1	College-aged Latinas' Fertility Intent in Relation to Academic and Family Self-Worth and
2	Valuing Education
3	
4	Abstract
5	Fertility intent is an important predictor of reproductive outcomes and research in this area is
6	moving towards examining larger structural influences in people's family planning decisions.
7	Using a sample of 428 mostly Hispanic/ Latina women at a Hispanic Serving Institution (84%
8	Hispanic) on the US-Mexico border, we measured associations between desired number of
9	children, the importance of not getting pregnant, and timing of intercourse with two education
10	psychosocial scales. Academic self-worth was associated with fewer desired number of children,
11	placing importance on pregnancy avoidance, and being less likely to have intercourse before the
12	age of 18. Perceived greater educational costs and higher family-related self-worth were
13	associated with fewer sexual partners. Higher intrinsic value of college was associated with more
14	lifetime sexual partners. Our findings add considerations of academic self-worth to the fertility
15	intent and education bodies of research with the inclusion of theory that moves beyond rational-
16	choice assumptions. Our findings also counter simplistic cultural explanations for
17	Hispanic/Latina sexual behavior and stereotypical tropes through indicating that Hispanic/Latina
18	students perceive themselves as both academically oriented and sexually responsible.
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20	Keywords: College; Educational self-esteem; Fertility Intent; Hispanic
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24 Data are available by request to the corresponding author.

26

Introduction

27	Fertility intent is the plan to have (or not have) a child, measured by fertility desires,
28	attitudes, or behaviors. There is a large body of research on fertility intent because it is an
29	important predictor of maternal health outcomes and has implications for individual identity and
30	family relationships. For example, pregnancy (mis)timing, measured by asking women if the
31	pregnancy occurred when they wanted it to, is associated with the onset of depression, intimate
32	partner violence, breastfeeding rates, smoking behaviors, and receipt of medical care (Mark &
33	Cowan, 2022). Research on fertility intent has examined associated contextual factors such as
34	age, age at first birth, number of live births, partner preferences, education, sex, race,
35	unplanned/mistimed birth, employment status, marital status, household composition, and
36	religiosity, among other variables (Hakim, 2003; Hayford & Morgan, 2008; Peristera & Kostaki,
37	2007; White & McQuillan, 2006). Additional research on fertility intent is needed (Guzzo &
38	Hayford, 2020) that applies different theoretical perspectives and continues to examine broader
39	contexts influenced by a constellation of social, cultural, political, economic, religious, familial,
40	and personal factors, particularly among those with less access to resources.
41	With the present study, we aim to fill gaps in both the literature on higher education and
42	fertility by examining fertility intent in relation to psychosocial educational factors among a
43	mostly Mexican-American sample of women at a university on the US side of the US-Mexico
44	border. Thus, the unique contribution of this study is its examination of multiple fertility intent
45	outcomes alongside self-worth and valuing of education. We also apply theory beyond rational-
46	choice and simplistic cultural influence assumptions often found in research on fertility intent
47	and Hispanics/ Latinos, respectively.

