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ORIGINAL RESEARCH

Women's Work Characteristics and Fertility Expectations

Jennifer Yarger[1] · **Sarah R. Brauner-Otto**[2]

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Abstract

Previous research has shown that employment is an important social context affecting fertility, yet relatively little is known about the extent to which work characteristics affect fertility expectations. Using over 25 years of data from the 1979 National Longitudinal Survey of Youth, we analyzed the associations between part-time work and characteristics associated with autonomy over working time, specifically self-employment and managerial/professional occupation, and childbearing expectations among women ages 18–45 ($N = 4{,}415$). Logistic regression models for longitudinal data reveal that work characteristics are significantly associated with fertility expectations, but that the specific nature of the relationship varies by parity. Among women with one child, those working part-time had predicted probabilities of expecting to have additional children that were 2% higher than those working full-time. In contrast, among women without any children, those working part-time had predicted probabilities that were 2% lower than those working full-time. Similar contrasting relationships by parity were found when comparing self-employed women to employees and managers/professionals to those in other occupations. Findings were consistent across racial and ethnic groups. These results suggest that different mechanisms link work characteristics to fertility plans for mothers and non-mothers, specifically that role incompatibility and work-family conflict are more salient for mothers but that financial strain is so for non-mothers.

Keywords Fertility expectations · Work characteristics · Work-family conflict

✉ Jennifer Yarger
jennifer.yarger@ucsf.edu

[1] University of California, San Francisco, 550 16th Street, 3rd Floor, Box 1224, San Francisco, CA 94143, USA

[2] McGill University, Montreal, Canada

Introduction

The dramatic rise in female labor force participation since the mid-twentieth century has brought an increase in women's experiences of work-family conflict (Collins, 2020; Molina, 2021; Nomaguchi, 2009). The amount of conflict experienced varies by multiple factors, including the characteristics of the employment situation itself (Bakker & Geurts, 2004; Galinsky & Stein, 1990; Schieman et al., 2006, 2009). This study contributes to a growing body of empirical research focusing on how women respond to work-family conflict.

Women have multiple options when faced with work-family conflict. On the one hand, they may change their work pattern, for example by reducing their work hours, changing jobs, or leaving the workforce (Damaske & Frech, 2016; Guzzo & Hayford, 2020; Ishizuka & Musick, 2021; Killewald & Zhuo, 2019). Another option is to adjust one's family life by having fewer children or delaying childbearing (Budig, 2003). We focus on this latter option and examine how women's work characteristics are associated with their childbearing expectations. As an example of the dearth of knowledge on this topic, in a recent review of work-family conflict, work characteristics was not even covered as topic (Molina, 2021).

Using longitudinal data covering over twenty-five years, we examine how women's work characteristics are associated with whether they expect to have more children. We focus on work characteristics that are relevant to work-family conflict, namely part-time work schedules, self-employment, and working in a managerial or professional occupation (Budig, 2003; Shreffler, 2017). We focus on fertility expectations because they likely reflect both an individual's preferences and their assessment of the contextual constraints in meeting those preferences, both of which may be impacted by work. Because both work characteristics and fertility expectations[1] change over time (Hayford, 2009), we explicitly incorporate the time-varying dynamic into our longitudinal models. Additionally, because the experiences associated with childbearing and rearing likely interact with work characteristics to influence future childbearing plans, we take a life course perspective and examine these relationships separately for women with children and those who have not (yet) had any children (Hayford, 2009; Iacovou & Tavares, 2011; Johnstone et al., 2021). By focusing on the relationship between work characteristics and fertility expectations our analysis sheds light on the overall mechanisms linking work and fertility.

[1] Although some theoretical and empirical research has demonstrated that intentions and expectations are distinct psychological dimensions (Bachrach & Morgan, 2013; Warshaw & Davis, 1985), we use the terms interchangeably here. Our hypothesized relationships with work characteristics would be substantively the same whether we were discussing intentions or expectations.

Conceptual Framework

We draw on multiple theories and frameworks for understanding the relationship between working conditions and fertility expectations. First, role theory suggests that individuals occupy a variety of roles on a daily basis. Roles may be incompatible and result in inter-role conflict if they involve competition over time and obligations, i.e., when multiple roles are in "greedy" institutions (Coser, 1974; Glass & Camarigg, 1992; Hochschild, 1997). In support of this, working too many hours and inflexible hours has been found to leave little time for family life (Jacobs & Gerson, 2004). Following industrialization, childcare and economically productive work became increasingly incompatible (Weller, 1977). Work sites moved to locations further from home, work hours grew longer, and schedules lost the flexibility that childrearing requires. Thus, most women who participate in the labor force today must find an alternate child care arrangement or limit their fertility. The negative relationship between female labor force participation and fertility at the individual level is often attributed to this incompatibility between the social institutions of work and family. We expect that the nature of these two greedy institutions makes childbearing and rearing more difficult and therefore leads to lowered fertility expectations (Rindfuss & Brauner-Otto, 2008). We now turn to a discussion of how specific work characteristics are associated with work-family conflict.

