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ABSTRACT

Do Fathers Have Son Preference in the United States? Evidence from Paternal Subjective Well-Being

Using data drawn from 2010, 2012, and 2013 American Time Use Survey Well-Being Modules, this paper examines the existence of son preference among fathers in the U.S. by estimating the effect of child gender on the fathers' subjective well-being. A wide range of subjective well-being measures, including happiness, pain, sadness, stress, tiredness, and meaningfulness, is analyzed, and fixed-effects models are adopted to control for unobserved individual heterogeneity. The results from the full sample show that fathers feel less sad and tired when interacting with both sons and daughters versus with daughters only. In families with only one child, fathers report no difference in subjective well-being when spending time with a son versus with a daughter. By further stratifying this sample of fathers by child's age of three, we continue to find no difference in paternal subjective well-being between being with a son and with a daughter when the child is younger than three. However, when the child is three or older, we find that fathers feel less stressed and more meaningful being with a son versus with a daughter. The results from Asian fathers in the U.S., in contrast, show a tremendous reduction in stress in activities with sons only than with daughters only. These results indicate no evidence of son preference in the general U.S. population. If there is any, it only exists among Asian fathers in the U.S.

JEL Classification: J13, J16, I31

Keywords: son preference, child gender, subjective well-being, stress, time use

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1. Introduction

The prevalence of gender bias towards sons due to preferences as well as differences in the economic returns to sons and daughters in developing countries, especially in South and East Asia, is well known among scholars, and its impact on children's well-being has been widely documented in the literature (for example, see Das Gupta et al., 2003; Jayachandran & Pande, 2017; Purewal, 2020; Rose 2018; Rossi & Rouanet, 2015; Schief et al., 2021; Sen, 1990, 1992, 2001; Sivak & Smirnov, 2019). Does this son preference also exist in a developed country such as the United States?[1] Although quite a few scholars have investigated this research question (for a review, see Rose 2018), they have not reached a broad consensus on the existence of son preference in the U.S., and from the perspective that the more gender equality a society has, the less likely child gender preference exists (Pollard & Morgan, 2002), son preference should be much weaker, if there is any, in the U.S. than in most developing countries.

The empirical findings on son preference in the U.S. are mixed. One strand of scholarship finds the association between child gender and family structure consistent with the son preference hypothesis. For example, researchers have found that the presence of a male fetus, relative to a female fetus, increases the likelihood of marriage formation; a boy compared to a girl reduces the probability of marriage dissolution (Dahl & Moretti, 2008) and raises marital happiness and satisfaction (Cox et al., 1999; Katzev et al., 1994). Also, firstborn girls increase the number of children in the family (Dahl & Moretti, 2008). Another strand of studies focuses on parental care for boys vs. girls and uses it as evidence of son preference. For example, fathers spend more time with sons than with daughters (Harris & Morgan, 1991; Lundberg, Pabilonia &

[1] Gallup survey has asked parents in the U.S. their preference for the gender of children 11 times since 1941 and consistently found that fathers—but not mothers—prefer a boy if they could have only one child (Newport, 2018).

Ward-Batts, 2007; Price, 2008; Yeung et al., 2001), particularly with singleton sons relative to singleton daughters (Mammen, 2011).

Although these findings may indicate that parents, especially fathers, have a gender bias, studies with more sophisticated econometric methods and recent population data have failed to show evidence of son preference. For example, using more recent U.S. data, Blau et al. (2020) revisited Dahl and Moretti (2008) but failed to find that having a female first child was associated with a higher probability of having additional children among natives, although a female first child was still more likely to be in the family without a father in particular among natives. A few studies find that parents treat girls and boys equally in plenty of dimensions, such as parental spending (Kornrich & Furstenberg, 2013), prenatal care (Lhila & Simon, 2008), and parental availability (Hofferth & Anderson, 2003). Even if parents treat boys differently from girls, it may not necessarily mean they have a gender bias (Baker & Milligan, 2016; Gugl & Welling, 2012). Parents may face different constraints in raising boys and girls, and they may have a comparative advantage in doing same-sex parenting (Lundberg, 2005a, 2005b). Furthermore, the observed relationship between the child's gender and marriage stability should not be simply interpreted as evidence of son preference. There might exist reverse causality: the poor quality of marriage may lead to the birth of a girl because female fetuses are stronger than male fetuses biologically (Hamoudi & Nobles, 2014).

As we can see, a majority of existing studies on son preference have focused on evidence from individuals' behavior, such as fertility, marriage, divorce, childbearing, and time use. In addition to watching an individual's behavior, however, examining one's subjective well-being is another useful method of capturing the individual's preferences (Frey & Stutzer, 1999). In this study, we extend the literature on son preference in the U.S. by investigating whether child

gender affects fathers' subjective well-being (SWB). We hypothesize that if son preference is prevalent in the U.S., fathers should have gained greater utility from spending time with sons than with daughters. As a result, they will report a higher level of positive feelings and/or a lower level of negative emotions when doing activities with their sons relative to daughters, ceteris paribus. However, a competing hypothesis that fathers have a comparative advantage in raising sons may lead to similar paternal feelings or outcomes. According to this hypothesis, fathers are more productive in caring for sons because of gender-specific parenting skills and/or gender differences in child development requirements (Dahl & Moretti 2008; Lundberg 2005a). Boys and girls have different care requirements due to their distinct biological characteristics and social norms, making fathers more critical for raising sons than daughters. Since boys and girls have different production functions, the actual or perceived returns to paternal inputs may also vary by the gender of the children, leading to a different level of SWB while parenting boys versus girls.

To distinguish paternal son preference from their comparative advantage in raising sons, we further hypothesize that any existence of son preference would appear when the child was born. In contrast, any presence of fathers' comparative advantage in raising a son is less likely to occur for infants and toddlers. Suppose we fail to see fathers having a higher level of positive feelings with sons versus daughters when children are young but only observe the phenomenon when children aged three or above. In that case, the association between paternal SWB and child gender is most likely due to the comparative advantage in raising same-gender children instead of son preference. In this paper, we focus on fathers but not mothers mainly because gender bias is more prominent among fathers (Connelly & Kimmel, 2015; Dahl & Moretti, 2008; Mammen, 2011; Musick et al., 2016; Raley & Bianchi, 2006).

Our study contributes to the research on parental well-being, gender and gender composition of the children, and fathers' interaction with the children. First and foremost, we provide more evidence to the argument on whether there is son preference in the U.S. No studies investigate son preference through the channel of parents' subjective well-being. Therefore, we provide a brand-new perspective to look at this issue. In addition to testing whether there is son preference like the other existing studies, our work also provides a possible explanation of why there exists son preference if there is any. It is because having a son versus a daughter may affect fathers' subjective well-being differently, such as making them happier or less stressed. Second, we fill the gap in the parental well-being literature by estimating the impact of child gender (or gender composition) on paternal SWB. Whereas scholars have mainly focused on the existence of children and the number of children on parental well-being outcomes, only one U.S. study (Negraia et al. 2021) explores the relationship between child gender composition and parental SWB. We broaden this strand of research to include the impact of gender of children and deepen the analysis conducted by Negraia et al. (2021) by estimating an unbiased relationship using individual fixed-effects models. Thirdly, this paper adds more evidence to a broader branch of research that studies the determinants and consequences of fathers' investment with children by examining fathers' subjective well-being with sons versus daughters and interacting with older children versus younger children. It advances the Mammon (2011) study by further investigating whether fathers' increased time with same-sex children is due to son preference or fathers' comparative advantage in raising a son. It helps us better understand why fathers spend more time with sons and increase our knowledge of the father-child relationship. Lastly, the results of this paper add more evidence on paternal SWB in time with children versus without children, which is an update and extension of Musick et al. (2016).

2. Literature Review

2.1 Child Gender, Fertility, and Family Structure

Although there are multiple ways to test the existence of son preference, the most direct evidence comes from parental fertility behaviors. One of the most important studies on son preference is Dahl and Moretti (2008). They provided fertility evidence of son preference by finding that having a firstborn girl versus a boy increased the chance of having additional children using the 1960-2000 U.S. Census data. Blau et al. (2020) updated this research using the 2008-2013 American Community Surveys, but they failed to discover any fertility evidence of son preference among natives. They argued that this could be explained by the fact that the increasing relative costs of raising girls (such as college costs) have decreased the demand for additional children after a female first child. Instead of son preference, a small strand of literature (Angrist & Evans, 1998; Larsen Gibby & Thomas, 2019; Teachman & Schollaert, 1989) indicates a preference for mixed-gender children. Although Pollard and Morgan (2002) found that such mixed-gender preference weakened during 1986-1995, Tian and Morgan (2015) argued that this weakened trend would persist in the U.S. because of the stalled gender revolution. Outside of the U.S., Andersson et al. (2006) detected a preference for mixed-gender children in the Nordic countries.

