacher, was known for kicking students out of her class for no clear reason. Amelia shared that on several occasions, Ms. Science saw her enter class, and would write her a pass before taking the attendance. Amelia would end up being in the office or the library for the period.

When some of the conflicts arising in science class were shared during Xinachtli, more would slowly trickle their way out. One that struck the facilitator was an incident in which one of the young Latinas asked for permission to use the restroom. Ms. Science interrogated the student publicly doubting whether the student actually needed to use the restroom. The teacher looked for every reason to not allow the student to use the restroom, eventually asking her to take her phone out of her pocket prior to going to the restroom. The student responded that her phone was in her backpack and showed Ms. Science the menstrual pad that she was hiding in her pockets. When Ms. Science realized that it was a feminine product and not the phone, she just said whatever, and the student walked out embarrassed from being exposed in front of all her classmates.

The findings discovered about the science and math courses offered at Southern California Secondary School, highlight the importance of offering multiple opportunities for students to develop STEM skills. They also support the findings of previous researchers who invite educators to honor the intersectionality of Latinas in STEM education (Alemán, 2018; Gutiérrez y Muhs et al., 2012). Although Xinachtli prioritized the social and emotional well-being of the young Latinas; math and science classes were often a source of stress, frustration, and disconnection. During the conversations that occurred in círculo, it was evident that the young women were not enjoying their math and science

classes because they felt criminalized in these spaces (Banda & Flowers, 2018; Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013; Starobin & Bivens, 2014).

Research Question 4: How do the self-efficacy beliefs of young Latinas who participate in Xinachtli and are part of a society that labels and silences women, change over 16 weeks?

The Xinachtli program was the first to offer a space that did not label the participants. It was the first place where the resiliency of the seven young women outside of school was acknowledged and the first time someone took the time to listen to their life stories. Xinachtli was an effective program because the facilitator was trained to acknowledge her social prejudice not to further propagate socialization, which had served as a system of oppression for the participants up to this point (Araujo Dawson & Quiros, 2014). This was important because the research shows that disrupting socialization, allows for academic achievement, high self-esteem, mental well-being, and resiliency (Araujo Dawson & Quiros, 2014).

Furthermore, The Xinachtli action component invited the young women to take part in an event organized for the community. The community action plan that this group of young women decided to be a part of was focused on assisting the senior center during a fundraiser. At this event, the young Latinas worked closely with a group of senior women, who shared stories of their lives with them. The senior women showed them how to make food, assigned each of them jobs, and made them feel so appreciated and loved. The young Latinas had never helped in the community, so this was the first time they realized there was so

much they could do for others. It also made them appreciate their health since many of the senior ladies were in wheelchairs, and would tell them, “You are my feet for today, thank you! I could not do this without you.” By engaging in community service, the young Latinas were able to internalize positive words said to them by the senior women, making them believe that they could transform (Bandura, 1995).

For many of the Latina participants, being part of the *Xinachtli* program increased their self-efficacy, because they had never started and finished something (Bandura, 1995). These new self-efficacy beliefs translated to feelings of accomplishment, confidence, and for some even increased grades. In this study, the *Xinachtli* youth character development program was used to work with young Latina women in a Southern California school. It was selected by the school district because it was culturally relevant to communities serving Chicana and Latina youth. The *Xinachtli* program consisted of four overarching topics, which were broken into a total of 16 subtopics that make up the different *Xinachtli* sessions (Haskie-Mendoza et al., 2018). The first topic was reflection, the second creation, the third critical consciousness, and the fourth was action (Haskie-Mendoza et al., 2018). Over approximately 16 weeks, the young Latinas were immersed in a program that celebrated their voices and welcomed them for who they were.

