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RESEARCH ARTICLE

COLLEGE-AGED LATINAS' FERTILITY INTENT IN RELATION TO ACADEMIC AND FAMILY SELF-WORTH AND VALUING EDUCATION

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Abstract

Fertility intent is an important predictor of reproductive outcomes and research in this area is moving towards examining larger structural influences in people's family planning decisions. Using a sample of 428 mostly Hispanic/Latina women at a Hispanic Serving Institution (84% Hispanic) on the US-Mexico border, we measured associations between desired number of children, the importance of not getting pregnant, and timing of intercourse with two education psychosocial scales. Academic self-worth was associated with fewer desired number of children, placing importance on pregnancy avoidance, and being less likely to have intercourse before the age of 18. Perceived greater educational costs and higher family-related self-worth were associated with fewer sexual partners. Higher intrinsic value of college was associated with more lifetime sexual partners. Our findings add considerations of academic self-worth to the fertility intent and education bodies of research with the inclusion of theory that moves beyond rational-choice assumptions. Our findings also counter simplistic cultural explanations for Hispanic/Latina sexual behavior and stereotypical tropes through indicating that Hispanic/Latina students perceive themselves as both academically oriented and sexually responsible.

Introduction:-

Fertility intent is the plan to have (or not have) a child, measured by fertility desires, attitudes, or behaviors. There is a large body of research on fertility intent because it is an important predictor of maternal health outcomes and has implications for individual identity and family relationships. For example, pregnancy (mis)timing, measured by asking women if the pregnancy occurred when they wanted it to, is associated with the onset of depression, intimate partner violence, breastfeeding rates, smoking behaviors, and receipt of medical care (Mark & Cowan, 2022). Research on fertility intent has examined associated contextual factors such as age, age at first birth, number of live births, partner preferences, education, sex, race, unplanned/mistimed birth, employment status, marital status, household composition, and religiosity, among other variables (Hakim, 2003; Hayford & Morgan, 2008; Peristera & Kostaki, 2007; White & McQuillan, 2006).Additional research on fertility intent is needed (Guzzo & Hayford, 2020)that applies different theoretical perspectives and continues to examine broader contexts influenced by a constellation of

social, cultural, political, economic, religious, familial, and personal factors, particularly among those with less access to resources.

With the present study, we aim to fill gaps in both the literature on higher education and fertility by examining fertility intent in relation to psychosocial educational factors among a mostly Mexican-American sample of women at a university on the US side of the US-Mexico border. Thus, the unique contribution of this study is its examination of multiple fertility intent outcomes alongside self-worth and valuing of education. We also apply theory beyond rational-choice and simplistic cultural influence assumptions often found in research on fertility intent and Hispanics/Latinos, respectively.

Fertility Intent

With a focus on Hispanics/ Latinos, we briefly review some relevant fertility intent research, which include inconsistent findings. Current research reveals that Hispanic[1] women have higher fertility intentions than non-Hispanic White women (McQuillan et al., 2015), although overall, there are narrowing differences on fertility measures across racial-ethnic groups in the U.S. (Guzzo & Hayford, 2020). Hayford (2009) found that Hispanic women were more likely than non-Hispanic White women to reduce their fertility intentions over the life course, suggesting that fertility intent has a contextual component. For example, some research supports the assertion that Hispanics have stronger familistic orientations than Whites, and that these norms affect fertility attitudes and behaviors (e.g., Gilliam et al., 2007), such as higher fertility intentions being associated with more importance placed on motherhood (McQuillan et al., 2015). Yet, family norms are not uniform. Gilliam et al. (2007) found that Latinas had older ages of sexual debut when they perceived that their family valued education over marriage and expected them to abstain until marriage. Using National Survey of Family Growth (NSFG) data, Hartnett and Parrado (2012) concluded that there is less support for the idea that familism underlies fertility decisions for U.S.-born Hispanics relative to foreign-born Hispanics, although differences across nativity are hard to quantify due to measurement issues (Guzzo & Hayford, 2020). Also relevant to Hispanic/ Latino populations that tend to be primarily Catholic is that higher fertility intentions are associated with higher religiosity (Hayford & Morgan, 2008).