Although the fertility evidence of son preference for the general U.S. population is mixed, it is more unanimously consistent among Asian parents in the U.S. Asian mothers in the U.S., in particular Chinese, Asian Indian, and Korean mothers, are more likely to abort a girl fetus and give birth to a boy when they have already given birth to girls (Abrevaya, 2009; Almond & Edlund, 2008; Blau et al., 2020; Duan & Hicks, 2020; Grech, 2017). Sex selection

may also exist among other immigrant groups, particularly for first/second-generation immigrants from countries with higher gender inequality and lower female status (Blau et al., 2020; Jergins, 2021).

In addition to fertility, a growing body of research has examined the impact of children's gender on family structure, which provides another channel to investigate son preference (Lundberg, 2005a; Raley & Bianchi, 2006). In general, this strand of the literature suggests that boys, relative to girls, increase marriage stability. For example, male fetuses increase the likelihood of shotgun marriages (Blau et al., 2020; Dahl & Moretti, 2008). The nonmarital birth of a son raises the chance of a follow-up marriage (Lundberg & Rose, 2003). Firstborn boys reduce the likelihood of divorce for their parents (Ananat & Michaels, 2008; Bedard & Deschenes, 2005; Cox et al., 1999; Dahl & Moretti, 2008; Katzev et al., 1994). However, whether the relationship between child gender and family structure should be interpreted as evidence of son preference is still questionable. Hamoudi and Nobles (2014) argued that reverse causality might explain these results. In the presence of prenatal female survival advantage, unstable marriages might cause the birth of daughters rather than the other way around, suggesting that one should be more cautious when interpreting the association between offspring sex and family structure as evidence of son preference.

In this paper, we test the son preference hypothesis by estimating the impact of child gender on paternal subjective well-being, the channel that has not been properly explored in the literature. We add more evidence to the debate on son preference and look at this issue from a different perspective.

2.2 Child Gender and Fathers' Involvement with Children

This study falls into a broader branch of research that investigates the determinants and consequences of paternal investment in children. Fathers' involvement is important for children's development and their play with children can be more stimulating than mothers' (Lamb & Lewis, 2004). Previous studies have measured paternal involvement with the frequency of activities, retrospective time estimates, and time diaries. They found that child gender affects the total time fathers spend with children: fathers interact more with sons than with daughters (Lundberg, 2005a; Mammen, 2011). Understanding how child gender affects fathers' time allocation and shapes how they interact with children helps explain why we want to focus on fathers' subjective well-being in our paper.

Researchers have found that fathers are more likely to obtain custody of sons than that of daughters after a divorce (Dahl & Moretti, 2008). Unmarried fathers are more involved with sons than with daughters (Lundberg, McLanahan, & Rose, 2007). And fathers work more hours and have wage rates increased more in response to sons' births (Lundberg & Rose, 2002). Compared to daughters, sons born to unmarried parents are more likely to receive the father's surname (Lundberg, McLanahan, & Rose, 2007) and are more likely to live in families with access to a man's income (Mammen, 2008). More importantly, fathers of boys spend more time in childcare and doing activities with children than fathers of girls, and boys receive more time from fathers than girls (Harris & Morgan, 1991; Mammen, 2011; Yeung et al., 2001). An analysis of the 2003 American Time Use Survey shows that singleton boys, relative to singleton girls, get extra primary care time from fathers (Mammen, 2011). Fathers' time spent with children and the types of activities differ by children's gender or gender composition. Fathers are more likely to include boys than girls in playing, doing sports and active leisure, and having companionship fun (Lundberg, 2005a; Lundberg, Pabilonia, &

Ward-Batts, 2007; Meier et al., 2016). This strand of studies raises an interesting question: do fathers feel happier or less tired/stressed when being with a son than with a daughter?

Existing studies have indicated that child gender does affect fathers' parenting behaviors and fathers treat sons differently from daughters in certain dimensions. Yet, it is still unclear whether the results reflect that fathers prefer sons or have a comparative advantage in raising sons. Fathers are more productive in producing boys, or boys need fathers more than girls do (Lundberg, 2005a, 2005b). It is possible that the "production function" is distinct for boys and girls, and therefore, the parents of boys and girls face different constraints and prices. Fathers spend more time with sons, maybe because they have a comparative advantage in raising sons versus daughters. Suppose fathers play a pivotal role in the development of a son, and the lack of a male role model is more harmful to sons. It provides another explanation for the phenomenon that sons increase marital stability and have more engaged and committed fathers. Using the American Time Use Survey (ATUS) Well-Being (WB) Modules, this paper studies how child gender affects father's subjective well-being and helps us better understand the relationship between fathers and the gender of children.

2.3 Child Gender and Parental SWB

In general, parenthood is considered a rewarding life pursuit, although well-being is undermined if there is more than one child (Meier et al., 2018; Musick et al., 2016). In the literature, the impact of having a child on parental SWB has been well-documented; however, the role of child gender on parental well-being has not been much explored. Two earlier European studies examined the effect of children's sex on parents' subjective well-being, but neither found clear evidence of son preference. Using Danish twin data, Kohler et al. (2004) found that after

controlling for partnership status, a large positive effect of the firstborn son on life satisfaction disappeared completely, suggesting that what matters for life satisfaction is not the gender of the first child but marital stability. Margolis and Myrskylä (2016) tested if Europeans preferred mixed-sex children using longitudinal data from the German Socio-Economic Panel and the British Household Panel Study. They found that the sex of the first child affected neither the likelihood of having a second child nor the parents' happiness. But having the first two children of the same sex increased the likelihood of having a third child, indicating mixed-sex preferences rather than son preference. It is worth noting that the measures of subjective well-being—life satisfaction and happiness—used in these two studies are based on a global assessment of well-being. Although these measures are supposed to reflect a stable inner state of well-being, they are, instead, judgments that individuals form on the spot, thus are influenced by contexts and moods, and are likely to suffer from social desirability bias (Schwarz & Strack, 1999). As an alternative, surveying moment-to-moment feelings/emotions is a less challenging task for respondents and can capture how specific context shapes the instantaneous SWB (Schwarz & Strack, 1999). Our study overcomes the weakness of the global assessment of happiness and life satisfaction by employing various episode-based measures of SWB.

In addition to these two European studies, a recent U.S. study, Negraia et al. (2021), assessed whether the gender composition of children matters for parents' subjective well-being. Using the ATUS WB Modules in 2010, 2012 and 2013, they found that fathers are more stressed while staying with daughters or mixed-gender children versus with sons only. Yet, this relationship was not statistically significant at the conventional level when 16 major activity indicators were controlled. Although using the same data source as our paper, Negraia et al. (2021) have failed to properly examine whether fathers have son preference in the U.S. for the

following three reasons. First, their estimates based on random-intercept models (also called random-effects models)[2] would be biased if unobserved individual characteristics are related to observed activity-level or individual-level covariates. This endogeneity is very likely considering that the quality of marriage could be related to the gender of children (Hamoudi & Nobles 2014). In contrast, the individual fixed-effects model could control for any unobserved factors invariant across activities between individuals, either or not correlated with observed activity-level or individual-level characteristics, providing unbiased estimates of relationships between well-being and gender of children.[3] By adopting the individual fixed-effects model, we further Negraia et al. (2021) by providing an unbiased link between paternal subjective well-being and the gender of children. Second, their estimates are likely to be inaccurate because they are based on unweighted regressions.[4] According to U.S. Bureau of Labor Statistics (2014, pp. 6-7), one has to use the WB module activity weights multiplied by the total amount of time in eligible activities to get an unbiased estimate of the average level of affect during an episode. Following this guideline, our analysis uses the appropriate weights to generate unbiased estimates of the difference in the levels of affect when fathers spend time with sons versus daughters. Finally, their sample is not appropriate to test whether fathers have son preference because their sample failed to include all own children. They are simply examining whether the gender composition of children is associated with parents' subjective well-being when parents spend time with own household children under age 18. As a result, they have left out any interactions between parents and own nonhousehold children. Furthermore, they have also ignored some parents could be

[2] Negraia et al. (2021, p. 830) described their models as random intercept models and their Stata do files available at https://osf.io/zxuhe/ show that they have used *xtreg, re* in Stata, which is also called random-effects models.
[3] For detailed comparison between random-intercept models and fixed-effects models, see Allison (2009). Random intercept models have been used in Musick et al. (2016) with the time use data.
[4] Their Stata do files show that although their descriptive statistics are weighted, none of their regression estimates are weighted. This could be because they are using the random effects models in Stata (*xtreg, re*) where probability weights are not allowed.

interacting with sons and daughters over age 18 in the household. We include both household and nonhousehold children under age 18 in our analysis and minimize the possibility of fathers having own nonhousehold children over age 18, as detailed below. We also examine the subsamples of fathers of singletons and Asian fathers in the U.S.

3. Empirical Framework

We adopt fixed-effects models in estimating the following equation to test whether fathers report a higher level of subjective well-being when being with sons than with daughters.

$$SWB_{ik} = \beta Son_{ik} + \gamma X_{ik} + \delta Z_i + \alpha_i + \varepsilon_{ik} \quad (1)$$

where SWB_{ik} is the level of subjective well-being for father *i* during episode *k*, Son_{ik} is a set of dummy variables indicating the presence of children and the gender composition of children for father *i* during episode *k*, X_{ik} is a set of characteristics for father *i* that vary over episodes, Z_i is a set of characteristics for father *i* that do not vary over episodes, α_i represents unobserved individual heterogeneity for father *i* that do not vary over episodes, and ε_{ik} is the error term.

