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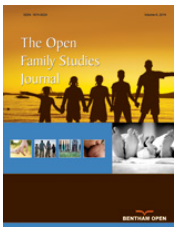

RESEARCH ARTICLE

Family Size Preferences in a College Student Sample

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Abstract:

Background:

Family size preferences and birth rate vary across culture, gender, religion, race/ethnicity, and time; yet little is known about how or when people decide how many children to have. Sociobiology suggests that women should invest more time and effort into the decision than men.

Objective:

The study's purpose is to examine family size preferences in a sample of male and female college students.

Method:

A sample of childless, college-aged participants (n =394; 58.7% women) completed a survey about their desires concerning procreation (*e.g.*, "How many children do you want to have?" "How committed to that number are you?" "How old were you when you picked this number?").

Results:

Women reported deciding how many children they ideally wanted at a younger age than men, being more committed to that number, and having given it more careful thought. Women also wanted to have their first child at a younger age than men, although men wanted marginally more offspring overall. Participants who used birth control wanted fewer children than those who did not. There were few differences as a function of religion or race/ethnicity.

Conclusion:

Family size preferences were consistent with sociobiological predictions, with women knowing how many children they wanted at a younger age than men, being more committed to a specific number, having given the matter more careful thought, and wanting to start childbearing at a younger age. Thus, despite recent cultural and societal changes, biological imperatives still appear to influence decision making about this most fundamental of behaviors.

Keywords: Family size, Procreation, Gender differences, Sociobiology.

1. INTRODUCTION

Family size is largely a matter of choice, at least in Western countries. There are various indicators of family size, such as birth rate (births/1000 population/year) and fertility rate (children born/woman). Both measures vary widely across as well as within societies [1]. For example, the fertility rate (as of 2014) is over 5 in many African countries; approximately 2 in the U.S.; less than 2 in Australia, Canada, Russia, and most of Europe; and close to 1 in many Asian countries [2]. Use of birth control measures roughly parallels family size; countries (or racial/ethnic groups within

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countries) that have higher birth control utilization have correspondingly lower birth rates [3].

Within a society, there are significant demographic differences. In the U.S., Whites have a lower birth rate than Blacks, Hispanics, and Asians [1, 4]. With respect to religion, there is a widespread perception that Catholics tend to have large families, and to some extent, Catholics are more likely to view a larger family as ideal [5 - 7]; yet religious differences in fertility are much less than in the past and are possibly now non-existent altogether, at least in the U.S [8].

Men and women likely make decisions about procreation quite differently, due to sex roles, family influences, and biology. For example, women's fertility and family size preferences are related to their sex-role attitudes [9 - 11]. A 2009 study found that females who intended to have children were significantly more likely to identify having a "biological" drive to have children compared to males who intended to have children and both males and females who did not intend to have children [12]. Consistent with this finding, a core tenet of sociobiological theory is that women should be more selective in mating than men, by virtue of their greater investment in terms of material and physiological resources [13]. There is evidence for this differential selectivity across the animal kingdom, including in humans [13].

Despite the clear relevance of family size to well-being and resource utilization, at both the micro (*e.g.*, individual, clan) and macro (*e.g.*, village, society) levels, surprisingly little research has addressed exactly how and when individuals decide how large a family to have. What research exists has focused primarily on married persons [6, 14 - 16]; however, individuals appear to enter marriage with some expectations about childbearing and family size already formed [17]. Studies of older, married individuals are limited, moreover, by the fact that the strongest predictor of the number of children desired is the number of children one already has [16, 18].

The scant research that has addressed the preferences of younger, single individuals has focused primarily on women [11]. Some research has compared the family size preferences of young, unmarried men and women [5]. This research found that single women desired larger families than single men, a difference that it attributed to sex roles; however, most of the literature in the area is dated, and sex roles have changed considerably since the 1960s and early 1970s. For example, in 1970, 40% of women in the U.S. were employed in the labor force, compared to 56% in 2008 [19]. In addition, prior research has not addressed the age and processes by which family size preferences are formed. The present study addresses these gaps in the literature by examining family size preferences in a sample of childless male and female college students.

2. HYPOTHESIS

Based on the differential resource investment between men and women, we formulated three hypotheses:

H1. Women would form a family size preference at an earlier age than men.

H2. Women would be more committed than men to having a specific number of children.

H3. Women would anticipate experiencing greater regret if they did not have their desired number.

With respect to the number of desired children, there are competing hypotheses. On the one hand, socialization norms would lead women to want more children [5]; on the other hand, differential resource investment would lead men to want more children. Thus, we make no hypothesis regarding a sex difference for number of desired children. We also explored family size preferences as a function of race/ethnicity, religion, and birth control use.

3. METHOD

3.1. Participants

Participants were 394 childless undergraduates (58.7% women, 85.8% White, 93.4% unmarried), recruited from psychology courses (7 participants with children were excluded from the analyses). Males and females did not differ in terms of the number of children they grew up with or marital status, though males were slightly older (*Ms* = 20.41 vs. 19.50 years; $t[352] = 3.99$, $p < .05$, $\eta^2 = .04$). (In this and subsequent comparisons, *M* refers to the group mean; *t* refers to the independent t-test statistic used to test for differences between groups; and η^2 is a measure of effect size analogous to R^2.)