Work-family conflict research focuses on the tension that arises when work and family roles compete for time, energy, and commitment (Carlson et al., 2009; Greenhaus & Beutell, 1985; Molina, 2021; Reimann et al., 2022) and often highlights the ways work hours and schedules can encroach on the family lives of workers. Empirical research suggests that longer work hours contribute to work-family conflict by leaving insufficient time for family life (Begall & Mills, 2011; Daly, 2001; Jacobs & Gerson, 2004; Milkie et al., 2004; Nomaguchi et al., 2005). Working a part-time schedule is one strategy workers adopt for balancing work and family; scaling back their work commitment frees up more time and energy for family demands. Previous research has shown that, compared to their full-time counterparts, part-time workers had lower levels of work-family conflict and greater family satisfaction (Hosking & Western, 2008; Jeffrey Hill et al., 2004; Peters et al., 2009).

In addition to total work hours, autonomy, flexibility, and control over working time may lessen work-family conflict (Annink & den Dulk, 2012; Lyness et al., 2012). These characteristics enable working parents to address family tasks that may need to be completed during regular work hours and are often unpredictable, such as picking up a sick child from school or taking children to doctors' appointments. Both self-employment and employment in a managerial or professional occupation are considered options more conducive for balancing work and family responsibilities precisely because they are associated with enhanced autonomy, flexibility, and control over working time (Lyness et al., 2012; Mannheim & Schiffrin, 1984; Thompson et al., 1999; Wheatley, 2017). In support of this, empirical research has found higher fertility intentions among women with greater perceived work control

(Begall & Mills, 2011) and in professional occupations (Shreffler, 2017).[2] Based on this literature we predict that women who work part-time, are self-employed, or are employed in managerial or professional occupations (i.e., those with lower work-family conflict) would have higher fertility expectations.

However, another branch of literature has shown that professional women, or women who are more employment oriented, may find the demands of their jobs to increase work-family conflict and/or be barriers to childbearing (Collins, 2020; Hakim, 2003; Shreffler, 2017; Wheatley, 2017). Women and professionals in the UK reported less autonomy on some dimensions than men or managers (Wheatley, 2017) and increasing job authority was associated with greater work-family conflict among Canadian workers (Badawy & Schieman, 2021). Self-employed workers also tend to be more psychologically involved in work and more likely to work long hours than organizationally employed persons (Hornaday & Aboud, 1987), which could exacerbate work-family conflict. Difficulty balancing the demands of work and family roles has been found to negatively affect the satisfaction and well-being of business owners (Bowen & Hisrich, 1986; Kalleberg & Leicht, 1991; Stoner et al., 1990). Some research has found that self-employed persons report higher levels of work-family conflict (Bozzon & Murgia, 2021; Parasuraman & Simmers, 2001; Schieman et al., 2006). However, Shreffler et al. (2010) did not find evidence that perceived work-family conflict, hours worked, or work schedules are related to women's fertility intentions. Additionally, although Shreffler (2017) did find evidence of a positive relationship between professional jobs and fertility intentions, this study was somewhat limited by the cross-sectional data and inability to include measures of income, education, and partners' work. We build on this work by directly addressing these weaknesses in our models. These findings all lead to the hypothesis that self-employed and professional/managerial women will have lower (or at least not higher) fertility expectations.

Strain theories, which have been applied to understand the relationship between economic circumstances and fertility goals, offer further support for this hypothesis (Geist & Brauner-Otto, 2017; Kreyenfeld, 2010). This framework holds that individual's decisions about parenthood may be influenced by financial strain or resource constraints. Along with absolute levels of resources, the extent to which individuals feel secure in their economic position and their confidence in their future economic position are also important (Brauner-Otto & Geist, 2018).

Part-time schedules tend to be associated with economic strain. Compared to full-time jobs, most part-time jobs in the U.S. are often considered "bad" jobs that offer lower compensation and fewer fringe benefits, such as health insurance and maternity leave (Ferber & Waldfogel, 1998; Kalleberg et al., 2000; Tilly, 1996). Studies of professional workers show that part-time schedules are associated with more limited career advancement opportunities and less job security (Kalleberg & Reskin, 1995; Kropf, 2001; Moen & Roehling, 2005). Furthermore, many women are involuntarily employed part-time and would prefer full-time family care or full-time employment (Kim & Golden, 2022; Negrey, 1993). Together this

[2] Shreffler (2017) also found these women were more likely to postpone childbearing.

implies that individuals working a part-time schedule would be expected to have lower fertility expectations given their greater financial constraints and economic uncertainty (Brauner-Otto & Geist, 2018).

