

ABSTRACT

Title of Thesis: ¡HAY QUE HABLAR SOBRE ESTO! [WE
NEED TO TALK ABOUT THIS]:
EXPLORING THE RELATIONSHIP
BETWEEN CONTRACEPTIVE AND
CONSENT KNOWLEDGE, SEXUAL SELF-
EFFICACY AND PSYCHOLOGICAL
DISTRESS AMONG LATINO
ADOLESCENTS

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Latino adolescents are a growing population in the US (U.S. Census Bureau, 2020), and they experience disproportionately high rates of unintended teen pregnancy, STIs and HIV (Guilamo-Ramos et al., 2012; Martin et al., 2021). Also, adolescents struggle with high rates of mental health issues (Bitsko et al., 2022; Merikangas et al., 2010). Some studies support that psychological distress plays a role in teens' sexual behavior and sexual self-efficacy (Lehrer et al., 2006; Seth et al., 2009; Seth et al., 2011). Yet, few studies have looked at the association between aspects of sexual health and psychological distress within Latino teens. This study conducted secondary data analysis using baseline data from a randomized controlled trial to test the effectiveness of El Camino, a comprehensive sexual health education curriculum developed

by Child Trends. Participants consisted of 474 Latino adolescents (44.8% male and 53.1% female) and they completed electronic self-report surveys (mean age 16.55 years). 84.2% of the sample was foreign born and 15.8% was US born. Results indicated that there was a significant correlation between sexual self-efficacy and knowledge about contraception and sexual consent ($r = .31, p < 0.001$). There was a small significant correlation between sexual self-efficacy and psychological distress ($r = .12, p < 0.001$). Psychological distress did not moderate the relationship between knowledge and sexual self-efficacy. Interestingly, the interaction term between knowledge and gender was statistically significant ($\beta = -0.44, SE = 0.09, p = <.001$), indicating that the relationship between knowledge and sexual self-efficacy is stronger for males than for females. The findings support that Latino youth may benefit from interventions that strengthen their knowledge and sexual self-efficacy, despite differences in nativity status and levels of psychological distress. Future studies should consider potentially important cultural, societal, and relational factors that may further explain these results.

¡HAY QUE HABLAR SOBRE ESTO! [WE NEED TO TALK ABOUT THIS]: EXPLORING
THE RELATIONSHIP BETWEEN CONTRACEPTIVE AND CONSENT KNOWLEDGE,
SEXUAL SELF-EFFICACY AND PSYCHOLOGICAL DISTRESS AMONG LATINO
ADOLESCENTS

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This thesis is dedicated to my phenomenal Latina clients who have survived trauma and are breaking generational patterns of sexual trauma and silence. I am inspired daily by their choice to learn new ways of healing and guiding and loving their children.

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Chapter 1: Introduction

Background

Latino Adolescent Population

In the United States (U.S.) today, Latinos¹ are one of the fastest growing minority populations, making up 19% of the overall U.S. population, consisting of 62.1 million people (U.S. Census Bureau, 2020). Research has found that 1/3 of the nation's Latino population is younger than 18 years old and Latinos are the youngest major racial and ethnic minority group in the U.S. (Pew Research Center, 2016). Moreover, Latino youth² comprise about 25% of the total U.S. youth population (Census Bureau, 2020). Compared to white youth, Latino youth have disproportionately higher sexual health issues such as higher rates of STIs, HIV, and unintended teen pregnancies (Benavides et al., 2006; Guilamo-Ramos et al., 2012; Martin et al., 2021; Morales-Alemán & Scarinci, 2016). Latino adolescents' greater risk for poor sexual health outcomes may be related to the fact that they are more likely to live in poverty, lack access to health insurance and reproductive medical care, and experience stress due to discrimination, immigration, and criminalizing policies (Barajas-Gonzalez et al., 2021; Cobb et al., 2021; Cohen et al., 2021; Dehlendorf et al., 2014; Espinoza-Kulick & Cerdeña, 2022). On a population level, unintended teen pregnancy risk may be buffered by familial support in child rearing and may not be as consistently associated with adverse outcomes. This supports the importance of taking a

¹ The term "Latina/o" is used to describe people of Latin American descent instead of the term "Latinx" to remain consistent with the wording used within other studies. If a study references an individual's gender (i.e., Latina female; Hispanic), then that terminology will be used.

² The term "youth" is used to stay consistent with the terminology used within the literature about adolescent and emerging adults ages 13 to 24. While many studies present their adolescent (ages 13 to 17) and emerging adult (ages 18 to 24) separately, other studies and national data sets present both age groups as one category.

nuanced contextualized view of Latino teen sexual health and ways to support them in making informed choices.

Much of teen pregnancy research historically takes a deficit perspective and conducts between group analysis (Afaible-Munsuz & Brindis, 2006), which compares target samples to a “de facto” population. It has been established that there are high rates of unintended teen pregnancy and STIs in the Latino adolescent population. However, key aspects of sexual health such as knowledge, sexual self-efficacy, and mental health remain understudied in the Latino teen population. Unintended Latino teen pregnancy, STIs, sexual assault and non-consensual sexual experiences, and dating violence can all be linked to social determinates of health, lack of conversations about sexual health within Latino homes, inconsistent comprehensive sexual education in schools, and misconceptions that sometimes stem from religion and cultural gender roles (Coleman-Minahan, 2017). On the other hand, a range of protective factors and strengths such as a focus on and loyalty to family, hope and optimism, strong cultural pride and traditions, strong work ethic, and engaging in pro-social and community-oriented behaviors also exist in this community and can support positive youth development and the sexual health of Latino teens (Maness et al., 2016). Connectedness to school, peers, and family is a protective factor for adolescent sexual and reproductive health (Maness et al., 2016; Porta et al., 2016). This study will explore within group differences which is in line with a strength-based perspective.

Adolescent Sexual Health Issues

Adolescence is a period of human development where changes in physical, cognitive, emotional, and social development happen quickly (Arain et al., 2013; Collins, 2003; Jetha & Segalowitz, 2012; Spence, S., 2003; Yurgelun-Todd & Killgore, 2006). Because of changes in brain development that increase stimulation and reward-seeking, adolescents are more likely than

adults to use illegal substances and engage in risky sexual behavior (Pedlow & Carey, 2004). As a result of risky sexual behavior, adolescents may experience high rates of sexually transmitted infections (STIs), human immunodeficiency virus (HIV), unintended teen pregnancy, and sexual coercion, all of which can have long-term health consequences (Centers for Disease Control and Prevention [CDC], 2021; Miller et al., 2004; Weinstock et al., 2004). STIs are associated with long-term health outcomes such as pelvic pain, a higher risk of contracting HIV, different cancers, infertility, and adverse birth outcomes (Bray et al., 2018; James et al., 2020; Unemo et al., 2021). STIs also create public health costs for testing and treatment (Chesson et al., 2004). In 2000, there were 9 million new STI cases that occurred among 15 to 24 year olds and this created a \$6.5 billion direct medical cost for treating immediate infections as well as infections that received insufficient or delayed care (Chesson et al., 2004). Direct medical costs include hospitalizations, clinic visits, medical exams, laboratory testing, and medications (Chesson et al., 2004). A previous study estimated that the direct medical cost of unintended pregnancy in the United States was more than \$4.6 billion annually (Trussell et al., 2013). Unintended teen pregnancies are associated with a higher risk of lower educational achievement, physical health problems, mental health issues like depression, and living in poverty (Fuller et al., 2018; Hoffman & Maynard, 2008). Additionally, adolescent mothers are at higher risk for HIV exposure, substance use, and domestic violence (Koniak-Griffin & Brecht, 1995, 1997; Tetteh et al., 2020).

Sexual Self-efficacy as Protective Factor

Bandura (1997) describes self-efficacy as believing in one's own ability to overcome challenges, or confidence in the ability to have control over your own motivation, behavior, and social environment. Higher perceived self-efficacy is associated with higher confidence in one's

ability to achieve positive behaviors and feel more in control of situations (Bandura, 1997). Sexual self-efficacy developed from the original concept of self-efficacy. Sexual self-efficacy is defined as a person's confidence in his or her ability to navigate sexual contexts and make decisions to protect their sexual health (Serier et al., 2021). Numerous research studies have found that one factor that protects adolescents from adverse sexual health outcomes is sexual self-efficacy, which has been associated with safer sexual practices across numerous studies (Addoh et al., 2017; Brafford & Beck, 1991; Brien et al., 1994; Fedding & Rossi, 1999; Kanekar et al., 2015; Manlove et al., 2019; Pearson, 2006; Raj, 1996; Rosenthal et al., 1991). According to the US federal government, safer sex is defined as behaviors that reduce the risk of STIs and unintended pregnancies. However, this definition may not consider the unique experiences and needs of racial, ethnic, and sexual minority populations, potentially causing harm. For example, these "safer sex" guidelines center around Eurocentric and heteronormative relationships and define sexual intercourse as only penetrative vaginal sex (Goldfarb & Lieberman, 2021). The definition of "safer sex" does not consider the diversity of sexual practices that are more common among sexual minority populations and thus may ignore the potential risks associated with those sexual practices and may pathologize certain sexual behaviors (Goldfarb & Lieberman, 2021). A narrow definition of "safer sex" can perpetuate colonialist attitudes that seek to impose dominant cultural values and practices onto marginalized groups. A broader definition that reflects inclusive language of "safer sex behaviors" and considers the unique needs of different populations is needed.

Sexual self-efficacy may develop from a variety of factors that include sexual socialization (i.e., the process by which individuals acquire knowledge, attitudes, and values related to sexuality from family, peers, media, religion and culture), sexual experience and

practice, relationship dynamics (i.e., supportive relationships with partner, friends and role models), attitudes towards sex (i.e., feeling deserving of pleasure), self-esteem, and cognitive factors, which include sexual health knowledge and information from schools (Allsop & Anderman, 2022; Bleakly et al., 2009; Rostosky et al., 2008; Zimmer-Gembeck, 2008). Positive sexual socialization, which includes access to accurate information, open communication, and positive role models, may contribute to higher sexual self-efficacy in teens, while negative or limited sexual socialization can hinder it and make teens feel like they have less power over their choices (Stewart et al., 2021). Therefore, sexual health knowledge may be one of the contributors to the development of sexual self-efficacy.

Sexual self-efficacy includes condom use self-efficacy (i.e., asking a partner to use a condom), contraception use self-efficacy (i.e., obtaining effective contraceptives), and self-efficacy around consent (i.e., feeling confident in asking for or choosing whether to provide consent) (Addoh et al., 2017; Brien et al., 1994; Hsu et al., 2015; Serier et al., 2021). Research has found that individuals with low sexual self-efficacy experience challenges to saying no to unprotected sex (Ibañez et al., 2017). High sexual self-efficacy may help teens make fully informed decisions about their sexual behavior. Several studies with white and African American youth have found that lower sexual self-efficacy in adolescents is related to engaging in riskier sexual behaviors (DiClemente et al., 1992; Reitman et al., 1996), yet only a handful of studies have focused on sexual self-efficacy within the Latino adolescent population.

Increasing Sexual Self-efficacy Through Knowledge

Knowledge about reproduction and contraception may also be protective against unintended pregnancy for adolescents (Munakampe et al., 2018). Research shows that teens have varying degrees of knowledge about sexual health and contraception (Dehlendorf et al., 2010;

Garfield et al., 2016). Many teens have low contraception knowledge due to limited, incomplete, and wrong information (Gage, 1998; Campbell et al., 2006). Teens often get their sexual health knowledge from schools, parents or caregivers, peers, the media, and healthcare providers, but there are barriers to obtaining correct reliable information (Campbell et al., 2006). Not all sources of sexual health knowledge are equally reliable and teens' access to comprehensive and correct information can differ by a teen's geographic location, cultural background, and socio-economic status (Cheng et al., 2014; Munakampe et al., 2018). In a systematic review of adolescents from middle and low-income countries, researchers found that there are large unmet needs for sexual health knowledge and access to contraception, and adolescents' contraception and abortion knowledge is an important factor in contraception use and sexual behavior (Munakampe et al., 2018). Having low contraception knowledge prevents teens from knowing how to seek out birth control and engage in safer sex practices (Munakampe et al., 2018), and it increases their chances of having an unintended teen pregnancy. Decisions to have unprotected sex are related to a lack of knowledge about the risks of becoming pregnancy and getting an STI (Gage, 1998). One study found that adults who had more accurate knowledge of condoms and reproduction during adolescence were more likely to consistently use effective contraceptive methods during adulthood (Guzzo & Hayford, 2018).

Knowledge may be a necessary precursor to developing self-efficacy regarding sexual health decisions. Increased sexual health knowledge is associated with higher sexual self-efficacy, which has been shown to lead to better sexual health outcomes such as using contraception and condoms correctly and more consistently, increased sexual satisfaction, improved sexual communication with partners (i.e., communicating sexual health issues, STI testing, sexual boundaries, condom and contraception use) and reduced sexual risk taking

behaviors (i.e., having unprotected sex with multiple partners or under the influence of drugs or alcohol) (Manlove et al., 2019; Rosenthal et al., 1991; Van Campen & Romero, 2012; Tomašević et al., 2022). Teens who were given reproductive health knowledge developed higher levels of sexual self-efficacy and were less likely to engage in unwanted sexual intercourse (Tomašević et al., 2022). Research indicates that when teens are given accurate contraception knowledge, they tend to have higher sexual self-efficacy, which has been shown to strengthen teens' sexual decision-making (Constantine et al., 2015; de Lijster et al., 2016) and increase the chances of using birth control every time they have sexual intercourse (i.e., penis in vagina sex) (Manlove et al., 2019). Teens with higher sexual self-efficacy had more consistent birth control and condom use, were able to make fully informed decisions about their sexual behavior, and were more intentional about who they want as their partners (Addoh et al., 2017; Closson et al., 2018; Cruz-Jiménez et al., 2020; Kasen et al., 1992; Pearson, 2006). The association between sexual health knowledge and sexual self-efficacy may be important for better public health outcomes by reducing the spread of STIs and unintended pregnancies and promoting sexual satisfaction and healthy relationships (Cheng et al., 2014; Zimmer-Gembeck et al., 2014). It is important to note that the directionality of the relationship between sexual health knowledge and sexual self-efficacy is not always clear and it could be bi-directional. While higher sexual health knowledge might increase self-efficacy, it could be that individuals with higher sexual self-efficacy may be more motivated to seek out more sexual health knowledge.

Social Determinants of Health, Latino Teens' Ability to Develop Self-efficacy

Social determinants of health are the environmental conditions that impact people's health and well-being – the five main domains as described by the Healthy People 2030 initiative include: economic stability, education access and quality, healthcare access and quality,

neighborhood and built environment and social and community context (Healthy People 2030, U.S. Department of Health and Human Service). These social and economic factors are associated with poorer sexual health outcomes for minority teens. Social determinants of health, such as poverty and low educational support, make it harder for Latino youth to access reproductive services and develop reproductive and contraception knowledge (Cardoza et al. 2012; Fenton, 2001; Mendez & Lopez, 2022; Martinez et al., 2017; Vega et al, 2009; Villarruel et al., 2007). Latino teens may have lower levels of knowledge and sexual self-efficacy because they are more likely than other teens to face specific socioeconomic factors such as poverty, disparities in sexual health knowledge and access to health care services, barriers to getting health insurance, language barriers and stigma in the Latino community about talking about sexual health (Barral et al., 2020, Cardoza et al., 2012; Cohen et al., 2021; Driscoll et al., 2001; National Women's Law Center, 2017). Latino adolescents are less likely than white adolescents to receive high levels of routine and preventative reproductive health care and overall have less contraception knowledge than their peers (Craig et al., 2014). Research has shown that strengthening Latino adolescents' sexual self-efficacy could be an important area of intervention because Latino teens' higher sexual self-efficacy is associated with more perception of risks, safer sexual behaviors, and the ability to negotiate condom use with sexual partners (Cruz-Jiménez, 2020; de Castro et al., 2018; Estrada et al., 2017; Villarruel et al., 2004). Manlove and colleagues (2021) found that when Latino teens participated in a teen pregnancy prevention program in Texas, their contraception and condom use knowledge and STI prevention knowledge increased. Furthermore, increased knowledge was associated with increased sexual self-efficacy, greater confidence in knowing where to get contraception, and feeling more confident in their ability to give and receive consent (Manlove and colleagues, 2021).

Sexual self-efficacy may mitigate risky sexual behavior associated with cultural values that support gender inequality, positively reinforcing positive attitudes about protected sex and healthy sexuality (Torregosa & Patricio, 2022). In one study, adolescents' attitudes against risky sexual behaviors did not translate into safer sex practices unless they had a high level of sexual self-efficacy (Torregosa & Patricio, 2022). Another study found that Mexican adolescents' sexual self-efficacy was associated with intentions to have safe sex in the next 3 months (Van Campen & Romero, 2012). These findings further support the importance of understanding sexual self-efficacy in the Latino adolescent population.