Although a linear model using OLS allows us to control for a comprehensive set of individual factors that may affect SWB, some unobserved individual heterogeneity, α_i, could be left out, resulting in biased estimates.[5] For example, OLS estimates will be biased if fathers spend time with sons (or daughters) based on some unobserved factors (i.e., personality traits, the quality of marriage), and these factors can affect SWB. Even in the subsample of fathers of singletons, OLS estimates may still be biased if the child's gender is related to marriage quality

[5] The random-intercept models have the same problems.

(Hamoudi & Nobles, 2014). According to Ferrer-i-Carbonell and Frijters (2004), the most important thing in studying the determinants of happiness is to consider unobserved individual heterogeneity, the conclusion obtained by testing various models used in the happiness studies. One approach to deal with individual heterogeneity is to adopt fixed-effects models, which have been widely used in this strand of literature (Clark et al., 2008; Clark & Georgellis, 2013; Lundberg & Rose, 2002). The fact that each respondent reports subjective well-being for three episodes in the ATUS WB Modules allows us to use individual fixed-effects models. This approach helps us address the issue of endogeneity regarding unobserved activity-invariant characteristics that may affect both the gender composition of children and the fathers' SWB. Note that individual fixed-effects models still cannot eliminate the bias generated by unobserved factors that vary across the three activities. To address this concern, we have controlled for a wide range of episode-level confounders.

In our model, the dependent variable, SWB_{ik}, is the SWB reported by fathers in each episode, including happiness, pain, sadness, stress, tiredness, and meaningfulness. We choose not to use ordered Probit models for the ease of result interpretation. Although the survey provides ordinal measures of subjective well-being, we adopt a cardinal interpretation of individuals' responses in the analysis. One challenge we face when using the cardinal interpretation is that respondents may interpret the measurement scale differently; for example, some respondents are high scorers, and others are low scorers. Using individual fixed-effects models can also help address this issue because the model captures individual heterogeneity in interpreting the scale of SWB measures. As long as the respondent is consistent in interpreting scales for different dimensions of SWB, our results will not be affected no matter how the respondent scores.

The main independent variables in our model are Son_{ik}. To test whether fathers' SWB differs between spending time with boys and girls, we adopt the specification that uses two dummy variables indicating the presence of children and the gender composition of children during the episode: 1) spending time with at least one son and 2) spending time without children. The reference category is spending time with daughters only. One disadvantage of this specification is that we cannot tell whether fathers prefer sons or mixed-gender children if fathers report a higher level of SWB when spending time with at least one son versus with daughters only. To further test our hypothesis, we decompose in another specification spending time with at least one son into 1) spending time with sons only and 2) spending time with sons and daughters.

We start with basic controls by including only the above key variables, and the number of children present during the activity. Then, we move on to further control for episode-level characteristics, X_{ik}, that may affect respondents' SWB: 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time-use categories in the ATUS)[6], dummies for activity start time, activity duration and whether the spouse/partner or other adults were present during the activity. All these controls vary across episodes.

There is no need to include individual characteristics, Z_i, in fixed-effects models because the model itself has controlled for individual heterogeneity. In the linear models using OLS (whose results are in the Appendix) various individual characteristics are controlled for, including basic controls (number of children and age of the youngest and oldest child) and

[6] When Negraia et al. (2021) controlled for 16 major activities, their finding that fathers are more stressed when interacting with daughters or mixed-gender children versus with sons only was no longer statistically significant. Therefore, it is important to control for the types of activity. To fully capture the effects of different types of activity on subjective well-being, we control for the most detailed time-use categories available from the ATUS, amounting to 210 activities in the full sample.

additional controls (respondent's age and its square, eight dummies for family income, five race/ethnicity dummies, five education dummies, a dummy for school enrolment, two dummies for marital status, three dummies for employment status, and a dummy for immigrant status). In addition to these individual-level confounders, we also include six dummies for diary days of the week, eleven survey month dummies, two year dummies, and a holiday dummy in OLS full-control estimation.

We first test the hypothesis using the full sample and then restrict the sample to fathers of singletons because many previous researchers have focused on the gender of the firstborn child as one of the important determinants of marriage formation, marriage dissolution, and marital happiness (Cox et al., 1999; Dahl & Moretti, 2008; Lundberg & Rose, 2003). Furthermore, singleton boys, relative to singleton girls, get extra primary care time from fathers (Mammen, 2011). We also examine the subsample of Asian fathers in the U.S. Son preference is more of a culture in developing countries, especially in Asian countries like China and India. Sen (1990, 1992, 2001) estimated that 80-100 million women in Asia had been missing through abortion, and there was a higher level of female infant mortality due to relative neglect. Abrevaya (2009) provided evidence that Chinese and Asian Indian mothers in the U.S. are more likely to give birth to a boy if they have previously given birth to girls only (also see Almond & Edlund, 2008; Grech, 2017). Based on these findings, if there is son preference in the U.S., we are more likely to find it among Asian families in the U.S.

Next, we examine whether the role of child gender on fathers' SWB varies by children's age. For this test, we use the sample of fathers with singletons because it is easier to divide the sample by child's age. We split the fathers into two groups: one group includes those with children under the age of three, and the other group contains those whose child is at least three

years of age. We pick the age three as a cutoff point for two reasons: 1) most child development studies find that sex-typed behaviors (such as different choices of toys, different play styles, and different ways to resolve conflicts) and gender segregation (such as preference for same-sex playdates) are more apparent from age three (Golombok et al., 2008; Maccoby, 1998; Martin et al., 1990; Ruble, 2006); and 2) parental roles, such as diaper changes or feeding the kids, vary little by child's gender before the child reaches three.

All results are weighted using the ATUS WB Module final activity weights multiplied by the total amount of time in eligible activities, which the Bureau of Labor Statistics provides.[7] They vary across individuals and have taken the duration of the episode into account. Because three episodes of activities are observed for each respondent, standard errors are clustered at the individual level.

4. DATA

4.1 Data Source and Measures of Subjective Well-Being

This study uses data drawn from 2010, 2012, and 2013 ATUS WB Modules. The ATUS is a time-diary study based on a nationally representative sample of the U.S. population 15 years of age or older. The survey has been conducted annually since 2003 by the U.S. Census Bureau, and it documents respondents' activities during a 24-hour period (called the diary day), which starts at 4 am on the day before the interview and ends at 4 am on the interview day. The diary days include all days in the year with the exception that data about some holidays were not collected in certain years (U.S. Bureau of Labor Statistics, 2022, p. 55). The survey asks

[7] Because the fixed effects estimation in Stata (*xtreg, fe*) does not allow weights to vary among activities, we use the package *reghdfe* developed by Correia (2017).

respondents where and when they conducted various activities and provides rich information on individual demographics and activity characteristics.

The Well-Being Modules, added at the end of the ATUS interview in 2010, 2012, and 2013, randomly selected three activities reported by each respondent in the ATUS, except sleeping, grooming, and personal activities. For each selected activity, respondents were asked to rank their happiness, pain, sadness, stress, and tiredness experienced in the activity and the meaningfulness of the activity using a scale from 0 to 6. Because the Well-Being Module measures various dimensions of emotions that respondents feel during a specific activity at a particular time, it has been widely used in subjective well-being studies (Connelly & Kimmel, 2015; Meier et al., 2016; Musick et al., 2016; Negraia et al., 2021).

4.2 Samples

We pool the three-year cross-sectional data of the ATUS WB Modules together to get a larger sample size. We restrict the sample to episodes of fathers between the ages of 18 and 40, with at least one own child under age 18 but no own child over age 18 in the household. Both household and nonhousehold children are included in our analysis. The ATUS provides information on the age and sex for the household children regardless of age. For the nonhousehold children, however, the same information is only collected for children under age 18. As a result, if there were any nonhousehold children older than 18 spending time with fathers, they cannot be identified as children of the respondent in the ATUS. To minimize the possibility of having older nonhousehold children being with fathers in the selected episodes, we restrict the age of fathers up to 40. The observation unit is an episode, and each father has up to three episodes.

Out of the 34,565 respondents to the three years of ATUS WB Modules, there are 15,301 men and 4,726 of them are fathers with no own child over age 18 in the household. And 2,616 of these fathers are between the ages of 18 and 40, for a total of 7,802 episodes. We excluded 52 episodes with missing subjective well-being measures or missing information regarding whether the respondent was interacting with anyone during the activity, which also dropped 2 fathers. We also dropped 12 fathers with only one episode included in the ATUS WB Modules because we need at least two episodes for each respondent in the fixed-effects estimation. In the end, there are 2,602 fathers with 7,738 episodes in the sample.