Our analyses are also guided by the life course framework, which highlights how patterns of work-family conflict vary at different life stages (Elder, 1983). Different stages provide individuals with new information and occur within different contexts, both of which shape fertility goals. Of particular importance here is childbearing or parity. In general, as the number of children born increases, the likelihood of expecting additional births decreases because women approach their desired family size and the normative family size of two or three children. At this point, women may make smaller adjustments to their future birth expectations, regardless of contextual factors such as working conditions.

We note that a large body of theoretical and empirical literature investigates the relationship between women's labor force participation and childbearing decisions (Brewster & Rindfuss, 2000). Much of this literature relies on work-family conflict to explain the observed negative association between labor force participation and childbearing, although researchers also point out the potential for selection bias and reciprocal relationships, wherein women opt not to work in anticipation of, or in response to, having children (see review in Brewster & Rindfuss, 2000). More recent studies find that not working, employment insecurity, and employment uncertainty are all related to lower fertility intentions (e.g., Brauner-Otto & Geist, 2018; Geist et al., 2021; Hanappi et al., 2017; Luppi et al., 2022), supporting theories of strain and uncertainty described above (Busetta et al., 2019). Our paper builds on these findings, making a distinct contribution to the literature by focusing on working women, their work characteristics, and their fertility expectations.

There may also be distinctly different relationships between work characteristics and fertility expectations when comparing mothers to women without children (Begall & Mills, 2011; Brewster & Rindfuss, 2000). Mothers clearly have knowledge about work-family conflict that non-mothers can only hypothesize about. For example, non-mothers may anticipate that working a non-standard schedule would allow them to balance childcare needs with another person, leading them to have greater fertility expectations when working in that schedule, whereas mothers may find the reality of being out of sync with other institutions stressful and therefore have lower fertility expectations. In fact, the positive relationship Begal and Mills (2011) found between perceived work control and fertility intentions was only among mothers. Consequently, we examine the relationship between work characteristics and fertility expectations separately by parity.

In addition, the relationships between work characteristics and fertility expectations may vary across racial and ethnic groups due to interrelated structural and cultural factors (Bearak et al., 2021; Florian, 2018). Scholarship on work and family topics increasingly acknowledges the ways that race and ethnicity shape work and family experiences (Browne & Misra, 2003; Gerstel & Sarkisian, 2005). Structural factors, such as occupational segregation by race and ethnicity (Tomaskovic-Devey, 1993), higher rates of employment discrimination (Moss & Tilly, 2001), and lower earnings for Black and Hispanic workers compared to Whites (U.S. Bureau of Labor

Statistics, 2023a) may shape differences in experiences of work-family conflict and judgements about whether economic resources are sufficient for future births.

Cultural and ideological factors also may play a role in shaping the impact of work characteristics on fertility expectations, including differences in cultural perceptions of work-family conflict. Dating back to slavery, Black women have combined work and caregiving responsibilities due to economic and social constraints and government policies (Barnes, 2008; Blum & Deussen, 1996; Jones, 2010). As a result, Black women may be socialized that work-family conflict is to be expected (Ammons et al., 2017), ultimately weakening the influence of work characteristics on fertility plans. Additionally, racial and ethnic differences in childcare organization may play an important role. Black and Hispanic families often rely on kin-based networks for childcare support (Gerstel, 2011; Kamo, 2000; Zambrana, 2011), potentially alleviating the impact of work-family conflict on plans for additional births. Lastly, work characteristics may divergently affect fertility expectations due to racial differences in cultural perceptions of childbearing. Dow (2016) finds that Black women hold different cultural expectations that normalize the need for mothers to work outside the home and rely on kin and community networks for childcare, which may lessen any influence of work characteristics on their fertility plans as they anticipate conflict and have cultural scripts offering solutions. On the other hand, some research suggests that White women place greater importance on motherhood than Black and Hispanic women (McQuillan et al., 2008), such that work characteristics may exert less influence on their fertility plans. We therefore examine whether the relationship between work characteristics and fertility expectations varies systematically by racial and ethnic group.

To summarize, the existing literature motivates multiple, at times contrasting, hypotheses[3]:

Hypothesis 1a: Women working *longer* hours (i.e., full-time) will have *lower* fertility expectations than those working fewer hours (due to more work-family conflict).

Hypothesis 1b: Women working *fewer* hours (i.e., part-time) will have *lower* fertility expectations than those working longer hours (due to financial strain or uncertainty).

Hypothesis 2a: Self-employed women will have *higher* fertility expectations than those who are employees (due to less work-family conflict).

Hypothesis 2b: Self-employed women will have *lower* fertility expectations than those who are employees (due to increased work-family conflict).

[3] Our analysis sample (described more below) includes women during periods when they are not working to mitigate potential selection bias, acknowledging that fertility expectations may influence women's decision to work. However, we do not posit specific hypotheses about the relationship between not working and fertility expectations, as the primary focus of this study is to provide new evidence on the relationship between specific work characteristics and fertility expectations.