The Role of Mental Health for Latino Teens

Mental health may also play a role in shaping sexual health outcomes for Latino teens (Merikangas et al., 2010). Psychological distress is defined as non-specific symptoms of stress, anxiety and depression and could indicate a mental health disorder (Kessler et al., 2002). Psychological distress rates are generally high in teens, and are higher in African American and Latino youth than in white youth (Alegria et al., 2010; Kistner et al., 2003; McLaughlin et al., 2007, 2013). Psychological distress symptoms are related to lower self-efficacy (Bandura, 2003; Comunian, 1989; Ehrenberg et al., 1991; Muris, 2001; 2002) and worse sexual health outcomes such as higher rates of STIs and inconsistent condom use (Hankin & Abramson, 2001; Jackson et al., 2015; Lehrer et al., 2006; Ramrakha et al., 2000; Shrier et al., 2001; 2002). Symptoms of depression, such as feeling hopeless and having negative thoughts, contribute to lower sexual self-efficacy (Caprara et al., 2010) and a greater likelihood of engaging in unprotected sex and riskier sexual behavior (Beck, 1976; Miller-Johnson et al., 1999; Rehm, 1977), and may not support safe sex decision making practices (Sales et al., 2009). Research has also shown that anxiety can prevent teens from challenging peer pressure and developing self-efficacy in

relationships because anxious teens may be more likely to be pressured to engage in risky sexual practices to please others or “fit in” (Cooper et al., 1998, Lehrer et al., 2006; Lewinsohn et al., 1997; Merikangas & Angst, 1995; Prinstein et al., 2001). Teens who are experiencing emotional distress such as depression often use unhelpful coping skills to deal with their emotions, such as avoiding or suppressing their feelings and seeking pleasure from riskier sexual behaviors (Aldao et al., 2010; Caprara et al., 2010).

Gap in the Literature

In general, there is a lack of research on minoritized teens and specific considerations regarding their sexual and mental health (Caruso et al., 2023). Many sexual health education curriculums and programs are designed based on research with primarily white adolescents and they do not center the context of the community or population in which the programs are being implemented (Caruso et al., 2023). Little is known about how Latino youth mental health may play a role in their ability to develop sexual self-efficacy. Seth and colleagues (2009) found that psychological distress significantly moderated the relationship between sexual health knowledge and sexual self-efficacy in a sample of African American adolescents, however research has yet to explore these relationships in the Latino teen population. Some research shows an association between contraception and condom knowledge and sexual self-efficacy, specifically for Latino adolescents (Manlove et al., 2021). However, research has yet to explore the associations between knowledge, sexual self-efficacy, and psychological distress among Latino adolescents.

In this study, I will examine the relationship between contraceptive knowledge and sexual self-efficacy, and the secondary role that psychological distress might play in this relationship. Exploring these associations will provide a better understanding of opportunities to strengthen Latino adolescents’ sexual health decision making. Understanding Latino adolescents’

sexual health knowledge and sexual self-efficacy could help improve sexual health outcomes and relationships and create more empowerment and safety for Latino teens.

Research Questions and Hypotheses

This study will examine the following research questions: 1) What is the association between knowledge about sexual and reproductive health and sexual self-efficacy for Latino adolescents? 2) Does psychological distress moderate the relation between knowledge and sexual self-efficacy? It is hypothesized that: 1) There will be a significant positive association between knowledge and sexual self-efficacy, and 2) Psychological distress will significantly moderate the association, such that high psychological distress will weaken the relationship between knowledge and sexual self-efficacy. Answering these questions will provide a better understanding of critical factors in sexual decision making for Latino youth, a historically marginalized population with limited existing research about their sexual health needs. Adolescent sexual self-efficacy may be an area where we can intervene to encourage teens to engage in safer sex practices. If mental health weakens the relationship between knowledge and self-efficacy, this may also be an important place for intervention. Helping teens manage and reduce their psychological distress may positively impact their ability to develop sexual self-efficacy and have better sexual health outcomes.

Chapter II: Literature Review

The Theory of Planned Behavior

The present study is informed by the Theory of Planned Behavior (Ajzen, 1985), an extension of the Theory of Reasoned Action (TRA; Fishbein & Ajzen, 1975), which explains that an individual's behavior is a result of their intentions to engage in that behavior. Behavioral intent is the inclination of a person to engage in a specific behavior. Intentions are shaped by attitudes and knowledge about the behavior, subjective norms (beliefs about others' approval or disapproval of a sexual behavior), and perceived self-control (Ajzen, 1991). Subjective norms are the beliefs about whether peers and people approve or disapprove of a behavior and if they think the individual should engage in it (Ajzen, 1985). How sex is portrayed in the media, and dominant discourses about what “women” and “men” should do impact teens' expectations around sexual behavior, thus further supporting the need to give teens more accurate knowledge (Aubrey et al., 2003; Brown et al., 1990; Brown & Newcomer, 1991; Coyne et al., 2019; Kunkel et al., 2007; Lin et al., 2020; Ward & Rivadeneyra, 1999). In this study, we will investigate whether having more sexual health knowledge is associated with teens greater sexual self-efficacy.

Historically, teens engage in maladaptive behavior because of developmental lack of reasoning and impulse control (Jetha & Segalowitz, 2012; Yurgelun-Todd & Killgore, 2006). Teens have less capacity than adults to be intentional in their behavior. Ajzen (2011) explains that other models about adolescent behavior accompany his original Theory of Planned Behavior to help us also understand the spontaneous processes that are involved with adolescent behavior. For example, the prototype/willingness model (PWM; Gerrard et al., 2008; Gibbons et al., 1998) is a dual process model explaining that adolescents' risky behavior is a result of both a reasoned

path using behavioral intention and a social reaction path to help explain teens' unplanned decisions. Teens' spontaneous decisions can be influenced by their willingness to engage in that behavior (Gerrard et al., 2008).

As previously mentioned, teens may develop sexual self-efficacy through sexual socialization, attitudes towards sex, sexual experience and practice, self-esteem, and cognitive factors, which include sexual health knowledge and information (Allsop & Anderman, 2022; Bleakly et al., 2009; Rostosky et al., 2008; Zimmer-Gembeck, 2008). Knowledge is an important background factor that could contribute to higher sexual self-efficacy. Sexual self-efficacy may create more intention to engage in safer sex behaviors, because young people who feel agency in their decision-making may intend to make safer decisions, understand risks and consequences, increase their awareness of how to practice safer sex and feel motivated to seek out services (Pearson, 2006; Zimmer-Gembeck, 2008; Zimmer-Gembeck et al., 2015). In the case of adolescent sexual behavior, the theory posits that sexual risk behavior may be shaped by sexual health knowledge and perceived behavior control, a component of sexual self-efficacy. When teens have inaccurate knowledge, they may perceive less sexual risk in riskier sexual behavior, and when they have low confidence in their abilities to have safer sex, they may have less intentions to take actions that protect their health. According to the theory, sexual self-efficacy would be an important factor in determining behavior and would be supported by greater contraceptive and consent knowledge.

Recently in 2020, Ajzen added background characteristics to the TPB model. It is theorized that individual (age, gender, mental health) and social background characteristics (culture, ethnicity, race, religion) can impact intentions to engage in certain behaviors (Ajzen, 2020). Additionally, psychological distress may be an important background characteristic to

consider in understanding sexual health behaviors because psychological distress may influence sexual self-efficacy. Ajzen (2020) describes that background characteristics can indirectly influence an individual's behavior by shaping their attitudes, beliefs, subjective norms, and perceived behavioral control. By adding psychological distress as a contextual moderating factor, my research hopes to add a potentially important factor to the theory.

A critique of this theory is that it does not fully consider contextual factors that can impact sexual health behaviors. The original theory does not consider how intention to change behavior differs by context. Fishbein and Ajzen (2010) explain that this does not invalidate the theory, but researchers should examine all underlying beliefs for specific cultures. Specific contextual factors for Latino teens, such as nativity and length of time living in the US speak to the critique of the theory and offer two contextual factors that could expand the theory for minority populations, specifically the Latino youth population.

Adolescent Sexual and Reproductive Health

Adolescence is a critical period of human development; typically marked by the onset of puberty and beginning around age 12, it is characterized by physical, emotional, sexual, and intellectual growth (Arain et al., 2013; Collins, 2003; Jetha & Segalowitz, 2012; Spence, S., 2003; Yurgelun-Todd & Killgore, 2006). Adolescents are working on forming their identities and seek more autonomy in their decision making (Becht et al., 2021; Meeus et al., 1999; Meeus et al., 2005; Pfeifer & Berkman., 2018). It is important to note that their brains are not fully developed and the prefrontal cortex, the part of their brain that helps with impulse control and reasoning, has not fully matured (Jetha & Segalowitz, 2012; Yurgelun-Todd & Killgore, 2006). Adolescents are considered the most likely to engage in high-risk sexual behavior as compared to young adults (Pedlow & Carey, 2004). Changes in teens' brains make it more likely for them to

engage in unhealthy and risky sexual behavior because they are drawn to stimulation and risk taking (Reyna, & Farley, 2006). Peer pressure and societal norms makes them even more drawn to risky sexual behaviors (Bhochhibhoya & Branscum, 2018; Espinoza et al., 2017).

During adolescence, the hormones that signal seeking pleasure and excitement are at an increased intensity which contributes to more risk taking behavior (Daitzman et al., 1978). Additionally, the ventral striatum, the area in the brain that codes for reward value, is more activated when teens take risks (compared to the activation experienced by children and adults (Ernst et al., 2005; Galvan et al., 2006; Geier et al., 2010). According to research published by the Centers for Disease Control and Prevention, many young people engage in sexual risk behaviors, and this increases the risk of HIV infections, STDs, and unintended teen pregnancy (Centers for Disease Control and Prevention [CDC], 2021). In the National Youth Risk Behavior Survey conducted in 2019, 46% of sexually active high school students did not use a condom the last time they had sex (CDC, 2020). Adolescents generally lack skills to negotiate condom use and perform safe sexual behaviors (Santos-Iglesias and Sierra, 2012). According to the CDC, the statistics indicate that 21% of all new HIV diagnoses were among young people (aged 13-24) (CDC, 2022). Additionally, half of the 20 million new STDs reported each year are among young people (aged 15 to 24) (CDC, 2021). According to the CDC, in 2018, about 180,000 babies were born to girls aged 15–19 years (CDC, 2019).

Considering teenagers' attitudes about risky sex, Telzar and colleagues (2023) explore how the environment and things that teens are exposed to contributes to brain development, explaining that “adolescence is a sensitive period during which the brain is especially tuned to social context and youth are building social connections, learning to care and engage in other-oriented tendencies, and developing competence, confidence, and character”. Teens are making

choices based on their sense of what is positive or negative behavior, potentially shaped by the knowledge they have and subjective norms about sexual behavior (Telzer et al., 2023).

Adolescents' Knowledge about Sexual Health

Adolescents have special sexual and reproductive health needs that, at a population level, remain unmet, due to multiple factors including lack of sexual health knowledge, social stigma, laws and policies preventing the provision of contraception and abortion to all adolescents, and judgmental attitudes among service providers (Salam et al., 2016). Knowledge about sexual health has been associated with postponing the age of sexual initiation and it helps teens understand short term and long-term consequences of their decisions (Atienzo et al., 2020).

Research shows a connection between knowledge about contraceptive methods and sexual behavior, in that inaccurate knowledge is correlated with more risky sexual behavior and inadequate contraceptive use (Frost et al., 2012). Knowledge about condoms, consent, and where to get contraception has been related to more contraception use and less risk of unplanned pregnancy (Frost et al., 2012; Ryan et al., 2007). Sexual consent knowledge is important for many reasons, one of which is that increased understanding of consent is associated with being able to develop healthier relationships, for example, understanding and being able to assert one's own boundaries about his/her body and respecting the boundaries of others aids in building healthy relationships (Ball et al., 2023). Additionally, teens who have unwanted sex are more likely to have unprotected sex (Blythe et al., 2006; Howard & Wang, 2005). Based on the 2019 Youth Risk Behavior Survey, 10.8% of high school students experienced sexual violence committed by anyone, 8.2% of students reported physical dating violence and 8.2% reported sexual dating violence (Basile et al., 2020). According to the 2021 Youth Risk Behavior Survey collected after the COVID-19 pandemic (CDC, 2023), it was found that this number is much

higher with nearly 15% of teen girls saying that they had ever been forced to have sex, a 27% increase from 2019. Given that given sexual assault and violence often happens within the context of relationships (i.e., date rape), literature highlights that sexual consent is one important aspect of adolescents' sexual development and that they need more knowledge about sexual consent (Katz et al., 2019). A qualitative study conducted with high school students found a large discrepancy in male and females adolescents understanding and expectations about consent, for example, girls said they usually communicated sexual refusal with nonverbal cues, whereas boys said they would continue with sexual activity until they heard a verbal "no" indicating someone's sexual refusal (Righi et al., 2021). This further shows the important of providing sexual consent knowledge to teens to reduce sexual violence and unwanted sexual experiences. When examining two national samples of adolescents, researchers found that most teens felt their parents never talked about consent and most parents didn't discuss sexual consent more than other sexual health topics such a reproduction (Padilla-Walker et al., 2020).

In a previous study, contraceptive knowledge was measured with a summary score created by adding up the number of correct responses to 23 true-or-false statements about the use of different contraceptive methods (Frost et al., 2012). Findings indicate that for women, social norms had the biggest impact on contraceptive use or nonuse (Frost et al., 2012). Additionally, men were more likely to have large gaps in objective knowledge about the major contraceptive options (Frost et al., 2012).

School health programs that offer comprehensive sexual education can help teens create attitudes and behaviors that reduce their risk for HIV and STDs (Salam et al., 2016). Researchers found that sexual and reproductive health education, counseling, and giving teens contraception are effective in increasing sexual knowledge, contraceptive use, and decreasing riskier sexual

behaviors and adolescent pregnancy (Ott & Santelli, 2007; Salam et al., 2016). Additionally, a literature review of research over the past thirty years provides strong support for comprehensive sex education across a range of topics and grade levels (Goldfarb & Lieberman, 2021).

Comprehensive sex education is defined as information on a range of topics including human development (i.e., anatomy, puberty, reproduction), sexual orientation and sexuality, gender identity and expression, communication skills (consent, condom negotiation), sexual behavior, interpersonal and sexual violence, healthy relationships, and sexual health (contraception, STIs, and pregnancy) (Leung et al., 2019). Abstinence-only education are not effective because they withhold crucial information about HIV and other STIs (Ott & Santelli, 2007). In comparison to abstinence-only education, comprehensive sexual education provides a range of strategies for contraception use and encourages safer sex practices (Kohler et al., 2008). The National Sex Education Standards, Second Edition (2020) explains that quality sexual education “provides young people with opportunities to explore their own identities and values along with the values and beliefs of their families and communities. It also allows young people to practice the communication, negotiation, decision-making, and assertiveness skills they need to create healthy relationships— both sexual and nonsexual—throughout their lives” (pg. 6). Although some people recommend that sexual health information should be given through family conversations instead of school and community programs, families can convey misinformation and in general these conversations are scarce and not comprehensive enough (Bruess & Greenberg, 2008; Rouhparvar et al., 2022; Joodaki et al., 2020).

Goldfarb and Lieberman (2021) explored three decades of research regarding comprehensive sexual education and they found that the benefits of giving teens accurate knowledge through comprehensive sexual education reach beyond unintended teen pregnancy

and reducing STIs. Their results supported the effectiveness of sexual education programs that look at multiple components of sexual health and take a positive and affirming approach to learning about human sexuality. For example, outcomes included more appreciation of sexual diversity, preventing dating and intimate partner violence prevention, development of healthy relationships, prevention of child sex abuse, improved social/emotional learning, and increased literacy regarding how sex is depicted in the media (Goldfarb & Lieberman, 2021). Researchers encourage the use of a rights-based sexual education curriculum which includes positive sexuality, pleasure, empowerment, and larger contextual issues that impact adolescents' sexual lives including gender and cultural norms, relationship power, and sexual orientation (Constantine et al., 2015). Participants who were given the rights based sexual health curriculum showed significantly greater knowledge about sexual health and sexual health services as well as greater self-efficacy to manage risky situations as compared to the control group (Constantine et al., 2015). Sexuality education programs that addressed gender and power were five times as likely to be effective as compared to programs that did not cover those topics (Haberland, 2015).

Adolescent Sexual Self-Efficacy

Hsu and colleagues (2015) elaborate on Bandura's definition and define sexual self-efficacy as one's belief in their ability to handle a sexual context well, and an individual's confidence in their sexual health behaviors. This includes the ability to give and receive sexual consent and have confidence in decisions around contraception use such as asking a partner to use a condom or saying no to someone who wants to engage in risky sexual behaviors (Hsu et al., 2015); Serier et al., 2021). Sexual self-efficacy is how individuals maintain self-control and self-regulation from engaging in risky behaviors (Addoh et al., 2017; Brien et al., 1994; Serier et al., 2021) . Research has found that lower sexual self-efficacy is an important predictor of

adolescents' risky sexual behavior (Rosenthal et al., 1991; Van Campen & Romero, 2012). (Pearson, 2006) describes that “adolescents who felt a sense of control over their lives, both in general and in sexual situations, were more likely to abstain from sex or to use condoms if they did engage in sexual intercourse.” Confidence in the ability to say no predicted safer sexual behavior for 18-year-olds (Rosenthal et al., 1991) and teen's self-efficacy gave them the ability to negotiate condom use (Cruz-Jiménez et al., 2020).

Knowledge may be a necessary precursor to developing self-efficacy regarding sexual health decisions. For example, teenagers who are given knowledge about where to access medical care and contraceptives may feel confident taking steps to get that care. One study found that self-efficacy was significantly related to AIDS-preventive behavioral intentions and measured knowledge about AIDS (Goh et al., 1996). However, the association between knowledge and sexual self-efficacy is less known for Latino teens.