Amelia was the young lady whose mother was in a constant battle with substance abuse, who lived with her grandparents and other cousins, who

prioritized her personal care over academics, Xinachtli was a place where she was not thought of as a slow learner or a burden. The weekly Xinachtli meetings gave her the tools she needed to develop her self-control in high-stress situations. She became calmer and learned to apologize. She shared that listening to everything other adolescent women went through made her realize that there is so much that people go through outside of school. While Amelia participated in the Xinachtli program, there were no more behavioral issues on campus, and most importantly she did not engage in school violence. For Amelia, Xinachtli resulted in increased self-regulation (Muenks et al., 2017).

Noreen was the young woman who witnessed the repercussions of an abusive relationship through her parents and saw her house burn down. Through Xinachtli, Noreen learned to express her feelings healthily. She explained that she learned to be comfortable with herself. Noreen was impacted especially by her ability to take action within the community. She explained that since she started the Xinachtli program she felt happy, loved, and laughed more often. In Xinachtli, Noreen was not a “bad kid” she was seen as a whole person. For Noreen, Xinachtli helped increase her self-efficacy beliefs, ultimately empowering her to visualize herself as a nursing major one day, and giving her the communication skills needed to ask for additional support in her math class (Bandura, 1995).

Galilea was the young Latina who was raised by her grandmother until her death. Galilea learned to communicate how scared she was to be left alone in

the world. She learned to express the importance of self-sufficiency, by describing how scary it had been to be abandoned by the only person who had been reliable in her life. For the first time, Galilea experienced what it felt like to start and finish something. This lived experience increased Galilea's self-efficacy beliefs. During the entire Xinachtli program and for the rest of the school year Galilea was not involved in any more school fights, nor did she engage in problematic behavior.

Noelia was one of the participants that came from a household of ten people. She was absent from school often, so for this participant, it was more challenging to grasp an understanding of why she engaged in school violence and the experiences that fueled the fire that drove her to act out in school. However, from the times she was present, she shared that she enjoyed being in Xinachtli and that it was the best part of her week. She expressed to the facilitator after the Xinachtli program that she really appreciated the kindness that she conveyed and also that she treated them all with respect despite their past behaviors and reputations. Noelia's self-regulation increased, and she did not engage in fights at school once she started attending the Xinachtli meetings.

Isaura was the young Latina who participated in the Xinachtli program for a short period but returned a year later to say thank you. Isaura shared that because of Xinachtli she learned to appreciate everything she had. She shared that the challenges her peers faced made her realize that her parents, her life,

and everything in it were perfect. Despite personally feeling unheard at times, her blessings greatly outweighed the challenges she faced.

Athena was the young Latina who constantly felt judged at school and who expressed feelings of anxiety most often. Athena shared that she enjoyed learning about why she felt anger and her triggers. For Athena, who had been very reserved and shy, the Xinachtli program helped her become more outspoken. She expressed being less shy, having a voice, and feeling safe during the Xinachtli meetings. For Athena, the Xinachtli program ultimately impacted her self-efficacy beliefs.

Finally, Renata was the young lady who missed school Monday through Thursday but who would show up on Fridays for Xinachtli. Renata enjoyed spending time in the Xinachtli program and was so grateful. She explained that the facilitator was the only reason she bothered going to school. For Renata and all of the Xinachtli participants, Xinachtli resulted in increased self-regulation as well as self-efficacy.

The Xinachtli program lasted five months or so, but the effects of building trust with an adult on campus, connecting with others, watching their peers improve, and learning about what goes on in their bodies when they experience different emotions, lasted for the remainder of the academic school year. That year all of the participants were not involved in school violence, and the severity of their behavioral issues was reduced immensely. Once the young Latinas

began participating in Xinachtli there were no more suspensions for any of the participants in the group for the remainder of the school year.

Research Question 5: What do young Latinas who participate in Xinachtli identify as the most meaningful element(s)?