Hypothesis 3a: Women employed in managerial or professional occupations will have *higher* fertility expectations than those in other occupations (due to less work-family conflict).

Hypothesis 3b: Women employed in managerial or professional occupations will have *lower* fertility expectations than those in other occupations (due to increased work-family conflict).

Hypothesis 4: The relationship between work characteristics and fertility expectations will vary systematically by parity.

Hypothesis 5: The relationship between work characteristics and fertility expectations will vary systematically by racial and ethnic group.

Methods

Data

This study uses data from the 1979 cohort of the National Longitudinal Survey of Youth (NLSY), a national probability sample of individuals who were ages 14–21 and living in the United States in 1979. Interviews were conducted every year from 1979 to 1994 and on a biennial basis thereafter (the survey is ongoing). Retention rates for the NLSY have been relatively high; they exceeded 90 percent through the early 1990s, and they were 77.5 percent in 2002, when sample members were ages 37–45. Fertility expectations were not collected in 1980, 1981, 1987, 1989, 1991, and 1993, so those years are dropped from our analysis.

We analyze expectations among women ages 18 to 45, which are primary years for both labor force participation and childbearing. The analytic sample includes 4,415 women who were out of school in at least one wave with no missing data on any of the variables in our analysis. This represents 94% of the 4,728 women initially interviewed in 1979.[4] Analyses include all person-years in which respondents were out of school.

[4] This number (4,728) excludes the military and poor white oversamples. The full military sample was dropped from the NLSY in 1985, and the poor white oversample was dropped in 1991. In total, 202 women (4%) and 4230 observations (8%) were excluded due to missing values on measures included in the analyses, the largest proportion of observations being dropped due to missing information on spouses' income (~2300 observations) and parental education (~1600 observations).

Measures

Fertility Expectations

Our dependent variable was a dichotomous measure for whether or not the respondent expected to have any (more) children, which we derived from two questions. Women who had no children were asked, "Altogether, how many children do you expect to have?" Women who already had children were asked, "Altogether, how many *more* children do you expect to have?"

Work Characteristics

The independent variables are work characteristics related to the number of hours worked and autonomy over work hours. The measures refer to the respondents' current job. If the respondent held more than one job at the time of the interview, the measures refer to the job at which she worked the most hours.

Part-time Hours We created a three-category variable for the respondent's work hours: (1) part-time hours, which is less than 35 h per week, based on the U.S. Bureau of Labor Statistics definition (U.S. Bureau of Labor Statistics, 2023b); (2) full-time hours or 35 h per week or more; and (3) not working.[5]

Self-employed Respondents were asked, "Were you an employee of a private company, business, or individual for wages, salary, or commission; or a government employee; or employed in your own business, professional practice, or farm; or working without pay in a family business or farm?" We created a three-category variable: (1) self-employed if the respondent was employed in her "own business, professional practice, or farm" or "working without pay in a family business or farm", (2) otherwise employed; and (3) not working.

Managerial/Professional Occupation We created a three-category variable for the respondent's occupational group: (1) managerial or professional occupation according to the 1970 and 2000 U.S. Census occupational classification; (2) non-managerial or professional occupation; and (3) not working.

Presence of Children

We created two time-varying measures of women's previous childbearing behavior: a categorical variable for the number of children women had given birth to (none, one, two or more) and a dichotomous indicator for the presence of a child under age five in the household.

[5] We do not differentiate between women who are unemployed or out of the labor force.

Race/Ethnicity

Respondents were categorized into racial/ethnic groups based on the primary racial/ethnic group with which they most closely identified, including Black, Hispanic, Asian/Pacific Islander, and White/other. The latter group includes primarily individuals identifying as White but also those who selected "American," "Indian American, or Native American" and "other." The NLSY noted that there were unusually high reports of Native American and that they cannot distinguish between individuals who misinterpreted this category to mean being born in the United States (US Bureau of Labor Statistics, N.D.). Due to the small sample size of Asian/Pacific Islander respondents ($n = 34$), this group was excluded from the analytic sample.

Controls

We included time-varying control variables for characteristics likely to be associated with work characteristics or fertility expectations: log of hourly wage[6]; log of years of tenure at job; age (centered, in years) and age squared; marital status (married, not married); log of spouse's income. We also include several measures collected at baseline: parents' education level, which was based on the average number of years of education the respondent's mother and father completed; whether or not the respondent was raised Catholic; number of siblings; desired family size; whether or not the respondent planned to work outside the home at age 35; and a measure of pro-egalitarian gender role attitudes, which we created by averaging and then centering the respondent's level of agreement with six statements about the employment of wives. See the supplementary material for more detailed descriptions and Supplementary Table 1 for descriptive statistics for these measures.