4.3 Summary Statistics of Key Variables

Table 1 summarizes the six measures of subjective well-being reported in episodes by fathers. We group all episodes into three categories: 1) doing activities without children; 2) doing activities with at least one son; and 3) doing activities with daughters only, based on the survey question, "Who was in the room with you / Who accompanied you during the activity?" Panel A presents the descriptive statistics of the SWB for the full sample. By comparing Columns a and b with c, we see that fathers reported higher levels of happiness and meaningfulness and a lower stress level when doing activities with at least one son than without children. And they reported lower levels of stress and tiredness when spending time with daughters only than without children. There is no statistically significant difference in SWB when fathers spend time with at least one son versus with daughters only.

In Panel B, we restrict the sample to fathers of singletons. We continue to find that fathers felt much happier and more meaningful and less stressed and sad when spending time with a child than without a child, which is consistent with the pattern shown in Panel A.

However, we observe some gender differences: fathers considered the activities more meaningful when being with a son relative to being with a daughter. The sample of Asian fathers in the U.S., shown in Panel C, is relatively small, with only 374 episodes. We fail to see statistically significant differences in the SWB between fathers accompanied by at least one son and by daughters only. Note that Table 1 only provides simple comparisons of fathers' SWB in activities involving children of different gender or gender combination. To examine the unbiased relationship between the gender of children and paternal well-being, we need to control for confounding factors.

Table 2 presents the key characteristics of the full sample and the two subsamples. As shown in the full sample, among the episodes reported by fathers, 33% were spent with at least one son, 14% with daughters only, and 53% without children. The average duration of an episode was 1.2 hours. On average, fathers had two children, were 34 years old, 36% had a college degree or above, 83% were married, and 90% were employed (82% were wage and salary workers). Among the sample of Asian fathers in the U.S., 87% were immigrants.[8]

5. RESULTS

5.1 Full Sample Analysis

[8] The unweighted sex ratios (sons/daughters) were 1.088 in the full sample, 1.080 in the one child sample, and 1.067 in the sample of Asian fathers in the U.S. Two factors, the sex ratios at birth and whether a child is living with a father, would affect the sex ratios in our samples of fathers. According to the analyses in Blau et al. (2020) of 2008-2013 American Community Survey data (which covered more or less the same time period as 2010, 2012, and 2013 ATUS WB modules used in our paper), there was no evidence of sex selection for the second or third child regardless of natives or immigrants. However, they found that a first daughter significantly raises the probability of living without a father among natives but not among immigrants. These might explain why the sex ratios are slightly higher in the full sample and the one child sample than in the sample of Asian fathers in the U.S., who were mostly immigrants.

We first regressed the six measures of SWB on the gender composition of children using the full sample and reported the fixed-effects results in Table 3. The corresponding OLS results for the full sample, one child sample, and sample of Asian fathers in the U.S. are in Appendix Tables A1-A3. OLS results were substantially different from the fixed-effects results, highlighting the importance of controlling for individual heterogeneity.[9]

Starting with a parsimonious specification by including only two key variables indicating the presence of children and gender composition of children, we failed to find that child gender had any statistically significant effect on father's subjective well-being at the conventional level (shown in Panel A). After further controlling for episode-level confounders, we found that fathers reported being less sad and tired when spending time with at least one son than with daughters only (shown in Panel B). However, from this specification, we still cannot tell whether the lower levels of sadness and tiredness reported by fathers with at least one son is due to sons or due to mixed-gender children. To test whether sons alone reduce fathers' sadness and fatigue, we differentiated spending time with only sons from spending time with mixed-gender children. As shown in Panel C, we found that spending time with mixed-gender children reduced fathers' sadness and tiredness. Being with both sons and daughters reduced the level of sadness by 70% (calculated at the mean: 0.315/0.451) and the level of tiredness by 19% (calculated at the mean: 0.451/2.360) than with daughters only. There was no statistically significant difference in SWB between being with sons only and with daughters only or between being with sons only and with both sons and daughters. Results in Table 3 also show that fathers felt less happy and considered

[9] The random effects estimation in Stata (*xtreg, re*) does not allow probability weights. Therefore, we report OLS results with probability weights. We have also carried out the Hausman specification tests for random effects and fixed effects using unweighted regressions based on the specification in Panel C of Table 3. Again, unweighted regressions are used because the random effects estimation in Stata does not allow probability weights. Of the six pairs of regressions, five rejected random effects in favor of fixed effects, whereas only one, the regression for pain, failed to reject random effects.

the activity less meaningful when spending time without children relative to with daughters only, which is consistent with the findings in Musick et al. (2016) that having children makes life more meaningful.

In general, the results showed no statistically significant difference in fathers' SWB between activities with sons only and those with daughters only. We failed to find any evidence of son preference in the full sample. The fact that fathers reported less sadness and tiredness in activities with both sons and daughters suggests a preference for mixed-gender children over having daughters only.[10]

5.2 One Child Sample Analysis

We limited the sample to fathers with only one child and reported the fixed-effects results in Table 4. Similar to the full sample analysis, we started with a parsimonious specification by only controlling spending time with a son and without a child and added all episode-level controls later on, with the results presented in Panels A and B, respectively. In both models, we failed to see fathers of singletons reported any different levels of SWB between doing activities with a son versus with a daughter: no evidence for son preference was detected from this sample. In comparison, the OLS results in Appendix Panel B of Table A2 showed that fathers of a son showed a lower level of stress and a higher level of meaningfulness than fathers of a daughter. The fact that these statistically significant estimates in the OLS disappeared in the fixed-effects results in Table 4 indicates that the gender of the child, even the first child, could be associated

[10] This finding is clearly different from the finding in Negraia et al. (2021) that fathers are more stressed while staying with daughters or mixed-gender children than with sons only. Furthermore, their result became statistically insignificant when 16 major activities were controlled for, whereas detailed activities are already controlled for in our result. As pointed out in section 2.3, the divergent results seem to be due to the differences in estimation methods, weighting, and sample selection.

with some parental or family characteristics that are difficult to control. Without controlling for them, the OLS estimate is biased, which corroborates with the findings in Hamoudi and Nobles (2014).

Finally, among fathers with only one child, we continued to see that they reported less happiness and meaningfulness and more stress in episodes without a child than with their daughter in basic-control models in Panel A. However, these effects were no longer statistically significant at the conventional level in the full-control models in Panel B, which was not surprising considering a decent number of episode-level controls.

5.3 Analysis of the Sample of Asian Fathers in the U.S.

The results for Asian fathers in the U.S. are presented in Table 5. When we only included basic controls, as shown in Panel A, we failed to find fathers' subjective well-being was related to the gender of their children. However, after controlling for more episode-level confounders (shown in Panel B), we found that Asian fathers accompanied by at least one son felt less stressed than those accompanied by daughters only. By further differentiating time with sons only and time with both genders of children, we found that the lower stress level was due to spending time with sons only (shown in Panel C).[11] The magnitude is substantial: being with only sons relative to only daughters was associated with a 101% (calculated at the mean: 1.724/1.705) decrease in stress. When comparing fathers' SWB in activities with both genders of children to that in activities with daughters only, we did not see much difference. Overall, fixed-effects results indicated that spending time with sons versus daughters tremendously reduced the stress for Asian fathers in the U.S.

[11] A Chow test of pooling based on the specification in Panel C indicates that the coefficients are different between Asian fathers and other fathers.

Considering the findings in Blau et al. (2020) that sex selection may exist in other immigrant groups, we also analyzed all immigrant fathers. We found that, though the regression results are not reported here, all immigrant fathers felt less stressed when spending time with sons only than with daughters only. However, this finding is due to Asian immigrant fathers because, among the sample of non-Asian immigrant fathers, there was no statistically significant variation in stress when spending time with sons only vs. with daughters only.

5.4 Stratifying the Sample by Children's Age

In the above analysis, except among Asian fathers in the U.S., we fail to observe any significant effect of spending time with sons only rather than with daughters only on paternal SWB, which we interpret as no evidence of son preference among fathers. However, since we do not know whether the role of child gender on paternal SWB varies by child's age or not, we may not see any statistically significant effect in the pooled sample of children of all ages even if fathers did have son preference when the child was born, but such preference declines as the child ages. To examine whether the effect of child gender on fathers' SWB varies with child's age, we stratify the sample of singletons by the child's age of three and report the results for these two groups in Tables 6 and 7, respectively.[12]

For fathers with a younger child less than age three, shown in Table 6, fixed-effects results suggest that fathers reported no significant difference in SWB between being with a son and with a daughter. For fathers with a child aged at least three years, the fixed-effects results in Table 7 show that those accompanied by their son felt less stressed and considered the activity

[12] We do not use the specification with interaction terms of child age and gender because a Chow test based on the specification in Panel B of Tables 6 and 7 indicates that the coefficients are different between the two groups of singleton fathers. However, the specification with interaction terms produces more or less the same qualitative results.

more meaningful than those accompanied by their daughter. The phenomenon that fathers reported less stress and more meaningfulness when spending time with an older son versus an older daughter but not with a younger son versus a younger daughter suggests that the hypothesis we discussed above is not supported, further excluding the possibility of son preference. In contrast, the results are more consistent with the comparative advantage hypothesis—fathers are more productive in raising boys. Yet, this comparative advantage is minimal when the boy is young and becomes more important as the boy grows up. Because we failed to see any effect of child gender on fathers' SWB in the sample of fathers with younger singleton children, we can safely say there is no evidence of son preference in the general population. If there is son preference, then we should have observed it since the child was born.