Previous research has also examined self-esteem in relation to fertility intent behaviors. Whereas some studies found no association between self-esteem and risky sexual behavior (Hockaday et al., 2000; McGee & Williams, 2000; Neumark-Sztainer et al., 1997; West & Sweeting, 1997), others revealed associations between low self-esteem and having sex without contraceptive use (leading to an increased frequency of unplanned pregnancy) and having a greater number of sexual partners (Berry et al., 2000; Corcoran et al., 2000; Davies et al., 2003; Dixon et al., 2000; Magnani et al., 2001; Mosack et al., 2008; Wild et al., 2004). In one study on Hispanic Americans, Corcoran et al. (2000) found that for teens, low self-esteem was associated with having been pregnant, yet looking beyond adolescence in a large cross-sectional sample of minority American young adult women, Berry et al. (2000) reported that high self-esteem served as a protective factor in preventing unplanned pregnancies.

Fertility intent is also dependent on larger social policies and socioeconomic contexts (Ajzen & Klobas, 2013; Shreffler et al., 2015), which themselves may shift, such as education, labor force participation, availability of child-support services, and cultural gender role ideologies that dictate the degree of childcare, housework, and other roles expected of men and women (Brinton & Lee, 2016).Looking specifically at education, studies have found small differences women's number of births by education status (Guzzo &Hayford, 2020) and according to a study analyzing data from the 2006-2010 (NSFG) that revealed that for Hispanic women aged 15-44, there was no association between education or income and unintended pregnancy or contraceptive use (Masinter et al., 2013).

Regarding college-specific education, having college ambitions (Raley et al., 2012; Sullivan, 2005) and college degrees (Guzzo & Hayford, 2020) delay childbearing and make unintended birth less likely. Qiao et al.'s (2024) study of female university students in China found their lower fertility intentions were associated with financial pressure, a lack of time and energy to raise children, and wanting external support from employers. Community college students in the U.S. reported a desire to not become pregnant because they believed it would hinder their education (e.g., degree completion, transfer to a four-year college, graduate degree) and career goals (Cabral et al., 2018).

This Study

[1]When referring to other studies, we use the authors' "Hispanic" or "Latino" language.

Our research continues exploring associations with fertility intent through focus on constructs of self-worth (education and family) and valuing of education with a Hispanic/Latina[2] college student sample. First, we explore if Hispanic/Latina college students' fertility intent is influenced by how they value education. According to Battle and Wigfield (2003), valuing education is evidenced by three primary factors: intrinsic attainment, utility, and psychological cost. Research using Battle and Wigfield's (2003) Valuing of Education Scale demonstrates the extent to which college students value college due to enjoyment, personal importance, and investment in providing for a family; concerns about the value of college pertain to personal effort, loss of time for other activities, the psychological cost of failing, and potential conflicts between career and family. To our knowledge, no studies have yet examined the influence of valuing education on fertility intent among Hispanic/Latina college students.

Although fertility intent seems related to general self-esteem, it has frequently been measured in White populations and unexamined in relation to specific domains of self-esteem, which are also referred to as contingencies of self-worth (Crocker et al., 2003). Our study focuses on two domains of self-worth relevant to college women and Latinas in particular: academics and family. Previous research shows that individuals base their self-worth on different domains, such as academic performance or family support, and doing so can be motivating in some situations or detrimental when individuals feel they have fallen short of their standards of worth (Park et al., 2007). The current study adopted the academic and family support subscales of the Contingencies of Self-Worth Scale (Crocker et al., 2003). Education research supports the notion that perceptions of family and academics are consequential for Latina college students (Liou et al., 2021; Rodriguez et al., 2021). If college-aged women base their self-worth on academics and family support, these self-worth contingencies may guide their fertility intentions and behaviors, given their consequences for future life plans. We are unaware of other studies that have examined these domains of self-worth in relation to fertility intent among Hispanics/Latinas.

Methods:

Sample and Data Collection

University IRB approval was received, and data was collected through convenience sampling from the fall 2013 semester at a university with a student body that self-reports as 80% Hispanic, which consists of mostly residents from a predominantly Hispanic US-Mexico border town. Thus, students are primarily Mexican/ Mexican American. This border town has a per capita income of $18,880, median household income of $42,000, and 20.3% of people living below the poverty line (U.S. Census Bureau, 2015), which represents the student population. Because this university is open access and low or no-cost, many students who normally could not afford college attend this university.

The study was directed to female-identified respondents. Research assistants approached potential participants and explained the goal of the research, that the survey was confidential and optional, and the $25 gift card raffle incentive. Interested women signed a consent form before filling out the survey. The survey contains 62 questions and took approximately 15-20 minutes to complete. Two-hundred-seventy surveys were completed by women who were alone or in small groups in public areas frequented by students at the University. They were approached by one of three undergraduate research assistants at heavily trafficked locations across campus where students congregated such as the library, the union, a food court, the business building, and the campus coffee shops.