Analytic Strategy

Longitudinal logistic regression models were used to estimate the relationship between work characteristics and fertility expectations, including random intercepts for each participant. This modeling approach allows us to account for the panel structure of the data and is appropriate for a dichotomous outcome, while also including race/ethnicity, a time-invariant covariate that is an essential component of our research questions (Allison, 1994).[7]

To structure our analyses we follow our hypotheses described above. First, we estimate a series of models with each independent variable separately. Next, we add interaction terms between parity (no children, one child, and two or more children) and work characteristics into our models. This allows us to test whether estimated effects of work characteristics are different by parity (Hypothesis 4). Finally, we

[6] Because the log transformation is invalid for people with no earnings (i.e., women not working) we assigned them a very small wage value that is less than the lowest wage in the data ($0.0025/hr).

[7] Models run using individual-level fixed effects yield similar effect estimates but with substantially larger standard errors.

Table 1 Descriptive statistics of variables used in the analyses, National Longitudinal Survey of Youth 1979

	% of person-years (N = 47,914)	% of women[a] (N = 4,415)
Fertility expectations		
Expects to have more children	41.59	94.16
Working characteristics		
Part-time schedule (≤ 35 h/wk)	14.30	58.60
Full-time	53.04	91.60
Self-employed	3.67	17.78
Employee	63.67	95.06
Managerial/ professional occupation	20.28	57.71
Other occupation	47.06	88.34
Not working	32.66	76.04
Childbearing		
Has any children	66.82	80.63
Num. of children born		
0	33.18	19.39
1	21.73	16.90
2 +	45.09	63.71
Child under age 5 in household	31.42	78.98
Race/ethnicity		
Black	30.14	29.58
Hispanic	18.37	19.05
White/other	51.49	51.37

[a]Column includes the percentage of women who reported the variable at least once during the study period, except for number of children born which is from the last person-year and race/ethnicity which was asked at baseline

estimate models separately by parity and include interaction terms between work characteristics and race/ethnicity. This allows us to examine whether within each parity, there is a different relationship between work characteristics and fertility expectations by race/ethnicity (Hypothesis 5).

Given the challenges in interpreting effect estimates or odds ratios from logistic regression, we present our findings in terms of predicted probabilities (see Mize, 2019 for a clear description of the importance of this approach, particularly when using dichotomous outcomes and interaction terms). We calculate average marginal effects on the observed values and use tests of first differences to test the average marginal effects by work characteristics, parity, and race/ethnicity. We use tests of second differences to test for interaction effects between work characteristics and parity at specific values of interest, as well as interactions between work characteristics and race/ethnicity.

Results

Descriptive Results

Descriptive statistics for key study variables (see Table 1) are based on 4,415 subjects and 47,914 person-periods, or observations. Women expected to have (more) children in 42% of their person-periods. Most women (94%) reported that they expected to have (more) children at least once over the entire study period.

Women worked part-time in 14% of the periods and 59% of women had ever worked part-time over the study period. Self-employment was rare, accounting for 4% of the periods, but 18% of women were ever self-employed. Fifty-eight percent of women had ever worked in a managerial or professional occupation and did so in about 20% of the periods.

Women had children in 67% of their person-periods and most women (81%) had children at some point in the study period. By the end of the study period, 64% of women had two or more children.

Work Characteristics and Childbearing Expectations

Figure 1 shows the predicted probabilities of women saying they expect to have more children, with one panel for each work characteristic (Panel A: work hours, Panel B: self-employment, Panel C: occupation). The regression models used to generate these probabilities are shown in Supplementary Table 2. Turning first to Panel A, we see minimal differences in fertility expectations by work hours. Women who are not working (white bar) had the highest probability of saying they expect to have more children (0.456). This was about 5% higher than the probability for women who worked full-time (0.408, gray bar) or part-time (0.406, black bar). We use brackets to show the p-value for each comparison, except for comparisons where $p > 0.10$ or otherwise noted on the table.

Panels B and C show the results for the other work characteristics. In Panel B we see that again, women who are not working have the highest predicted probability of expecting to have more kids, but also that self-employed women (0.422, black bar) had significantly higher fertility expectations than employees (0.404, gray bar). This result supports Hypothesis 2a, that self-employed women with more autonomy, flexibility, and control over their work schedules may experience less work-family conflict, which in turn promotes their higher fertility expectations. In Panel C, we see a similar pattern for women working in managerial or professional occupations, although the predicted probabilities are not statistically significantly different from one another.

As expected, previous childbearing was strongly associated with expectations for future fertility. Panel D shows that women who had more children had significantly lower probabilities of expecting to have an additional child.