Additional research supports the idea that personal agency and self-efficacy play a role in maintaining sexual health and are related to safer sex behaviors (Brien & Thombs, 1994; Goh et al., 1996; Gomez & Marin, 1996; Levinson et al., 1998; Soler et al., 2000; Pearson, 2006; Montano & Kasprzyk, 2015; Closson et al., 2018). Pearson (2006) analyzed data from a national sample of 20,745 youth and found that personal agency was related to safer sexual practices, specifically more condom negotiation. Personal agency, another term for self-efficacy, can impact individuals' intentions related to sexual health behaviors (Montaño & Kasprzyk, 2015). A study focused on HIV prevention found that personal agency informed proactive sexual health behaviors among youth such as getting regular HIV testing which may reduce their sexual risk behavior and exposure to HIV (Closson et al., 2018).

Based on developmental literature, sexual self-efficacy is often lower in adolescents than

in adults due to inexperience, ongoing frontal lobe brain development, risk-taking, and the influence of peer relationships (Pedlow & Carey, 2004). In addition to developmental factors that impact adolescents' sexual self-efficacy skills, gender may also play a role (Pulerwitz et al., 2002). One study found that personal control and self-efficacy in sexual negotiation are significantly associated with safer sex behavior and are often more important for girls than for boys in predicting contraceptive risk (Pearson, 2006). Pearson (2006) explains that condom use may be against dominant beliefs about men's sexuality and what is depicted in mainstream American media and when males have increased sexual self-efficacy, they might better at challenging cultural messages about masculinity and chose to engage in safer sex behaviors.

Adolescent Psychological Distress

Psychological distress may also be a factor that influences sexual and reproductive health. Psychological distress is defined as non-specific symptoms of stress, anxiety, and depression (Viertiö et al., 2021). When examining adolescent health and well-being, it is important to look at their mental health as well because mental health affects teenagers' sleep, eating habits, daily activities, and immune systems (Bitsko et al., 2022). According to the National Mental Health Services Survey (N-MHSS) conducted in 2020, the highest prevalence of mental health concerns is found in adolescents and young adults ages 18 to 25 (30.6%). According to the National Youth Risk Behavior surveys (2009-2019), over a 10 year period, there has been an increase in the percentage of high school students who experienced persistent feelings of sadness and hopelessness and considered attempting suicide (Underwood et al., 2020). Suicide is one of the top three leading causes of death for youth between the ages of 10 and 19 (National Vital Statistics System, 2020) and is the second leading cause of death for youth ages 10 to 14. A large-scale analysis of 193 epidemiological studies found that the average

age of onset of all lifetime mental illness begins by age 14.5 years (Solmi et al., 2022). The average delay between the onset of a mental health disorder and receiving treatment is 11 years (Wang et al., 2004). In the 2021 Surgeon General's Advisory, Dr. Vivek H. Murthy explained that mental health challenges in children, adolescents, and young adults are widespread and over the last decade there has been a dramatic increase in the number of young people who are struggling with feelings of depression and thoughts of suicide (Office of the Surgeon General, 2021). With the COVID-19 pandemic, psychological distress has intensified (McGinty et al., 2020). Younger adults, racial/ethnic minorities, essential workers, and people with lower incomes reported having experienced disproportionately worse mental health outcomes, increased substance use, and increased suicidal ideation (Czeisler et al., 2020). Younger people were even more vulnerable to stress, anxiety, and depression during COVID-19 (Varma et al., 2021).

Key findings from the 2023 State of Mental Health in America Report (Reinert et al., 2022) indicate that 16% of youth ages 12 to 17 suffered from at least 1 major depressive episode over the past year. 59.8% of youth with depression do not get any mental health care for their depression (Bitsko et al., 2022; Whitney & Peterson., 2019). Data analyzed from the National Health Interview Survey, 2009–2013, found that in every age group, women were more likely to have serious psychological distress than men (Weissman et al., 2015). Depression impacts 20% of female adolescents, twice the rate of males (Hamilton et al., 2015). This is in part due to societal risk factors such as living in a patriarchal society, and different roles and expectations for men and women. Adolescent girls tend to report more negative life events than boys and high distress in response to these events. These negative experiences are usually related to relationships with parents and peers (Hamilton et al., 2015). Notably, however, depression is

often underdiagnosed in adult and adolescent males (Hamilton et al., 2015). Adolescent women are often socialized in ways that permit them to more easily express symptoms of depression (Shi et al., 2021). Women are allowed to be more emotionally expressive and sensitive, and boys are given messages that they should not show emotions because emotions are viewed by society as vulnerability, weakness and are labeled as “feminine” (Shi et al., 2021). Research has found that due to traditional views of masculinity, men may hide or suppress their emotional distress or display more “acting out behaviors” such as using substances (Brownhill et al., 2005).

Depressive symptoms may bring men more shame because they go against traditional masculine gender roles and expectations that emphasize that men should always be strong, in control, successful and never express emotions; this shame and stigma prevents them from seeking help thus contributing to the under diagnosis of depression in males including male adolescents (Lasalvia et al., 2013).

Connection between Psychological Distress and Sexual Health

Cross-sectional studies have found a relationship between self-efficacy and symptoms of distress and depression in that children with lower self-efficacy tend to have higher levels of depression (Comunian, 1989; Ehrenberg et al., 1991; Muris, 2001) and anxiety (Muris., 2002). There is also research finding a correlation between depression and high sexual risk behaviors and high rates of sexually transmitted infections (STIs) (Jackson et al., 2015; Lehrer et al., 2006; Shrier et al., 2002). High risk sexual behaviors have been defined as sexual activities which expose people to risk of getting STIs, HIV or other diseases that impact their health (CDC, 2021). Kalichman and colleagues (1994) found that adults with severe mental illness engaged in high-risk sexual behavior due to poor impulse control, impaired judgement, and lack of knowledge about the perceived risks of different sexual behaviors. In another study of 403

women (ages 14–25 years), depression, stress, and low social support were associated with high-risk sexual behaviors and past STIs (Mazzaferro et al., 2006).

Mental health might impact how teens learn sexual self-efficacy skills. Bandura (1977) explains that self-efficacy is a part of human agency, and motivation to engage in a behavior comes from within the individual. Therefore, mental health challenges might limit adolescents' capacity to put knowledge into practice in sexual situations, potentially weakening the relationship between knowledge and sexual self-efficacy.

Previous research demonstrates that psychological distress is related to sexual behaviors and sexual self-efficacy (Seth et al., 2009; Seth et al. 2011). Seth and colleagues (2009) found that African American adolescents with high psychological distress had less sexual communication with their partners and were more fearful of communicating with their partners (Seth et al., 2009), an important component of sexual self-efficacy. Another study found a relationship between negative psychological constructs (such as depression and anxiety) and poorer sexual communication in adolescents (Brasileiro et al., 2021). Existing research has shown the relationship between psychological distress and self-efficacy in sexual contexts within an African American adolescent population (Seth et al., 2011). However, research has yet to explore the associations between psychological distress and sexual self-efficacy among Latino youth.

Latinos in the US

According to the Pew Research Center, The U.S. Latino population reached 62.5 million in 2021 (Krogstad et al., 2022). The Latino population is one of the largest and fastest-growing youth populations in the country with Latino children and adolescents making up one quarter of the U.S. population younger than 18 (US Census Bureau, 2020; Colby & Ortman, 2015). It is

important to understand that the Latino population is diverse in country of origin, nativity status, acculturation level, age, and socioeconomic status, and there are differences in health outcomes within the US Latino population (Guilamo-Ramos et al., 2005; Pew Research Center, 2022).

The Latino population is 60% Mexican (about 37.2 million people) as of 2021 followed by 9.3% Puerto Rican (Krogstad et al., 2022). Six other Hispanic origin groups in the U.S. have 1 million or more people each: Salvadorans, Cubans, Dominicans, Guatemalans, Colombians, and Hondurans (Krogstad et al., 2022). Within U.S. Latinos, the population that has grown the most over the last ten years are people from Venezuela, the Dominican Republic, Honduras, and Guatemala (Krogstad et al., 2022). Latinos have differences in sexual behaviors and reproductive health outcomes across country of origin, nativity, and acculturation level (Afable-Munsuz & Brindis, 2006; Guilamo-Ramos et al., 2005, 2009; Weiss & Tillman, 2009). The majority of Latinos living in the U.S. are U.S.-born. In 2019, 33 percent (19.8 million) of Latinos living in the U.S. were immigrants born outside of the country and 67 percent (40.6 million) were U.S.-born. Additionally, educational achievement is increasing for many Latinos. In 2018, 26% of recently arrived Latino immigrants ages 25 and older had a bachelor's degree or more (Noe-Bustamante, 2020).

Acculturation, the process by which individuals adopt the beliefs, values, behaviors, and norms of a new culture, can have both positive and negative effects on Latino teen sexual health (Ma et al., 2014). The relationship between acculturation and sexual health is complex and can vary depending on a range of individual, cultural, and societal factors. For example, more acculturated Latino teens may have greater access to sexual health information and resources. Greater acculturation to U.S. culture has also been found to be associated with greater contraceptive and condom use and increased contraceptive use self-efficacy among Latina

emerging adults, particularly Latina women (Afable-Munsuz & Brindis, 2006). Other research shows that more acculturated Latina women have a higher likelihood of having numerous sexual partners but are also more likely to practice safer sex and are more likely to feel empowered to discuss sexual practices with their partners and make their own decisions about their reproductive health (Flores et al., 2004; Quelopana & Alcalde, 2014). Interestingly, research has found that immigrant Latino men were no less likely than U.S.-born Latino men to engage in risky sexual behaviors (Weiss & Tillman, 2009). Acculturation may also expose Latino teens to American cultural attitudes towards sexuality (e.g., sexual freedom, individualism, sexual objectification, focus on physical appearance, double standards, more acceptance of casual sex), some of which may have an impact on sexual behaviors (Ahrold & Meston, 2010). On the other hand, less acculturated Latino teens may benefit from traditional cultural values and beliefs that have been shown to be protective against acculturation stress and have been associated with lower numbers of lifetime sexual partners and a later age for initiating sexual behavior (Kaplan et al., 2002). Research has found that higher acculturation can lead to the loss of traditional cultural values and beliefs that previously provided guidance for safer sexual behavior (Ma et al., 2014). In a nationally representative sample of 1,073 Latina adolescents (ages 11–20) transitioning into emerging adulthood (ages 18–27), researchers found that U.S.-born Latinas who spoke English at home (i.e., a proxy for greater acculturation) were more likely to have STIs and to exhibit sexual risk behaviors (e.g., not using condoms during sexual intercourse) than their foreign-born counterparts who did not speak English at home (Lee & Hahm, 2010).

The Role of Latino Cultural Beliefs and Values in Adolescent Sexual Health

The Latino community has many strengths that can positively impact Latino youth and their development; these include cultural identity and cultural pride, family connectedness,

extended family and community support, a sense of belonging, hope, optimism, resilience, and engaging in prosocial behaviors (Porta et al., 2016). Prior research shows that empathy, moral reasoning, and moral behaviors are strengths in the Latino youth population that contribute to their well-being and resilience (Carlo, 2014). Prosocial behaviors are actions that benefit others, such as helping, sharing, cooperating, and showing empathy. This can look like showing respect towards elders, volunteering in community activities, and feeling motivated to help peers and family members (Carlo, 2014). Prosocial behaviors are linked to better school performance, healthy relationships, and physical and mental health (Carlo, 2014). Prosocial behaviors can also play a role in promoting healthy sexuality for youth such as turning to peers for advice and support about sexual decision-making, wanting their peers to have sexual health knowledge, and wanting to make responsible decisions about sex and contraceptives to benefit the health of themselves and others.

Simpatia is the belief in interpersonal relationship harmony, and more support of *simpatia* was associated with sexual abstinence and greater sexual self-efficacy for all adolescents and delaying sex for Latina teens (Ma et al., 2014). *Simpatia* helps encourage appropriate behaviors and create pleasant, respectful and pro-social interactions with others. Teens who highly endorse *simpatia* may avoid situations that could create conflicts. More support of the cultural value *respeto*, meaning respect towards parents and other authority figures, was associated with lower intention to have sex during high school and more condom use self-efficacy (Ma et al., 2014). Respect for self and family may strengthen resilience when facing challenging developmental tasks of relationships, sexuality, and self-regulation. Researchers found that higher levels of Latino cultural orientation and ethnic pride were related to greater sexual self-efficacy and fewer sexual partners for female adolescents and greater

condom use self-efficacy for both males and females in a sample of Latino adolescents ages 13-16 (Ma et al., 2014). Strong identification with the Latino culture may create personal agency that empowers youth to resist peer pressures to engage in riskier sexual risk behaviors.

Familismo, a prominent Latino cultural value, highlights the importance of family relationships, loyalty, and responsibility, and values extended family relationships as well (Compos et al., 2008; Guilamo-Ramos et al., 2009; Keefe et al., 1978; Sabogal et al., 1987; Steidel & Contreras, 2003). In a study with Latino college students, *familismo* positively predicted academic motivation (Azpeitia & Bacio, 2022). In the context of sexual health, high levels of *familismo* have been associated with more parental monitoring which is seen as protective against sexual risk behaviors, but some research has found that female adolescents who embraced the value of *familismo* perceive their mothers as less approving of dating and that Latino parents allow their sons to date and not their daughters (Guilamo-Ramos et al., 2009; Villarruel 1998). Research with Latino families has identified important factors associated with preventing unintended teen pregnancies, STIs and HIV, including more open parent–adolescent communication about sexual health and health relationships, parental monitoring and involvement, and strengthening of cultural identity (Guilamo- Ramos et al., 2012).

However, not all cultural values are necessarily protective, and understanding the nuances that exist in the impact of their cultural values is important. The narratives from culture and religion play a role in how sexual health is discussed or not discussed in the Latino community; and these narratives also impact how US society views Latino sexual health. For example, Caal and colleagues (2013) conducted 11 focus group with a total of 95 young adult Latina women (ages 18 to 24) and 24 health providers from clinics that have large Latino client-bases. Many women shared that parents pass on cultural values around virginity and *familismo*

which can emphasize family unity and following traditional gender roles. A desire to please parents alongside the reality that many young women were sexually active made open communication about reproductive health particularly difficult. The Latina women noted it was common for Latino parents to think being on birth control meant that their teen was automatically being more promiscuous. Young adult women who used sexual health services feared judgment from their parents and took measures to hide that they had received services so that they wouldn't disappoint their parents. Women who perceived more parental support used sexual health services without fear and enjoyed having their parents as a resource for getting additional sexual health knowledge.

Traditional cultural values may prevent family sexuality communication within Hispanic families (Guilamo-Ramos et al., 2006; Guilamo-Ramos et al., 2008). Carrillo (2002) describes the concept of “sexual silence” in Latino families in which topics of a sexual health remain largely unspoken. Many Latino parents see the sexual health risks facing teens but have a hard time talking about sex because of cultural taboos about openly discussing sex (Guilamo-Ramos et al., 2006;Alcalde & Quelopana, 2013). Some Latino parents may hold the belief that if they talk about sex in their home, their children will be more likely to go out and become sexually active (Deardorff et al., 2010). In one study, Latino adolescent women reported that they have limited knowledge about sex or contraception because it was never discussed at home (Gilliam, 2007).

Research has found that parents believe it is important to discuss sex and sexual health with their kids, but many have not had these conversations due to several barriers (e.g., thinking their children are too young, not knowing how to approach the subject with their kids, and fear that it would increase sexual activity) (Wilson et al., 2010). Parents found it easiest to talk to

their children about sex if they had a good parent-child relationship and started having discussions with their kids when the kids were younger (Wilson et al., 2010). Despite many Latino parents' desire to have more communication about sex with their children, misconceptions may be shared when parents talk to their kids about sex. For example, a mother might tell her daughter that birth control pills will make her gain weight and become infertile (Gilliam, 2007). Although Latino parents talking to their children about sex can be seen as protective, these conversations about sex in Latino families are, generally speaking, not specific, or comprehensive enough to support adolescents' informed decision-making about sexual health and relationships (Martinez & Orpinas, 2016). The lack of communication between parents and their children, and misinformation may contribute to Latino adolescents having less knowledge about sexual and reproductive health, and low sexual self-efficacy (Benavides et al. 2006; Van Campen & Romero, 2012). The lack of discussions about sexual health also extends to talking about how to develop healthy romantic relationships. Research found that when Latino parents did talk about sex happening in the context of romantic relationships, Latina females were less likely to have sex and Latino males were less likely to have multiple partners (Estrada-Martínez et al., 2021). It is important to normalize sex as a part of healthy teen development and give Latino teens the skills they need to navigate sexual situations and know how to develop healthy relationships (Estrada-Martínez et al., 2021).

Although early pregnancy is accepted in some Latino cultures and some earlier studies found that Latino youth think they will gain respect from their communities by having kids (East, 1998), and that Latina women express greater happiness levels than non-Latinos when faced with an unintended pregnancy (Hartnett, 2012), more recent research has found that most Latino teens do not want to get pregnant at a young age (Rocca et al., 2010) or are ambivalent about teen

pregnancy (Martínez-García et al., 2014). Martínez-García and colleagues (2014) highlight that wanting a teen pregnancy may be influenced by social determinants of health and cultural factors. They used a community-based sample of 794 Latino teens in Montgomery County Maryland, which is the same county as the sample used in this current study. Students completed a “pregnancy wantedness scale” (PWS) to assess attitudes toward an early pregnancy and it was found that PWS scores for all groups were below but near the mid-point, suggesting that most Latino teens don’t want a teen pregnancy but there is some ambivalence toward an early pregnancy. Additionally, foreign-born teens had even lower scores on wanting a pregnancy. Ambivalence towards teen pregnancy is highly correlated with not using birth control (Jaccard et al., 2003; Rosengard et al., 2004) and it may reduce Latinos intentions to seek out contraceptive methods.

