Patterns in Women's Subjective Well-Being by Work and Family Status

–an empirical complement to the "having it all" conversation

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Abstract

"Having it all", meaning *both* family and paid work outside the home, as the marker of a successful life, is intuitively appealing and pervasive in conversations about women's lives in the United States. However, there is limited empirical evidence on this question, whether "having it all" is indeed associated with greater subjective well-being (SWB) –a cognitive evaluation of one's life, taking all things into consideration. In this paper, utilizing data from large, nationally representative surveys and employing ordinary least squares and treatment effects models, I describe patterns in women's SWB by work and family status. I find well-being gains to *being a parent* and *being employed* but a well-being penalty to *being an employed parent*. Moreover, I find higher SWB for women with one role –working but not raising families or raising families but not working –than women with both. These patterns hold for every socio-economic status except the lowest. I explore the meaning of these patterns and contradictions through several alternate explanations.

The remarkable social, economic and political progress that women in the United States have been directly and indirectly affected by since the 1960s, have translated into many gains and achievements in education, in the labor market and in terms of women's political agency. However, the promise of a rewarding career outside the home that would exist alongside the satisfaction of raising a family, remains largely unfulfilled. This popular sentiment and frustration was captured in a very popular article titled "Why women still can't have it all" that was published in the *Atlantic* magazine in 2012. Written by an accomplished foreign policy analyst and academic, Anne Marie Slaughter, the article generated a renewed interest in the irreconcilability of the pulls of work and family given the present socio-economic and policy environment, in the mainstream public conversation, and was followed by a surge in publications on closely related themes[2]. Direct empirical evidence on this matter is however, very limited. To my knowledge, only one recent paper (Marianne Bertrand, 2013) has substantiated this anecdotal evidence by empirically examining whether and how having both a career and a family, are associated with college-educated women's subjective wellbeing, a cognitive evaluation of life, generally measured by respondents' satisfaction with their lives, all things considered.[3]

The issue of work-family conflict is not exclusive to the college educated, although it is likely very different at different portions of the earnings distribution (Joan Williams and Heather Boushey, 2010; Suzanne Bianchi, 2011). In this paper, I extend Bertrand's line of work by

[2] *Lean In* by Sheryl Sandberg (2013), *Sex, Power and the Quest for Perfection* by Deborah Spar (2013), *The XX Factor* by Alison Wolf (2013), *Unfinished Business* by Anne Marie Slaughter (2015), *Overwhelmed* by Brigid Schulte (2015), *Beyond Happy –women, work and wellbeing*, by Beth Cabrera (2015), *Finding Time –the Economics of Work-Life Conflict* by Heather Boushey (2016), to name a few.

[3] In related prior work, Claudia Goldin (1995, 1997, 2004) has examined to what extent different cohorts of women were able to achieve their career and family goals, by measuring what proportion of college educated women had both a career and a family usually by age 40. See also discussion of this line of work in Francine Blau (1998). Finally, in *The Time Bind* (1997), Arlie Hochschild reported employed parents' subjective experience with work-life balance; this type of examination is quite limited, possibly due to lack of appropriate data –see also Melissa Milkie and Pia Peltola (1999)

examining patterns in women's subjective wellbeing by work and family status for *all* women and also disaggregated by education status and own or family income. I use ***work*** to refer to activities undertaken for an employer and remunerated by salary or wages and ***family*** to refer to the role of parent and the associated activities related to providing care for children. In examining these patterns, I use two key measures of subjective wellbeing, life satisfaction and Cantril's life evaluation ladder (Hadley Cantril, 1965), as well as a number of related wellbeing indicators such as self-reported health status, emotional and mental health, and adequacy of rest and sleep. Using new data – the Behavioral Risk Factor Surveillance System annual surveys from 2005 to 2010 and the American Time Use Survey's wellbeing modules, 2012 and 2013 – I begin my analysis by replicating least squares regression models in prior studies (Marianne Bertrand 2013; Angus Deaton and Arthur Stone, 2014, who examine the selection problem in estimating the relationship of parenthood with subjective wellbeing). After confirming prior findings with new data, I additionally use a treatment effects framework where I consider the employment-parenthood status as a multi-valued *treatment* with the following treatment statuses –homemaker and non-parent, employed non-parent, unemployed non-parent, homemaker parent, employed parent, and unemployed parent. Doing so allows me to compare subjective well-being of women with both family and work to women of these other role combinations while adjusting for selection.

To briefly preview the results, I find evidence of a positive association of *being a parent* with subjective wellbeing as well as a positive association of *being employed* with subjective wellbeing. Confirming prior research, I also find no evidence of the combination of these relationships translating into a "double bonus" for wellbeing and instead find a penalty to *being an employed parent*. This core pattern is identical across measures of subjective wellbeing,

model specifications and datasets. The pattern also exists for all but the lowest socio-economic groups, as characterized by education level and family income. However, there are differences in the wellbeing penalty between subgroups; for instance, women with a Bachelor's degree and above face a significantly higher wellbeing penalty for being an employed parent than those with less education. In more detailed analysis focused on specific and mutually exclusive categories of work and family status, I further find that women who are working but not raising families and women who are raising families but not working, tend to report higher levels of life satisfaction on average than women who are doing both. This difference cannot be explained by factors like age, marital status, or even the number of children. I return to theory and to prior research to try and explain the meaning of and contradictions in these findings.