One hundred fifty-eight additional surveys came from convenience sampling from classrooms in the building where the research lab is located, which has classes from across campus. We contacted several professors teaching in the building, asking for permission to explain the study and hand out consent forms and the survey at the end of class. It was necessary to administer the survey at the end of the class since it was given to women only, and the men were asked to leave the classroom early. We had great success with this method, as we were able to survey about 30 women within 15-20 minutes. We surveyed a total of five Sociology/Anthropology classes and one Campus Undergraduate Research workshop. The rejection rate was very low at 6.5%. We recorded 28 rejections and 428 women participated in total.

The sampling approach used in this study is appropriate for our analysis, as it combines both public and classroom-based convenience sampling to ensure a diverse pool of participants from various parts of campus. By targeting heavily trafficked public areas and classes from different disciplines, the sample captures a range of experiences and backgrounds, which is crucial for understanding the fertility intent of female-identified students across a broad spectrum.

[2] Our survey asked if participants identified as "Hispanic or Latino," thus we refer to our sample as Hispanic/Latina.

Measures

Outcome Measures

We examined four outcome variables. Fertility intent was measured by student-reported desired number of children (Qiao et al., 2024). Specifically, in the survey, we asked the open-ended question: "If you want kids, how many would you like to have? "The second outcome was student attitude toward not getting pregnant in college (Ren et al., 2023). A survey question asked participating students, "How important is it for you at this time to keep from getting pregnant? "and a five-point Likert-like scale was provided (from 1=not important to 5=very important). We also included two exploratory behavior variables to complement our use of the theory of planned behavior. A binary variable (0=No; 1=Yes) was created to indicate whether the student had intercourse before the age of 18, and we asked students to report the number of lifetime sexual partners (from 1 to more than 5; Karabchuk et al., 2022).

Explanatory Measures

We used two groups of explanatory measures: psychosocial scales and sociodemographic factors. The psychosocial scales consisted of the Contingencies of Self-Worth Scale (Crocker et al., 2003) and the Valuing of Education Scale (Battle & Wigfield, 2003). Each has been used widely in psychology and education research and has demonstrated acceptable reliability and validity with college-age samples (Battle & Looney, 2014; Battle & Wigfield, 2003; Crocker et al., 2003; Perinelli et al., 2020). Two subscales of the Contingencies of Self-Worth Scale (Crocker et al., 2003) were administered to measure the extent to which participants base self-worth on academics and on family support. Ten items (five items for each subscale) were rated on a five-point scale (strongly disagree to strongly agree). The academic subscale is composed of items such as "My self-esteem is influenced by my academic performance" and "My opinion of myself isn't tied to how well I do in school" (reverse-scored). The family support subscale is composed of items such as, "When I don't feel loved by my family, my self-esteem goes down" and "My self-worth is not influenced by the quality of my relationships with my family" (reverse-scored).

The Valuing of Education Scale was administered to assess students' value of a college education. We modified the original items to pertain to undergraduate rather than graduate students. The scale contains three subscales with a total of 26 items rated on a five-point scale (strongly disagree to strongly agree). The intrinsic attainment subscale consists of 13 items, including "I enjoy being a college student" and "I am excited about the challenge of college-level schoolwork." The utility subscale has three items, including "I want to get a college degree so that I can support my children, if necessary" and "I don't think a college degree will be very useful for what I want to do in the future" (reverse scored). The psychological cost subscale includes 10 items such as, "I worry that I will waste a lot of time and money before I find out that I don't want to continue my college education" and, "I'm concerned that I won't be able to handle the stress that goes along with college."

In terms of sociodemographic factors, the race/ethnicity survey question asked people to identify as: Hispanic or Latino, Black or African American, White (Non-Hispanic), Asian, American Indian/ Alaskan Native, Native Hawaiian or other Pacific Islander, or Other. Our race/ethnicity variable was recoded into three binary variables (Hispanic/ Latina [reference]; White, non-Hispanic; Other racial/ethnic groups, non-Hispanic). Parental nativity includes three categories: 1) only foreign-born parent/s; 2) one parent is foreign-born and one is US-born; 3) only US-born parent/s [reference]. Continuous variables measuring parental education, household income, and number of siblings were also included. Students also reported how often they attended religious services, based on a 4-point scale (ranging from 0=I do not attend religious services to 3=once a week) due to the association between religious beliefs and sexual activity, the latter of which is an important behavioral component of fertility intent. In addition, we controlled whether the student self-reported as currently sexually active (0=No; 1=Yes), and we also asked whether she had ever been pregnant (0=No; 1=Yes), which included both planned and unplanned pregnancies. Descriptive statistics of all analysis variables are included in Table 1.