3.2. Materials

Eleven questions assessed participants' desires and beliefs about having children (using 7-pt scales unless otherwise

specified): 1) How many children do you want to have? (allowing a response of any number, including 0; participants could also respond "unsure"); 2) How committed to that number are you? 3) Why did you choose this specific number? (free response); 4) How old were you when you picked this number? (hereafter referred to as *age of decision*); 5) Was the decision something you thought through carefully or a gut feeling? 6) How many girls and boys? 7) How important in choosing a mate/spouse was/would be that person's preferences? 8) How much regret would you experience if you ended up having a) more or b) fewer children? 9) If you desire multiple children, what is the optimal age difference? (free response); 10) At what age would you like to have your a) first and b) last child? 11) How much do financial considerations affect your decision?

Participants who were married or in a long-term committed relationship answered four additional questions (*e.g.*, "How much did you talk about this issue with your partner before you were married, versus after?"). Participants also provided basic demographic information and reported whether they had been sexually active in the last six months; and, if so, which form of birth control they usually used.

3.3. Procedure

Participants gave informed consent, then completed the questionnaire in small groups, with each participant working individually. The questionnaire took 15-20 minutes to complete. The study was approved by the Institutional Review Board for adherence to ethical principles in the use of human participants.

4. RESULTS

The data were analyzed using SPSS; degrees of freedom vary because participants had the option not to answer individual questions. All but seven participants indicated a desire for children, with a majority indicating a preference for two (33.9%) or three (35.2%) children (M = 3.08, SD = 1.59). Similarly, the average number of children in home of upbringing was around three (M = 3.02, SD = 1.28).

Table **1** shows the major findings. There was a marginally significant difference in the number of children desired by men (M = 3.28) and women (M = 2.94), $t(267) = 1.92$, $p = .06$, $\eta^2 = .01$. As hypothesized, women (M = 15.82) reported making a decision earlier in life about the number of children they wanted to have compared to their male counterparts (M = 17.55), $t(348) = 5.10$, $p < .01$, $\eta^2 = .07$. Women showed a higher degree of commitment (M = 4.92) than men (M = 4.56) to their desired number, $t(346) = 2.37$, $p = .02$, $\eta^2 = .01$.

Table 1. Desired number of children, age of decision, and degree of commitment as a function of demographic and behavioral characteristics.

	N	# Desired	Age of Decision	Commitment
Men	163	3.28 (1.83)**	17.55(3.08)*	4.56(1.50)*
Women	231	2.94 (1.40)	15.82 (3.10)	4.92 (1.34)
White	338	3.12 (1.58)	16.55 (3.26)	4.78 (1.39)
Minority	56	3.02 (1.67)	17.12 (3.25)	4.96 (1.66)
Catholic	123	3.22 (1.76)	16.14 (3.49)	4.55 (1.61)*
Protestant	222	3.04 (1.48)	16.67 (3.15)	4.96 (1.28)
BC user	216	2.94 (1.49)*	16.75 (3.46)	4.90 (1.37)
Non-BC user	12	4.09 (1.97)	18.15 (3.11)	4.90 (2.08)

Note. Figures are means (SDs in parentheses). Commitment was rated on a 7-pt scale. * $p < .05$; ** $p = .06$.

Men and women differed significantly in their response to the question, "Was the decision something you thought through carefully or a gut feeling?" $t(360) = 2.05$, $p < .05$, $\eta^2 = .01$, with women more likely to have given the decision careful thought (Ms = 4.04 [SD = 1.45] vs. 3.72 [SD = 1.52]). Women wanted their first child at a significantly younger age (M = 26.05, SD = 2.11) than men (M = 26.61, SD = 2.78), $t(352) = 2.18$, $p < .05$, $\eta^2 = .01$, but there was no significant difference between women and men regarding the age at which they wanted to have their last child, $t(341) = 1.91$.

When asked how much regret they would experience if they had either more or fewer children than desired, men and women did not differ significantly, ts < 1.61. Participants predicted they would experience less regret over having more children (M = 2.39, SD = 1.50) compared to having fewer children than desired (M = 3.21, SD = 1.86), $t(389) = 7.27$, $p < .01$, $\eta^2 = .12$.

As an overwhelming majority of the participants identified as White (85.8%), ethnicity was coded as being either White or racial/ethnic minority. There was no significant difference in the number of children desired by Whites and minorities, $t(393) = .42$. Race/ethnicity also was unrelated to the age at which participants reported deciding on the number of children they wanted to have, $t(377) = 1.17$, or their degree of commitment, $t(374) = .86$.