Work, Family and Subjective Well-Being

In standard economic theory, the relationship between work and family is framed as a necessary trade-off –the more time, energy and effort an individual spends at work or in work-related activities, the less time they have to spend with family or in care activities and vice-versa. Therefore, individuals (and households) will choose some combination of their time and energy to allocate to work and family. In Gary Becker's highly influential model, women's comparative biological advantage in housework and childcare, under the assumption of increasing returns to specialized human capital and welfare maximizing behavior, would lead to an allocation of more effort (or energy and time) into this household economy, leaving less available to allocate to the market economy. Such a choice would lead to less productivity and switches into less demanding jobs, compared to those not making similar choices (while Becker's original model compared

married women with married men, the idea has been extended to parents and non-parents more generally).[4]

In the above scenario, individuals' wellbeing or wellbeing maximizing choices are not directly known, but through their observed behavior or "revealed preference", the choices are assumed to have been utility maximizing. This reliance on rational, or welfare maximizing, behavior and revealed preferences to understand individual choice, is challenged in the subjective wellbeing approach (Daniel Kahneman and Amos Tversky 1979; Daniel Kahneman, Peter Wakker, and Rakesh Sarin 1997; Richard Layard 1980, 2006, 2010; Richard Easterlin 2005; Daniel Kahneman and Richard Thaler 2006;). Important to the understanding of the work-family relationship, is the idea that individuals systematically mis-predict utility due to underestimation of adaptation, distorted memory of past experiences, rationalization of decisions ex-post and false intuitions about the sources of future utility (Alois Stutzer and Bruno Frey 2008, 2010). Consistent with this prediction problem, people may overvalue income relative to care and choose to allocate time for work and family in ways that do not optimize their wellbeing (Richard Easterlin 2005). On the other hand, care, by its very nature, is not entirely rational, perhaps only to the extent that care and family time are investments in quality of children; in general, love for and the emotional bond with one's child and family, duty and responsibility towards them as well as some degree of altruism and meaningfulness, likely motivate caregiving choices and therefore, work-family behaviors or the way individuals allocate time between these two domains and the trade-offs they make with regard to wages, health, stress or wellbeing, may not always demonstrate utility maximizing choices. Finally, in the subjective wellbeing

[4] Becker's models (1965, 1985, 1991, 2009) have been utilized, critiqued, built on, questioned and written about countless times in the broadly defined gender, work and family literature; see for instance, Barbara Bergmann (1995, 2005), Joseph Altonji and Rebecca Blank (1999), Nancy Folbre (2004), Shelly Lundberg and Robert Pollak (2007).

framework, both expected outcomes and relative outcomes, particularly in the context of income, matter in shaping individual wellbeing (Richard Layard, 1980; Andrew Clark and Andrew Oswald, 1996).The act of balancing the expectations of parenthood and employment and achieving both, might enhance or hinder individual subjective wellbeing through various mechanisms like income (employment may raise income, while parenthood may be costly), positive emotions and sense of fulfillment, along with increases in day-to-day stresses and worries (Katherine Nelson, Kostadin Kushlev and Sonja Lyubomirsky 2014a,b; Daniel Kahneman and Angus Deaton 2010). On the other hand, energy and effort expended in one aspect of life (primarily, household and childcare work) might diminish the energy and effort available for efficient performance at work (Becker, 1985). The opposite scenario of a negative spillover from work to family is also possible and together might negatively affect overall wellbeing (Nelson et al 2014a, b.).

While some of these mechanisms are universal, the nature of the work-family dilemma is to a large extent, different for different portions of the income distribution. At the top, women may be coping with too many hours away from family with little scope for flexibility but access to relatively generous paid family and sick leave or the income to afford the best quality of childcare among other things. At the bottom, women may be coping with too few hours of work to qualify for any employment benefits, may be above the income threshold to qualify for public assistance and may have too much variation in hours of work, not to mention limited resources for good quality childcare arrangements (Joan Williams and Heather Boushey 2010, Suzanne Bianchi 2011). This does not necessarily predict variation in patterns of subjective wellbeing by work and family status according to position in the income distribution because irrespective of

the underlying mechanism, the overall relationship of the parenthood-employment interaction with subjective wellbeing may be similar.

In her study on the subjective wellbeing (SWB) effects of career and family among US college graduates, Marianne Bertrand (2013) postulates that women who fit the anecdotal definition of "having it all" –that is, both career and family – would intuitively be expected to report higher levels of SWB than women who have met only one or neither of these two goals. However, she mentions two important factors that can diminish this expected higher SWB –the first of these is the "hedonic treadmill" which refers to the idea that individuals adjust to their life circumstances quite quickly; the empirical effect of important life events or circumstances on individual SWB is found to be small by some researchers (Daniel Kahneman and Alan Krueger 2006) but others have argued against such a "set point" (Richard Easterlin 2003, Richard Lucas 2007). The second factor to note is the "aspiration treadmill", which refers to the idea that individuals will adjust their SWB aspirations to the utility that they experience (Marianne Bertrand 2013). Again, parenthood usually means less control over time as well as scheduling conflicts between the needs of the employer and that of children. Taking all things into consideration therefore, the "effect" of parenthood or employment on subjective wellbeing is theoretically indeterminate.