The majority of Latinos in the US are Christians. Religiosity in the Latino community may support delaying the initiation of sex but the religious view of sex being “forbidden” before marriage may reduce condom use and access to sexual education knowledge (Lescano et al., 2009). Some research has shown that religion is a protective factor for Latinos against acculturation stress and economic hardship. Regarding sexual behaviors, while some studies show that higher religiosity is associated with delaying sexual behavior (Burdette & Hill., 2009), other studies show that extrinsic religiosity increases risky sexual behavior (Smith, 2015). Extrinsic religiosity is when an individual views religion as a way of reaching certain behavioral goals such as social morality or social acceptance (Smith, 2015). Sexual behaviors are often seen as a morality issue. For example, some churches emphasize abstinence, and share morality messages such as sex is only used for procreation and real sex is only vaginal intercourse. Some churches spread misinformation about condom use, for example condoms are seen as “unethical”

and “sinful” because they prevent procreation and are even described as a barrier for emotional connection between partners (Smith, 2015). Although religion is not directly measured in this study, we felt that it was important to acknowledge it in the context of teen sexual behavior.

Fatalism is a common belief for Latinos and it is rooted in Catholicism. It is the belief that all events are predetermined for us by God, and we have no control over changing any of their future outcomes. Although this can help create a sense of acceptance in the face of hardship, it can reduce people’s sense of agency and responsibility to take actions in their life to protect their health. Albert (2010) recently explored the impact of fatalism on adolescent sexual health in a national survey on teen pregnancy prevention. It was found that 34% of teens agree that “it doesn’t matter whether you use birth control or not, when it is your time it will happen” (p. 5). Lescano and colleagues (2009) found that within a sample of Latino youth, higher fatalistic beliefs made people think that efforts to protect oneself from HIV are a waste of time and won’t really do anything.

Cultural norms also may influence teens’ perceived risks and intentions to engage in safer sex practices. The values of *marianismo* and *machismo* set the expectation that women should be virgins until marriage, and men cannot control their sexual needs. *Marianismo* emphasizes that women should be submissive, sexually pure, self-silencing passive, virgins, and self-sacrificing for their families (Zavella & Castañeda, 2005). There is saying “calladito te ves más bonito” which means “the quieter you are, the prettier you look”. These gendered expectations make it harder for women to negotiate safer sexual practices and have sexual self-efficacy (Zavella & Castañeda, 2005). Ibañez and colleagues (2017) conducted a qualitative study exploring the cultural and relational factors that impact Latina women’s risk perception of HIV. Eight focus groups (4 Spanish speaking groups and 4 English speaking groups) were conducted in Florida

with adults ranging from 18-49 years old and a theme that emerged was that women saw not using a condom as a sign of love, commitment, and intimacy even if it meant putting themselves at risk and even if they knew their partner was being unfaithful. When Latino adolescents have internalized these traditional gender expectations, they tend to have lower self-efficacy, feel less autonomy over their bodies, and be less empowered to seek out birth control methods or condoms (Cruz-Jiménez et al., 2020).

Cultural values around *machismo* often deter women from having an active voice in sexual decision-making (Pulerwitz et al., 2002). Adolescent Latina females who believe that premarital sex is wrong and unacceptable are less likely than others to plan for contraceptive use (Deardorff et al., 2010). If adolescent Latino males agree with the idea that they can't control their sexual needs, they may feel like they should have a high number of sexual partners and not use condoms (Deardorff et al., 2010). Additionally, several studies have found that Latino males have a dislike for using condoms and they have shared the belief that birth control is a woman's responsibility (Benavides et al., 2006; Gilliam, 2007). Research supports this and has found that generally women tend to have higher contraceptive self-efficacy (Rostosky et al., 2008; Redmond & Lewis, 2015). A recent study found that Latino men who ascribed to traditional gender roles and *machismo* beliefs were more likely to engage in unprotected sex unless they had developed sexual self-efficacy (Torregosa & Patricio, 2022). The researchers note that sexual self-efficacy helps people maintain self-regulation and avoid engaging in risky behaviors (Torregosa & Patricio, 2022).

In contrast to negative qualities associated with *machismo*, research supports that moving towards gender equity can help improve Latino adolescent sexual health. Gender equity can help reduce gender-based power imbalances and gender-based violence and it can promote respect,

open communication in sexual relationships, and foster healthy relationships. Campero and colleagues (2021) conducted a study using a sample of 747 adolescents ages 11 to 19 year olds from rural Mexico and evaluated the effects of an intervention called “I matter, I learn, I decide” that focused on helping teens improve their sexual health knowledge, sexual self-efficacy, and understanding of the advantages of health equity. As compared to the control group, there were positive associations in several health outcomes. Gender equity helps teens see themselves as equals in relationships, negotiate consensual sexual experiences, create healthy relationships and work towards their long-term goals (Cruz-Jiménez et al., 2020). Gender equity helps support the overall wellbeing of Latino adolescents (Campero et al., 2021). Latino cultural values are complicated and impact peoples’ lives differently. Overall, cultural values can have both positive and negative impacts on individuals' lives and sexuality, and it's important to recognize the diversity of experiences and perspectives within the Latino community.

Health Disparities in Sexual and Reproductive Health for Latino Adolescents

Cultural values and social determinants of health can help us better understand the sexual health behaviors and needs of the Latino teen population. There are some sexual health disparities that are more shaped by cultural values, such as sexual knowledge and family conversations (or lack of conversations) about sexual health, and there are other disparities where structural inequities play a role, such as teens being able to obtain reproductive care and access to contraceptive methods. Social determinants of health such as employment, education, and income are important contributors to health outcomes, and disparities in these social conditions drive health disparities. Health disparities are inequities in health outcomes that systematically and structurally impact disadvantaged socially under resourced groups (Alson et al., 2021; Bailey et al., 2017; Bailey et al., 2021). These health disparities, including in sexual and reproductive

health, directly impact adolescents' health and access to medical care (Ramos-Olazagasti et al., 2023). Research has shown health disparities in rates of unintended teen pregnancy, access to quality reproductive care, and use of contraceptives (Anachebe & Sutton, 2003; Troutman et al., 2020). Barriers in accessing care increases the likelihood of unintended pregnancies (Troutman et al., 2020). The rate of teen pregnancy is disproportionately higher for low income ethnic and racial minorities (Mosher et al., 2012). Unintended pregnancies put teens at greater risk of depression, substance use, and increased likelihood of poverty, failure to finish high school, and unstable couple relationships (Hoffman & Maynard, 2008).

In 2021, 15% of the Latino population was living below the poverty line (Statistica, 2022). Latino adolescents in the U.S. historically experience relatively lower levels of educational and medical support, and have disproportionately high rates of teen pregnancy (Martin et al., 2021), and STDs, including HIV (Benavides et al., 2006; Guilamo-Ramos et al., 2012; Morales-Alemán & Scarinci, 2016). As mentioned previously, not all Latinos perceive teen pregnancy as bad and Latino parents have wonderful strengths and on average receive higher levels of familial support in child raising as compared with non-Latinos (Campos et al., 2008; Sarkisian et al., 2006), but there is ample research that adolescent childbearing increases the risk of negative consequences such as lower economic and educational achievement and being more likely to end up in an abusive relationship.

In 2019, the birth rates for Latino teens (25.3 per 1,000) and non-Latino Black teens (25.8) were more than two times higher than the rate for non-Latino White teens (11.4) (Martin et al., 2021). According to the CDC (2021), Latino young adults ages 20–24 have 1.3 times the reported rate of chlamydia, 1.4 times the rate of gonorrhea, and 2.1 times the rate of syphilis compared to their white counterparts. Latino teenagers are more likely than white teenagers to

initiate sexual activity before the age of 13 and to avoid using condoms or other birth control methods (Eaton et al., 2012). Latino adolescents have the highest high school dropout rate as compared to other minority groups (Gramlich, n.d.), and having a baby in high school decreases adolescents' chances of graduating high school and earning wages that can support a family (Assini-Meytin & Green, 2015; Diaz & Fiel, 2016; Fletcher & Wolfe, 2009, 2012; Lee, 2010).

As a group, the Latino population is more likely to experience institutional and socio-structural inequities and social and economic stressors including poverty, xenophobia, racism, and discrimination than the white population (Barajas-Gonzalez et al., 2021; Cobb et al., 2021; Flores et al., 2010); Flores et al., 2010). Latino adolescents in the US are growing up in a context of anti-immigrant sentiment and community-held stereotypes that can negatively impact their well-being (Torres et al., 2022). Further, there is a significant lack of access to health insurance and medical care within the Latino community (Cohen et al., 2021) and a higher rate of ineligibility due to immigration status (Cohen et al., 2021). Most federal health insurance policies prevent immigrants and their families from accessing reproductive health services, preventive care, or other treatments (National Women's Law Center, 2017). Undocumented immigrants are excluded from the Affordable Care Act which limits their access to state health insurance such as Medicaid (Bucay-Harari et al., 2020). According to the 2020 National Health Interview Survey, about 30% of Latino adults ages 18 to 64 in the U.S. did not have health insurance coverage as compared to 12% of African Americans and 9% of non-Latino White Americans (Cohen et al., 2021). Latinos with undocumented status often work low-income jobs that do not provide healthcare insurance (Artiga & Diaz, 2019); National Women's Law Center, 2017). Even though undocumented immigrants can receive care from community clinics, this is limited to primary care doctors and there is a lack of specialized services (Artiga & Diaz, 2019).

Latinos are less likely to have HIV testing and to have received routine STI screening than their white peers and there is a large amount of data missing (Guilamo-Ramos et al., 2020). In a recent study, researchers collected data from four emergency departments in four different cities in the US and it was found that of the 2,265 adult participants, 28% of Latino immigrants had never been tested for HIV as compared to 16% of African American participants (Bennett et al., 2020). For Latino immigrants, being male and having lower health literacy were associated with no previous HIV testing (Bennett et al., 2020).

Access to quality reproductive health services plays an important role in supporting the health and well-being of adolescents and promoting health equity (Tyler et al., 2014). Yet some teens face barriers in accessing these services (Tyler et al., 2014). Sexual education and reproductive health services are often inequitably distributed and unavailable to students from marginalized communities (Whitfield et al., 2022), and marginalized populations have gaps in access to knowledge and differences in beliefs around sexual activity (Wellings et al. 2006). For example, studies with Mexican adolescents report low levels of sexual knowledge, specifically about risk behaviors for getting an STDs, ways STDs are transmitted, and how they can be prevented (Rocca & Harper, 2012). Craig and colleagues (2014) analyzed data from the National Survey of Reproductive and Contraceptive Knowledge and found that Latinos and teenagers (aged 18-19) had lower awareness of available contraceptive methods, and lower knowledge about individual methods compared with White women and young adults (age 20-29). Additionally, foreign-born Latinos had lower knowledge about contraceptives than U.S.-born Latinos. For example, 82% of U.S.-born Latinos were more likely to have heard of an IUD as compared to 59% of Latinos who were born outside of the United States (Craig et al., 2014).

Knowledge about reproductive health and sexual self-efficacy may play important roles in promoting sexual and reproductive health for Latino adolescents.

Regarding self-efficacy, Manlove and colleagues (2020) evaluated a comprehensive sexual education program and found that Latino teens' lower reproductive health knowledge was associated with lower self-efficacy regarding contraception and giving and receiving consent. Cruz-Jiménez and colleagues (2020) found that adolescents with higher self-efficacy perceived themselves as capable of reproductive and family planning and were more likely to perceive risks related to physical health or self-development compared to those who did not perceive themselves as capable in this area.

In this current study, we seek to better understand what enables or hinders adolescents' sexual self-efficacy. This is an important outcome because the Theory of Reasoned Action argues that self-efficacy would be an important predictor of healthy sexual decision-making (Fishbein & Ajzen, 1975). There are several studies that support the theoretical relationship that greater self-efficacy is related to safer-sexual practices and decision-making (Addoh et al., 2017; Brafford & Beck, 1991; Brien et al., 1994; Fedding & Rossi, 1999; Kanekar et al., 2015; Pearson, 2006; Raj, 1996; Rosenthal et al., 1991). In a study with sexually active 18-year-olds, confidence in the ability to say no was the only predictor of safer-sex behavior with a casual partner (Rosenthal et al., 1991). In a cross-sectional survey design with African American college students, researchers found that self-efficacy towards safer sex explained 14.7% of variance in safer sex (Kanekar & Sharma, 2009). Another study found that self-efficacy explained 40% of variance in intention to use condoms for college students (Wulfert & Wan, 1995). Although there is previous research backing that self-efficacy supports intentions to

engage in safer sex practices for college students and teens, there are limited studies with ethnic and racial minority adolescent populations specifically the Latino adolescent population.

Self-efficacy is an important precursor for safer sexual behavior because it enables young people to resist pressure, unhealthy societal norms, and have attitudes about sex shaped by their own desires, interests, and experiences, and to feel empowered to make decisions based on own beliefs rather than peers and messages around them (Albarracín et al., 2001; Villarruel et al., 2007). This study will explore whether increased knowledge is associated with greater sexual self-efficacy. Sexual self-efficacy is used as a more proximal variable than sexual behaviors because studies have connected higher sexual self-efficacy to safer sex practices ((Brien & Thombs, 1994; Goh et al., 1996; Gomez & Marin, 1996; Levinson, 1986; Levinson et al., 1998; Soler et al., 2000; Pearson, 2006; Manlove et al., 2019; Manolve et al., 2020; Montaña & Kasprzyk, 2015; Closson et al., 2018).

Psychological distress could be a factor that hinders teens from developing higher sexual self-efficacy because current research shows that distress, which includes anxiety and depression, is associated with more hopelessness, less confidence in decision making, self-doubt, fear of rejection, and less likelihood of communicating clearly and using already gained knowledge (Cooper, Shapiro, & Powers, 1998; Lehrer et al., 2006; Lewinsohn, Gotlib, & Seeley, 1997; Merikangas & Angst, 1995; Prinstein, Boergers, & Spirito, 2001). For example, research shows that teens with high anxiety are less likely to feel confident asking a partner to wear a condom due to fear of rejection or having a misunderstanding (Brown et al., 2008; DiClemente et al., 2001; Seth et al., 2009). Higher psychological distress could lower sexual self-efficacy and contribute to negative sexual health outcomes experienced by teens.

Health Disparities in Psychological Distress for Latino Adolescents

Racial and ethnic minority adolescents are at greater risk of mental health conditions due to their living situations, stigma, discrimination, lack of access to quality services, and the unequal distribution of resources (Alegria et al., 2010; Hoffman et al., 2022). Children and adolescents in racial, ethnic, sexual, and other minority groups experience inequities in access to care and disparities in both mental and behavioral health outcomes (Hoffman et al., 2022). The recognition of mental health disparities are important for Latino youth because rates of psychological distress are high in teens in general and are higher in African American and Latino youth than in white youth (Alegria et al., 2010; Kistner et al., 2003; McLaughlin et al., 2007, 2013). Racial and ethnic minorities in the United States are more likely than white people to have severe and persistent mental disorders, less likely to access mental health care, thereby remaining untreated longer (Cook, et al., 2019).

According to the Substance Abuse and Mental Health Service Administration [SAMHSA], (2021) National Survey on Drug Use and Health, overall mental health issues are on the rise for the Latino population between the ages of 12-49. Common mental health conditions among Latino people are generalized anxiety disorder, major depression, post-traumatic stress disorder (PTSD), and excessive use of alcohol and drugs (Alegría et al., 2008; Bucay-Harari et al., 2020). Latino youth are at high risk for mental health disorders; 18.9% of Latino high school students had considered suicide (Kann et al., 2018). Latina females reported experiencing higher levels of depression, anxiety, and reputational aggression than other groups (McLaughlin et al., 2007). Latino children and teens suffer from higher rates of depression and suicidal behavior compared to their peers, and they are less likely to receive treatment; findings

that were especially true during the COVID-19 pandemic (Fortuna et al., 2020; Ehlman et al., 2022).

There is ample research showing that structural factors impact Latino immigrants' mental health services and mental health outcomes (Alegría et al., 2002; Ayalew et al., 2021; Bauer et al., 2000; Berdahl & Torres Stone, 2009; Caballero et al., 2017; Garcini et al., 2016, 2018; Luque et al., 2018; Vega et al., 1999). Latino children and adolescents are at high risk for mental health disorders due to higher rates of poverty, lack of access to services, exposure to trauma, discrimination, and acculturation stress (Dillon et al., 2019; Molina et al., 2016). Yet, we know less about the role that mental health plays in encouraging or inhibiting sexual health behaviors.

Barriers to mental health care for the Latino community include health disparities in access to treatment, stigma around mental health and therapy, privacy concerns around immigration status, language barriers, and lack of health insurance (Espinoza-Kulick & Cerdeña 2022; Kim et al., 2011; Lee & Matejkowski, 2012; Timmins., 2002; Yun et al., 2019). Only 1 in 10 Latinos with a mental disorder receive services from a general care provider and 1 in 20 get services from a mental health provider (Office of the Surgeon General, 2001). Between 2014 and 2019, the national Latino population increased by 5.2 million people and 44 states saw a decline in available Spanish-speaking services despite this population growth across all states (Pro et al., 2022). The proportion of facilities that offered treatment in Spanish declined by 17.8%, or a loss of 1,163 Spanish-speaking mental health facilities. In an analysis of 46 primary care practices, Latinos were less than half as likely as whites to receive depression care (Lagomasino et al., 2005).