48 Fertility Intent

49	With a focus on Hispanics/ Latinos, we briefly review some relevant fertility intent
50	research, which include inconsistent findings. Current research reveals that Hispanic ¹ women
51	have higher fertility intentions than non-Hispanic White women (McQuillan et al., 2015),
52	although overall, there are narrowing differences on fertility measures across racial-ethnic groups
53	in the U.S. (Guzzo & Hayford, 2020). Hayford (2009) found that Hispanic women were more
54	likely than non-Hispanic White women to reduce their fertility intentions over the life course,
55	suggesting that fertility intent has a contextual component. For example, some research supports
56	the assertion that Hispanics have stronger familistic orientations than Whites, and that these
57	norms affect fertility attitudes and behaviors (e.g., Gilliam et al., 2007), such as higher fertility
58	intentions being associated with more importance placed on motherhood (McQuillan et al.,
59	2015). Yet, family norms are not uniform. Gilliam et al. (2007) found that Latinas had older ages
60	of sexual debut when they perceived that their family valued education over marriage and
61	expected them to abstain until marriage. Using National Survey of Family Growth (NSFG) data,
62	Hartnett and Parrado (2012) concluded that there is less support for the idea that familism
63	underlies fertility decisions for U.Sborn Hispanics relative to foreign-born Hispanics, although
64	differences across nativity are hard to quantify due to measurement issues (Guzzo & Hayford,
65	2020). Also relevant to Hispanic/ Latino populations that tend to be primarily Catholic is that
66	higher fertility intentions are associated with higher religiosity (Hayford & Morgan, 2008).
67	Previous research has also examined self-esteem in relation to fertility intent behaviors.
68	Whereas some studies found no association between self-esteem and risky sexual behavior
69	(Hockaday et al., 2000; McGee & Williams, 2000; Neumark-Sztainer et al., 1997; West &
70	Sweeting, 1997), others revealed associations between low self-esteem and having sex without
71	contraceptive use (leading to an increased frequency of unplanned pregnancy) and having a

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

92 greater number of sexual partners (Berry et al., 2000; Corcoran et al., 2000; Davies et al., 2003; 93 Dixon et al., 2000; Magnani et al., 2001; Mosack et al., 2008; Wild et al., 2004). In one study on 94 Hispanic Americans, Corcoran et al. (2000) found that for teens, low self-esteem was associated 95 with having been pregnant, yet looking beyond adolescence in a large cross-sectional sample of 96 minority American young adult women, Berry et al. (2000) reported that high self-esteem served 97 as a protective factor in preventing unplanned pregnancies.

78 Fertility intent is also dependent on larger social policies and socioeconomic contexts 79 (Ajzen & Klobas, 2013; Shreffler et al., 2015), which themselves may shift, such as education, 80 labor force participation, availability of child-support services, and cultural gender role 81 ideologies that dictate the degree of childcare, housework, and other roles expected of men and 82 women (Brinton & Lee, 2016). Looking specifically at education, studies have found small 83 differences women's number of births by education status (Guzzo & Hayford, 2020) and 84 according to a study analyzing data from the 2006-2010 (NSFG) that revealed that for Hispanic 85 women aged 15-44, there was no association between education or income and unintended 86 pregnancy or contraceptive use (Masinter et al., 2013).

87 Regarding college-specific education, having college ambitions (Raley et al., 2012; 88 Sullivan, 2005) and college degrees (Guzzo & Hayford, 2020) delay childbearing and make 89 unintended birth less likely. Qiao et al.'s (2024) study of female university students in China 90 found their lower fertility intentions were associated with financial pressure, a lack of time and 91 energy to raise children, and wanting external support from employers. Community college 92 students in the U.S. reported a desire to not become pregnant because they believed it would 93 hinder their education (e.g., degree completion, transfer to a four-year college, graduate degree) 94 and career goals (Cabral et al., 2018).

95 This Study

96 Our research continues exploring associations with fertility intent through focus on 97 constructs of self-worth (education and family) and valuing of education with a Hispanic/Latina² 98 college student sample. First, we explore if Hispanic/Latina college students' fertility intent is 99 influenced by how they value education. According to Battle and Wigfield (2003), valuing 100 education is evidenced by three primary factors: intrinsic attainment, utility, and psychological 101 cost. Research using Battle and Wigfield's (2003) Valuing of Education Scale demonstrates the 102 extent to which college students value college due to enjoyment, personal importance, and 103 investment in providing for a family; concerns about the value of college pertain to personal 104 effort, loss of time for other activities, the psychological cost of failing, and potential conflicts 105 between career and family. To our knowledge, no studies have yet examined the influence of 106 valuing education on fertility intent among Hispanic/Latina college students. 107 Although fertility intent seems related to general self-esteem, it has frequently been 108 measured in White populations and unexamined in relation to specific domains of self-esteem, 109 which are also referred to as contingencies of self-worth (Crocker et al., 2003). Our study 110 focuses on two domains of self-worth relevant to college women and Latinas in particular: 111 academics and family. Previous research shows that individuals base their self-worth on different 112 domains, such as academic performance or family support, and doing so can be motivating in 113 some situations or detrimental when individuals feel they have fallen short of their standards of 114 worth (Park et al., 2007). The current study adopted the academic and family support subscales 115 of the Contingencies of Self-Worth Scale (Crocker et al., 2003). Education research supports the