Prior Research

Several prior studies have estimated the relationship between parenthood and subjective wellbeing in the United States, using both longitudinal and cross sectional data and both hedonic and evaluative measures of wellbeing[5]. Hedonic measures of wellbeing are those that measure

[5] See also recent reviews of the research on parenthood and well-being in Thomas Hansen (2012), Katherine Nelson, Kostadin Kushlev and Sonja Lyubomirsky (2014a, b), Rachel Connelly and Jean Kimmel (2015); For recent evidence from outside the US, see Myrskylä and Margolis (2014) who find increases in subjective well-being around the period surrounding childbirth in British and German panel data

momentary states of being or emotional states such as happiness, physical pain and so forth, whereas evaluative measures of wellbeing attempt to capture a cognitive evaluation of life that may be domain specific (relationships, employment, and so forth) or global (all things considered). Betsey Stevenson and Justin Wolfers (2009) find a declining trend in subjective wellbeing of women overall as well as mothers, with no significant difference between working and non-working parents or between single and married parents, over the period 1970 – 2005 in cross-sectional data from the General Social Survey. Using the NLSY (National Longitudinal Survey of Youth) 1997 cohort, Shoshana Grossbard and Sankar Mukhopadhyay (2010) find no effect of children on women's overall happiness in the period 2000-2006. Again, using the Gallup survey, Angus Deaton and Arthur Stone (2014) find that the presence of a child has a small negative association with life evaluation of parents in the US. There is also related evidence linking children with significant increases in stress, sadness and worry (Daniel Kahneman, Alan Krueger, David Schkade, Norbert Schwarz and Arthur Stone, 2004). On the other hand, using time diary data from the American Time Use Survey's Subjective Well-Being modules, a set of studies have examined the relationship between parents' time use and parenting related activities and subjective well-being. These studies find that parents consistently report greater subjective well-being during activities with children including direct caregiving than during activities without children (Rachel Connelly and Jean Kimmel, 2015; Kelly Musick, Ann Meier and Sarah Flood, 2016). However, researchers also found that emotions related to mothering activities varied by relationship and employment status, with single mothers, particularly unemployed single mothers, reporting less happiness and more sadness, stress, and fatigue in parenting activities than partnered mothers (Ann Meier, Kelly Musick, Sarah Flood

and Rachel Dunifon, 2016). The latter study also found employed single mothers to report more positive emotions and less stress during parenting activities than unemployed single mothers.

Overall, the evidence on the relationship of parenthood with subjective wellbeing, is mixed. Angus Deaton and Arthur Stone (2014) quite convincingly explain the discrepant findings in the literature in terms of a strong selection effect. They challenge the premise of most studies examining the relationship between parenthood and SWB by arguing that the direct comparisons of people with and without children treats children as if they were randomly allocated. Instead they posit a theory of children and wellbeing in which adults sort into parenthood according to their preferences; in that scenario, people who have a taste for children anticipate higher SWB from having children and will therefore have lower SWB if they could not have children. Similarly, people who prefer to not have children anticipate higher SWB from not having children and will therefore have lower SWB if they were to accidentally have children. They show that without adjusting for selection, parents have higher life evaluation than non-parents but once selection is adjusted for, non-parents have slightly higher SWB than parents.

Work and income are two of the key determinants of subjective well-being (Richard Layard, Jeffrey Sachs and Claudia Senik, 2012). Unemployment has been consistently linked to lower levels of evaluative and hedonic well-being (Andrew Clark and Andrew Oswald, 1994; Liliana Winkelmann and Rainer Winkelmann, 1998 and many others, see review of the research on employment status and subjective well-being in Paul Dolan, Tessa Peasgood and Mathew White, 2008), with new evidence from Europe suggesting that the strength of the relationship is weaker for women (Peter Van der Meer, 2014). There is mixed evidence on the subjective well-being of people who are out of the labor force, with some studies finding lower levels of

subjective wellbeing for homemakers than women working for pay outside the home in the US (Betsey Stevenson and Justin Wolfers, 2009), while others reporting no significant difference between housewives and working wives in rich countries including the US (Edsel Beja Jr, 2014). Researchers have speculated that other than income, social approval may explain the higher SWB of groups out of the labor force as compared to the unemployed (Peter van der Meer, 2014). The body of evidence on income and other important determinants of subjective wellbeing is also very relevant to this study. Research based on cross-sectional data is largely consistent in showing a positive relationship between individual income and subjective wellbeing while local income as a measure of relative income has been found to have a negative relation with subjective wellbeing (Angus Deaton and Arthur Stone 2013; Richard Layard, Jeffrey Sachs and Claudia Senik, 2012). While the older literature pointed to the existence of some threshold value for individual income beyond which there is not additional gain to subjective wellbeing, recent works addressing this matter does not find evidence of such a "satiation point," in case of evaluative wellbeing measures like life satisfaction (Daniel Kahneman and Angus Deaton 2010; Betsey Stevenson and Justin Wolfers 2013).[6]

To my knowledge, only one prior study (Marianne Bertrand, 2013) has examined the direct effect of being a working mother on women's life satisfaction. Using the American Time Use surveys' 2010 Wellbeing module and the General Social Surveys 1972-2010, Bertrand (2013) found that for *college-educated* women in the US, there was a wellbeing premium from having a career as well as from having children but not from having both. I want to understand if this is true on average, or if it is specific to the higher educated groups that she studies. I

[6] However, in case of hedonic wellbeing, Kahneman and Deaton (2010) estimate a satiation point of individual earnings at $75,000, such that there is no evidence of higher positive affect just above, or lower negative affect just below, this threshold

therefore build on this work and expand it to include women of all educational levels. I also use two more recent years of the ATUS Wellbeing module and one new source of data, the BRFSS.