Since the sample of Asian fathers in the U.S. was already small (374 observations), we could not further test our hypothesis on a sample of Asian fathers with only one child or by splitting the sample by child's age. Instead, we have created two dummies based on children's age: 1) the oldest child's age is less than three, and 2) other age. By interacting these two dummies with the dummies for the presence of children and the gender composition of children, we can test whether the result found in Panel C of Table 5 that spending time with sons versus daughters decreased the stress for Asian fathers in the U.S. varies by children's age. Column 4 of Table 8 shows that even among fathers whose oldest child is less than three years of age, spending time with only sons relative to only daughters statistically significantly lowers the stress level among Asian fathers in the U.S. The two coefficients on the interaction terms between the dummies for children's age and the dummy for spending time with sons only are both negative and statistically significantly different from zero. And they are not statistically significantly different from each other. These results indicate that the decreased stress level when

spending time with sons only relative to daughters only observed among Asian fathers in the U.S. does not statistically significantly vary by children's age, consistent with the son preference hypothesis.

6. Supplemental Analysis

We discuss some potential scenarios that may challenge our null results on SWB and our conclusion on the no evidence of son preference in the general population and show additional analyses that we have done to address these concerns.

The first challenge is the reverse causality we may have in the model. Despite using individual fixed-effects models, we still cannot completely exclude the possibility of reverse causality. Suppose fathers choose to interact with sons versus daughters based on their levels of SWB, for example, spending time with their son when they are less happy and more stressed, whereas spending time with their daughter when they are happier and less stressed. In that case, we will not observe any statistically significant effect even if the son preference exists. Although methodologically, we do not have a great way to address this issue, it should not be a genuine concern for this paper. The scenario mentioned above is unlikely to happen in the sample of fathers with a younger child. Most often, fathers cannot choose when to conduct the childcare, such as changing diapers and feeding, when the child is young. Therefore, we argue that reverse causality is unlikely the reason for the null effect we found in the one-child sample with a younger child.

Fixed-effects models capture the within-person SWB difference between spending time with a son and spending time with a daughter. Therefore, one may argue that the null result still cannot fully exclude the possibility of son preference if having a son increases fathers' overall

well-being regardless of whether they spend time with children. To address this concern, we estimate the impact of having a son in the family versus having daughters only on father's SWB by splitting the sample into activities with and without children. Note that we use OLS instead of fixed-effects models here because the gender composition of children does not vary across episodes for each father. If having a son improves overall SWB, we would observe more positive feelings for fathers having at least one son in the family, whether they are doing activities with children or not. Appendix Tables A4 through A6 present the OLS regression results of the measures of SWB on whether there is at least one son in the family for the full sample, one-child sample, and sample of Asian fathers in the U.S. by activities with and without children. We found that compared to fathers with daughters only in the family, fathers with at least one son in the family reported more positive SWB only during the episodes with children, presented in Panel A of Tables A4 through A6. During the episodes without children, presented in Panel B of Tables A5 through A6, there was no statistically significant difference in the SWB between fathers with at least one son in the family and those with daughters only. These results indicate that the changes in SWB due to having sons are present only when fathers spend time with children, excluding the possibility that the null result is due to a change in the overall SWB of fathers. The fact that the SWB measures we used are instantaneous measures reported by the respondents right after each activity instead of lifetime well-being measures further alleviates this concern.

One could be concerned that the null results found in some samples based on fixed effects are simply because the key independent variables do not have enough variation for each father. In fixed-effects estimations, for any independent variable that does not vary enough, its effect will be absorbed by the model, leading to statistically insignificant results. In our sample,

however, fathers with two or more categories out of the three categories of time use—episodes with at least one son, episodes with daughters only, and episodes without a child—are 53.5 percent in the full sample, 50.1 percent in the singleton sample, and 48.4 percent in the sample of Asian fathers in the U.S. Therefore, it is unlikely that the null results found in some samples are because of the lack of variation among the independent variables.

Finally, one might argue that the null results found among fathers with singleton children in Table 4 could be due to the small sample size, combined with a large number of individual-level fixed effects, rather than there is, indeed, little son preference. However, the fact that substantial and statistically significant results are observed among the smallest sample used in this paper, with the same individual-level fixed effects, for the analysis of Asian fathers in the U.S. in Table 5 demonstrates that the null result in Table 4 is unlikely due to the small sample size or too many controls. In addition to this piece of evidence, the statistically significant results discovered in the same singleton children sample but using linear models with the OLS method(shown in Appendix Table A2) also indicate the null results from fixed-effects models are not likely due to the small sample size.

7. Conclusions

Strong preference for one gender of children or sex composition of offspring can influence fertility, skew sex ratios, change parenting behaviors and family structures, and ultimately affect child development. In this paper, we examine the effect of child gender on fathers' subjective well-being, which can shed light on son preference in the United States. Using fixed-effects models to control for individual heterogeneity and SWB data from 2010, 2012, and 2013 ATUS WB Modules, we found that fathers felt less sad and tired when spending time with both sons

and daughters versus with daughters only, but reported no difference in SWB in activities with sons only versus with daughters only. These results indicate a preference for mixed-gender children rather than a preference for sons among fathers. Our result from fathers of singletons further confirms the lack of evidence of son preference: fathers with singletons reported no difference in SWB between being with a son and with a daughter. After splitting the sample by children's age, we found that fathers reported being less stressed and feeling more meaningful with a son than with a daughter if the children were at least three years of age, but we failed to see such SWB difference in the sample of fathers with singletons under age three. This phenomenon is consistent with the comparative advantage hypothesis: fathers are more productive in raising same-sex children, and this advantage is more evident when the son becomes older. Although our results show no evidence of son preference for the general population in the U.S., we did find that Asian fathers in the U.S. felt less stressed in episodes with sons versus daughters. The fact that this effect exists even among Asian fathers with sons less than three years of age indicates son preference.

To sum up, we fail to find any evidence of son preference among the general population in the U.S., and if there is any, it must be among Asian fathers in the U.S. The evidence we provided that son preference has not gone beyond the Asian group is consistent with the evidence found in a most recent fertility study by Blau et al. (2020), who used another nationally representative data during a similar period. As one of the first studies to examine how the gender composition of children is associated with parents' feelings/emotions, we test the existence of son preference from a channel different from Blau et al. (2020). Our results, jointly with Blau et al. (2020) and Hamoudi and Nobles (2014), indicate that son preference has not become a feature of U.S. demography; to the extent that it exists, it is confined to immigrants with a son

preference culture in their original countries. A couple of demographic changes could explain our results: shifts in the gender division of labor among married couples—increased female labor force participation (Juhn & Potter 2006) and male share of household work, including childcare (Raley et al., 2012; Sayer, 2005), growing bargaining power of women within the family (Lundberg & Pollak, 2008), the reduced gender pay gap, and rising costs to raise girls due to higher college attendance rates (Goldin et al. 2006). All these factors would lead to a decline in son preference if there were any in history.

Some limitations of using the ATUS WB Module to study the son preference question should be noted. First, the ATUS WB Module sample is a small (although representative of the population) dataset compared to other datasets, such as the American Community Survey, used in the son preference studies. Due to the small sample size of Asian fathers in the U.S., we cannot examine the Asian one-child sample or stratify the sample by children's age. Future SWB research with a larger dataset can further disentangle this issue. Second, we cannot differentiate biological children from adopted or stepchildren in the ATUS. Since most of the studies on son preference focus on biological children, it would have been ideal to limit the sample to fathers who have biological children only. Without doing so, the well-being effect of child gender will be underestimated, considering that son preference is more likely to appear among biological children. However, this is less likely to be an issue in our analysis because 93.3 percent of householders' children under age 18 are biological children in the 2010 Census of the United States (Kreider & Lofquist, 2010). The third limitation is that our sample only includes fathers up to age 40 to reduce the likelihood of having fathers spending time with nonhousehold children older than 18. In future studies using other datasets, it will be interesting to expand fathers' age to examine whether our conclusion still holds.

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Declarations

The authors have no competing interests to declare that are relevant to the content of this article.

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Table 1. Comparison of the Measures of Subjective Well-Being among Fathers' Activities

Panel A Full sample

	(a) Without children	(b) With at least one son	(c) With daughters only
Happiness	4.12	4.85 [a]	4.60
Pain	0.77	0.65	0.80
Sadness	0.47	0.40	0.46
Stress	1.73	1.11 [a]	1.11 [a]
Tiredness	2.44	2.28	2.02 [a]
Meaningfulness	4.23	4.94 [a]	4.60
# of episodes	4,096	2,584	1,058

Panel B One child sample

	(a) Without children	(b) With a son	(c) With a daughter
Happiness	4.03	4.88 [a]	4.73 [a]
Pain	0.64	0.50	0.59
Sadness	0.49	0.24 [a]	0.27 [a]
Stress	1.79	0.88 [a]	1.14 [a]
Tiredness	2.46	2.36	2.14
Meaningfulness	4.10	4.99 [a]	4.62 [a, b]
# of episodes	1,531	611	507

Panel C Sample of Asian fathers in the U.S.