Statistical Analysis

With the original data, we first conducted descriptive and bivariate correlations analyses. We then used multiple imputation (MI) to address potential bias associated with missing values, which involves fitting a model to impute missing values for each variable (Enders, 2010), and the imputed values were saved and used in our analyses. Next, we analyzed the 20 datasets using generalized estimating equations (GEEs) and reported results from pooled analyses. GEEs are appropriate for this study because, like generalized linear models, GEEs relax the assumptions of traditional regression models (e.g., normality of variable distribution; Diggle 2002; Liang & Zeger 1986; Zeger & Liang 1986). Also, GEEs are more suitable than generalized linear models for analyzing clustered data (Liang & Zeger 1986; Zeger

& Liang 1986). Our dependent variables significantly vary across the four classifications (freshmen, sophomore, junior, senior), so we used them as clusters in GEEs.

In total, we estimated four models to predict fertility intent (Model 1), attitude on not getting pregnant in college (Model 2), having intercourse before the age of 18 (Model 3), and number of sexual partners (Model 4). For model fitting, we selected the negative binomial distribution with a logarithmic (Log) link for Model 1, inverse Gaussian distribution with a Log link for Model 2, binomial distribution and a Logit link for Model 3, and normal distribution and an identity link for Model 4. Those specifications were selected because they yielded the lowest quasi-likelihood under the independence criterion (QIC) values, meaning they were the best fitting models. Based on the variance inflation factor, tolerance, and condition index criteria, inferences from our GEE models were not affected by the issue of multicollinearity.

Results:

Descriptive Results

Our sample included 428 women: 118 first-year students, 84 sophomores, 122 juniors, and 104 seniors. The majority (92%, n=390) were Hispanic/ Latina, 5% (n=23) were non-Hispanic White, and 3% (n=12) were from other racial/ethnic groups. Close to 60% (n=247) of our sample had one US-born and one foreign-born parent, 8% (n=33) had only foreign-born parent/s, and 32% (n=136) had only US-born parent/s. The average parental education level was high school or some college, the average household income during the past 12 months was $36,500, and the average participant age was 21. Further, most (76%, n=323) survey participants had one to three siblings, about 40% (n=167) of them reported attending religious services once a week, and almost half (46%, n=195) self-identified as currently sexually active. Of note, "sexually active" was not specifically defined by any particular sexual behaviors.
Among students who had been pregnant (9.6%, n=41), the majority of them (85%, n=35) were currently sexually active and had an average of four lifetime sexual partners and a$30,063 household income. For those who had never been pregnant, only 43% (n=159) self-reported as currently sexually active and had an average of 2 lifetime sexual partners and a$37,133 household income.

Bivariate Results

Table 2 reports the bivariate correlation coefficients between psychosocial scales, outcome variables, and sociodemographics. Reliability analyses were conducted for the psychosocial scales: academic self-worth, family self-worth, intrinsic attainment, utility, and cost. Cronbach's alpha measuring internal reliability was computed for each subscale (values ranged from .51 to .82), with the cost construct having low reliability. The academic and family self-worth subscales were positively correlated with each other, suggesting that for this sample, participants based their self-worth on these two domains in comparable patterns. Three subscales of the valuing of education measure were significantly correlated with each other: intrinsic attainment was positively related to utility, and psychological cost was negatively related to utility and intrinsic attainment. Across the psychosocial scales, academic self-worth was positively correlated with intrinsic attainment and utility but not related to psychological cost. Family self-worth was positively related to intrinsic attainment, utility, and psychological cost.

Multivariate Results

Table 3displays the results from Models 1-4. For Model 1 on fertility intent, three educational scales were statistically significant. Higher academic self-worth was associated with decreased desired number of children ($p<.0001$), which indicates that students who perceived academics as important for their self-worth tended to prefer fewer future children. Family self-worth scores were not a significant predictor ($p=.331$). Intrinsic attainment scores were negatively associated with desired number of children ($p=.011$), suggesting that students who reported enjoying being a college student preferred fewer future children. Yet, cost and utility scores were positively associated with desired number of children (both $p<.0001$), which indicates that students who were more certain about the utility of a college degree or more concerned about the psychological cost of college preferred more future children. For sociodemographic factors, parental nativity was a significant predictor. Students with one foreign-born and one US-born parent desired more children than students with only US-born parents ($p=.021$), but there was no significant difference between students with only foreign-born parent/s and students with only US-born parent/s in terms of desired number of children ($p=.207$).Further, the desired number of children increased as students attended religious services more frequently ($p<.0001$).