Data and Methods

I use two sources of data. The first is the American Time Use Survey (ATUS) 2012 and 2013 Wellbeing Module[7]. The ATUS is an annual time use survey conducted by the United States Bureau of Labor Statistics since 2003. In 2012 and 2013, it explicitly collected data on global measures of life satisfaction. The data is very well-suited for this analysis because it allows me to identify parents and separate them by age of the youngest child, and provides key employment characteristics as well as demographic and family information. It also includes several related measures of wellbeing such as self-reported health status, physical pain, well rested or not, and whether yesterday was a good, bad or typical day, the latter corresponds to a momentary affective state or a hedonic wellbeing indicator and is qualitatively different from the life evaluation measure. My second data source is the Behavioral Risk Factor Surveillance System (BRFSS). Conducted by the Center for Disease Control (CDC), the BRFSS is the largest continuous health survey in the world and it surveys U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. From 2005, the survey has included questions on life satisfaction. BRFSS data is particularly suited to complement this analysis since its large sample size allows for a more nuanced comparison among respondents with different employment and parenthood statuses. It also provides information on several self-evaluated health, mental and emotional health outcomes including adequacy of sleep and availability of social and emotional support. Weighted, both datasets are nationally representative of the adult US population.

[7] Data from Sandra Hofferth, Sarah M. Flood and Matthew Sobek (2013)

I restrict my analytic sample to women aged 18-65 years (N in ATUS: 7473; N in BRFSS: 760,017) and mainly focus on the prime working age sample of women 25-44 years (N in ATUS: 3689; N in BRFSS: 315,041). My main outcome variable of interest is subjective wellbeing. From the ATUS, I use as my dependent variable, a global evaluation of life measured using Cantril's Self Anchoring Ladder of Life Satisfaction (Hadley Cantril, 1965). Respondents are asked to imagine a ladder with 10 rungs, such that the top of the ladder represents the best possible life for him/her and the bottom represents the worst possible life. The respondent is then asked "where do you feel you stand at the present time"? Thus, it is theoretically an equal interval measure and can be treated as a continuous variable, something that is not possible with more commonly used measures of life satisfaction that tend to use four to six category indicators, such as ranging from extremely satisfied to not at all satisfied. The BRFSS data uses such a standard measure of life satisfaction. In the BRFSS, I use as my dependent variable, answers to the question "In general how satisfied are you with your life?" The response categories are very satisfied, satisfied, dissatisfied, very dissatisfied. Similar to prior studies using the BRFSS data to examine subjective wellbeing in the US (see for instance, Andrew Oswald and Stephen Wu, 2010), I note that responses to this question are skewed, with the two positive responses significantly more common. I therefore recode this variable into a dichotomous variable indicating whether a person is "very satisfied" or not. For easy comparability between the two datasets, I also use a dummy variable derived from the ATUS ladder measure that is roughly equivalent to the BRFSS measure of whether a respondent is very satisfied with life. Appendix A discusses the detailed strategy based on the distribution of the measures. 46% of respondents in my ATUS sample and 45% of respondents in my BRFSS sample of women, 18-65 years, report being very satisfied with life.

I also examine a number of other self-reported outcomes that capture related facets of wellbeing. (a) *self-rated general health status* – this is a standard self-reported health measure with the categories excellent, very good, good, fair and poor; I dichotomize the variable into "very good or excellent health" or not; this measure is available in both datasets (b) *emotional wellbeing* –respondents in the BRFSS are asked to report how many days in the past month they experienced stress, depression or emotional problems, (c) *emotional and social support* –BRFSS respondents are asked whether they feel they have adequate social and emotional support when needed; this is a categorical variable with possible responses always, usually, sometimes, never and rarely; I again create a dummy for "always or usually has emotional and social support" or not. (d) adequate rest and sleep –in the ATUS, respondents are asked if they felt well rested, somewhat rested or not at all rested when they woke up yesterday; using this variable, I create a dummy for "well rested". In the BRFSS, respondents are asked to report the number of days in the past month that they had inadequate sleep. Since the two measures depend on different time frames, I leave them as they are and do not attempt to dichotomize the latter measure for comparability. I further leave all continuous outcomes as they are, so as to not lose information from dichotomization.