	(a) Without children	(b) With at least one son	(c) With daughters only
Happiness	4.14	4.59	4.70
Pain	0.77	0.54	0.41
Sadness	0.79	0.66	0.19 [a]
Stress	1.86	1.38	1.43
Tiredness	2.38	2.60	2.67
Meaningfulness	4.55	4.87	4.92
# of episodes	188	140	46

Note: Each of the superscripts a and b denotes that the mean in the current column is different from the mean in columns a and b, respectively, at the 5 percent level of significance. The means are weighted using activity weights multiplied by the total amount of time in eligible activities. All measures of SWB range from 0 to 6.

Table 2. Means and Standard Deviations of Key Independent Variables

Variables	Full sample	One child sample	Asian fathers in the U.S.
With at least one son	0.334 (0.472)	0.230 (0.421)	0.374 (0.485)
With daughters only	0.137 (0.344)	0.191 (0.393)	0.123 (0.329)
Without children	0.529 (0.499)	0.578 (0.494)	0.503 (0.501)
Number of children present during the activity	0.846 (1.080)	0.422 (0.494)	0.778 (0.932)
Episode duration in hours	1.19 (1.72)	1.23 (1.79)	1.08 (1.41)
Interacting with anyone	0.681 (0.466)	0.666 (0.472)	0.639 (0.481)
Spouse/partner present	0.368 (0.482)	0.339 (0.474)	0.382 (0.487)
Other adults absent	0.465 (0.499)	0.465 (0.499)	0.455 (0.499)
Number of episodes	7,738	2,649	374
Number of children	2.00 (0.98)	1 (0)	1.71 (0.76)
Age of the youngest child	3.96 (3.71)	4.33 (4.36)	2.85 (2.65)
Age of the oldest child	7.11 (4.64)	4.33 (4.36)	5.10 (3.95)
Age	33.78 (4.63)	32.36 (5.19)	34.97 (3.87)
White	0.678 (0.467)	0.673 (0.469)	0
Black	0.069 (0.253)	0.082 (0.275)	0
Asian	0.048 (0.214)	0.060 (0.237)	1 (0)
Hispanic	0.188 (0.390)	0.167 (0.373)	0
Native American	0.009 (0.094)	0.010 (0.100)	0
Other	0.008 (0.089)	0.008 (0.088)	0
Less than some high school	0.033 (0.180)	0.014 (0.116)	0
Some high school	0.065 (0.247)	0.066 (0.249)	0.024 (0.153)
High school	0.261 (0.439)	0.266 (0.442)	0.063 (0.245)
Some college	0.275 (0.447)	0.301 (0.459)	0.103 (0.305)
College	0.233 (0.423)	0.229 (0.420)	0.333 (0.473)
Graduate	0.132 (0.338)	0.125 (0.331)	0.476 (0.501)
Enrolled in school	0.053 (0.223)	0.063 (0.243)	0.071 (0.259)
Unmarried	0.118 (0.323)	0.200 (0.401)	0.032 (0.176)
Married	0.826 (0.379)	0.716 (0.451)	0.960 (0.196)
Partner	0.056 (0.230)	0.083 (0.277)	0.008 (0.089)
Self-employed	0.085 (0.278)	0.075 (0.264)	0.048 (0.214)
Wage and salary workers	0.819 (0.385)	0.814 (0.389)	0.881 (0.325)
Unemployed	0.052 (0.222)	0.056 (0.231)	0.016 (0.125)
Not in the labor force	0.045 (0.207)	0.054 (0.226)	0.056 (0.230)
Family income missing	0.110 (0.312)	0.127 (0.333)	0.119 (0.325)
Family income less than $10,000	0.034 (0.181)	0.041 (0.197)	0.040 (0.196)
Family income $10,000-$19,999	0.070 (0.256)	0.087 (0.282)	0.040 (0.196)
Family income $20,000-$34,999	0.129 (0.335)	0.131 (0.337)	0.040 (0.196)
Family income $35,000-$49,999	0.115 (0.319)	0.125 (0.331)	0.040 (0.196)
Family income $50,000-$74,999	0.199 (0.400)	0.182 (0.386)	0.175 (0.381)
Family income $75,000-$99,999	0.136 (0.343)	0.136 (0.343)	0.127 (0.334)
Family income $100,000-$149,999	0.136 (0.343)	0.119 (0.324)	0.230 (0.423)
Family income $150,000 and over	0.071 (0.256)	0.052 (0.222)	0.190 (0.394)
Immigrant	0.200 (0.400)	0.179 (0.384)	0.873 (0.334)
Number of fathers	2,602	888	126

Note: All statistics are unweighted. Standard deviations are in parentheses.

Table 3. Child Gender and Fathers' Subjective Well-Being: Full Sample, Fixed Effects

Panel A Basic control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With at least one son	0.212	-0.014	-0.199*	-0.106	-0.241	0.181
	(0.140)	(0.077)	(0.106)	(0.140)	(0.165)	(0.154)
Without children	-0.520***	0.149*	0.112	0.281**	-0.138	-0.943***
	(0.145)	(0.082)	(0.116)	(0.131)	(0.154)	(0.157)
Observations	7,738	7,738	7,738	7,738	7,738	7,738
R-squared	0.808	0.911	0.820	0.820	0.801	0.781
No. of respondents	2,602	2,602	2,602	2,602	2,602	2,602

Panel B Full control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With at least one son	0.088	-0.059	-0.192**	-0.145	-0.287**	0.021
	(0.135)	(0.073)	(0.098)	(0.118)	(0.137)	(0.138)
Without children	-0.304**	0.113	0.004	0.112	0.073	-0.612***
	(0.151)	(0.084)	(0.117)	(0.120)	(0.156)	(0.166)
Observations	7,738	7,738	7,738	7,738	7,738	7,738
R-squared	0.840	0.928	0.845	0.858	0.844	0.823
No. of respondents	2,602	2,602	2,602	2,602	2,602	2,602

Panel C Full control with separate dummies for sons

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With sons only	0.088	-0.067	-0.132	-0.153	-0.207	0.089
	(0.151)	(0.079)	(0.107)	(0.126)	(0.152)	(0.153)
With sons and daughters	0.088	-0.044	-0.315***	-0.128	-0.451**	-0.118
	(0.145)	(0.096)	(0.108)	(0.157)	(0.177)	(0.160)
Without children	-0.304*	0.105	0.070	0.103	0.160	-0.538***
	(0.160)	(0.092)	(0.126)	(0.129)	(0.171)	(0.177)
Observations	7,738	7,738	7,738	7,738	7,738	7,738
R-squared	0.840	0.928	0.845	0.858	0.844	0.823
No. of respondents	2,602	2,602	2,602	2,602	2,602	2,602

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. The number of children present during the activity is controlled in all panels. The following control variables are additionally included in Panels B and C: 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table 4. Child Gender and Fathers' Subjective Well-Being: One Child Sample, Fixed Effects

Panel A Basic control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With a son	0.203	-0.122	-0.230	-0.054	0.060	0.248
	(0.289)	(0.140)	(0.217)	(0.259)	(0.290)	(0.307)
Without children	-0.493**	0.083	-0.005	0.337**	-0.085	-0.901***
	(0.205)	(0.076)	(0.135)	(0.131)	(0.198)	(0.220)
Observations	2,649	2,649	2,649	2,649	2,649	2,649
R-squared	0.797	0.903	0.808	0.835	0.809	0.779
No. of respondents	888	888	888	888	888	888

Panel B Full control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With a son	0.042	-0.111	-0.148	-0.117	-0.025	0.352
	(0.251)	(0.117)	(0.139)	(0.162)	(0.209)	(0.245)
Without children	-0.183	-0.004	-0.048	0.150	0.057	-0.433*
	(0.198)	(0.107)	(0.141)	(0.129)	(0.194)	(0.234)
Observations	2,649	2,649	2,649	2,649	2,649	2,649
R-squared	0.850	0.931	0.855	0.893	0.869	0.844
No. of respondents	888	888	888	888	888	888

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. The following control variables are included in Panel B: 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table 5. Child Gender and Fathers' Subjective Well-Being: Asian Fathers in the U.S., Fixed Effects

Panel A Basic control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With at least one son	0.516	-0.177	0.064	-0.681	-0.355	0.527
	(0.540)	(0.462)	(0.287)	(0.595)	(0.664)	(0.483)
Without children	0.264	0.767*	0.777***	0.954*	0.135	-0.251
	(0.390)	(0.393)	(0.207)	(0.520)	(0.494)	(0.312)
Observations	374	374	374	374	374	374
R-squared	0.834	0.857	0.891	0.780	0.750	0.710
No. of respondents	126	126	126	126	126	126