The role of the facilitator in the Xinachtli program was to inform, guide, and listen (Haskie-Mendoza et al., 2018). The seven participants expressed gratitude for the facilitator and the respect that she treated them with. The participants shared on multiple occasions, that the facilitator was one of the very few adults who saw them for more than their behavioral records or their past mistakes. Previous holistic interventions have found that supporting students through emotional stressors and nourishing relationships has an overall positive effect on school climate and character development (Breen, 2018). This study contributes data that shows how age-appropriate and culturally relevant curriculum, can be used to guide adolescents through the intricate social environments they navigate in secondary education. The seven participants in this study stopped getting into school fights and the problems they got into were very minimal once they built relationships and trust in Xinachtli. Xinachtli, was like other social and emotional learning curriculums because it taught the Latinas to understand why they felt how they did and showed them strategies to cope with their emotions without suppressing and dismissing them (Breen, 2018; Haskie-Mendoza et al., 2018).

Recommendations for Educational Leaders

This study shared the lived experiences of young Latinas attending a public school in a rural and under-resourced community. The results presented in chapter four described some of the moments that destroyed the Latinas' sense of belonging in education. Being labeled and silenced throughout their academic journey and at home made the young women feel inadequate, unheard, and misunderstood, ultimately leading them to develop poor self-efficacy beliefs and to display poor self-regulation in high-stress situations. The Xinachtli program was an intervention organized by the district to help young Latinas cope with stress and anger. This research study found that programs like Xinachtli, which are holistic, age-appropriate, and with a foundation on critical consciousness help young women develop their self-efficacy and self-regulation. Once the participants were part of the Xinachtli program, there were fewer, less severe misconduct reports and the participants were involved in zero additional fights on campus. These shifts in risk behaviors are indicators of improved self-efficacy and self-regulation.

With the observed improvements in the participants' self-efficacy and self-regulation, the researcher finds it is important that schools support and expand programs like Xinachtli. Xinachtli helped the Latinas interpret their social and emotional experiences and showed them ways to navigate different situations. The researcher hopes that through this study other researchers can be better

aware of ways in which they can serve Latino populations. Connecting with students and creating safe spaces on school campuses is so important in developing their academic identities and self-efficacy. Many educators are already doing amazing work when it comes to fostering social and emotional well-being, so celebrating this work can bring forth more intentionality.

In addition to the abovementioned recommendations, something to consider given the role of Xinachtli facilitators is providing emotional, cognitive, and physical support when needed. The unique role of Xinachtli facilitators as explained through the results in this study highlight the significant amount of responsibility they take on, especially in the early and formative experiences of Xinachtli. The site of study provided extensive support throughout the entire program for the facilitator, and that is a reason for the extensive success of Xinachtli at this site. Additionally, sites should consider appropriate compensation for the varied roles and intensive emotional labor that facilitators take part in. Finally, promoting social and emotional awareness in schools should not fall only on Xinachtli student programming. Truly serving and empowering minority populations requires a district-wide focus on psychological thriving.

Next Steps for Educational Reform

Teacher Shortages in Rural Areas

The literature explains the importance of having qualified teachers in classrooms across the country (Madrigal-Garcia & Acevedo-Gil, 2016). The literature explains that there are systemic inequities that result in Latinos being

more likely than Whites to attend program improvement schools, experience a shortage of qualified teachers, and greater gender discrepancies in STEM interest (Starobin & Bivens, 2014). This study found the findings of previous researchers to be true. The seven Latinas in the study were negatively affected by the lack of qualified science and math teachers and science and math electives they had in the small rural school. Consequently, the participants were struggling to relate to the math and science subjects, resulting in a lost opportunity to develop the skills they need in STEM to be successful in higher education.

School districts need to prioritize offering equitable programs for all the students they serve. The site of this study was one of three secondary schools within its district. The school was 30 miles farther than the other two high schools given its rural location, and yet there was no incentive to recruit qualified teachers to this site specifically. Educational leaders should consider the inconvenience of driving farther to perform the same job, and how this impacts the interest that educators have in working at rural sites. This is an example of how equality is not the same as equity. Offering a quality education in all classes is just as important at schools that are in the city as it is in rural towns.