For Model 2, the only significant predictor of the importance of not getting pregnant in college was academic self-worth. The more meaningful academics was for the student's self-worth, the more important it was for her to avoid pregnancy in college ($p<.0001$). The results from Model 3 suggest that students who reported higher academic self-worth were more likely to have had intercourse before the age of 18 ($p=.001$). Students who had only foreign-born parent/s or one foreign-born and one US-born parent were significantly less likely to have had intercourse before 18 than students who had only US-born parents ($p<.0001$ and $p=.004$, respectively). Further, students who had more siblings ($p<.0001$), had more sexual partners ($p<.0001$), or were currently sexually active ($p<.0001$) had higher odds of having intercourse before the age of 18.

Model 4 shows that three education scales were associated with the number of sexual partners. Specifically, students who perceived family support as important for their self-worth had fewer sexual partners ($p=.001$); students who reported higher psychological cost scores had fewer sexual partners ($p=.001$); and students with higher intrinsic attainment scores (enjoyed being a college student) had more sexual partners ($p<.0001$).Students who attended religious services more frequently had fewer sexual partners ($p<.0001$), and those who self-reported as currently sexually active had more sexual partners ($p<.0001$). Finally, students who had been pregnant reported more sexual partners than those with no history of pregnancy ($p<.0001$).

Discussion:

This is the first study to our knowledge to examine the association between specific psychosocial educational measures and fertility intent. Understanding these associations is important because fertility intent is an important predictor of various maternal health outcomes (see Mark & Cowan, 2022). We found academic self-worth (i.e., basing self-esteem on academic performance) to be positively correlated with family self-worth and significantly associated with fewer desired number of children, the importance of not getting pregnant in college, and having intercourse before the age of 18. In essence, the women in our sample took their college education seriously, were strongly connected to their families, and felt strongly about family planning, but not necessarily abstinence. Fertility intent is complex and should take context into account; our sample is predominantly first-generation college students facing pressure to graduate and probably a desire to avoid current pregnancy to graduate from college more easily. Whereas this may seem like a rational-choice decision, our other findings add complexity to potential theoretical underpinnings.

The cost measure had both positive and negative associations. Cost and utility scores were positively associated with desired number of children, where students who valued the usefulness of a college education and those who were concerned about whether they could complete their college education preferred more children in the future. Moreover, psychological cost had a negative association in the small subset of our sample who had pregnancy histories or experienced unplanned pregnancies. Students with previous pregnancies were less likely to be concerned about the psychological costs of pursuing higher education. One potential reason as to why women who had experienced pregnancy were less concerned about the psychological cost of education is that being pregnant or having children may have tempered students' concerns and increased certainty about education, especially if they viewed it as a way of securing a career that would better support their family. We recommend further study of student pregnancy history, and fertility intent more generally, as this may help shape academic counseling for subsets of students.

Research on general self-esteem reveals associations between lower self-esteem and a greater number of sexual partners (Mosack et al., 2008), and we had similar findings with our specific family-related self-worth measure, where students who had lower family-related self-worth tended to have more sexual partners. Our findings may be due to our Hispanic/ Latina sample, as a strong sense of familialism is strongly associated with Hispanic/ Latino cultures (Comeau, 2012) and includes the presumption of duty and obligation to elders (Ruiz & Ransford, 2012) and their wishes about both educational attainment and appropriate sexual behaviors. These findings contribute to the question of whether statistical relationships between self-esteem and sexual behaviors reflect the direct effects of self-esteem, or a more elaborate process where sexual behaviors are grounded in individuals' psychosocial contexts with differing sources of self-esteem, and thus we encourage continued research into sexuality and more directed self-esteem measures. Global self-esteem, as a form of overall self-worth, may also be worthwhile to assess in future research to observe how it aligns with fertility measures and other types of self-esteem.