116 notion that perceptions of family and academics are consequential for Latina college students

117 (Liou et al., 2021; Rodriguez et al., 2021). If college-aged women base their self-worth on

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

academics and family support, these self-worth contingencies may guide their fertility intentions 118 119 and behaviors, given their consequences for future life plans. We are unaware of other studies 120 that have examined these domains of self-worth in relation to fertility intent among 121 Hispanics/Latinas. 122 **Methods** 123 **Sample and Data Collection** 124 University IRB approval was received, and data was collected through convenience 125 sampling from the fall 2013 semester at a university with a student body that self-reports as 80% 126 Hispanic, which consists of mostly residents from a predominantly Hispanic US-Mexico border 127 town. Thus, students are primarily Mexican/ Mexican American. This border town has a per 128 capita income of \$18,880, median household income of \$42,000, and 20.3% of people living 129 below the poverty line (U.S. Census Bureau, 2015), which represents the student population. 130 Because this university is open access and low or no-cost, many students who normally could not 131 afford college attend this university. 132 The study was directed to female-identified respondents. Research assistants approached 133 potential participants and explained the goal of the research, that the survey was confidential and 134 optional, and the \$25 gift card raffle incentive. Interested women signed a consent form before 135 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 136 137 groups in public areas frequented by students at the University. They were approached by one of 138 three undergraduate research assistants at heavily trafficked locations across campus where 139 students congregated such as the library, the union, a food court, the business building, and the

140 campus coffee shops.

141 One hundred fifty-eight additional surveys came from convenience sampling from 142 classrooms in the building where the research lab is located, which has classes from across 143 campus. We contacted several professors teaching in the building, asking for permission to 144 explain the study and hand out consent forms and the survey at the end of class. It was necessary 145 to administer the survey at the end of the class since it was given to women only, and the men 146 were asked to leave the classroom early. We had great success with this method, as we were able 147 to survey about 30 women within 15-20 minutes. We surveyed a total of five 148 Sociology/Anthropology classes and one Campus Undergraduate Research workshop. The 149 rejection rate was very low at 6.5%. We recorded 28 rejections and 428 women participated in 150 total. 151 The sampling approach used in this study is appropriate for our analysis, as it combines 152 both public and classroom-based convenience sampling to ensure a diverse pool of participants 153 from various parts of campus. By targeting heavily trafficked public areas and classes from 154 different disciplines, the sample captures a range of experiences and backgrounds, which is 155 crucial for understanding the fertility intent of female-identified students across a broad 156 spectrum.

157 Measures

158 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 openended 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).

169 *Explanatory Measures*

170 We used two groups of explanatory measures: psychosocial scales and sociodemographic 171 factors. The psychosocial scales consisted of the Contingencies of Self-Worth Scale (Crocker et 172 al., 2003) and the Valuing of Education Scale (Battle & Wigfield, 2003). Each has been used 173 widely in psychology and education research and has demonstrated acceptable reliability and 174 validity with college-age samples (Battle & Looney, 2014; Battle & Wigfield, 2003; Crocker et 175 al., 2003; Perinelli et al., 2020). Two subscales of the Contingencies of Self-Worth Scale 176 (Crocker et al., 2003) were administered to measure the extent to which participants base self-177 worth on academics and on family support. Ten items (five items for each subscale) were rated 178 on a five-point scale (strongly disagree to strongly agree). The academic subscale is composed of 179 items such as "My self-esteem is influenced by my academic performance" and "My opinion of 180 myself isn't tied to how well I do in school" (reverse-scored). The family support subscale is 181 composed of items such as, "When I don't feel loved by my family, my self-esteem goes down" 182 and "My self-worth is not influenced by the quality of my relationships with my family" (reverse-scored). 183