Panel E shows the predicted probabilities of expecting to have another child by race/ethnicity. Contrary to previous research, we see very little difference between

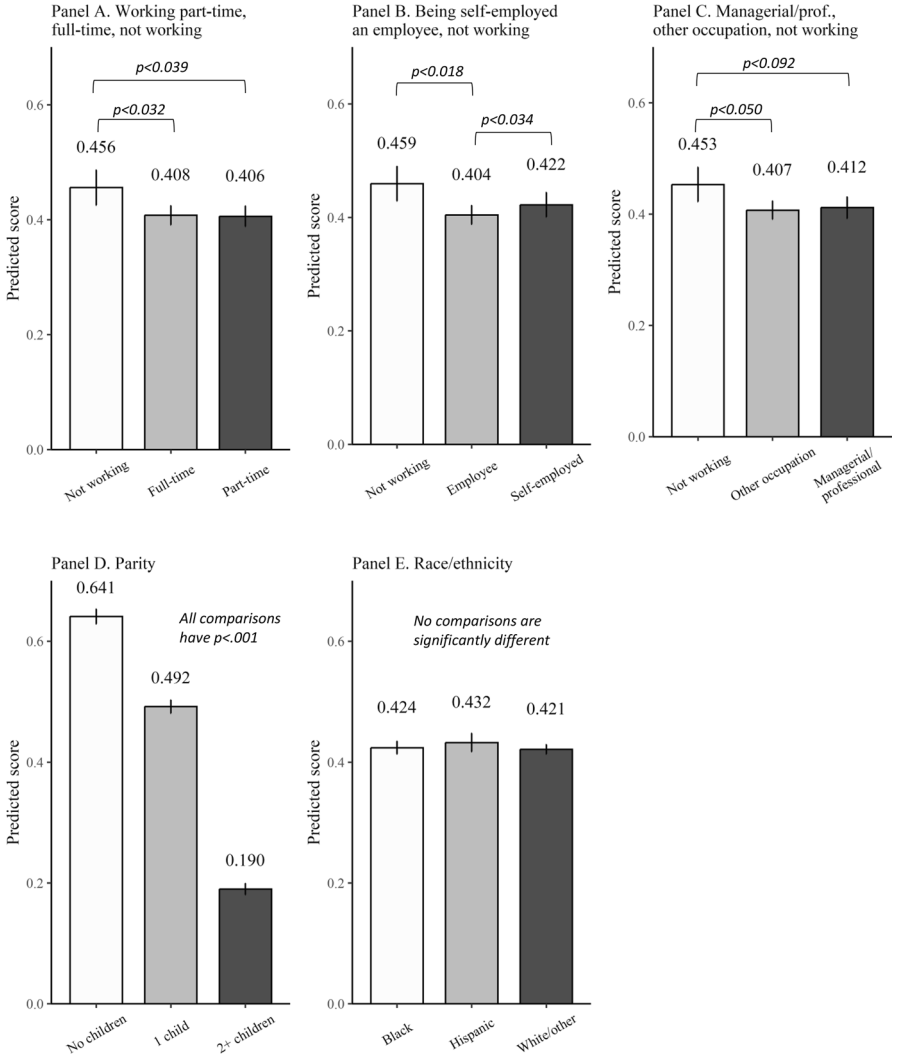

Fig. 1 Predicted probability of expecting to have a(nother) child by work characteristics. For Panels A, B, and C comparisons with $p > .10$ are not shown. Predictions are based on multivariate models that include all controls (wage, tenure, education, age, marital status, spouse's income, preschool-age children, parents' education, religion, siblings, and baseline family size desires, work expectations, and gender role attitudes)

groups and none of those differences are statistically significant (Hayford & Guzzo, 2013; Lundquist et al., 2009; McQuillan et al., 2015; Sweeney & Raley, 2014).

Next we turn to Hypothesis 4, exploring whether the relationship between work characteristics and fertility expectations differs by parity. The regression models used to generate these values are shown in Supplementary Table 3. Figure 2 shows the predicted probability of expecting to have more children by work