I define having a *family* by the presence of a child less than 18 in the household. 52% of respondents in my ATUS sample and 46% in my BRFSS sample have families. I use three categories of *work* status –homemaker, employed and unemployed. BRFSS explicitly uses the "Homemaker" category when asking respondents about their labor force status. In the ATUS, I define homemaker as those who report being "out of the labor force" but not retired and not in school or college. "Employed" includes those who are employed in either private or public sector but not the self-employed. "Unemployed" includes those who are in the labor force but not

currently employed and may include both long-term and short-term unemployed. Most of the women in my samples are employed -72% in the ATUS and 75% in the BRFSS; 22.5% of women in the ATUS and 17% in the BRFSS are homemakers; the remaining 6% and 8% respectively in the two samples are unemployed.

Women who have children may differ from other women in ways that also affect their self-assessed evaluations of life; for example, economic security or good health may make a woman more likely to have a child and also more likely report higher life satisfaction. Again, employed women may systematically differ from those who are not, in ways that are associated with their subjective wellbeing. For instance, the latter group might expect to achieve higher levels of life satisfaction by being full-time stay-at-home parents than by juggling the dual obligations of employment and parenthood. In order to deal with such selection issues, I follow the work in Marianne Bertrand (2013) and Angus Deaton and Arthur Stone (2014) and begin by estimating ordinary least squares (OLS) regression models that include controls for the types of characteristics likely to affect parenthood and employment as well as subjective wellbeing. I estimate the following equation(s):

$$SWB_i = \beta_0 + \beta_1 Parent_i + \beta_2 Employed_i + \beta_3 Parent_i * Employed_i + \sum \beta_j X_{ji} + \varepsilon_i \quad (1)$$

where *SWB* is the subjective wellbeing measure for the i-th respondent; *Parent* is a dummy variable denoting whether a woman is a mother or not (defined by the presence of own child in the household in both datasets); *Employed* is a dummy variable taking the value 1 if the woman is currently employed and 0 otherwise; in this part of the analysis, I do not differentiate between the homemakers and the unemployed, and code both as 0; *X* is the covariate vector and includes j demographic, family and economic status variables, *age* and *age squared*, *educational attainment*, *marital status*, and *race and ethnicity*, *log of weekly earnings and/or family income*,

*number of children, birth decade, household size, smoker, whether any physical, mental or cognitive limitations (*not all these variables are controlled for in the same regression*).* In Equation 1, β_1 is a coefficient of interest. It provides an estimate of the association of having a child with subjective wellbeing; β_2 is also a coefficient of interest and provides an estimate of the association of being employed with SWB. Finally, β_3 is the key coefficient of interest and it provides an estimate of the association between having both a family and a job and SWB. Defined this way, my results are directly comparable to the results in Bertrand 2013. However, I also estimate the model using the more detailed employment categories so that I can differentiate between the unemployed and homemakers.

In order to more carefully adjust for selection issues, I draw upon the counterfactual framework pioneered by Donald Rubin (1974, 1977) and extended in Paul Rosenbaum and Donald Rubin (1983, 1984, 1985).[8] This framework assumes that for each respondent, there is an outcome in the treated state (y1) and an outcome in the untreated state (y0). That we cannot observe any respondent in both these states is the fundamental problem of causal inference. I consider the employment-parenthood status as a multi-valued *TREATMENT* with the following treatment statuses –homemaker and non-parent, employed non-parent, unemployed non-parent, homemaker parent, employed parent, and unemployed parent. Neither parenthood nor employment can be randomly assigned and respondents self-select into each of the six treatment levels depending on their expected benefits or wellbeing from it. In order to identify treatment effects, I assume ignorability of treatment (Rosenbaum and Rubin), that is, conditional on

[8] This line of work is further extended in Guido Imbens and Joshua Angrist (1994), James Heckman (1997) and later developed in Guido Imbens (2000), Alberto Abadie and Guido Imbens (2006, 2016), Guido Imbens and Jeffrey Wooldridge (2009), Matias Cattaneo (2010), Jeffrey Wooldridge (2007), Peter Austin (2011), Donald Rubin (2011) and Matias Cattaneo, David Drukker and Ashley Holland (2013).

observed covariates, treatment assignment is independent of (y1, y0). Empirically, I estimate the following treatment model using multinomial logit

$$TREATMENT_i = \beta_0 + \sum \beta_j X_{ji} + \varepsilon_i \quad (2),$$

where TREATMENT is as defined above and is estimated as a function of plausibly pre-treatment variables such as education, marital status, age, race and ethnicity. Using inverse probability weighting, I estimate the average treatment effect for each treatment level compared to women who are employed parents. While I use the nomenclature of the causal inference and treatment effects literature, it is important to note that my results describe an association between parenthood/employment and subjective wellbeing, not a *causal* effect of either parenthood or employment.

Descriptive Results

Figure 1 depicts the proportion of women in the two datasets who report being very satisfied with life, separated by labor force status and parenthood. Consistent with prior research, the unemployed in both samples report the lowest levels of subjective wellbeing on average – only about 30% are very satisfied with life, compared to about 50% of the employed and again, about 50% of homemakers. In terms of parenthood status, about 45% of mothers as well as of non-mothers, on average, report being very satisfied with life in the BRFSS sample, while a slightly higher proportion of mothers than non-mothers in the ATUS sample, report being very satisfied with life (51% compared to 45%, marginally significant difference)[9].