184 The *Valuing of Education Scale* was administered to assess students' value of a college 185 education. We modified the original items to pertain to undergraduate rather than graduate 186 students. The scale contains three subscales with a total of 26 items rated on a five-point scale

187 (strongly disagree to strongly agree). The intrinsic attainment subscale consists of 13 items, 188 including "I enjoy being a college student" and "I am excited about the challenge of college-189 level schoolwork." The utility subscale has three items, including "I want to get a college degree 190 so that I can support my children, if necessary" and "I don't think a college degree will be very 191 useful for what I want to do in the future" (reverse scored). The psychological cost subscale 192 includes 10 items such as, "I worry that I will waste a lot of time and money before I find out 193 that I don't want to continue my college education" and, "I'm concerned that I won't be able to 194 handle the stress that goes along with college."

195 In terms of sociodemographic factors, the race/ethnicity survey question asked people to 196 identify as: Hispanic or Latino, Black or African American, White (Non-Hispanic), Asian, 197 American Indian/ Alaskan Native, Native Hawaiian or other Pacific Islander, or Other. Our 198 race/ethnicity variable was recoded into three binary variables (Hispanic/Latina [reference]; 199 White, non-Hispanic; Other racial/ethnic groups, non-Hispanic). Parental nativity includes three 200 categories: 1) only foreign-born parent/s; 2) one parent is foreign-born and one is US-born; 3) 201 only US-born parent/s [reference]. Continuous variables measuring parental education, 202 household income, and number of siblings were also included. Students also reported how often 203 they attended religious services, based on a 4-point scale (ranging from 0=I do not attend 204 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, 205 206 we controlled whether the student self-reported as currently sexually active (0=No; 1=Yes), and 207 we also asked whether she had ever been pregnant (0=No; 1=Yes), which included both planned 208 and unplanned pregnancies. Descriptive statistics of all analysis variables are included in Table 209 1.

210

[Table 1 about here]

211 Statistical Analysis

212 With the original data, we first conducted descriptive and bivariate correlations analyses. 213 We then used multiple imputation (MI) to address potential bias associated with missing values, 214 which involves fitting a model to impute missing values for each variable (Enders, 2010), and 215 the imputed values were saved and used in our analyses. Next, we analyzed the 20 datasets using 216 generalized estimating equations (GEEs) and reported results from pooled analyses. GEEs are 217 appropriate for this study because, like generalized linear models, GEEs relax the assumptions of 218 traditional regression models (e.g., normality of variable distribution; Diggle 2002; Liang & 219 Zeger 1986; Zeger & Liang 1986). Also, GEEs are more suitable than generalized linear models 220 for analyzing clustered data (Liang & Zeger 1986; Zeger & Liang 1986). Our dependent 221 variables significantly vary across the four classifications (freshmen, sophomore, junior, senior), 222 so we used them as clusters in GEEs. 223 In total, we estimated four models to predict fertility intent (Model 1), attitude on not 224 getting pregnant in college (Model 2), having intercourse before the age of 18 (Model 3), and

getting pregnant in conege (Model 2), naving 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.

232

Results

233 **Descriptive Results**

234 Our sample included 428 women: 118 first-year students, 84 sophomores, 122 juniors, 235 and 104 seniors. The majority (92%, n = 390) were Hispanic/Latina, 5% (n = 23) were non-236 Hispanic White, and 3% (n = 12) were from other racial/ethnic groups. Close to 60% (n = 247) 237 of our sample had one US-born and one foreign-born parent, 8% (n = 33) had only foreign-born 238 parent/s, and 32% (n = 136) had only US-born parent/s. The average parental education level 239 was high school or some college, the average household income during the past 12 months was 240 \$36,500, and the average participant age was 21. Further, most (76%, n = 323) survey 241 participants had one to three siblings, about 40% (n = 167) of them reported attending religious 242 services once a week, and almost half (46%, n = 195) self-identified as currently sexually active. 243 Of note, "sexually active" was not specifically defined by any particular sexual behaviors. 244 Among students who had been pregnant (9.6%, n = 41), the majority of them (85%, n =245 35) were currently sexually active and had an average of four lifetime sexual partners and a 246 \$30,063 household income. For those who had never been pregnant, only 43% (n = 159) self-247 reported as currently sexually active and had an average of 2 lifetime sexual partners and a 248 \$37,133 household income.