A solution would be to rotate math and science teachers on a yearly basis so that all students can have access to a quality education and STEM background. This can be added to the contracts of certificated staff. The district of this study offers a competitive salary to its teachers in comparison to two other

neighboring districts, it has repetitively been considered the highest paid, so teachers would probably still want to be in this district. To further compensate for the extended commute, the district should allocate funds to award a stipend for the years teachers are assigned to the rural school.

Another solution to this would be a carpool system or shuttle. This site has 20 to 30 teachers who drive to and from school every day. A solution could be that the district invests in a shuttle and drivers that go to the rural school and back. Departure times could begin at 6 am and continue every two hours until 5:00 pm for those who work in the after-school programs. Many universities have shuttle systems in place, and these shuttles become very convenient as the drive allows for time to answer emails, rest, or be productive in other ways.

Mental Health

The Xinachtli program also acknowledged that some students have challenging home situations that impact their performance in school. Students need a safe place to voice their concerns. In Latino culture, mental health is a taboo topic and is seldom acknowledged. However, in this study, it was evident that the young Latinas were being aggressive, loud, and confrontational as a plea for help. An important step that needs to happen is providing information to the parents about the developmental stages of their children, and how best to support them. This must take place in the Native language of the parents and during times that they can attend the meetings. Informing the Latinas of ways,

they can manage emotions was a start, but the shared testimonies of the participants also highlight how important their families were to them.

Conversations need to happen with families. Attention needs to be brought to stereotypes that were in place 100 years ago, and how time has changed these preconceptions. Parents need to be informed of the way that different messages are interpreted by young women, and how taking away their voices and opinions can be hurtful and damaging. In the past society wanted women to be submissive, and sometimes these are still the expectations held for young women today. However, as a society there have been great changes to the value and role of women, considering for instance that at one point in history, women were property. The history of the country cannot be changed, but parents need to be assisted in realizing why young women need to be heard. Only after listening to young women can families and schools become aware of hurt, abuse, or neglect.

Recommendations for Future Research

Positive Women Role Models

The Xinachtli program was introduced to this site by the leaders in the school district in 2019. The district offered yearly summer training for teachers who were interested in becoming Joven Noble, for young men, or Xinachtli, for young women, facilitators in the upcoming school year. This training was paid for by the school district and during this training, Xinachtli experts interacted with teachers, counselors, administrators, and others within the district to talk about

the Xinachtli program and its goals. For three consecutive days, Xinachtli experts share materials, resources, and ideas, to guide the facilitators through several workshops that exemplify the structure and process of circulo in Xinachtli.

This phenomenology analyzed the experiences of seven young Latinas who were placed in the Xinachtli character development program at this school due to participation in physical and emotional violence. The greatest finding of this phenomenology was the discovery of a huge absence of positive women role models for young Latinas at home and at school. The study found that there were complex mother-daughter relationships between the participants and their moms, and this caused the participants to behave violently at school. When navigating the Xinachtli program with peers and the facilitator, the participants benefitted greatly from having a woman role model in their lives. This finding is important because it will help inform stakeholders of the value of programs like Xinachtli. This program offered hope, safety, and an open door to participants who had previously been disciplined without good cause, victims of microaggressions, or needed emotional help. The role of the facilitator was important in this study, and this district should continue to offer this training in the future because there is a huge need in developing positive relationships between young Latinas and adult women.

Criminalization and Student Behavior

This phenomenology also uncovered the effects of criminalization on the seven young Latinas. The participants of this study shared feeling like an outcast

at a young age due to personal hygiene, the absence of their mothers, and the burning of their homes. These experiences were part of their upbringing and thus were normal to them, but resulted in frequent misunderstandings with teachers, peers, and family members. The participants grew up in environments that forced them to be strong and to speak up when they needed something. Several also witnessed violence at the home and altogether these experiences shaped how they behaved. From speaking loudly to being assertive when they felt disrespected, the participants learned to fend for themselves at a really young age. It was possible to understand this survival mechanism, thanks to the Xinachtli program offered by the school district, which gave them a space to tell their story and share how they felt on a weekly basis.