Experiences with trauma in the Latino population contributes to their psychological distress. Central American immigrants living in the United States have been shown to have a

high prevalence of trauma and posttraumatic stress disorder (Eisenman, 2003; Holman, 2000). In a qualitative study with Latina women, the most common types of traumas were exposure to domestic violence and community violence in their home country (Kaltman et al., 2016). Latina immigrant women have high levels of trauma including sexual trauma and symptoms of PTSD, and this increases their mental and sexual health risks (Cleaveland & Frankenfeld, 2020; Fortuna et al., 2019; Galano et al., 2017; Kaltman et al., 2016). In a sample of 281 foreign born Latino immigrants, 29% experienced traumatic experiences during their migration process (Perreira & Ornelas, 2013).

Discrimination is a stressor that creates health risks for the Latino community (Gomez et al. 2011; Schmitt et al. 2014; Unger et al. 2014) and research has found that discrimination creates heightened stress and has negative impacts on people's physiological well-being (Bekteshi & Kang; 2020; Schmitt et al., 2014). A longitudinal study with Latino college students found that students who experienced racial and ethnic discrimination were at a higher risk for PTSD symptoms (Cheng & Mallinckrodt, 2015). Another longitudinal study conducted with recently immigrated Latino adolescents found that experiences with discrimination were associated with more depressive symptoms and less prosocial behaviors (Davis et al., 2016). Experiencing discrimination also create fear about using medical and mental health services (Galvan et al., 2017; López-Cevallos et al., 2014).

First generation immigrants face additional significant stressors and research has highlighted that Latino acculturation into the U.S. is correlated with high levels of psychological distress (Arbona et al., 2010; Caplan, 2007; Cariello et al., 2020; Torres et al., 2012). Acculturative stress refers to mental and emotional changes that happen when adapting to a new cultural environment (Hovey & King, 1996). Hovey and King (1996) found that within a sample

of Latino adolescents, high acculturative stress was related to higher levels of depression and suicidal ideation. In a 3-wave longitudinal study with first generation and second generation Latino adolescents, researchers found that more exposure to acculturative stress predicted more symptoms of anxiety and depression as well as being withdrawn (Sirin et al., 2013). These stressors create a lack of trust in medical services, delayed medical care, and adverse mental health outcomes. The longer Latinos are living in the US, their psychopathology gets worse across successive generations as they experience different kinds of stressors such as poverty and discrimination, this phenomenon is known as the immigrant paradox (Bowe, 2017; Breslau et al., 2007; Kistner et al., 2003; Zhang et al., 2021).

Mental and sexual health are critical aspects of overall health, and Latino adolescents have higher rates of poor sexual health outcomes (Guilamo-Ramos et al., 2012) and higher rates of depression and anxiety (Doi et al., 2001; Roberts et al., 1997, 1999; Siegel et al., 1999) than their White counterparts, making a study that addresses the main components of healthy sexual development in this population an important line of inquiry. A better understanding of the role of mental health in sexual health knowledge and self-efficacy may enable practitioners and educators to provide adolescents with more comprehensive sexual and mental health education.

There is limited literature about Latino teens sexual health needs and ways to strengthen their decision making. Some sexual education programs have been adapted to be more culturally responsive to Latino teens and the literature emphasizes the need for accurate sexual health knowledge. Literature with white adolescents has highlighted the benefits of higher sexual self-efficacy because it leads to increased intentions thus leading to safer sex behaviors and there are limited studies about the importance of sexual self-efficacy for Latino teens. This study would confirm these findings about knowledge and sexual self-efficacy and expand upon them. Also,

for African American teens the research has shown there is a connection between sexual self - efficacy and psychological distress but studies have yet to explore that connection for Latino teens, so this study intends to fill this gap.

Chapter III: Methods

Data Source

This current study used data of Latino youth preparing to complete *El Camino*, a sexual health program. The present study represents a secondary data analysis using only baseline data from the El Camino Program, funded by the federal Office of Population Affairs in the Department of Health and Human Services. The implementation partner for El Camino is Identity, Inc. (<https://identity-youth.org/>), and the program evaluator is the University of Maryland, College Park. All of the adolescent participants were attending one of eight partner high schools in Montgomery County, Maryland. Non-random sampling was used for recruiting participants. Bilingual staff from *Identity, Inc.* coordinated with school administrators, nurses, and English as a second language (i.e., ESOL) teachers, to identify and recruit potential participants. Purposive sampling was used because Latino students were the intended recipients of the intervention.

Although the present study is only examining baseline data, I will describe the broader study to contextualize the data. From July 2020 to January 2023, groups of Latino adolescents ages 14 to 21 participated in an 11-week program called El Camino, a longitudinal school-based teen pregnancy prevention program that helps teens think through long-term goals. El Camino is a randomized controlled trial in which students were randomly assigned to either the control group, *Poder* (to be able to), a general leadership program, or the experimental group, *El Camino*. Although this study is not examining the effectiveness of the *El Camino* program, future research will examine the program effectiveness.

This current study is a cross-sectional study that combines both groups and uses only pre-intervention data. Baseline survey questions included: demographic information, sexual

orientation and gender identity, long-term goals about educational achievement, family support, neighborhood safety, intimate relationships psychological distress, views, perceptions and knowledge about condoms and contraceptives, self-efficacy, intentions about sexual behavior and dating, and specific sexual behaviors. This study is a within group analysis which may allow for a more nuanced understanding of within-group differences (Luthar et al., 2007).

Procedures and Data Collection

Respondents were primarily Latino students in 9th to 12th grade, ranging from 14 to 21 years old. However, the current study limited the analytic sample to Latino-identifying students aged 14 to 19 due to the focus on Latino adolescents. The sample size for this study is $n = 474$ Latino students. Data were de-identified to maintain participant confidentiality. Surveys were created through RedCap which uses data encryption. Surveys were completed in Spanish or English depending on participant preference. The students completed the surveys at their schools. When school was virtual during the COVID-19 pandemic, participants completed the online surveys remotely.

Measures

Sexual Self-Efficacy

Students were asked 8 questions about their sexual self-efficacy (e.g., how confident are you that you could say “no” to sex if your partner won’t use a condom?). 2 of the 8 questions were specific to sexual consent self-efficacy (e.g., ask for consent from someone you want to have any kind of sex with?). A copy of this scale can be found in Appendix A. This scale was created by the Child Trends team for use in previous studies with adolescents (Manlove et al., 2020; Manlove et al., 2021). Participants responded on a scale of 0 (not at all confident) to 4

(completely confident). A summary score was created from 0 to 32, with lower scores indicating lower sexual-self efficacy and higher scores indicating higher sexual self-efficacy.

Condom, Contraceptive and Consent Knowledge

The participants were asked 14 questions to assess their knowledge of condoms, contraceptives, and sexual consent. 9 of the 14 questions were about contraceptives and condoms. Students indicated if they thought a statement was “true”, “false”, or “don’t know”. Example statements include “using birth control as a teen makes it harder for a person to get pregnant later in life when they are no longer using birth control” and “It is okay to use the same condom more than once”. Additionally, 5 out of the 14 questions explored students’ thoughts about sexual consent (e.g., “Is someone consenting to have sex with you if they agreed to have sex with you before but do not want to at this time?”). Participants responded by selecting “yes”, “no” or “don't know”. A copy of this scale can be found in Appendix B. A summary score was created by adding up the number of correct answers. The summary scores ranged from 0 to 14, and this variable was treated as a continuous variable. Lower scores indicated less knowledge, and higher scores indicated more knowledge.

Psychological Distress

Feelings of psychological distress were measured with the Kessler-6 Psychological Distress Scale (K-6; Kessler et al., 2002). The K-6 asks respondents about the frequency of feelings of nervousness, helplessness, restlessness, depression, effort, and worthlessness over a 30-day period (Mitchell & Beals, 2011). Participants indicated how often in the past 30 days they experienced each of these distress symptoms on a scale from 0 (none of the time) to 4 (all the time). Item scores were summed to create a summary score ranging from 0–24, with a score of 24 indicating the highest level of psychological distress. Then the summary score was

dichotomized by a clinical cut off of 13, which indicated serious psychological distress as determined by scale developers (Kessler et al., 2003). The K-6 is a valid and reliable measure of psychological distress among youth and has demonstrated consistently strong psychometric properties across major sociodemographic subsamples (Kessler et al., 2002). The scale has demonstrated excellent internal consistency reliability ($\alpha = .89$; Kessler et al., 2002).

Control Variables

Nativity Status and Length of time in the United States. Students were asked whether they were born in the United States. This variable was dichotomized with “yes” representing all students who were born in the US, and “no” representing students who are foreign born and immigrated to the US as well as students who selected prefer not to say.

Participants who were not born in the U.S. were asked how old they were when they came to live in the U.S. The researchers created a variable for years lived in the U.S. (i.e., current age minus age moved to the U.S.). Length of time in the U.S. was measured as a 3-level categorical variable representing: born in the U.S., immigrated less than 3 years ago, or immigrated more than 3 years ago.

Length of time in the U.S. was included as a control variable based on research demonstrating that adolescents who are less acculturated have less sexual health knowledge.

Gender. For gender, I created a three-level categorical variable consisting of female, male, and all other forms of gender identity which included the answer choices “I do not identify as either male or female” and “I’m not sure”. Different genders have different experiences learning about sexual and reproductive health. Research indicates inconsistent findings regarding gender differences in sexual self-efficacy. Previous research with African American and Caucasian high school students found that males reported lower sexual self-efficacy than females

(Rostosky et al., 2008; Redmond & Lewis, 2015; Rosenthal et al., 1991; Stevenson et al., 1995) but this difference has not yet been studied in Latino youth.

Age. Students recorded their age in years at the beginning of the survey, Age was measured as a continuous variable. Before data analysis, age was recoded as a 3-level categorical variable consisting of: 15 and younger, 16 and 17, and 18 and older. The researchers controlled for age due to developmental differences in knowledge about sexuality and contraceptives (Craig et al., 2014).

Data Analyses

Four different analyses were conducted using SPSS v29. Multiple imputation in SPSS was used to impute missing values. The first analysis was a univariate descriptive analysis consisting of the knowledge, self-efficacy, and psychological distress variables in the sample. Next, I conducted bivariate analyses testing the relationship between knowledge and self-efficacy, then the relationships between each of the control variables and both knowledge and self-efficacy. The independent variable and control variables significantly correlated to self-efficacy were then included in a linear regression analysis examining the independent relationships between knowledge, each of the related control variables, and self-efficacy. Then, a moderated regression analysis was conducted to explore how psychological distress (Model A) moderated the relationship between knowledge and self-efficacy. Then, I tested if being born in the US or foreign born (Model B) moderated the relationship between knowledge and self-efficacy. Lastly, I tested if gender (Model C) moderated the relationship between knowledge and sexual self-efficacy. The continuous variables knowledge and psychological distress were mean centered before putting them into the moderated regression models.

Chapter IV: Results

Data Analysis

Univariate Analyses

The sample consisted of 250 Latina female adolescents (53.1%) and 211 Latino male adolescents (44.8%) ($n = 474$) (Table 1). Regarding age, 127 adolescents were 15 years old or younger (27.7%), 209 adolescents were between 16 and 17 years old (45.6%), and 122 adolescents were 18 years old and older (26.6%), demonstrating a relatively equal distribution. Regarding nativity, 73 adolescents were born in the U.S. (15.8%) and 389 adolescents were foreign born (84.2%). For length of time in the U.S., 202 adolescents were in the US for less than three years (47.5%) and 150 adolescents were in the US for more than three years (35.3%). To see histograms of the frequencies of these variables, see appendix C.

The sample had varying levels of contraceptive knowledge and sexual self-efficacy (See Table 1). Descriptive statistics for sexual self-efficacy indicated a mean score of 23.65 ($SD = 6.82$). The mean score for contraceptive and consent knowledge was 6.31 ($SD = 2.91$). The mean score for psychological distress was 13.35 ($SD = 5.20$).

Table 1						
Description of Data						
Variable	Mean	St. Dev.	Range	Frequency	Percent	Valid Percent
Sexual Self-efficacy	23.65	6.82	0 - 32			
Psychological Distress	13.35	5.20	0 - 24			
Contraceptive Knowledge	6.31	2.91	0 - 14			
Age						
15 years old				127	26.8%	27.7%
16 to 17 years old				209	44.1%	45.6%
Over 17 years old				122	25.7%	26.6%

Missing	16	3.4%	
Born in the US			
Foreign born	389	82.1%	84.2%
US born	73	15.4%	15.8%
Missing	12	2.5%	
Length of time in the US			
US Born	73	15.4%	17.2%
Less than 3 years in US	202	42.6%	47.5%
More than 3 years in US	150	31.6%	35.3%
Missing	49	10.3%	
Gender			
Male	211	44.5%	44.8%
Female	250	52.7%	53.1%
Don't identify as male or female / don't know	10	2.1%	2.1%
Missing	3	.6%	

Bivariate Relationships Among Variables

Before conducting the proposed analysis, I used multiple imputation to account for missing data. Multiple imputation was used because missing data ranged from 10 to 20% per item in each questionnaire. I then conducted bivariate analyses to examine the associations between knowledge, sexual self-efficacy, psychological distress, and our other covariates: age, gender, nativity, and length of time in the US.

Correlation analyses (Table 2) demonstrated that adolescents' contraceptive knowledge, sexual self-efficacy, and psychological distress were significantly correlated with each other.

Table 2
Variable Correlation Matrix
N = 474

	1	2	3	4	5	6	7
1. Sexual Self-efficacy	1.00						
2. Psychological Distress	.12**	1.00					
3. Knowledge	.31**	.11**	1.00				
4. Age	.10**	.001	.11**	1.00			
5. Gender	.17**	.22**	-.08**	-.02	1.00		
6. Born in US	.13**	-.002	.11**	-.23**	.11**	1.00	
7. Length of time in the US	-.06**	<.001	-.04*	.17**	-.08**	-.71**	1.00

Note. **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Age and length of time used spearman's correlation because they are ordinal variables, and all other variables used person's correlations.

The correlation between sexual self-efficacy and knowledge was significant ($r = .31, p < 0.001$). Also, there was a small significant correlation between sexual self-efficacy and psychological distress ($r = .12, p < 0.001$). Three of the potential covariates (age, gender, born in the US) had a small yet significant correlation with sexual self-efficacy, but the fourth covariate length of time in the US had a significant but not meaningful correlation ($r = -.064, p < 0.001$). Therefore, length of time in the US was not included in any of the multiple regression models.

A *t*-test analysis of mean differences across knowledge between those born in the US and those not born in the US indicated that those born in US had significantly higher mean scores on the knowledge scale ($M = 6.85, SD = 3.03$) than those not born in the US ($M = 5.97, SD = 2.94$) ($t(2320) = -5.28, p < 0.001$). A *t*-test analysis of mean differences of sexual self-efficacy between those born in the US and those who immigrated to the US revealed that those born in the US had significantly higher mean scores on the self-efficacy scale ($M = 25.32, SD = 6.40$) than those not born in the US ($M = 22.78, SD = 7.04$) ($t(2320) = -6.44, p < 0.001$).

A *t*-test analysis of mean differences across knowledge between male and female adolescents indicated that males had significantly higher mean scores on the knowledge scale ($M = 6.35$, $SD = 2.82$) than females ($M = 5.90$, $SD = 3.08$) ($t(2313) = 3.65$, $p < 0.001$). Another *t*-test analysis of mean differences of sexual self-efficacy between males and females demonstrated that females had significantly higher mean scores on the self-efficacy scale ($M = 24.28$, $SD = 6.89$) than males ($M = 21.92$, $SD = 6.84$) ($t(2313) = -8.23$, $p < 0.001$).

Psychological distress was significantly correlated with contraceptive knowledge ($r = .11$, $p < 0.001$) and sexual self-efficacy ($r = .12$, $p < 0.001$) as well as gender ($r = .22$, $p < 0.001$) in that there was more distress among females.

Moderation Analysis

Contraceptive and Consent Knowledge, Age, Gender, and Born in US Regressed on Self-efficacy with no Moderation. The primary analysis in this study was to examine the influence of contraceptive knowledge on adolescent's sexual self-efficacy, while controlling for age, gender, nativity, and psychological distress (see Table 3). Students' sexual self-efficacy was regressed on their knowledge, age, gender, nativity status and psychological distress. The overall multiple regression model was statistically significant ($R^2 = 0.14$, $F(6, 2266) = 63.1$, $p < 0.001$).

The findings from this regression model suggest that as contraception and consent knowledge increased, sexual self-efficacy increased while controlling for age, gender, nativity status, and psychological distress. For every one unit increase in knowledge, self-efficacy scores increased by .68 ($\beta = .68$, $SE = .05$, $p < .001$), controlling for all other predictors in the model.

Table 3 Multiple Regression of Contraceptive and Consent Knowledge, Age, Gender, and Born in US Regressed on Self-efficacy with no Moderation

	Beta	Std. Error	<i>p</i>
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Intercept	15.21	0.64	<.001
Age 15 and Younger	-1.87	0.38	<.001
Age 16 and 17	-0.52	0.34	0.122
Gender	2.39	0.28	<.001
Born in the US	2.02	0.39	<.001
Contraceptive & Consent Knowledge	0.68	0.05	<.001
Psychological Distress	0.04	0.03	0.125

Notes: $R^2 = 0.14$, $F(6, 2266) = 63.1$, $p < 0.001$.