249 **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, 256 participants based their self-worth on these two domains in comparable patterns. Three subscales 257 of the valuing of education measure were significantly correlated with each other: intrinsic 258 attainment was positively related to utility, and psychological cost was negatively related to 259 utility and intrinsic attainment. Across the psychosocial scales, academic self-worth was 260 positively correlated with intrinsic attainment and utility but not related to psychological cost. 261 Family self-worth was positively related to intrinsic attainment, utility, and psychological cost. 262 [Table 2 about here] 263 **Multivariate Results** Table 3 displays the results from Models 1-4. For Model 1 on fertility intent, three 264 educational scales were statistically significant. Higher academic self-worth was associated with 265 266 decreased desired number of children (p < .0001), which indicates that students who perceived

worth scores were not a significant predictor (p = .331). Intrinsic attainment scores were

267

negatively associated with desired number of children (p = .011), suggesting that students who

academics as important for their self-worth tended to prefer fewer future children. Family self-

270 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

273 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-

277 born parent/s and students with only US-born parent/s in terms of desired number of children (p

278 = .207). Further, the desired number of children increased as students attended religious services 279 more frequently (p < .0001).

280 For Model 2, the only significant predictor of the importance of not getting pregnant in 281 college was academic self-worth. The more meaningful academics was for the student's self-282 worth, the more important it was for her to avoid pregnancy in college (p < .0001). The results 283 from Model 3 suggest that students who reported higher academic self-worth were more likely to 284 have had intercourse before the age of 18 (p = .001). Students who had only foreign-born 285 parent/s or one foreign-born and one US-born parent were significantly less likely to have had 286 intercourse before 18 than students who had only US-born parents (p < .0001 and p = .004, 287 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 288 289 before the age of 18.

290 Model 4 shows that three education scales were associated with the number of sexual 291 partners. Specifically, students who perceived family support as important for their self-worth 292 had fewer sexual partners (p = .001); students who reported higher psychological cost scores had 293 fewer sexual partners (p = .001); and students with higher intrinsic attainment scores (enjoyed 294 being a college student) had more sexual partners (p < .0001). Students who attended religious 295 services more frequently had fewer sexual partners (p < .0001), and those who self-reported as 296 currently sexually active had more sexual partners (p < .0001). Finally, students who had been 297 pregnant reported more sexual partners than those with no history of pregnancy (p < .0001). 298 [Table 3 about here]

299

Discussion

300 This is the first study to our knowledge to examine the association between specific 301 psychosocial educational measures and fertility intent. Understanding these associations is 302 important because fertility intent is an important predictor of various maternal health outcomes 303 (see Mark & Cowan, 2022). We found academic self-worth (i.e., basing self-esteem on academic 304 performance) to be positively correlated with family self-worth and significantly associated with 305 fewer desired number of children, the importance of not getting pregnant in college, and having 306 intercourse before the age of 18. In essence, the women in our sample took their college 307 education seriously, were strongly connected to their families, and felt strongly about family 308 planning, but not necessarily abstinence. Fertility intent is complex and should take context into 309 account; our sample is predominantly first-generation college students facing pressure to 310 graduate and probably a desire to avoid current pregnancy to graduate from college more easily. 311 Whereas this may seem like a rational-choice decision, our other findings add complexity to 312 potential theoretical underpinnings.

313 The cost measure had both positive and negative associations. Cost and utility scores 314 were positively associated with desired number of children, where students who valued the 315 usefulness of a college education and those who were concerned about whether they could 316 complete their college education preferred more children in the future. Moreover, psychological 317 cost had a negative association in the small subset of our sample who had pregnancy histories or 318 experienced unplanned pregnancies. Students with previous pregnancies were *less* likely to be 319 concerned about the psychological costs of pursuing higher education. One potential reason as to 320 why women who had experienced pregnancy were less concerned about the psychological cost 321 of education is that being pregnant or having children may have tempered students' concerns and 322 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.