Future researchers should consider these findings when working with Latina adolescents. Xinachtli uncovered the negative effects of policing students who are simply trying to get through the day like everyone else. When interrogated because she wanted to use the restroom, Amelia was exhausted in trying to hide a normal part of her body which resulted in an outburst of anger displaying a feminine pad to the class and teacher. When Noreen kept being labeled as a “bad kid” on the behavior chart, she eventually gave up on trying to prove otherwise and started acting as such. These examples highlight ways in which criminalization impacts self-efficacy beliefs in young women. The seven Latinas needed to be heard since childhood, but this did not happen until they reached adolescence. All their childhood they were hushed and instead of

acknowledging their struggles, adults at school and at home denied them of their experiences.

Cultural Barriers

A final recommendation to future researchers would be to study cultural barriers present between teachers and the communities they serve. In this study, Isaura and Noreen expressed a desire to develop their math skills. They expressed frustration about their grades in those classes and shared a lack of relatedness to the contents due to a lack of qualified teachers in the school they attended.

Isaura had a very difficult time connecting with an elderly Filipino teacher. This teacher seemed to be inflexible with the students and often misinterpreted questions about the subject, and instead associated them with a lack of preparation on behalf of the students. Noreen also shared a negative experience with another math teacher. This teacher was a White male teacher who responded to Noreen's questions about the lesson by telling her she might have a learning disability and should get tested. Both examples demonstrate the importance of filling math and science positions with qualified teachers. Receiving an inconsistent learning experience is harmful to the social and academic development of young women. There is a huge need to for healthy mentorship opportunities between educators and students, and through positive women role models, the liking of STEM subjects for young women can increase.

Overall, this study found that certain behaviors and tones vary from one culture to the next, and perhaps districts should consider exploring and informing educators who are new to the community of how students might behave and what these behaviors indicate. Gender norms assigned in previous generations are still impacting the preconceptions of many teachers and substitute teachers, but it is important to provide professional development that allows educators to be better aware of their own biases so that they can be better teachers. Ultimately, the goal of this recommendation is to reduce the number of microaggressions experienced by young Latinas because of their gender, race, and language.

Limitations of Study

There are multiple phenomena that the young Latina women of this study have in common. Through *circulo*, *platicas*, interviews, and writing they expressed resistance against the labels that were used to rob them of their unique personalities, and against the various suppressions they continued to exist in. There are several limitations within the design of this phenomenology as well as the research on the *Xinachtli* character development program.

One of the limitations of this phenomenology was the duration of the meetings. At the site of research, the program was organized so that students would miss one class, once a week. The problem with this was that it never seemed to be enough time for the participants to share everything they wanted to say. In the future, it might be better for the program to occur after school for two

or more hours so that there is enough time for the participants to eat, open círculo, do the hands-on activities, and finally close the círculo. In one hour, the meetings were fast-paced.

Another limitation of this Xinachtli study was the space where the meetings occurred. Xinachtli consists of various activities that happen in a circular pattern so that students are constantly facing each other to have a mutual conversation. However, due to the meeting happening in a standard classroom, it was challenging to have this open space. The circle would be too big, and there were too many other classroom components in the way making it difficult for this arrangement. In addition to this, the facilitator had to put the classroom back for the next period. Future researchers should consider finding a space that is always open and in a circle.

All parents gave consent for the students to participate in the Xinachtli program, but when efforts were made to get in touch with them it was challenging to get a hold of them. Missing parental support made it challenging for the facilitator to communicate to the participants that their parents had high expectations of them, and for the participants to believe it. This was a limitation to the effectiveness of the program because the students really grew personally after the community service project, so it is believed that with parents present the impacts would have been that much greater. The seven Latinas benefitted greatly from working with adult women and seeing adult women collaborate positively with each other and with them. The modeling and exchange of

gratefulness could have really impacted the students further if their parents/guardians would have been present.