Although data were collected for a variety of religious groups, participants predominantly identified as being Catholic (31.2%) or Protestant (56.4%). There was no significant difference in the number of children desired by Catholics and Protestants, $t(349) = 1.04$. Catholics and Protestants also did not differ on the age at which they reported deciding on the number of children they wanted to have, $t(335) = 1.44$. Catholics and Protestants showed a small ($\eta^2 = .02$) but significant difference in how committed they were to the number of children they wanted to have, with Catholics less committed ($M = 4.55$) than Protestants ($M = 4.96$), $t(334) = 2.55$, $p = .01$.

Over half of the participants (57.9%) indicated that they had been sexually active in the past 6 months. Of these, 95% were using some form of birth control (BC). One's decision to use BC may reflect childbearing intentions, but because of the small number of non-BC users, these analyses are exploratory. There was a small ($\eta^2 = .03$) but significant difference in the number of children desired by BC users ($M = 2.94$) and non-BC users ($M = 4.10$), $t(230) = 2.45$, $p = .02$. BC users and nonusers did not differ on the age at which they reported deciding on the number of children they wanted to have, $t(222) = 1.26$, or their level of commitment, $t(222) = .00$.

5. DISCUSSION

The vast majority of participants desired children, which is consistent with both biological imperatives and gender roles for both men and women [13]. The number desired by most participants—two or three—is a robust finding in recent American samples [6, 11, 20] and consistent with the current U.S. fertility rate [1, 2]. Even though most participants were in their late teens or early twenties, nearly all had a specific number of children in mind, and they tended to be strongly committed to that number (the mean score on the commitment question was above the midpoint for both men and women). Nonetheless, there were some significant differences in terms of demographic characteristics, especially as a function of participants' gender.

Women reported deciding how many children they wanted at a younger age than men, by nearly two years. Women also reported being more firmly committed to a specific number, desiring slightly fewer children than men on average, and wanting to have their first child at a younger age. The gender difference in number of desired children contradicts a previous research finding that women preferred slightly more children than men [5]. A likely explanation of this discrepancy is societal changes over time. The research reviewed by Nobbe and Okraku [5] was conducted in the 1960s and early 1970s, at the beginning of the women's liberation movement in the U.S. Since that time, many more women have entered the workforce, as traditional sex roles have relaxed; and working women, as well as those with less traditional sex-role attitudes, desire fewer children [14, 15, 21]. These trends likely contribute to the closing, and even reversal, of the male-female gap in family size preferences.

Both men and women anticipated experiencing more regret at having too few than too many children. This tendency could reflect a framing effect, whereby "too few" involves imagining taking away something one already has, which is perceived as a loss [22]. Of course, participants did not already have children, but in their imagined subjective future state, it would nonetheless be perceived as a loss, compared to the incremental "gain" of having more children than desired [23].

Participants who used birth control wanted fewer children than participants who did not. This finding is consistent with other research showing that the availability of family planning measures is associated with intentions to have fewer children [18, 24]. A variety of factors go into the decision whether to use birth control [25]. Contraceptive use and family size preferences are likely part of a constellation of variables including sex-role attitudes, career aspirations, and other factors [12, 14, 15]. Contraceptives allow women (and their partners) to be more selective about when they want offspring and how many of them to have [6].

5.1. Limitations and Future Directions

The present study has several limitations. First, the participants were undergraduate students and therefore reasonably well-educated and mostly middle-class; the sample also did not have a great deal of racial, religious, or geographical diversity. Although there might be broad differences with a more diverse sample-such as less educated, lower-SES individuals desiring more children [15], or variations across racial/ethnic groups [1, 26] - we expect that the

pattern of findings, especially regarding gender differences, would remain the same.

The present sample also consisted entirely of Americans. Fertility and family size preferences differ, often quite dramatically, across societies [18, 27]. Nations with social policies different from the U.S., such as welfare states, might inculcate in their citizens a preference for more or fewer children, for a variety of reasons. Some societal changes relevant to family planning, such as industrialization, availability of birth control measures, and government policies, occur relatively quickly (*i.e.*, over a few generations). Sociobiological factors, on the other hand-such as an evolutionary basis for sex differences in family planning and family size preferences-are more stable, owing to their long evolutionary history. Thus, we would expect a comparable pattern of findings from other countries, especially those with more traditional sex roles.

Memory bias is another limiting factor. In general, "memory for when" is not highly accurate [28, 29], and that is likely to be complicated further when asking participants to pinpoint the timing of a decision-such as how many children they want to have-that is probably made gradually and not at a discrete point in time. This problem is offset somewhat by the fact that the mean age of decision was not too long ago for our college-aged sample.

CONCLUSION

Overall, college students' family size preferences were consistent with sociobiological predictions. Women reported deciding how many children they wanted at a younger age than men, being more committed to a specific number, having given the matter more careful thought, and wanting to start childbearing at a younger age. Thus, despite recent cultural and societal changes, biological imperatives still appear to influence decision making about this most fundamental of behaviors.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

HUMAN AND ANIMAL RIGHTS

No Animals/Humans were used for studies that are the basis of this research.

CONSENT FOR PUBLICATION

Not applicable.

CONFLICT OF INTEREST

The authors confirm that this article content has no conflict of interest.

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