326 Research on general self-esteem reveals associations between lower self-esteem and a 327 greater number of sexual partners (Mosack et al., 2008), and we had similar findings with our 328 specific family-related self-worth measure, where students who had lower family-related self-329 worth tended to have more sexual partners. Our findings may be due to our Hispanic/ Latina 330 sample, as a strong sense of familialism is strongly associated with Hispanic/Latino cultures 331 (Comeau, 2012) and includes the presumption of duty and obligation to elders (Ruiz & Ransford, 332 2012) and their wishes about both educational attainment and appropriate sexual behaviors. 333 These findings contribute to the question of whether statistical relationships between self-esteem 334 and sexual behaviors reflect the direct effects of self-esteem, or a more elaborate process where 335 sexual behaviors are grounded in individuals' psychosocial contexts with differing sources of 336 self-esteem, and thus we encourage continued research into sexuality and more directed self-337 esteem measures. Global self-esteem, as a form of overall self-worth, may also be worthwhile to 338 assess in future research to observe how it aligns with fertility measures and other types of self-339 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.

349 Looking at family influence in reproductive decision-making, which follows the 350 normative beliefs aspect of the theory of planned behavior, studies show that family is important 351 in reproductive decision-making (e.g. Author cite) and for our sample perhaps those with higher 352 family support felt more supported in their education and/or felt that they did not want to 353 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 354 355 that mother-daughter sexual and reproductive health conversations were often brief with a focus 356 on shame and scare tactics (Author cite). Moreover, our findings reveal that although Hispanic 357 students were significantly more likely to have had intercourse before the age of 18 compared to 358 students from other racial/ethnic groups, generational status mattered-- students who had only 359 foreign-born parents or one foreign-born and one US-born parent were significantly less likely to 360 have intercourse before the age of 18 than students who had only US-born parents. Thus, family 361 messages about sexuality may vary due to acculturation and subsequent behaviors may also vary. 362 Pregnancy and childcare have been found to interfere with enrolling in, continuing, and 363 graduating from college (Manze et al., 2021; Sonfield et al., 2013). A large majority (79%) of 364 our sample stated that "it is very important at this time to keep from getting pregnant" and the 365 only significant predictor of students' attitudes on avoiding pregnancy in college was academic 366 self-worth. The more academics was central to the student's self-worth, the more important it 367 was for her to avoid pregnancy in college, which is similar to Cabral et al.'s (2018) community 368 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.

376 To add further complexity and diversity to the idea of a monolithic "Hispanic/Latina" 377 college student, students with higher intrinsic attainment scores (those who enjoyed being a 378 college student) had more lifetime sexual partners, and those who reported higher academic self-379 worth were more likely to have had intercourse before the age of 18. This displays an 380 academically oriented, sexually active individual, which goes against some of the tropes of 381 sexually irresponsible young Hispanics/Latinas (see Juárez & Kerl, 2003) and adds to current 382 literature breaking the stereotypes of Latinas (see Garcia, 2022). The students in our sample 383 placed high importance on being a college student and being in sexual relationships with 384 effective use of contraception or abortion, given the limited frequency of past pregnancies within 385 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.

392 We also present more findings that complicate simplistic cultural explanations for sexual 393 behavior. One supporting result for a singularly cultural explanation is that Hispanic/Latino 394 culture tends to be heavily Catholic, and religion was associated in our sample with the desire for 395 more children (as well as fewer sexual partners). Hispanics/Latinas also reported higher desired 396 numbers of children than other non-White racial/ethnic group students (Black, Asian, American 397 Indian). We caution against examining racial/ethnic differences in our outcomes given that most 398 study participants were Hispanic/Latina but also caution against simplistic explanations due to 399 our complex findings, such as family support not being a significant predictor of desired number 400 of children despite Hispanic/Latino culture being associated with familialism (Comeau, 2012). 401 Adding another layer of complexity, students who perceived themselves as academically 402 competent, or excited about college education (intrinsic attainment), tended to prefer fewer 403 future children.