Reference category for age is 18 and older

Born in the US is a binary where immigrant is the reference category and born in the US = 1

Gender is a binary where 0 = male, 1 = female. Male is the reference category.

Psychological Distress as a Moderator of the Relationship Between Knowledge and Sexual Self-efficacy. The initial hypotheses presented in Model A (see appendix D) were examined by testing whether psychological distress moderated the relationship between knowledge and sexual self-efficacy. As seen in Table 4, the interaction between knowledge and psychological distress was not statistically significant ($\beta = -0.002$, $SE = .01$, $p = 0.795$), indicating that the relationship between knowledge and sexual self-efficacy did not differ based on level of psychological distress. The coefficient for knowledge was .68, meaning that for every increase in knowledge, sexual self-efficacy increased by .68 when psychological distress equaled 0 (i.e., the mean level of psychological distress). The coefficient for psychological distress was .04, indicating that for every increase of psychological distress, sexual self-efficacy increased by 0.04 when knowledge equaled 0 (i.e., the mean level of knowledge).

Table 4 Multiple Regression Model Testing Psychological Distress as a Moderator of the Relationship Between Knowledge and Sexual Self-efficacy

	Beta	Std. Error	<i>p</i>
Intercept	19.89	0.51	<.001
Age 15 and Younger	-1.87	0.38	<.001
Age 16 and 17	-.51	0.34	.126
Gender	2.40	0.29	<.001

Born in the US	2.02	0.39	<.001
Contraceptive & Consent Knowledge	0.68	0.05	<.001
Psychological Distress	0.04	0.03	.123
Interaction Psychological Distress x Contraceptive & Consent Knowledge	-.002	0.01	.795

Notes: $R^2 = 0.14$, $F(7, 2266) = 54.07$, $p < 0.001$.

Reference category for age is 18 and older

Born in the US is a binary where immigrant is the reference category and born in the US = 1

Gender is a binary where 0= male, 1 = female. Male is the reference category.

All scores for psychological distress and knowledge were mean centered before running analysis

Born in the US as a Moderator of the Relationship Between Knowledge and Sexual

Self-efficacy. Because US nativity was significantly correlated with self-efficacy and knowledge, I tested model B with nativity as a moderator (appendix D). As seen in Table 5, the interaction term between knowledge and US born was not statistically significant ($\beta = -0.08$, $SE = 0.12$, $p = 0.495$). This means that the relationship between knowledge and sexual self-efficacy did not differ based on nativity. The coefficient for knowledge was .70 ($\beta = 0.70$, $SE = 0.05$, $p < .001$), meaning that for every increase in knowledge, sexual self-efficacy increased by .70 when US-born. The coefficient for US born was 2.03, indicating that adolescents born in the US had on average 2.03 points higher on the sexual self-efficacy scale than those not born in the US when knowledge equaled 0, which is the mean level of knowledge. As knowledge increased, sexual self-efficacy also increased for those not born in the US and for those born in the US.

Table 5 Report on Multiple Regression Model with Born in the US as a Moderator of the Relationship Between Knowledge and Sexual Self-efficacy

	Beta	Std. Error	<i>p</i>
Intercept	19.72	0.49	<.001
Age 15 and Younger	-1.84	0.38	<.001
Age 16 and 17	-0.48	0.34	.157
Gender	2.49	0.28	<.001
Contraceptive and Consent Knowledge	0.70	0.05	<.001
Born in the US	2.03	0.39	<.001

Interaction Knowledge x Born in the US	-0.08	0.12	.495
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Notes: $R^2 = 0.14$, $F(6, 2266) = 62.73$, $p < 0.001$.

Reference category for age is 18 and older

Gender is a binary where 0 = male, 1 = female. Male is the reference category.

Born in the US is a binary where immigrant is the reference category and born in the US = 1

All scores for knowledge were mean centered before running analysis

Gender as a Moderator of the Relationship Between Knowledge and Sexual Self-efficacy. Because gender was significantly correlated with sexual self-efficacy and knowledge, I analyzed the degree to which gender moderated the association between self-efficacy and knowledge as seen in Model C (see appendix D). As seen in Table 6, the interaction term between knowledge and gender was statistically significant ($\beta = -0.44$, $SE = 0.09$, $p = <.001$), meaning that the relationship between knowledge and sexual self-efficacy did differ based on whether the participants were male or female. The coefficient for knowledge was .94 ($\beta = 0.94$, $SE = 0.07$, $p = <.001$), indicating that for every increase in knowledge, sexual self-efficacy increased by .94 for males. The slope between knowledge and sexual self-efficacy for females was .50 (.94 (slope for males) – 0.44 (difference in slopes for males and females)). The interaction (see Figure 5 in Appendix E) suggests that the relationship between knowledge and sexual self-efficacy was stronger for males than for females. Specifically, as knowledge increased, self-efficacy increased more for males than for females.

Table 6 Report on Multiple Regression Model with Gender as a Moderator of the Relationship Between Knowledge and Sexual Self-efficacy

	Beta	Std. Error	<i>p</i>
Intercept	22.17	0.30	<.001
Age 15 and Younger	-1.91	0.38	<.001
Age 16 and 17	-0.48	0.33	.154
Born in the US	1.98	0.39	<.001
Contraceptive and Consent Knowledge	0.94	0.07	<.001
Gender	2.52	0.27	<.001

Interaction Knowledge x Gender	-0.44	0.09	<.001
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Notes: $R^2 = 0.15$, $F(6, 2266) = 66.96$, $p < 0.001$.

Reference category for age is 18 and older

Gender is a binary where 0 = male, 1 = female. Male is the reference category.

Born in the US is a binary where immigrant is the reference category and born in the US = 1

All scores for knowledge were mean centered before running analysis

Chapter V: Discussion

Research shows that Latino adolescents have lower awareness of contraceptive methods as compared to white teens and that they have disproportionately higher adverse sexual health outcomes (Benavides et al., 2006; Craig et al., 2014; Guilamo-Ramos et al., 2012; Martin et al., 2021; Morales-Alemán & Scarinci, 2016). The present study is one of the first to examine the association between contraceptive and sexual consent knowledge and sexual self-efficacy, and the role of psychological distress among both male and female Latino adolescents living in the US. The data suggest that in general higher levels of contraceptive and consent knowledge were positively associated with higher sexual self-efficacy for the youth overall. Previous research with Latino adolescents supports the positive relationship sexual health knowledge and sexual self-efficacy (Manlove et al., 2019; Manolve et al., 2020). In this study, the relationship between knowledge and sexual self-efficacy was positively correlated regardless of level of psychological distress and nativity. The findings support that Latino youth in this study may benefit from strengthening their knowledge and sexual self-efficacy regardless of whether they were born in the US or they immigrated, and regardless of their level of psychological distress. These results suggest the importance of understanding the relationship between contraception and consent knowledge and sexual self-efficacy for Latino teens. Giving teens more accurate knowledge may help improve their sexual self-efficacy. Future studies could explore whether knowledge increases self-efficacy, sexual self-efficacy improves teens motivation to seek out knowledge, or the relationship between knowledge and sexual self-efficacy may be bi-directional. Interestingly, it was found that the relationship between knowledge and self-efficacy was stronger (more positive) for males than females. There are several possible explanations as to why this might be, and it is important to note that there is variability within the Latino population diaspora regarding

levels of sexual health knowledge and sexual self-efficacy. Some factors that could be influencing this relationship are traditional gender norms and expectations in the Latino culture, patriarchal family structures, cultural values, access to information and resources, and cultural stigma about talking about sexual health (Ravelo et al., 2022). These traditional gender norms may help explain why gender moderated the relationships between knowledge and sexual self-efficacy because gender norms impact attitudes, beliefs, and expectations about sexuality and how people perceive their own sexual self-efficacy. Additionally, these findings suggest that sexual health knowledge and sexual self-efficacy may be areas that could be strengthened to help teens have positive sexual health outcomes.

Hypothesis One: Association between Knowledge and Sexual Self-Efficacy

The first research question assessed the association between contraception and consent knowledge and sexual self-efficacy for Latino adolescents. We found that there was a moderate positive association between knowledge and sexual self-efficacy for the entire sample in the bivariate analysis. The significant positive relationship was still present even after controlling for age, gender, and nativity. Sexual self-efficacy is an important outcome as it is associated with safer sexual behaviors such as using condoms correctly and more consistently, using more effective birth control methods, decreased rates of STIs and unintended teen pregnancies, and increased sexual satisfaction and better communication with sexual partners (Brien & Thombs, 1994; Goh et al., 1996; Gomez & Marin, 1996; Levinson et al., 1998; Soler et al., 2000; Pearson, 2006; Montano & Kasprzyk, 2015; Closson et al., 2018). Our findings further support previous studies that have found a positive relationship between sexual health knowledge and sexual self-efficacy (Green et al., 2017; Manlove et al., 2019). It is possible that Latino adolescents may develop sexual self-efficacy by being provided with accurate and reliable contraceptive and

consent knowledge. On the other hand, research supports that increased sexual self-efficacy could lead to more motivation to obtain accurate and reliable sexual health knowledge (Ryan et al., 2007). The relationship between these two variables may also be bi-directional.

Hypothesis Two: Psychological Distress as Moderator between Knowledge and Sexual Self-Efficacy

The second hypothesis was that psychological distress would significantly moderate the association, such that high psychological distress would weaken the relationship between knowledge and sexual self-efficacy. Knowledge remained significantly positively related to sexual self-efficacy regardless of the level of psychological distress. Thus, psychological distress did not emerge as a significant moderator. Knowledge is strongly related to self-efficacy, and it seems that psychological distress did not interfere with that relationship for this sample.

Research supports that psychological distress may not always be a bad thing for teens because it might motivate them to seek support and mental health resources and develop coping skills which would help their overall well-being and resilience (Willroth et al., 2023). Research demonstrates that certain emotions related to psychological distress may be helpful in certain ways, for example, anxiety can help people be aware of and face potential threats and sadness can signal to other people that an individual needs their social support (Ford et al., 2018; Masedo & Rosa Esteve, 2007; Willroth et al., 2023). People who are better able to accept and tolerate negative emotions can handle stress better and cope with life challenges (Ford et al., 2018; Masedo & Rosa Esteve, 2007). These results may indicate that Latino teens are resilient in overcoming challenges and they may try to access resources that help them increase their sexual health knowledge and self-efficacy even if they are experiencing mental health challenges.

Additionally, the use of the K6 poses a limitation in the findings of this research and may help explain why there was no moderation effect of psychological distress. Although the K6 has been validated as a measure of psychological distress, it remains a general measure and may not adequately capture the nuances of psychological distress experienced by this group of young people who have high levels of trauma and face daily experiences of systematic oppression (Cheng & Mallinckrodt, 2015; Flores et al., 2010; Kim et al., 2016; Perreira & Ornelas, 2013). Different measures that address other elements of psychological distress could be used in the future. For example, acculturation stress, trauma, and distress caused by discrimination are not represented in this limited measure, and research supports that those are aspects of mental health that are high in the Latino teen population (Cabello et al., 2017; Cheng & Mallinckrodt, 2015; Flores et al., 2010; Fortuna et al., 2019; Perreira & Ornelas, 2013).

The correlation between contraceptive and consent knowledge and sexual self-efficacy supports the Theory of Planned Behavior (TPB) and adds background characteristics to the TPB model specific for the Latino population. According to the TPB, both individual (i.e., level of knowledge, age, gender, and psychological distress) and societal characteristics (i.e., Latino ethnicity) contribute to perceived behavioral control (i.e., sexual self-efficacy), which can lead to increased intentions to engage in safer sex behaviors ((Ajzen, 1985; Ajzen, 2020). By adding specific contextual background factors (i.e., psychological distress, nativity status and gender) to the TPB, this research expands the theory for the Latino youth population. Future studies would be needed to explore whether sexual self-efficacy may be a way that Latino teens strengthen their resilience and overcome adversity in their environment, which may help address health disparities and promote health equity by potentially empowering Latino teens to make informed decisions, seek out reproductive health services (as supported by the TPB), and reduce stigma.

Additional Findings

In an exploratory analysis, we tested whether being US born or foreign born moderated the relationship between contraceptive and consent knowledge and sexual self-efficacy. In this sample, 84.2% of the sample consisted of immigrants. Knowledge remained significantly positively related to sexual self-efficacy regardless of nativity status. The lack of moderation support that all Latino youth, both US born and immigrants, can benefit from increases in sexual health knowledge and sexual self-efficacy to improve their overall sexual health, well-being, and resilience. Latino immigrant teens can experience high amounts of adversity and trauma in their home countries and during the immigration process (Perreira et al., 2013; Vogt, 2013). These results could suggest that Latino teens are resilient in adapting to their environment and they may work to access resources that help them increase their sexual health knowledge and self-efficacy regardless of their nativity status.

Although nativity status was not a moderator, immigrant Latinos had lower levels of knowledge and sexual self-efficacy compared to US born Latinos. Latino adolescent immigrants may have less access to sexual health services and information than those born and raised in the US, and this might explain why they had lower levels of knowledge and sexual self-efficacy. US-born Latino adolescents have more access to sexual health information and medical services, which may help explain why the US born teens had higher mean scores for both knowledge and sexual self-efficacy as compared to immigrant teens. Additionally, the higher means for US-born adolescents could also be explained by the fact that US-born teens tend to be more aware of American messages that promote sexual self-efficacy and personal agency in decision-making related to their sexual health. Many Central American countries do not provide comprehensive sexual education at school and emphasize abstinence education only (Chandra-Mouli et al.,

2018). Immigrant teens in this sample may have lower levels of sexual health knowledge due to not receiving it in their home countries. Lastly, immigrant teens often lack health insurance, do not receive the specific medical care that they need, and they may fear that seeking medical services could impact their immigration status, all of which are factors that limit their access to healthcare and act as a barrier to helping them develop sexual self-efficacy (Artiga & Diaz, 2019; Cohen et al., 2021; Guilamo-Ramos et al., 2020).

Latino immigrant teens' lower levels of knowledge and sexual self-efficacy could also be due to Latino immigrants needing to prioritize meeting basic needs (i.e., food and housing) over sexual health needs. Research shows that improving sexual health knowledge and sexual self-efficacy can be beneficial for Latino teens (Campero et al., 2021), however, given the complex structural and systemic challenges faced by this population (e.g., structural racism contributes to sexual and reproductive health inequities), Latino immigrant teens may also need more comprehensive services including case management, job training, support meeting basic needs, and being connected with sexual health medical services (Fenton, 2001; Valdez et al., 2023). Latino immigrant teens may be experiencing so much stress from their environment that it is hard to develop sexual self-efficacy and prioritize sexual health needs, which may be explained by the concept of environmental press (Kemp et al., 2016). Environmental press is an ecological concept that refers to demands and challenges that an individual experiences in their environment which press upon and influence their development (Kemp et al., 2016). In the context of adolescent sexual health, environmental press includes factors such as social norms, access to healthcare and education, and cultural beliefs that may impact adolescent behavior. Previous research supports that some immigrant Latino teens are afraid to seek out sexual health services such as STI and HIV testing due to fear that it may hurt their immigration case or that

their parents will find out and they perceive that they are ineligible for services due to their immigration status (Caal et al., 2013, Valdez et al., 2023).

The concept of environmental press suggests that when teens operate within their comfort zone, they possess the necessary competencies to handle the environmental pressures they face, thereby reducing the likelihood of engaging in risky sexual behaviors (Kemp et al., 2016).

However, Latino immigrant teens face numerous demands, which may create a need for them to access culturally responsive sexual health knowledge and additional resources to support their environmental needs and increase functioning in their comfort zone. By doing so, they may potentially improve their sexual self-efficacy. These findings are supported by other researchers who have found that social determinants of health are the key to understanding and addressing persistent disparities in adolescent pregnancy in the United States (Martínez-García et al., 2018).

Although Latino teens face many stressors from their environment, self-efficacy embodies important elements of sexual health that center on sexual empowerment and support Latino adolescent overall health and wellness. Programs that emphasize knowledge or skill-building around condom use may fall short by ignoring serious structural socioeconomic and environmental conditions, such as poverty, acculturation stress and how immigration status and language barriers could impact being able to access sexual health care and resources (Caruso et al., 2023).

In another exploratory analysis, I tested whether gender moderated the relationship between knowledge and sexual self-efficacy. We found that for males, the relationship between knowledge and sexual self-efficacy was stronger (more positive) than for females, although it was also positive for females. There could be several possible explanations for why the relationship between contraceptive and consent knowledge and sexual self-efficacy might be

stronger for Latino male adolescents compared to Latina female adolescents. Some explanations for this relationship may be that gender norms and expectations and socialization messages about sexual behavior may impact gender differences in exposure to sexual health resources and education, potentially leading to differences in sexual health knowledge and sexual self-efficacy based on gender and potentially enhancing the relationship between knowledge and sexual self-efficacy for males (Caal et al., 2013; Larson et al., 2012). Latino traditional cultural norms, gender roles, and patriarchy may give messages to males that they can display more assertive characteristics and can be more sexually active and messages to females that they should be more submissive and sexually naive, which may make it easier for males to develop confidence in their abilities and assertive communication, which are qualities central to sexual self-efficacy. Giving males more contraceptive and consent knowledge may help empower them to play a more active role in protecting their own bodies and helping their partners make decisions that also support their sexual health.