This leads us to turn to theory, where this initial study may give us an indication of which theories might apply as this line of research continues. Moving away from older rational-choice assumptions, newer theories better acknowledge structure, attitudes, and values as contributors to fertility intent. For example, the social-psychological theory of planned behavior (Ajzen & Klobas, 2013) argues that intentions are the main determinant of behavior and examines

three belief systems: behavioral beliefs—the perceived positive and negative consequences of having a child; normative beliefs—the perceived expectations of and social pressures from important individuals in people's lives; and control beliefs—the perceived presence of factors that can influence people's ability to have a child.

Looking at family influence in reproductive decision-making, which follows the normative beliefs aspect of the theory of planned behavior, studies show that family is important in reproductive decision-making (e.g. Leyser-Whalen & Jenkins, 2022) and for our sample perhaps those with higher family support felt more supported in their education and/or felt that they did not want to disappoint their families through engaging in a stigmatized sexuality (greater number of sexual partners) or not graduating from college. A qualitative study on a subset of this sample found that mother-daughter sexual and reproductive health conversations were often brief with a focus on shame and scare tactics (Leyser-Whalen & Jenkins, 2022). Moreover, our findings reveal that although Hispanic students were significantly more likely to have had intercourse before the age of 18 compared to students from other racial/ethnic groups, generational status mattered-- students who had only foreign-born parents or one foreign-born and one US-born parent were significantly less likely to have intercourse before the age of 18 than students who had only US-born parents. Thus, family messages about sexuality may vary due to acculturation and subsequent behaviors may also vary.

Pregnancy and childcare have been found to interfere with enrolling in, continuing, and graduating from college (Manze et al., 2021; Sonfield et al., 2013). A large majority (79%) of our sample stated that "it is very important at this time to keep from getting pregnant" and the only significant predictor of students' attitudes on avoiding pregnancy in college was academic self-worth. The more academics was central to the student's self-worth, the more important it was for her to avoid pregnancy in college, which is similar to Cabral et al.'s (2018) community college sample that feared pregnancy and expressed desires to continue their educational pursuits. Our sample differs from Cabral et al.'s (2018), however, in that we have a predominantly Hispanic/Latina sample coming from a culture that places great emphasis on family (Comeau, 2012). We see, however, that familialism, sexuality, and young women's educational goals do not have to be juxtaposed-- women can have primary goals of education and effectively use family planning. This speaks to the behavioral beliefs aspect of the theory of planned behavior in that these students perceived the positive and negative consequences of having a child and adjusted their behaviors accordingly.

To add further complexity and diversity to the idea of a monolithic "Hispanic/Latina" college student, students with higher intrinsic attainment scores (those who enjoyed being a college student) had more lifetime sexual partners, and those who reported higher academic self-worth were more likely to have had intercourse before the age of 18. This displays an academically oriented, sexually active individual, which goes against some of the tropes of sexually irresponsible young Hispanics/Latinas (see Juárez & Kerl, 2003) and adds to current literature breaking the stereotypes of Latinas (see Garcia, 2022).The students in our sample placed high importance on being a college student and being in sexual relationships with effective use of contraception or abortion, given the limited frequency of past pregnancies within the sample.

These findings could also be interpreted through identity theory (Stryker & Serpe, 1994), which examines the importance of an identity in relation to other identities. Thus, being Hispanic/Latina is one identity, as is being a college student, and a sexually active adult, among a constellation of other identities. Therefore, studies that assume that Hispanic/Latino identities are foremost in explaining human behavior may fall into the trap of essentializing individuals by their racial and ethnic identities.

We also present more findings that complicate simplistic cultural explanations for sexual behavior. One supporting result for a singularly cultural explanation is that Hispanic/Latino culture tends to be heavily Catholic, and religion was associated in our sample with the desire for more children (as well as fewer sexual partners). Hispanics/Latinas also reported higher desired numbers of children than other non-White racial/ethnic group students (Black, Asian, American Indian). We caution against examining racial/ethnic differences in our outcomes given that most study participants were Hispanic/Latina but also caution against simplistic explanations due to our complex findings, such as family support not being a significant predictor of desired number of children despite Hispanic/Latino culture being associated with familialism (Comeau, 2012). Adding another layer of complexity, students who perceived themselves as academically competent, or excited about college education (intrinsic attainment), tended to prefer fewer future children.

Acculturation may also be a simplistic explanation for reproductive desires and behaviors. Students with one foreign-born and one US-born parent desired more children than students with only US-born parents or only foreign-born

parents. Yet also of note, students who had only foreign-born parent/s or one foreign-born and one US-born parent were significantly less likely to have had intercourse before 18 than students who had only US-born parents.