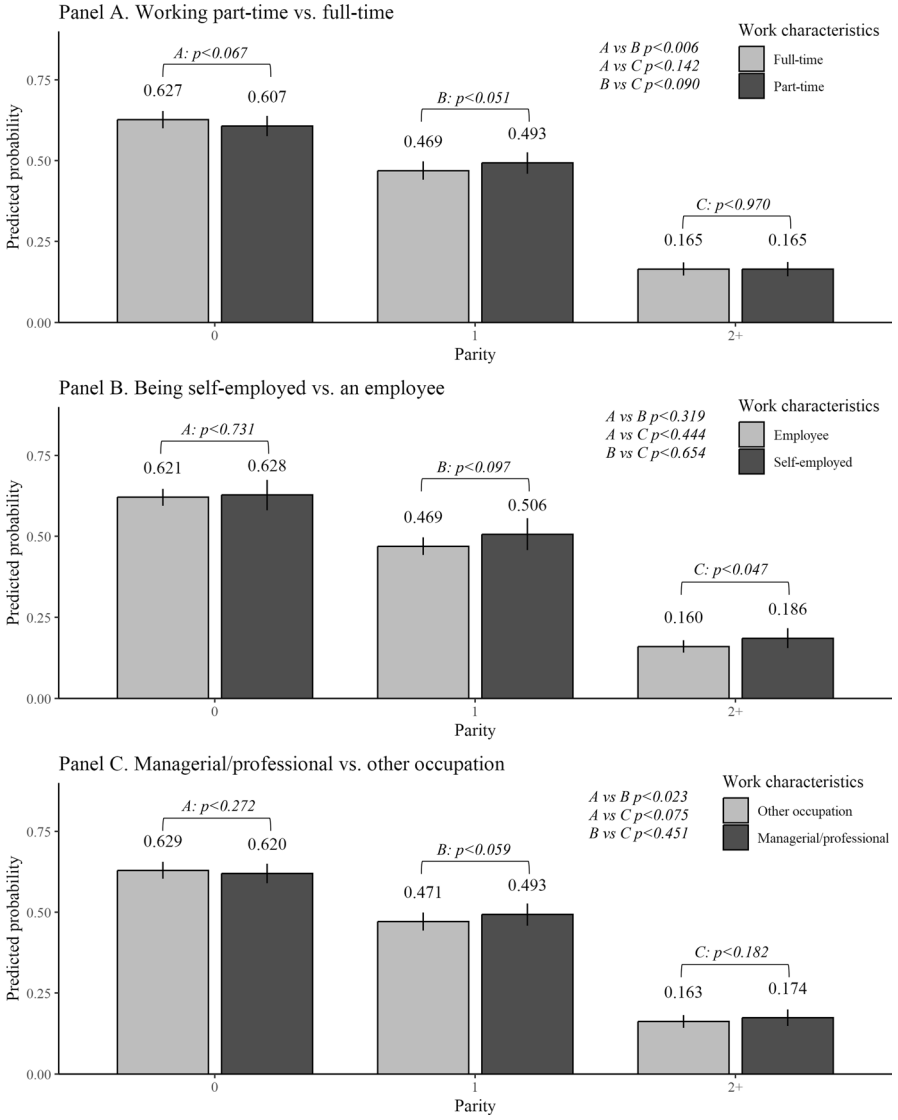

Fig. 2 Predicted probability of expecting to have a(nother) child by work characteristics and by parity. Predictions are based on multivariate models that include race/ethnicity and all controls (wage, tenure, age, education, marital status, spouse's income, preschool-age children, parents' education, religion, siblings, and baseline family size desires, work expectations, and gender role attitudes)

characteristics and parity. As we saw in Fig. 1, women who were not working always had higher probabilities of expecting to have a(nother) child, and this holds across parities. To focus our attention on the factors of interest, work characteristics, we do not show those predicted probabilities in Fig. 2. They are available upon request.

The first two bars in Panel A show the predicted probabilities of expecting to have a child for childless women by their work hours. We find support for Hypothesis 4 in that childless women working part-time had a probability of expecting to have a child 2% *lower* than childless women working full-time (0.607 vs 0.627). However, turning to women with one child, we see that those working part-time had a *higher* predicted probability of expecting to have another child than those working full-time (0.493 vs 0.469). Tests of these differences (i.e., second differences) reveal that the "effect" of working part-time vs full-time is different for women with one child than for childless women. There was no relationship between work hours and fertility expectations for women with at least two children.

The large differences in predicted probabilities by parity indicate that a woman's fertility expectations depend largely on the number of children they already have. These differences across parity are far larger than the differences across work characteristics within parity. However, the magnitude of the work characteristics' "effect" is in line with that of other measures (results available upon request). For example, using Model 3 in Supplementary Table 2 we estimated that the marginal effect of being Catholic was 4% and that of planning to work outside the home (instead of raising a family) at age 35 was 1%.

Panel B shows the predicted probabilities of expecting to have a(nother) child by parity and self-employment. The first two bars indicate that childless women who are self-employed have a similar probability of expecting to have children as those who are not self-employed. The next sets of bars show that the self-employed have a *higher* probability of expecting more children than the employed among those with one child (0.506 vs. 0.469) and two or more children (0.186 vs. 0.16). However, tests of second differences indicate that differences in the effect of self-employment by parity were not statistically significant.

Similarly, the results of Panel C show that childless women in a managerial or professional occupation have a similar probability of expecting more children as women in other occupations. This was also the case among women with two or more children. On the other hand, women with one child in a managerial or professional occupation have a higher probability of expecting more children than those in other occupations (0.493 vs. 0.471). Tests of second differences suggest that the effect of occupational type does vary significantly vary by parity.

Finally, we turn to Hypothesis 5 and assess whether the relationship between work characteristics and fertility expectations varies by race/ethnicity (See Supplementary Fig.1). Because parity is so highly predictive of fertility expectations and the relationship between work characteristics and expectations varies by parity, we conduct these analyses separately by parity. Overall, we do not find evidence of differential relationships by race/ethnicity. Interaction terms were not statistically significant, likelihood ratio tests reveal that models including an interaction term with race did not improve model fit over models without the interaction term, and of all the relationships between work characteristics and race/ethnicity examined, only two first differences were statistically significant at the 0.05 level. Among women with one child, self-employed Black women had higher predicted probabilities of expecting to have more children than Black women who were employees (0.678 vs 0.511). Among women with two or more children, self-employed White/other women had a

predicted probability of expecting more children higher than White/other employees (0.095 vs 0.070). However, given concerns over multiple hypothesis testing, we do not put much stock in these differences. In general, working fewer hours and autonomy over work hours had similar associations with fertility expectations regardless of race/ethnicity.