It is unclear from the results if knowledge is less salient for Latina females than males because the study found a positive association between knowledge and self-efficacy for both genders, but the association was stronger for males. Some factors that might be constraining sexual self-efficacy in Latina females are gender power imbalances and socialization messages about gender and sexual behavior. Sanchez and colleagues (2017) conducted qualitative interviews with Mexican American teens and found that patriarchal gender ideologies and the hyper sexualization and mistreatment of Latina women in Latino TV shows and songs were linked with cautious and negative attitudes towards dating, and sexuality, as well as with censoring communication about sexual matters with their family. These attitudes may affect the

relationship between sexual health knowledge and sexual self-efficacy, with the effect being stronger for males who are socialized to be more dominant and assertive.

Specifically for Latino males, a recent study found that sexual self-efficacy was a significant mitigating factor against sexual risks associated with machismo and attitudes towards risky sex (Torregoso & Patricia, 2022). It is possible that Latino men may be able to grow in their sexual self-efficacy faster than Latina women if they are able to access resources and reliable sexual health information that promote this growth. For example, if Latino men can access comprehensive sex education programs that give them accurate information about contraception and affirmative consent, they may be able to increase their knowledge and confidence more rapidly than Latina women. Within the literature on Latino sexual health, much of the focus has been on interventions for Latina female adolescents. The positive relationship between knowledge and sexual self-efficacy may support that Latina teens can benefit from knowing more about sexual health and consent. The findings of this study provide helpful insight into interventions that may benefit both Latino males and females by empowering them to make informed decisions and feel confident in their abilities to communicate clearly in sexual situations. We can work to empower all adolescents to make healthy sexual decisions that aren't dictated by patriarchal norms.

Consistent with previous literature conducted with African American and Caucasian high school students that found males reported lower sexual self-efficacy than females (Rostosky et al., 2008; Redmond & Lewis, 2015; Rosenthal et al., 1991; Stevenson et al., 1995), Latina females in this study also had higher sexual self-efficacy than Latino males. However, Latina females had on average lower levels of knowledge than Latino males. There are several potential explanations as to why Latino females had lower levels of knowledge than Latino males, such as the influence of

cultural norms, gender roles, less access to information, gender based violence and acculturation. Gender-related factors impact relationships to power, sexual communication, intimate partner violence and the ability to develop strong sexual self-efficacy (Amaro & Raj, 2000; Pulerwitz et al., 2002). Patriarchal gender ideologies may lead to cautious and negative attitudes towards sexuality among Latina teens, which could undermine the positive association between sexual health knowledge and sexual self-efficacy. Wanting sexual self-efficacy refers to the desire to have confidence in one's ability to navigate sexual situations, while having sexual self-efficacy means possessing that confidence and being able to effectively use those skills during sexual situations. Latina female adolescents may benefit from receiving more contraceptive and consent knowledge, and future research could explore if Latina females might need additional skills to continue strengthening their sexual self-efficacy such as self-confidence, communication skills, counseling, and additional social support.

Latino cultural gender roles and expectations also influence sexual beliefs and attitudes (Alzate et al., 2018). Research supports that gender roles can perpetuate inequality for Latino teens and contextual factors also play a role (Alzate et al., 2018). For example, there is a cultural double standard that males can be more sexually active and have multiple partners, while females are expected to be virgins until marriage and faithful to one partner. Due to these societal expectations that men are supposed to be more sexually experienced, there might be greater emphasis on sexual knowledge and self-efficacy for males, but less emphasis for females. Research has found that Latina women think about their contraceptive and sexual behavior decisions in the context of relationships (Ibañez et al., 2017). In several studies that have conducted focus groups, it emerged that Latina women often have some knowledge about safer sex behaviors but will not say anything due to trying to show their partner love, emotional

connection, and commitment even if they knew their partner had been unfaithful and it meant putting themselves at risk (Ibañez et al., 2017). These findings suggest that Latina women's sexual self-efficacy may not solely depend on their knowledge of sexual health but is also influenced by societal and cultural and relational factors. This could explain why the association between contraceptive and consent knowledge and sexual self-efficacy was stronger for males than for females. Future research should broaden the theoretical framework to consider potentially important relational factors such as an ecodevelopmental or social ecological framework.

Acculturation refers to the process of adapting to the dominant culture, while biculturalism refers to the ability to navigate and integrate two cultures (Roncancio et al., 2012). Alvarez and Villarruel, (2015) found that Latino gender norms, acculturation and relationship factors were associated with gender differences in sexual communication. During the acculturation process, Latina females may receive messages from their culture that they should conform to traditional gender roles and to remain sexually inexperienced until marriage, while at the same time experiencing pressure to assimilate and conform to the dominant culture's more permissive attitudes toward sexuality (Alvarez & Villarruel, 2015). These contradictions can lead to confusion and uncertainty and less access to accurate and trustworthy sexual health knowledge, which helps explain why females had lower knowledge than males.

Implications for Programs, Policy Makers, and Counselors

These findings help provide insight into potential ways to support adolescent sexual health. Contraceptive and consent knowledge was positively associated with sexual self-efficacy for Latino teens, and gender significantly moderated this relationship in that it was stronger for males than for females. More research is needed to explore the directionality of the relationship

between knowledge and self-efficacy. One potential way to increase sexual self-efficacy within the Latino teen population may be to give them more comprehensive sexual health knowledge including topics about contraception, consent, gender roles and expectations and pleasure, but future research is needed to confirm and expand on these findings. Research indicates that comprehensive sexual education programs that include topics such as gender equity and sexual and reproductive rights can help people be more open minded about different sexual behaviors and desires, better understand affirmative consent, negotiate consensual sexual experiences, and pleasure, and see their life and goals beyond traditional gender roles (Cruz-Jiménez et al., 2020; Haberland & Rogow, 2015). Other ways to strengthen Latino teen sexual self-efficacy include promoting positive body image and self-confidence, providing access to culturally appropriate and sensitive healthcare services, community-based programs, encouraging open communication about identity and sex, and creating safe and supportive environments for exploration and experimentation (Caruso et al., 2023; Hsu et al., 2015; Martinez & Orpinas, 2016; Rostosky et al., 2008).

These findings underscore the importance of tailoring interventions to be culturally responsive to the Latino teen population. Program developers, policymakers, and counselors should take into consideration these gender differences in knowledge and sexual self-efficacy to effectively promote sexual health and well-being among Latino teens. From a policy perspective, these findings support that programs designed to strengthen Latino teens' knowledge and sexual self-efficacy may be helpful for both US born and immigrant Latino teens. All Latino teens may benefit from more tools and skills to feel empowered in taking care of their sexual health. Given the complex challenges that Latino teens face to developing their sexual self-efficacy, it might also mean taking a more systemic approach by providing more comprehensive services to Latino

youth that target social inequities like case management, connection to resources and giving them sexual health knowledge in a way that is culturally sensitive and attuned to their language preferences (Davis et al., 2021). Recent literature supports that efforts to address adolescent sexual and reproductive health inequities should go beyond short-term education classes. Programs should work to reduce structural injustices that create barriers for Latino teens' accessing resources (e.g., transportation to clinics, more access to health insurance, preventative care). Programs can also focus on strengthening social support (e.g., provide mentorship, clubs), providing better training for teachers on the needs of historically marginalized students and increasing access to school-based counseling (Caruso et al., 2022; Collins Lovell et al., 2022).

Clinically, individual and family therapists as well as school counselors should be aware of the unique experiences of Latino adolescents and their sexual and mental health. At a clinical level, psychoeducation about sexual health may be helpful to strengthen their knowledge. Therapists can help teens strengthen their sexual self-efficacy by providing a safe and non-judgmental space for them to explore their feelings and experiences around sexuality and romantic relationships.

It may be helpful to move into a paradigm that gives teens the chance to negotiate pleasure as well as safer sexual behaviors in a society that makes people think they need to pick between unregulated pleasure and restricted sexual safety (Naisteter & Sitron, 2010). These findings also highlight the importance of the need for culturally centered, flexible, and community-oriented sexual health interventions for Latino adolescents as supported by recent studies (Caruso et al., 2023). Some examples of these interventions look like including minority youth and their voices in the creation of sexual health interventions (also known as Youth

Participatory Action Research), using art-based methods, storytelling, role-playing, body mapping, story circles, and poems (Caruso et al., 2023; Fakoya et al., 2022).

Limitations and Future Directions

A limitation of this study is the potential for social desirability bias in which teens provide answers based on society's expectations and not their own beliefs. Teens may underreport their mental health struggles (Tarren-Sweeney, 2019) or may overreport sexual self-efficacy. Research has shown that adolescents may fear being judged or punished and pick answers that conform to what society considers "acceptable" and "normal" behavior which are based on heteronormative white patriarchal beliefs (Pearson, 2006). Another factor that may be a limitation of this study is the mistrust that Latino immigrant adolescents may have regarding research data collection. They may fear that their answers will be shared with adults at school or at home, or that their answers could negatively impact their immigration status if they are going through the legalization process (Jauhiainen & Tedeschi, 2021). Research has found that self-identified Latino participants score significantly higher than Anglos on some socially desirable responding indicators (Hopwood et al., 2009). Latino respondents are more likely than other Americans to show acquiescence bias which means saying "yes" to answers at a disproportionate higher rate (Aday et al., 1980). This concern is offset by the data collection methods used. Data for this study are collected by school staff who are known and trusted by students. It is also important to note that this study uses a sample from a single state on the east coast of the United States in a metropolitan area. This sample was largely Central American and Latino youth from other parts of the world may have different experiences. This may limit the generalizability of the study findings.

Secondary data analysis reduces the burden on students because no additional data needs to be collected, however, it limits the data that are available. The only mental health measure included in the survey is the K-6, therefore the data on mental health is limited to a general indicator of psychological distress and may not be culturally attuned for this population and their experience of psychological distress. Also, this study only uses quantitative data analyses, so there is no opportunity for in-depth information about the participants' lived experiences as found in qualitative data analysis. Qualitative research or a mixed methods design could give a deeper understanding of Latino teens' experiences, attitudes, and beliefs about contraceptive use, consent, and sexual self-efficacy. Qualitative research can help confirm and expand on the quantitative findings from this study by exploring the contextual factors and nuances that may explain why gender played a role in the relationship between contraceptive and consent knowledge and sexual self-efficacy.

Despite these limitations, data of these kinds rarely exist, and the present analysis is an important step for Latino adolescent sexual health research examining knowledge and sexual self-efficacy from a strengths-based behavioral decision-making perspective. It was surprising to find that psychological distress was not identified as a moderator between contraceptive and consent knowledge and sexual self-efficacy. Past literature has supported that psychological distress mediated the relationship between sexual health knowledge and sexual self-efficacy (Seth et al., 2009; Seth et al., 2010). Some researchers suggest that interventions for teens should integrate mental health and sexual and reproductive health services to best support minority adolescents, but future research is needed to continue to explore these relationships (Musindo et al., 2023; Seth et al., 2009; Seth et al., 2010; Shrier et al., 2020). Future research should examine

these relationships more closely, perhaps identifying better ways to measure psychological distress as a construct.

Additionally, there should be more attention on the nuances of how sociocultural and economic uncertainty impact Latino adolescents' sexual health behaviors and development of sexual self-efficacy. It may be helpful for future studies to use social ecological approaches and look at variables beyond the individual level. For example, sexual self-efficacy may be influenced by other individual and community factors such as sexual experience, sexual and gender identity, social support, and access to role models. Because familial support and cultural values may play such a central role in Latino teen decision making around sexual health behaviors and seeking out or not seeking out protective measures, future studies should explore this relationship and figure out ways to integrate individual bodily autonomy and self-efficacy with respecting and preserving the family unity. Future studies should examine how Latino teens' families can help promote and normalize sexual health conversations about contraception and consent within families. Destigmatizing sexual health and sexual health conversations within Latino families could be an area for future inquiry and finding ways for schools and families to work together to empower Latino teens. Future research should attempt to confirm and expand on these findings; identifying specific ways in which adolescent sexual self-efficacy can promote risk and/or resilience in sexual health decision making.

Conclusion

Recent research has been looking at positive dimensions of sexual health which includes sexual self-efficacy (Cheng et al., 2014). Overall, the findings from this study demonstrate that contraceptive and consent knowledge is significantly associated with sexual self-efficacy and that gender may uniquely contribute to Latino adolescents' ability to develop sexual self-

efficacy. This study found that the relationship between contraceptive and consent knowledge and sexual self-efficacy was not affected by whether the individual was native-born or their level of psychological distress, which may suggest that improving sexual health knowledge and sexual self-efficacy could potentially lead to better sexual health outcomes for Latino teenagers.

Based on these results, specific recommendations include creating more culturally responsive sexual health education programs for Latino teens to help increase their knowledge, self-efficacy, and agency to negotiate safer sex practices and feel confident in their ability to give and receive consent. In this study, Latino males had a stronger (more positive) relationship between knowledge and sexual self-efficacy, and it could also be helpful to design interventions that address the gender differences in knowledge and self-efficacy among Latino teens, which could look like integrating topics and more open conversations about gender roles and gender equity in sexual health programs. Latina female teens might need additional supports to boost their sexual health knowledge because they had less knowledge than males. Another recommendation is for programs to work with parents and families to have more open and supportive communication around sexual health including topics around consent, contraception and gender norms and expectations. Lastly, healthcare providers should give culturally responsive care that is attuned to the sexual health needs and lived experiences of Latino teens, including issues related to gender. Helping teens develop stronger sexual health knowledge and sexual self-efficacy may be an important step in promoting healthy sexuality and relationships for all teens. More research is needed to fully understand the directionality between sexual health knowledge and sexual self-efficacy, the complex factors that contribute to these gender differences in knowledge and sexual self-efficacy, and in the long term how these patterns intersect with other forms of oppression and identities.

Appendix A: Sexual Self-efficacy Survey

1. Whether or not you've ever had any kind of sex, how confident are you that you could...

Mark (X) one for each question	Not at all confident	A little confident	Very confident	Completely confident
a. Talk to your partner about whether or not to have sex?	☐	☐	☐	☐
b. Talk to your partner about whether or not to use a condom?	☐	☐	☐	☐
c. Say no to sex if your partner won't use a condom?	☐	☐	☐	☐
d. Go to a clinic to get contraception for you or your partner?	☐	☐	☐	☐
e. Stop having sex if your partner says no?	☐	☐	☐	☐
f. Say no to having sex with someone if you don't want to?	☐	☐	☐	☐

2. Sexual consent means that each person agrees to a sexual activity.

Whether or not you've ever had sex, how confident are you that you could...

Mark (X) one for each question	Not at all confident	A little confident	Very confident	Completely confident
a. State your consent to someone you want to have any kind of sex with?	☐	☐	☐	☐
b. Ask for consent from someone you want to have any kind of sex with?	☐	☐	☐	☐

Appendix B: Contraceptive, Condom and Consent Knowledge Survey

3. For the following set of statements, please indicate whether you think the statement is true or false.

Mark (X) one for each question	True	False	Don't Know
a. The IUD is more effective at preventing pregnancy than the condom	☐	☐	☐
b. The birth control pill is effective for preventing pregnancy if used correctly and consistently	☐	☐	☐
c. Using birth control as a teen makes it harder for a person to get pregnant later in life when they are no longer using birth control	☐	☐	☐

4. For the following set of statements, please indicate whether you think the statement is true or false.

Mark (X) one for each question	True	False	Don't Know
a. It is okay to use the same condom more than once.	☐	☐	☐
b. Condoms have an expiration date.	☐	☐	☐
c. When putting on a condom, it is important to leave a space at the tip.	☐	☐	☐
d. When using a condom, it is important for the person with a penis to pull out right after ejaculation.	☐	☐	☐
e. If used correctly and consistently, condoms decrease the risk of getting sexually transmitted infections (STIs).	☐	☐	☐
f. If birth control pills are used correctly and consistently, they decrease the risk of getting sexually transmitted infections (STIs).	☐	☐	☐

The following questions are about any kind of sex and consent.