Our study had limitations, such as a low alpha for the cost variable and employing convenience sampling, wherein the non-representative and non-random nature of the sample restricts the generalizability of our findings. We also may have a biased sample in that students who get pregnant may drop out of school. Moreover, we did not compare students by university class level yet our models controlled the effect of class level on outcome variables; future studies may want to use university class level as a predictor. We also did not collect information on students' sexual orientation due to the IRB review board stating that these questions were too personal, and we recommend future studies include more variables such as sexual orientation. We also recommend that future studies include men, since they are also part of the reproductive realm, and include individuals facing fertility issues or other structural barriers that are particularly poignant in the lives of people who are more marginalized in society.

Notably, we had a small number of non-Latina students in this study and recommend future studies with more racially-ethnically diverse samples for research on racial-ethnic comparisons. Whereas we focused on individual-level factors, we also recommend that future studies continue to examine the strength of multiple-level influences such as those coming from government policies, school-based programs, siblings, and parents on sexual and reproductive health behaviors and intentions. For example, Levit (2022) wonders if the current state of abortion restrictions may also affect university students' sexual behavior decisions.

Despite limitations, our findings add richness and complexity to ideas of psychosocial educational self-esteem, fertility intent, and Hispanic/Latina populations, with the inclusion of theory that moves beyond rational-choice assumptions. Self-esteem has been associated with fertility measures, mostly for White, adolescent populations, yet not measured in terms of more specific academic self-esteem. The importance of motivations, values, and attitudes as key determinants adds to the debate of what variables to examine for fertility intent, which are often overlooked in social science and economic studies (Hakim, 2003).For example, whereas we know that women delay childbearing if they go to college, the psychosocial educational self-esteem mechanisms behind this fertility intent have not been previously examined.

We find that the students in our sample find enjoyment and satisfaction in their college careers and have life goals beyond creating large families (as is often assumed in stereotypes of Hispanic families). Thus, our findings complicate more simplistic and ethnocentric assumptions that exist about Latina/o culture, gender, and sexuality (see Juárez & Kerl, 2013), which are important as Hispanics continue trending toward increased college enrollment (Irwin et al., 2021) with their eyes set on graduation. Colleges and universities may also want to re(examine) policies on access to contraception, pregnancy tests, and Plan B on campus to ensure student success. Moreover, explanations for differences in birth timing and intention have focused on understanding why disadvantaged women have earlier and more unintended births (Guzzo & Hayford, 2020), yet our study examines why this group of socioeconomically disadvantaged women are delaying childbirth, in part due to access to a university education.

Table 1. Descriptive Statistics (N=428)

	Min.	Max.	Mean	Std. Dev.	Yes	No	% missing
Outcome Measures:							
"If you want kids, how many would you like to have?"	0.00	8.00	2.51	1.28	-	-	4.67
"How important is it at this time to keep from getting pregnant?"	1.00	5.00	4.44	1.24	-	-	8.41
Had intercourse before the age of 18	-	-	-	-	153	270	1.17
"How many sexual partners have you had in your lifetime?"	0.00	5.00 or more	1.81	1.88	-	-	1.40
Explanatory measures:							
Education Scales							
Academic Self-worth	1.20	5.00	4.01	0.54	-	-	1.64
Family Self-worth	1.25	5.00	3.87	0.56	-	-	1.64
Intrinsic Attainment Scale	1.54	4.46	4.33	0.58	-	-	1.17
Cost Scale	1.10	4.67	2.68	0.78	-	-	1.17
Utility Scale	1.33	5.00	4.55	0.62	-	-	1.17
Socioeconomic Factors							
Race/ethnicity							
Hispanic [reference]	-	-	-	-	390	35	0.70
White, non-Hispanic	-	-	-	-	23	402	0.70
Other racial/ethnic groups, non-Hispanic	-	-	-	-	12	413	0.70
Parental nativity							
US-born parent/s [reference]	-	-	-	-	136	280	2.80
one parent is foreign-born, and one is US-born	-	-	-	-	247	169	2.80
only foreign-born parent/s	-	-	-	-	33	394	0.23
Parental education	1.00	6.00	3.76	1.26	-	-	1.64
Household Income ($USD)	15,000	70,000	36,500	19,620	-	-	6.54
Number of siblings	1.00	7.00	3.13	1.42	-	-	0.23
Frequency of attending religious services	0.00	3.00	1.68	1.21	-	-	0.47
Other Control Variables:							
Being currently sexually active	-	-	-	-	195	224	2.10
Had ever been pregnant	-	-	-	-	41	371	3.74