When further segregated (Figure 2), a few features stand out –in both samples, homemaker mothers as a group seem to be doing the best, with 50-56% reporting being very satisfied with life; the proportion of unemployed women reporting the same wellbeing status

[9] Appendix B presents descriptive results using the Cantril Ladder measure. Results are substantively similar.

continues to be the lowest, with parenthood making little difference in either sample; similarly, average subjective wellbeing for employed mothers and employed non-mothers also does not differ significantly in either dataset.

Results from ordinary least squares models

Table 1 presents results from ordinary least squares regression models first on the sample of adult women of working age, 18-65 years, and again on the sample of 25-44 year olds. Prior research has shown that the association of parenthood changes depending on what else is controlled for (Deaton and Stone, 2014) and I therefore run three separate models with controls similar to full models in Bertrand (2013) and Deaton and Stone (2014) and combine them in a third and preferred, model but only keep controls that are present in both datasets. Further, prior research indicates that the way wellbeing is measured could make a difference in results. I therefore use both the original 11 category equidistant ladder measure as well as the dichotomized measure from the ATUS. Across specifications, samples, datasets and measures of subjective wellbeing, I find that coefficients on parenthood and employment are positive and significant ($p<0.001$), indicating a wellbeing "bonus" for both, and the coefficient on their interaction is negative and significant ($p<0.001$), indicating the presence of a significant wellbeing "penalty" from being an employed parent.

Additionally, taking advantage of the large sample size of the BRFSS data, I plot the coefficients by more detailed age groups and find a gently U shaped pattern, such that the

employment*parenthood penalty is negligible before 25, increases sharply thereafter, and decreases slowly from age 35, again becoming negligible after 54. This pattern is noteworthy since the period when wellbeing penalties seem strongest, coincides with the prime working age period, when work-family conflicts might be particularly acute. Going forward therefore, I focus my analysis on the 25-44 age group.

I next examine the relationship by age of the youngest child (Table 2) and by number of children (Table 3) and find an identical basic pattern of significant positive association with both employment and parenthood, and a significant negative association with their interaction. Further, the wellbeing penalty for being an employed parent, increases with number of children.

In Table 1, I have compared employed women with women who were not employed; the latter includes both women who are unemployed and those who are homemakers. In Table 4, I separate these two categories since prior research has found significant negative effects of being unemployed but the results are ambiguous for those completely out of the labor force. Again, I find a positive association between subjective wellbeing and parenthood; I also find positive associations between subjective wellbeing and being employed as well as being a homemaker. Moreover, the wellbeing bonuses for the employed and the homemakers are not significantly different in either dataset. However, being an employed parent is associated with a wellbeing penalty while there is no significant wellbeing effect from being both a parent and a homemaker.

In Table 5, I examine how parenthood and employment are related to self-reported health, sleep and rest, and emotional wellbeing in women; each of these outcomes sheds light on a different aspect of wellbeing and also contributes to the overall quality of one's life. Of note, I find both employment and parenthood to be positively associated with self-reported health, but being an employed parent is associated with a health penalty (although not statistically

significant in the ATUS sample). Parenthood is associated with almost 3 additional days of inadequate sleep; being employed too is associated with almost a full additional day of inadequate sleep. However, being an employed parent is not associated with any additional wellbeing penalties in terms of rest and sleep. Results based on a closely related measure – whether the respondent felt well rested when they woke up yesterday –are not statistically significant, however the direction of the measured associations are similar. Using two separate indicators for emotional wellbeing, I find that first, compared to non-parents, parents have a slightly lower frequency (almost a day less in a 30 day period) of experiencing stress, depression or emotional problems, but are no more likely to report having adequate emotional and social support. Secondly, I find that being employed too is associated with a reduction in the number of days on average women experience stress, depression or emotional problems; again, employed women have a higher probability of having adequate emotional and social support than those not employed. Finally, the employment-parenthood interaction is consistently associated with lower emotional wellbeing, both in terms of higher stress, depression, emotional problems and in terms of a lower probability of having adequate social and emotional support.

Figures 4 and Figure 5 depict the patterns in subjective wellbeing by work and family status, separated by education and family income.[10] At each level of education, except for those without a high school diploma, I find a significant negative association of subjective wellbeing with being an employed parent. However, the penalty for being an employed parent appears to vary across the education distribution, such that those with a Bachelor's degree face significantly higher penalties than those with some college or no high school diploma; evidence on the

[10] Detailed results with comparable measures of life satisfaction and a variety of measures of wellbeing, are presented in Appendix E.

difference in the wellbeing penalty between working parents with a Bachelor's degree and working parents with a High school diploma, is not consistent across the two datasets.

In examining the patterns by family income, I again find evidence of the core pattern of bonuses and penalty at every socio-economic status except those in the lowest family income category; further, I find that the wellbeing penalty for employed parents is significantly higher for women in the middle and higher income families than in families with less than $25,000 annual income. For women in families with $25,000 or higher annual family income, the differences in the wellbeing penalty among the three groups ($25,000 and above but less than $50,000; $50,000 and above but less than $75,000; $75,000 and above) is not statistically significant in both datasets.