The Xinachtli program was initiated before the coronavirus pandemic at a southern California high school but was never completed because schools were shut down. Upon the return to in-person learning, the Xinachtli program was restarted, but coronavirus measures were still being implemented. Consequently, college tours were done using virtual tours only. This was informative but did not have the same impact on the students, as going to the campus in person. Physically being in a university and being immersed in its climate for the day would have been preferred. Hopefully, future researchers can take college tours with their Xinachtli groups so that they can inspire and open new opportunities for Latinas.

Another limitation that was encountered during this phenomenology study was that two participants dropped out. The data collected from these students was minimal as they attended approximately two meetings and then discontinued the program. One of the participant's living situations changed due to custody battles between her mother and father. The other young lady was removed from school and was instead home-schooled. The exact reasons for this were unclear, but again, this study took place during the first year back to in-person learning and some parents were uneasy about having their students be exposed to new coronavirus strains.

Conclusion

The findings of this phenomenology align with several results in the literature. For example, Reinking and Martin (2018) found that early gender socialization tends to infiltrate undermining attitudes about the intellectual abilities of girls, which was also reported by the young women in this phenomenology study (Reinking & Martin, 2018). The main takeaway of Reinking and Martin's (2018) study was that changing mindsets could increase girls' interest in STEM; similarly, the findings in this research study also invite educators to change how they communicate with children even during the elementary grades.

Furthermore, higher education studies describe the experiences of Latinas in STEM programs and discover that discrimination, oppression, and a lack of strong women role models, negatively influence how they feel about STEM courses (Banda & Flowers, 2018; Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013; Starobin & Bivens, 2014), and the same can be said about the educational experiences of the young Latinas in this study. Furthermore, the literature explained that the gender gap in the STEM field is even more pronounced when it comes to poor and rural areas, highlighting the educational inequities within high-need communities (Starobin & Bivens, 2014). This phenomenology supports Starobin and Bivens (2014) because the seven participants were from a rural area in which the same teachers taught multiple grades due to a teacher shortage, and a lack of incentive on behalf of the school district resulted in long-term substitutes.

The literature also explained how cultural norms result in oppression and discouragement for Latinas pursuing STEM fields (Banda & Flowers, 2018; Cantú, 2012; Reinking & Martin, 2018; Ruiz, 2013; Starobin & Bivens, 2014). During various instances in this study, it was evident that the outspoken nature of the young Latinas was perceived as being a negative quality, this likely due to society's patriarchy.

Lived experiences, cultural identities, communities, and trauma cannot be considered using a single focal point. While developing assessments that determine proficiency in different content areas is essential in preparing students for the rigor of higher education, the literature shares that the most effective indicator of student success in higher education is student self-efficacy. Research findings throughout the literature show that standardized assessments may be useful in determining performance on a certain day, however, they are poor indicators of the level of success a student will attain in higher education.

Programs like *Xinachtli* help educators understand the experiences shaping the identity students develop about school. Schools must support teachers so they can be prepared to help and empower the young men and women they serve. By listening to what they share it is possible to understand what they need help with. In many cases, simply providing a safe space, is all students need to share what is happening in their lives. This study and others emphasize the importance of celebrating student growth at schools so that students can develop their confidence and self-efficacy beliefs.

APPENDIX A:
IRB APPROVAL LETTER

IRB #: IRB-FY2019-211
 Title: Problem and Constraint Identification
 Creation Date: 3-22-2019
 End Date:
 Status: **Approved**
 Principal Investigator: Andrew Hughes
 Review Board: CSUSB Main IRB
 Sponsor:

Study History

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|-----------------|---------|-------------|--------|----------|---------------|
| Submission Type | Initial | Review Type | Exempt | Decision | Exempt |
|-----------------|---------|-------------|--------|----------|---------------|

Key Study Contacts

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