Conclusion

Previous research has focused on how work characteristics and work-family conflict affect women's decisions to reduce their work hours, change jobs, or exit the labor force (Damaske & Frech, 2016; Guzzo & Hayford, 2020; Ishizuka & Musick, 2021; Killewald & Zhuo, 2019; Reynolds & Aletraris, 2007). Less is known about how work characteristics affect women's decisions about childbearing, including family size. Using over 25 years of longitudinal data, we found evidence that work characteristics are associated with childbearing expectations, however, the nature of the relationship depends on the number of children women already have. Mothers who worked part-time were more likely to expect more children, as were self-employed mothers and those in managerial or professional occupations—two characteristics associated with greater autonomy over time spent working. This was particularly true among mothers with one child who have gained first-hand experience of work-family conflict and have not reached the strong normative family size of two or three children.

Among non-mothers we found evidence of other processes at work. Specifically, part-time work was associated with lower fertility expectations. The financial strain associated with working part-time may be suppressing fertility expectations. Part-time workers also tend to have fewer fringe benefits, such as health insurance and maternity leave, along with limited career advancement opportunities and job insecurity (Kalleberg et al., 2000; Moen & Roehling, 2005; Tilly, 1996). The extent to which it is lack of fringe benefits, limited career advancement opportunities, or job insecurity is an empirical question for further research.

While we found that different mechanisms link work characteristics to fertility expectations for mothers and non-mothers, we did not find evidence that these processes are different for women from different racial/ethnic groups. Working fewer hours and autonomy over work hours had similar associations with fertility expectations regardless of race/ethnicity. It may be the case that the relationship between work characteristics and fertility expectations does in fact vary across racial and ethnic groups, but these differences cannot be detected without controlling for interrelated structural and cultural factors that may shape the relationship (Bearak et al., 2021; Florian, 2018). To fully explore this relationship, future studies are needed that account for factors such as experiences of workplace discrimination, perceptions of financial readiness for parenthood, childcare arrangements, and norms and attitudes around childbearing.

It is worth noting that we cannot rule out a reverse causal link at play here. For example, mothers may experience self-employment as a relatively seamless way to balance work and family roles and, as a result, plan to have more children.

Or, women may choose self-employment because they want to have more children and anticipate being better able to manage work and family roles when self-employed. However, we do control for underlying pro-family attitudes and early childbearing desires. Furthermore, analyses that include individual fixed effects yield similar effect estimates, although fewer cross the common threshold for establishing statistical significance.

Relatedly, our analyses also include women when they were not working, and we see that they consistently have much higher fertility expectations than women in any work situation. While that may appear to support the work-family conflict hypothesis as women who are not working clearly have the least amount of conflict, it is just as likely that women stop working because they expect to have a(nother) child in the very near future.

When interpreting these findings, it is important to consider how other factors co- occurring with these work characteristics that were not controlled in the current analyses may have contributed to the associations found. For example, supportive working conditions tend to co-occur with workplace cultures that support the integration of work and family lives, which can manifest in managerial support for work-family balance and social norms that encourage workers to utilize benefits (Thompson et al., 1999). Regardless of whether the workplace culture leads to or results from working conditions, it likely affects fertility plans and may have extraneously contributed to the effects found in the current study.

Collectively, the findings suggest that working conditions exert a broader influence on family well-being than previous research has demonstrated. Previous studies have shown that working conditions influence parenting behaviors and the time that parents spend with children (Genadek & Hill, 2017; Hook & Wolfe, 2013; Parcel & Menaghan, 1994), but this study is the first to link specific work characteristics with plans for childbearing using longitudinal data.

These findings also have important implications for work-family policy, suggesting that the impacts of "family-friendly" working conditions go beyond enabling parents to care for their children, but also play into their decision to become parents in the first place. The United States has higher rates of work-family conflict and, at the same time, has had fewer laws in place to support working families than other high-income countries (Heymann & El-Dardiry, 2009; Stier et al., 2012). For women who are already mothers, our findings suggest that policies ensuring that workers have the option of part-time schedules with proportional wages and supporting autonomy and flexibility over work hours will also support reproductive autonomy. For childless women, policies that address underemployment by removing barriers to getting more, desired hours may also remove constraints on their decision of whether to have children.

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Declarations

Ethical approval This study was exempt from requiring ethics approval because it used publicly available, secondary data. The original NLSY received its own ethics approval when informed consent was obtained from all individual participants included in the study.

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