Acculturation may also be a simplistic explanation for reproductive desires and 404 405 behaviors. Students with one foreign-born and one US-born parent desired more children than 406 students with only US-born parents or only foreign-born parents. Yet also of note, students who 407 had only foreign-born parent/s or one foreign-born and one US-born parent were significantly 408 less likely to have had intercourse before 18 than students who had only US-born parents. 409 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 410 411 restricts the generalizability of our findings. We also may have a biased sample in that students 412 who get pregnant may drop out of school. Moreover, we did not compare students by university 413 class level yet our models controlled the effect of class level on outcome variables; future studies 414 may want to use university class level as a predictor. We also did not collect information on

415 students' sexual orientation due to the IRB review board stating that these questions were too 416 personal, and we recommend future studies include more variables such as sexual orientation. 417 We also recommend that future studies include men, since they are also part of the reproductive 418 realm, and include individuals facing fertility issues or other structural barriers that are 419 particularly poignant in the lives of people who are more marginalized in society.

420 Notably, we had a small number of non-Latina students in this study and recommend 421 future studies with more racially-ethnically diverse samples for research on racial-ethnic 422 comparisons. Whereas we focused on individual-level factors, we also recommend that future 423 studies continue to examine the strength of multiple-level influences such as those coming from 424 government policies, school-based programs, siblings, and parents on sexual and reproductive 425 health behaviors and intentions. For example, Levit (2022) wonders if the current state of 426 abortion restrictions may also affect university students' sexual behavior decisions.

427 Despite limitations, our findings add richness and complexity to ideas of psychosocial 428 educational self-esteem, fertility intent, and Hispanic/Latina populations, with the inclusion of 429 theory that moves beyond rational-choice assumptions. Self-esteem has been associated with 430 fertility measures, mostly for White, adolescent populations, yet not measured in terms of more 431 specific academic self-esteem. The importance of motivations, values, and attitudes as key 432 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 433 434 know that women delay childbearing if they go to college, the psychosocial educational self-435 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 collegecareers and have life goals beyond creating large families (as is often assumed in stereotypes of

438 Hispanic families). Thus, our findings complicate more simplistic and ethnocentric assumptions 439 that exist about Latina/o culture, gender, and sexuality (see Juárez & Kerl, 2013), which are 440 important as Hispanics continue trending toward increased college enrollment (Irwin et al., 2021) 441 with their eyes set on graduation. Colleges and universities may also want to re(examine) 442 policies on access to contraception, pregnancy tests, and Plan B on campus to ensure student 443 success. Moreover, explanations for differences in birth timing and intention have focused on 444 understanding why disadvantaged women have earlier and more unintended births (Guzzo & 445 Hayford, 2020), yet our study examines why this group of socioeconomically disadvantaged 446 women are delaying childbirth, in part due to access to a university education.

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	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				-		13	
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			\mathbf{X}				
Hispanic [reference]	-	-	-	-	390	35	0.70
White, non-Hispanic	-		- /	-	23	402	0.70
Other racial/ethnic groups, non- Hispanic	-	- A	_	-	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 1. Descriptive Statistics (N=428)

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<0.05					

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

Table 3: Results of the GEE Models	(<i>N</i> = 428)				,	2		
	Model 1 Fertility Intent		Model 2 Not getting pregnant in college		Model Had intercours 18	3 se before	Model 4 Number of sexual partners	
	В	р	В	р	В	р	В	р
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:		$\sim > >$						
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:				$\mathcal{N}\mathcal{O}$				
Currently sexually active	0.084	.405	-0.036	.324	1.264***	<.0001	1.766***	<.0001
Had ever been pregnant	-0.080	.583	\sim		-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		\mathcal{X}	-0.007	.172				

a. ***p<0.0001, **p<0.01, *p<0.05 b. Coefficients are unstandardized.