Results from Treatment Effects models

Figure 6 presents results from treatment effects models (please see Appendix F for details of models). In both datasets, I find that the only group consistently worse off in terms of subjective wellbeing, are the unemployed, irrespective of parenthood status. Given the strong negative correlation of unemployment with subjective wellbeing, this finding is not surprising. However, what is noteworthy is the finding, consistent across the datasets and model specifications, that both homemaker mothers and working non-mothers, on average, report higher life satisfaction compared to working mothers.

Discussion

In this paper, I examine patterns in women's subjective wellbeing by family and employment status. I replicate least squares regression models from key recent studies (Marianne Bertrand 2013; Angus Deaton and Arthur Stone 2014) using new data – the Behavioral Risk Factor Surveillance System annual surveys from 2005 to 2010 and the American Time Use

Survey's Wellbeing modules, 2012 and 2013 – and additionally estimate inverse probability of treatment weighted models, to adjust for selection. Results confirm findings in prior research of a positive association of *being a parent* with subjective wellbeing as well as a positive association of *being employed* with subjective wellbeing. However, similar to prior research (Bertrand 2013), I find no evidence of the combination of these relationships translating into a "double bonus" for wellbeing and instead, the existence of a significant penalty to *being both employed and a parent*.

This basic pattern holds at every socio-economic status except the lowest, as measured by level of education and family income. However, there are differences in the penalty between subgroups; for instance, women with a Bachelor's degree and above tend to face a significantly higher wellbeing penalty for being an employed parent than those with less education. Finally, in models considering more detailed categories of work and family status, I find that women who are working but not raising families and women who are raising families but not working, tend to report higher levels of life satisfaction on average than women who are doing both.

It is worth reiterating that these results are not women's reported satisfactions *from* parenting or working or *due to* being a parent or being employed or both (see in comparison, prior work relating parenting activities to subjective well-being in Rachel Connelly and Jean Kimmel, 2015 and in Kelly Musick, Ann Meier and Sarah Flood, 2016). Therefore, these results are not showing that women *feel* more satisfied with either homemaking or working but not with both. What they show is that women who are working but not raising families and women who are raising families but not working, tend to report higher levels of life satisfaction on average than women who are doing both. This difference cannot be explained by differences in marital status, age, education, race and ethnicity, family income, or their geographical location, typical

factors that determine individual subjective well-being. However, unobserved heterogeneity could still be driving these results and remains a limitation of the research design.

Women who choose to become parents but not work outside or choose to be working but not become mothers (at least in the given point in time) may choose those roles precisely because they predict their wellbeing will improve by fulfilling these roles *alone*. On the other hand, women who choose both employment and parenthood may do so because they feel that the role of an *employed parent* would be key for their wellbeing –in this scenario, which group is more satisfied is theoretically uninteresting and empirically, a matter of what else is controlled for, similar to the futility of estimating whether parents are happier than non-parents that Deaton and Stone (2014) have explained in detail. However, women who choose both employment and parenthood may also do so because they have experienced any one role (was working before but was not a mother; was a mother but was not working before) and/or have reason to believe, perhaps due to social norms or expectations, that if both these roles independently provide fulfillment and satisfaction, then doing both would be an improvement and would bring them to higher levels of wellbeing; alternately, if any one role (particularly employment) is not fulfilling or meaningful for overall wellbeing, then they should look for fulfillment in other socially approved roles such as that of motherhood. For both these scenarios therefore, the woman choosing to be an employed parent is making this choice precisely because she predicts it would make her better off than she is in the role of either an employed non-parent or a homemaker parent. I first consider two theoretical possibilities why my findings (as well as prior research) show otherwise –firstly, the results could simply be demonstrating the problem of utility mis-prediction that is at the heart of the theories of subjective wellbeing –individuals systematically mis-predict utility due to underestimation of adaptation, distorted memory of past experiences,

rationalization of decisions ex-post and false intuitions about the sources of future utility (Stutzer and Frey 2008, 2010). A second possibility, is that such patterns could be reflecting limitations of subjective wellbeing measures in capturing utility and individual choice. Bertrand (2013) makes a similar argument that women may choose the role of an employed parent because they predict it would improve specific aspects of their life such as prestige, social status, sense of purpose and control, none of which may be captured in current measures of subjective wellbeing.

Again, the cost to making work-family trade-offs may be particularly acute for high skilled women. In a study of gender gaps in labor market performance of high skilled men and women, all MBA graduates, researchers find that women are 20-26 percentage points more likely to make employment related choices due to "family related reasons" after birth than in the pre-birth period and 13-21 percentage points less likely to make employment related choices due to "career related reasons" (Marianne Bertrand, Claudia Goldin and Lawrence Katz 2010). The study further finds that such job switches are associated with significant earnings declines when it is due to family relate reasons like flexible hours, "opportunity to work remotely" and "limited travel schedule", with mothers losing on average 18 log points in earnings for changing jobs. To the extent that the highly educated women in my samples represent similar professions, the stronger wellbeing penalties to being an employed parent for highly educated women, may be explained by this type of work-family trade-offs.[11] In that sense, the observed patterns could be interpreted as empirical reinforcement to the widely held fear and frustration about women not "having it all". Further, this group is also likely to face the expectations of high levels of engagement and a culture of "overwork" in their careers while simultaneously dealing with

[11] The authors caution against generalizing these results to other professions like academia, medicine or law, since labor market behavior for mothers tends to vary among the professions. (Claudia Goldin and Lawrence Katz 2008, Marianne Bertrand, Claudia Goldin and Lawrence Katz 2010)

expectations of intensive parenting and high levels of engagement in their children's lives (Mary Blair-Loy, 2009 and Youngjoo Cha and Kim Weeden, 2014).