5. Is someone consenting to have sex with you if...

Mark (X) one for each question	Yes	No	Don't Know
a. ... they make out with you clothed?	☐	☐	☐

b. ... they agreed to have sex with you before but do not want to at this time?	☐	☐	☐
c. ...they say no, but keep responding to you in a sexual way?	☐	☐	☐
d. ... they say yes and seem comfortable?	☐	☐	☐
e. ... they do not say no, but are very drunk or high?	☐	☐	☐

Appendix C: Histograms

Figure 1: Distribution of Age

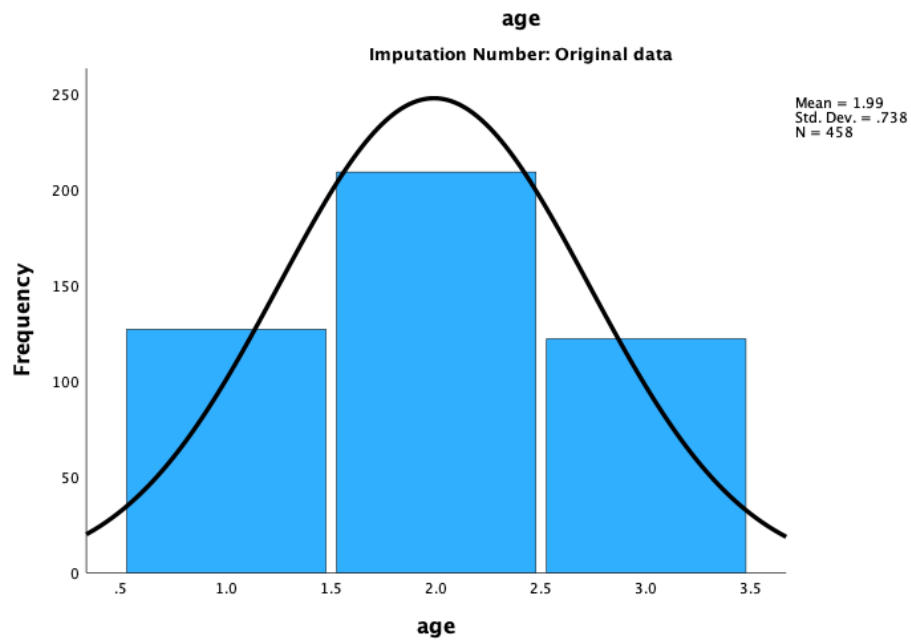


Figure 2: Distribution of Gender

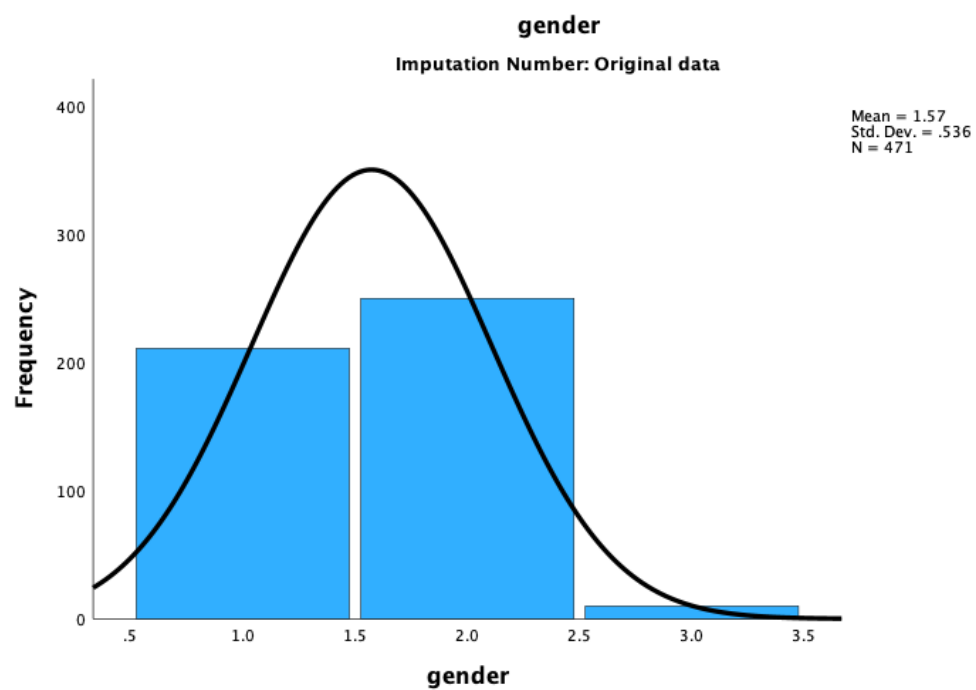


Figure 3: Distribution of Length of time in the US

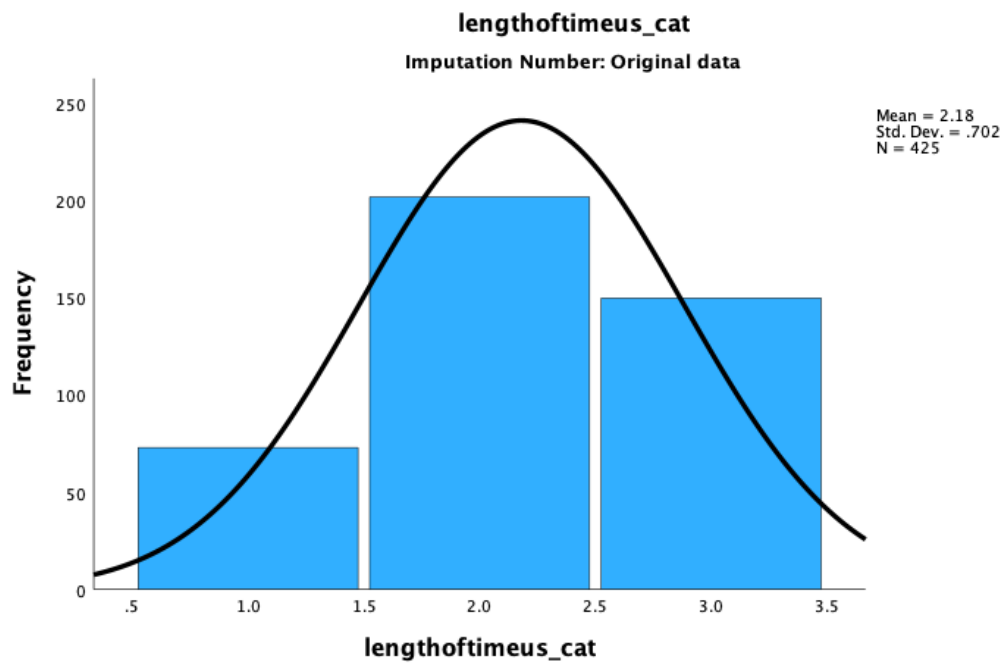
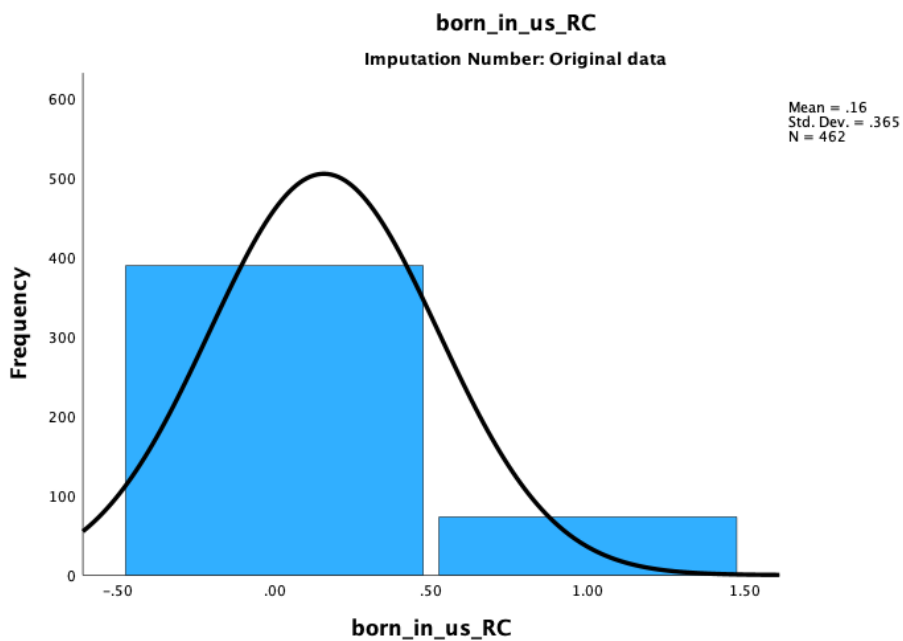
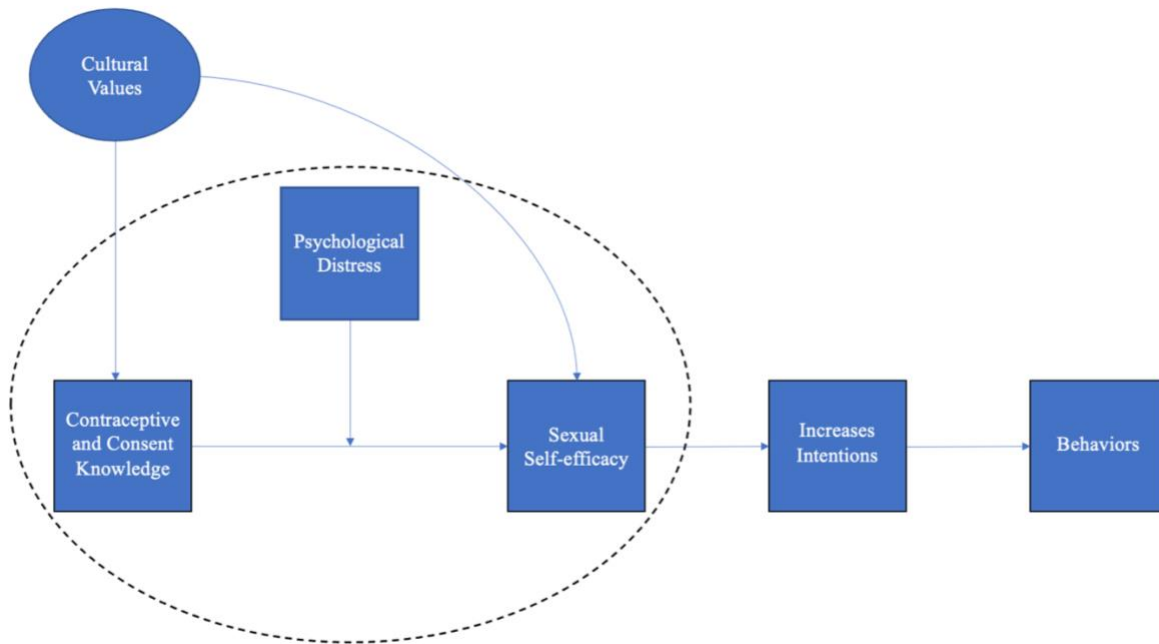


Figure 4: Distribution of Nativity



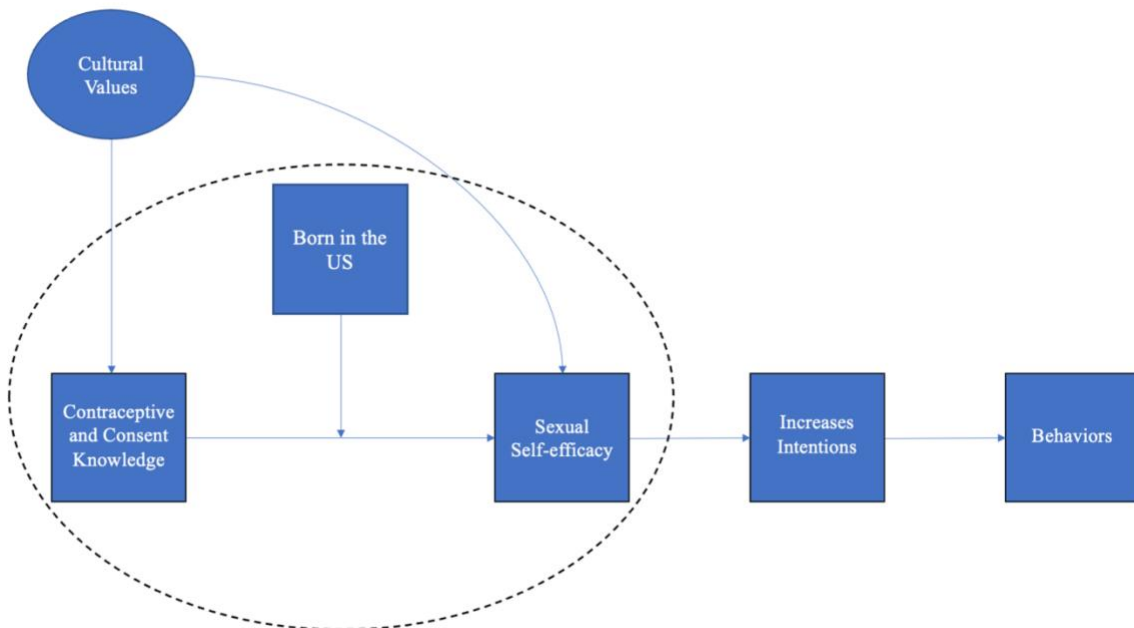
Appendix D: Theoretical and Analytic Models

Model A

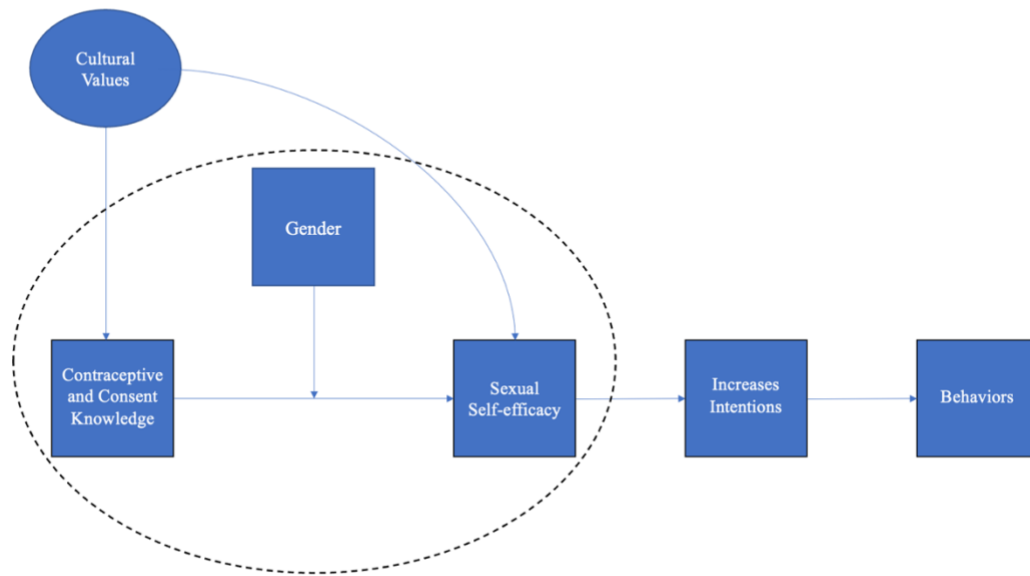


Note: the dotted circle represents the analytic model and everything outside of the dotted circle represents that theoretical model

Model B

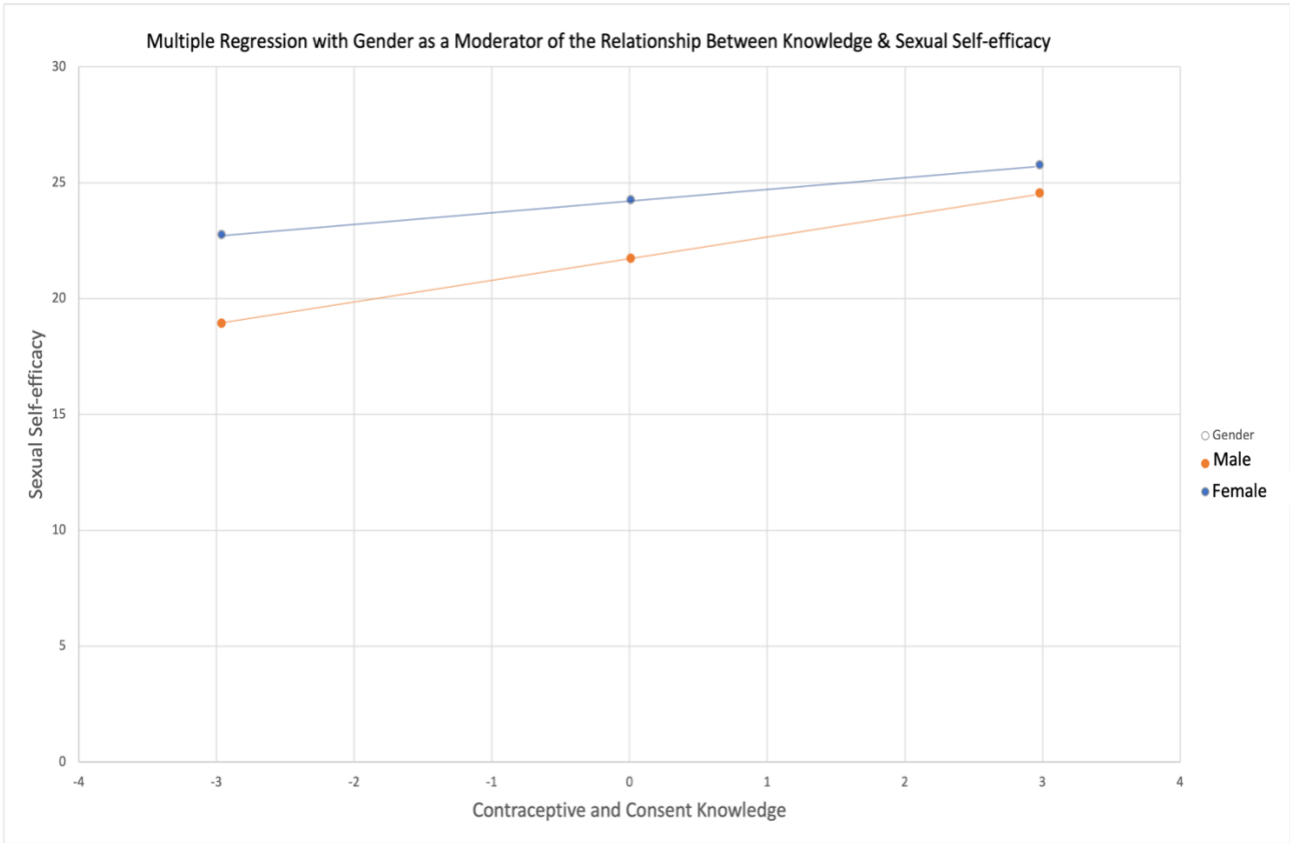


Model C



Appendix E

Figure 5: Graph of Multiple Regression with Gender as Moderator



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