Panel B Full control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With at least one son	0.372	-0.049	-0.151	-1.400**	-1.032*	0.445
	(0.582)	(0.474)	(0.437)	(0.552)	(0.576)	(0.596)
Without children	0.268	0.533	0.379	-0.148	-0.382	0.220
	(0.566)	(0.473)	(0.441)	(0.709)	(0.617)	(0.603)
Observations	374	374	374	374	374	374
R-squared	0.954	0.945	0.951	0.926	0.924	0.925
No. of respondents	126	126	126	126	126	126

Panel C Full control with separate dummies for sons

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With sons only	0.055	-0.208	-0.171	-1.724***	-0.962	0.446
	(0.573)	(0.426)	(0.500)	(0.584)	(0.604)	(0.606)
With sons and daughters	1.389*	0.458	-0.088	-0.362	-1.258	0.441
	(0.745)	(0.760)	(0.476)	(0.835)	(0.982)	(0.804)
Without children	-0.286	0.257	0.344	-0.713	-0.259	0.222
	(0.552)	(0.462)	(0.538)	(0.794)	(0.672)	(0.619)
Observations	374	374	374	374	374	374
R-squared	0.956	0.946	0.952	0.928	0.924	0.925
No. of respondents	126	126	126	126	126	126

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. The number of children present during the activity is controlled in all panels. The following control variables are additionally included in Panels B and C: 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table 6. Child Gender and Fathers' Subjective Well-Being: One Child Sample (Age <3), Fixed Effects

Panel A Basic control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With a son	0.187	-0.138	0.002	0.127	0.127	0.045
	(0.446)	(0.228)	(0.248)	(0.361)	(0.440)	(0.468)
Without children	-0.625**	0.117	0.017	0.352**	0.019	-1.146***
	(0.293)	(0.106)	(0.198)	(0.168)	(0.260)	(0.311)
Observations	1,288	1,288	1,288	1,288	1,288	1,288
R-squared	0.774	0.856	0.742	0.823	0.784	0.764
No. of respondents	431	431	431	431	431	431

Panel B Full control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With a son	-0.100	-0.162	-0.143	0.031	-0.014	-0.064
	(0.371)	(0.190)	(0.187)	(0.219)	(0.273)	(0.342)
Without children	-0.238	-0.007	-0.139	0.179	0.049	-0.505
	(0.270)	(0.151)	(0.172)	(0.173)	(0.250)	(0.320)
Observations	1,288	1,288	1,288	1,288	1,288	1,288
R-squared	0.853	0.909	0.831	0.903	0.873	0.855
No. of respondents	431	431	431	431	431	431

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. The following control variables are included in Panel B: 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table 7. Child Gender and Fathers' Subjective Well-Being: One Child Sample (Age ≥3), Fixed Effects

Panel A Basic control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With a son	0.328	-0.128	-0.540*	-0.293	-0.107	0.701***
	(0.230)	(0.109)	(0.310)	(0.366)	(0.325)	(0.261)
Without children	-0.221	0.014	-0.050	0.306	-0.300	-0.396**
	(0.152)	(0.081)	(0.072)	(0.207)	(0.278)	(0.171)
Observations	1,361	1,361	1,361	1,361	1,361	1,361
R-squared	0.823	0.931	0.851	0.848	0.834	0.797
No. of respondents	457	457	457	457	457	457

Panel B Full control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With a son	0.251	-0.204	-0.248*	-0.664***	-0.129	0.892***
	(0.250)	(0.124)	(0.148)	(0.242)	(0.265)	(0.276)
Without children	0.125	-0.117	-0.041	-0.061	-0.017	0.056
	(0.214)	(0.092)	(0.124)	(0.193)	(0.197)	(0.262)
Observations	1,361	1,361	1,361	1,361	1,361	1,361
R-squared	0.881	0.957	0.900	0.912	0.903	0.873
No. of respondents	457	457	457	457	457	457

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. The following control variables are included in Panel B: 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table 8. Child Gender and Fathers' Subjective Well-Being: Asian Fathers in the U.S., Fixed Effects, Interaction Terms

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With sons only	0.098	-0.839	-0.794	-2.511**	-1.215	0.158
× Oldest child's age <3	(0.812)	(0.536)	(0.664)	(1.125)	(0.851)	(0.856)
With sons only	0.201	0.180	-0.296	-1.599**	-1.008	1.032
× Other age	(0.698)	(0.501)	(0.541)	(0.701)	(0.791)	(0.720)
With sons and daughters	0.796	-0.245	-0.890	0.276	-1.870**	-0.363
× Oldest child's age <3	(1.054)	(0.681)	(0.829)	(0.897)	(0.765)	(1.163)
With sons and daughters	1.568*	0.727	0.165	-0.490	-1.073	0.737
× Other age	(0.833)	(0.865)	(0.497)	(0.969)	(1.140)	(0.853)
Without children	-0.106	-0.037	-0.719	-1.387	-0.727	0.625
× Oldest child's age <3	(0.625)	(0.450)	(0.665)	(1.133)	(0.727)	(0.837)
Without children	-0.440	0.393	1.067**	-0.254	0.052	-0.144
× Other age	(0.690)	(0.561)	(0.416)	(0.896)	(0.793)	(0.645)
Observations	374	374	374	374	374	374
R-squared	0.957	0.947	0.957	0.930	0.925	0.931
No. of respondents	126	126	126	126	126	126

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. The number of children present during the activity is controlled in all panels. The following control variables are additionally included: 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Appendix
Table A1. Child Gender and Fathers' Subjective Well-Being: Full Sample, OLS

Panel A Basic control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With at least one son	0.227	-0.084	0.015	0.042	0.256	0.379
	(0.342)	(0.182)	(0.185)	(0.168)	(0.216)	(0.349)
Without children	-0.558**	-0.326	-0.067	0.629***	0.499**	-0.560**
	(0.232)	(0.267)	(0.279)	(0.235)	(0.232)	(0.247)
Observations	7,738	7,738	7,738	7,738	7,738	7,738
R-squared	0.043	0.031	0.014	0.030	0.006	0.032
No. of respondents	2,602	2,602	2,602	2,602	2,602	2,602

Panel B Full control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With at least one son	0.214	-0.004	-0.015	-0.108	0.220	0.277
	(0.204)	(0.103)	(0.098)	(0.105)	(0.175)	(0.199)
Without children	-0.063	-0.211	-0.160	0.054	0.393*	-0.356*
	(0.198)	(0.152)	(0.181)	(0.160)	(0.228)	(0.209)
Observations	7,738	7,738	7,738	7,738	7,738	7,738
R-squared	0.204	0.218	0.172	0.241	0.167	0.205
No. of respondents	2,602	2,602	2,602	2,602	2,602	2,602

Panel C Full control with separate dummies for sons

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With sons only	0.166	-0.042	-0.007	-0.125	0.303*	0.210
	(0.185)	(0.112)	(0.110)	(0.114)	(0.179)	(0.183)
With sons and daughters	0.308	0.073	-0.031	-0.076	0.054	0.412
	(0.263)	(0.129)	(0.115)	(0.135)	(0.217)	(0.256)
Without children	-0.119	-0.256*	-0.151	0.035	0.491**	-0.436**
	(0.184)	(0.155)	(0.185)	(0.165)	(0.234)	(0.205)
Observations	7,738	7,738	7,738	7,738	7,738	7,738
R-squared	0.204	0.218	0.172	0.241	0.167	0.205
No. of respondents	2,602	2,602	2,602	2,602	2,602	2,602

Note: Robust clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The following control variables are included in both basic and full controls in Panels A, B and C: number of children; number of children present during the activity; age of the youngest child; and age of the oldest child. The following control variables are additionally included in full control in Panels B and C: respondent's age and its square; five dummies for race/ethnicity; five education dummies; a dummy for school enrolment; two dummies for marital status; three dummies for employment status; eight dummies for family income; an immigrant dummy; a holiday dummy; six dummies for days of the week; eleven month dummies; two year dummies; dummies for detailed third-tier time-use categories; activity duration in hours; dummies for activity start time; dummies for the location of the activity; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table A2. Child Gender and Fathers' Subjective Well-Being: One Child Sample, OLS

Panel A Basic control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With a son	0.155	-0.098	-0.024	-0.257	0.220	0.377**
	(0.155)	(0.151)	(0.096)	(0.168)	(0.247)	(0.189)
Without children	-0.703***	0.001	0.212**	0.656***	0.315	-0.542***
	(0.149)	(0.127)	(0.106)	(0.174)	(0.204)	(0.192)
Observations	2,649	2,649	2,649	2,649	2,649	2,649
R-squared	0.053	0.026	0.010	0.040	0.003	0.038
No. of respondents	888	888	888	888	888	888

Panel B Full control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With a son	0.245	-0.249*	-0.093	-0.478***	0.112	0.447***
	(0.152)	(0.136)	(0.094)	(0.154)	(0.203)	(0.172)
Without children	0.072	-0.154	-0.032	-0.063	0.070	-0.102
	(0.156)	(0.145)	(0.107)	(0.169)	(0.210)	(0.194)
Observations	2,649	2,649	2,649	2,649	2,649	2,649
R-squared	0.353	0.286	0.273	0.407	0.300	0.361
No. of respondents	888	888	888	888	888	888