Table 2. Correlation Matrix (N=428)

	Academic Self-worth	Family Self-worth	Intrinsic Attainment Scale	Cost Scale	Utility Scale
Fertility Intent	-.058	.058	-.020	.068	.126*
Not getting pregnant in college	.232***	.052	.104*	-.025	.130*
Had intercourse before 18	.105*	-.038	.032	-.131**	.108*
Number of sexual partners	.086	-.043	.151**	-.258***	.139**
Academic Self-worth	1	.427***	.401***	.080	.312***
Family Self-worth	.427***	1	.290***	.141**	.198***
Intrinsic Attainment Scale	.401***	.290***	1	-.222***	.479***
Cost Scale	.080	.141**	-.222***	1	-.305***
Utility Scale	.312***	.198***	.479***	-.305***	1
White, non-Hispanic	-.003	-.053	.042	-.091	.020
Hispanic	.033	.075	-.009	.122*	-.018
Other racial/ethnic groups, non-Hispanic	-.050	-.053	-.041	-.078	.002
Only foreign-born parent/s	-.081	-.002	-.015	.040	-.071
One parent is foreign-born, and one is US-born	-.040	.080	.047	.003	.018
US-born parent/s	.088	-.084	-.041	-.027	.022
Parental education	.039	-.024	.033	-.010	.009
Household income	.169**	.019	.120*	-.118*	.086
Number of siblings	-.030	-.007	.009	-.028	.072
Frequency of attending religious services	.041	.096*	-.026	.074	.049
Being currently sexually active	.117*	.053	.035	-.169**	.131**
Had ever been pregnant	.059	-.002	.052	-.137**	.096
Cronbach's α	.64	.63	.82	.51	.77

a. ***p<0.0001,**p<0.01, *p<0.

Table 3: Results of the GEE Models (N=428)

	Model 1 Fertility Intent		Model 2 Not getting pregnant in college		Model 3 Had intercourse before 18		Model 4 Number of sexual partners	
	B	p	B	p	B	p	B	p
Intercept	0.288	.144	1.098***	<.0001	-2.384**	.003	1.160*	.011
Educational Scales:								
Academic Self-worth	-0.137***	<.0001	0.132***	<.0001	0.435**	.001	0.041	.788
Family Self-worth	0.048	.331	-0.006	.792	-0.204	.490	-0.230**	.001
Intrinsic Attainment Scale	-0.065*	.011	-0.006	.808	-0.332	.257	0.431***	<.0001
Cost Scale	0.082***	<.0001	-0.008	.638	-0.059	.588	-0.279**	.001
Utility Scale	0.186***	<.0001	0.029	.281	0.095	.660	-0.081	.393
Socioeconomic Factors:								
Race/ethnicity								
Hispanic	ref	ref	ref	ref	ref	ref	ref	ref
White, non-Hispanic	-0.109	.501	0.012	.828	0.041	.892	0.429	.193
Other racial/ethnic groups, non-Hispanic	-0.201*	.023	-0.029	.451	-1.508**	.002	0.642*	.031
Parental nativity								
US-born parent/s	ref	ref	ref	ref	ref	ref	ref	ref

One parent is foreign-born, and one is US-born	0.104*	.021	0.019	.454	-0.447**	.004	-0.117	.116
Only foreign-born parent/s	0.103	.207	0.003	.935	-1.209***	<.0001	-0.148	.647
Parental education	-0.015	.371	0.012	.257	0.112	.062	-0.065	.266
Household Income	0.000	.471	0.000	.701	0.000	.469	0.000	.323
Number of siblings	0.031	.151	0.004	.718	0.168***	<.0001	0.057	.141
Frequency of attending religious services	0.067***	<.0001	-0.013	.127	-0.034	.646	-0.224***	<.0001
Other Control Variables:								
Currently sexually active	0.084	.405	-0.036	.324	1.264***	<.0001	1.766***	<.0001
Had ever been pregnant	-0.080	.583			-0.074	.906	1.381***	<.0001
Number of sexual partners	0.0003	.993	-0.002	.811	0.604***	<.0001		
Not getting pregnant in college	-0.016	.236			-0.075	.445	0.052	.529
Fertility Intent			-0.007	.172				

a. ***p<0.0001,**p<0.01, *p<0.05

b.Coefficients are unstandardized.

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