Note: Robust clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The following control variables are included in both basic and full controls in Panels A and B: age of the child. The following control variables are additionally included in full control in Panel B: respondent's age and its square; five dummies for race/ethnicity; five education dummies; a dummy for school enrolment; two dummies for marital status; three dummies for employment status; eight dummies for family income; an immigrant dummy; a holiday dummy; six dummies for days of the week; eleven month dummies; two year dummies; dummies for detailed third-tier time-use categories; activity duration in hours; dummies for activity start time; dummies for the location of the activity; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table A3. Child Gender and Fathers' Subjective Well-Being: Asian Fathers in the U.S., OLS

Panel A Basic control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With at least one son	-0.256	-0.085	0.299	-0.193	-0.491	-0.233
	(0.348)	(0.263)	(0.283)	(0.358)	(0.446)	(0.312)
Without children	-0.224	0.365	0.946***	0.552	-0.127	-0.297
	(0.443)	(0.365)	(0.301)	(0.495)	(0.409)	(0.413)
Observations	374	374	374	374	374	374
R-squared	0.031	0.040	0.039	0.026	0.095	0.043
No. of respondents	126	126	126	126	126	126

Panel B Full control

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With at least one son	-0.171	-0.685**	-0.149	-1.074**	-0.644	-0.097
	(0.451)	(0.341)	(0.312)	(0.502)	(0.459)	(0.366)
Without children	-0.752	-0.710	0.155	-0.310	-0.586	-0.706
	(0.634)	(0.463)	(0.494)	(0.720)	(0.647)	(0.545)
Observations	374	374	374	374	374	374
R-squared	0.788	0.823	0.807	0.758	0.780	0.741
No. of respondents	126	126	126	126	126	126

Panel C Full control with separate dummies for sons

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
With sons only	-0.241	-0.761**	-0.213	-1.135**	-0.709	-0.244
	(0.463)	(0.366)	(0.362)	(0.539)	(0.496)	(0.396)
With sons and daughters	0.024	-0.472	0.029	-0.905	-0.461	0.311
	(0.547)	(0.394)	(0.416)	(0.632)	(0.675)	(0.483)
Without children	-0.898	-0.870*	0.021	-0.437	-0.724	-1.013*
	(0.684)	(0.501)	(0.575)	(0.832)	(0.755)	(0.593)
Observations	374	374	374	374	374	374
R-squared	0.789	0.823	0.807	0.759	0.781	0.743
No. of respondents	126	126	126	126	126	126

Note: Robust clustered standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The following control variables are included in both basic and full controls in Panels A, B and C: number of children; number of children present during the activity; age of the youngest child; and age of the oldest child. The following control variables are additionally included in full control in Panels B and C: respondent's age and its square; five education dummies; a dummy for school enrolment; two dummies for marital status; three dummies for employment status; eight dummies for family income; an immigrant dummy; a holiday dummy; six dummies for days of the week; eleven month dummies; two year dummies; dummies for detailed third-tier time-use categories; activity duration in hours; dummies for activity start time; dummies for the location of the activity; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table A4. Child Gender and Fathers' Subjective Well-Being by Activities With and Without Children: Full Sample, OLS

Panel A Activities with children

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
Basic control						
At least one son in the family	0.406	0.131	0.153*	0.078	0.246	0.575
	(0.386)	(0.114)	(0.091)	(0.135)	(0.226)	(0.392)
R-squared	0.015	0.039	0.035	0.007	0.004	0.023
Full control						
At least one son in the family	0.280**	0.037	0.082	-0.154*	0.072	0.311**
	(0.125)	(0.091)	(0.062)	(0.092)	(0.141)	(0.130)
R-squared	0.328	0.354	0.411	0.287	0.229	0.297
Observations	3,642	3,642	3,642	3,642	3,642	3,642
No. of respondents	1,918	1,918	1,918	1,918	1,918	1,918

Panel B Activities without children

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
Basic control						
At least one son in the family	0.019	0.102	-0.019	-0.139	-0.015	0.088
	(0.127)	(0.110)	(0.087)	(0.163)	(0.145)	(0.142)
R-squared	0.008	0.023	0.011	0.009	0.001	0.006
Full control						
At least one son in the family	-0.046	0.094	-0.037	-0.094	-0.015	0.106
	(0.103)	(0.107)	(0.079)	(0.127)	(0.125)	(0.130)
R-squared	0.206	0.218	0.178	0.266	0.224	0.222
Observations	4,096	4,096	4,096	4,096	4,096	4,096
No. of respondents	2,048	2,048	2,048	2,048	2,048	2,048

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. The following control variables are included in both basic and full controls in Panels A and B: number of children; age of the youngest child; and age of the oldest child. The following control variables are additionally included in full control in Panels A and B: respondent's age and its square; five dummies for race/ethnicity; five education dummies; a dummy for school enrolment; two dummies for marital status; three dummies for employment status; eight dummies for family income; an immigrant dummy; a holiday dummy; six dummies for days of the week; eleven month dummies; two year dummies; 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table A5. Child Gender and Fathers' Subjective Well-Being by Activities With and Without Children: One Child Sample, OLS

Panel A Activities with children

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
Basic control						
One son in the family	0.158	-0.098	-0.025	-0.257	0.219	0.380**
	(0.154)	(0.151)	(0.096)	(0.168)	(0.248)	(0.189)
R-squared	0.012	0.031	0.004	0.008	0.004	0.017
Full control						
One son in the family	0.197*	-0.183	-0.032	-0.479***	-0.103	0.136
	(0.108)	(0.119)	(0.073)	(0.140)	(0.179)	(0.138)
R-squared	0.460	0.434	0.320	0.399	0.430	0.446
Observations	1,118	1,118	1,118	1,118	1,118	1,118
No. of respondents	607	607	607	607	607	607

Panel B Activities without children

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
Basic control						
One son in the family	0.012	0.162	-0.016	-0.160	-0.095	0.051
	(0.193)	(0.141)	(0.130)	(0.243)	(0.204)	(0.213)
R-squared	0.002	0.026	0.000	0.002	0.001	0.007
Full control						
One son in the family	-0.080	0.212	-0.074	-0.048	0.142	0.150
	(0.128)	(0.138)	(0.111)	(0.150)	(0.169)	(0.166)
R-squared	0.404	0.332	0.339	0.467	0.361	0.432
Observations	1,531	1,531	1,531	1,531	1,531	1,531
No. of respondents	726	726	726	726	726	726

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. Age of the child is included in both basic and full controls in Panels A and B. The following control variables are additionally included in full control in Panels A and B: respondent's age and its square; five dummies for race/ethnicity; five education dummies; a dummy for school enrolment; two dummies for marital status; three dummies for employment status; eight dummies for family income; an immigrant dummy; a holiday dummy; six dummies for days of the week; eleven month dummies; two year dummies; 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.

Table A6. Child Gender and Fathers' Subjective Well-Being by Activities With and Without Children: Asian Fathers in the U.S., OLS

Panel A Activities with children

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
Basic control						
At least one son in the family	-0.415	-0.118	0.421	-0.124	-0.154	-0.262
	(0.354)	(0.258)	(0.309)	(0.368)	(0.442)	(0.310)
R-squared	0.146	0.104	0.068	0.025	0.176	0.107
Full control						
At least one son in the family	-0.680*	-0.185	-0.181	-1.046**	0.042	0.039
	(0.406)	(0.344)	(0.430)	(0.522)	(0.771)	(0.440)
R-squared	0.935	0.934	0.906	0.899	0.921	0.918
Observations	186	186	186	186	186	186
No. of respondents	93	93	93	93	93	93

Panel B Activities without children

VARIABLES	(1) Happiness	(2) Pain	(3) Sadness	(4) Stress	(5) Tiredness	(6) Meaningfulness
Basic control						
At least one son in the family	-0.163	0.468	0.344	1.059**	0.749	0.348
	(0.556)	(0.395)	(0.394)	(0.514)	(0.451)	(0.510)
R-squared	0.016	0.050	0.068	0.092	0.141	0.043
Full control						
At least one son in the family	0.393	0.219	-0.157	0.457	0.673	0.558
	(0.534)	(0.552)	(0.406)	(0.590)	(0.417)	(0.578)
R-squared	0.907	0.917	0.943	0.912	0.948	0.901
Observations	188	188	188	188	188	188
No. of respondents	94	94	94	94	94	94

Note: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors clustered at the individual level are in parentheses. The following control variables are included in both basic and full controls in Panels A and B: number of children; age of the youngest child; and age of the oldest child. The following control variables are additionally included in full control in Panels A and B: respondent's age and its square; five education dummies; a dummy for school enrolment; two dummies for marital status; three dummies for employment status; eight dummies for family income; an immigrant dummy; a holiday dummy; six dummies for days of the week; eleven month dummies; two year dummies; 23 dummies for the location of the activity, dummies indicating different types of activity (third-tier time use categories), dummies for activity start time, activity duration; a dummy for interacting with anyone during the episode; a dummy for the presence of spouse/partner; and a dummy for the absence of other adults.