That the observed well-being patterns are present not only for college educated women, but also for women who are less than college educated or belong to lower-middle and middle income families leads me to speculate however, that it could instead or additionally, reflect two further scenarios –firstly, working mothers, because of assumptions about their reduced effort and energy and/or an inconsistency between cultural expectations of an ideal mother and an ideal worker, might be subjected to higher standards at work (Cecilia Ridgeway and Shelley Correll, 2004; Kathleen Fuegen, Monica Biernat, Elizabeth Haines, and Kay Deaux 2004; Stephen Benard and Shelley Correll, 2010). Secondly, it could reflect the constraints imposed by a rigid work-family environment that does not allow the wellbeing bonus from parenthood and the wellbeing bonus from employment to translate into a double bonus. Raising children and taking care of family members, while maintaining a job, and without compromising on economic security, career progression or one's health and wellbeing, is a difficult task anywhere. In the US, it comes with a set of additional challenges because of a complete absence or limited reach of supporting work-family policies – policies that are designed specifically to help people manage and reconcile their roles as workers and parents or caregivers – such as paid and job-protected parental leave, publicly provided or subsidized child care, rights to request workplace flexibility or part time work and paid leave to attend to ill or disabled family members. Consequently, to manage the demands of work and family roles, workers in the US rely heavily on employer generosity and workplace programs, informal family support, and a patchwork of provisions available from various levels of government and with varying degrees of restrictive eligibility criteria. Researchers have repeatedly pointed to the important role of this duality –

major changes in women's work and family roles against an unresponsive policy environment – in explaining important markers of women's progress or paradoxes therein, such as a plateauing of labor force participation rates even as they continued to grow in comparable places (Francine Blau and Lawrence Kahn 2013), persistence of the gender gap in wages after a narrowing in the 1980s (Martha Bailey and Thomas DiPrete, 2016; Francine Blau and Lawrence Kahn, 2016) and declining subjective wellbeing over a period that saw increasing economic empowerment for women (Betsey Stevenson and Justin Wolfers 2009) as well as a shift in women's relationship with employment, with more and more of them considering work as "a fundamental aspect of their satisfaction in life" (Claudia Goldin 2006).

Finally, scholars have documented how the work-family dilemma differs across the income distribution –at the top, long and inflexible hours and expectations of face-time might take women away from family for long durations but high incomes might compensate and afford the purchase of additional resources; on the other hand, at the bottom of the distribution, the work-family dilemma might stem from erratic work schedules and unpredictable child care needs along with the higher likelihood of single motherhood; in the middle, limited flexibility, need for multiple jobs and tag-team parenting might take a toll on one's health and wellbeing, and economic insecurity may be a particularly important concern (Joan Williams and Heather Boushey, 2010; Suzanne Bianchi 2011). Thus it is possible that even though I observe the same core patterns in women's subjective wellbeing by work and family status, for different portions of the education or family income distributions, the underlying mechanisms behind those patterns may vary considerably and indicate the need for more in-depth research as well as more nuanced policy solutions and workplace interventions.

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Table 1 Estimated coefficients from ordinary least squares regressions of subjective wellbeing on parenthood, employment and their interaction, for women 18-65 and 25-44 years old

	18-65 years			25- 44 years		
	(1)	(2)	(3)	(1)	(2)	(3)
BRFSS 2005-2010						
Very satisfied with life						
(LPM)						
Parent	0.071***	0.011***	0.024***	0.155***	0.060***	0.068***
	(0.003)	(0.002)	(0.002)	(0.005)	(0.005)	(0.005)
Employed	0.064***	0.022***	0.027***	0.117***	0.039***	0.043***
	(0.002)	(0.002)	(0.002)	(0.005)	(0.005)	(0.005)
Parent*Employed	-0.071***	-0.048***	-0.052***	-0.132***	-0.067***	-0.073***
	(0.003)	(0.003)	(0.003)	(0.006)	(0.006)	(0.006)
Observations	759,961	754,913	757,534	315,019	313,228	314,245
ATUS 2012-2013						
Very satisfied with life						
(LPM)						
Parent	0.203***	0.106***	0.111***	0.222***	0.146**	0.138**
	(0.024)	(0.025)	(0.024)	(0.045)	(0.047)	(0.045)
Employed	0.116***	0.062**	0.063**	0.109*	0.065	0.064
	(0.019)	(0.020)	(0.020)	(0.046)	(0.047)	(0.047)
Parent*Employed	-0.163***	-0.117***	-0.117***	-0.168***	-0.130**	-0.129**
	(0.025)	(0.025)	(0.025)	(0.050)	(0.050)	(0.050)
Observations	7,473	7,473	7,473	3,689	3,689	3,689
ATUS 2012-2013						
Life Evaluation Ladder						
Parent	0.919***	0.467***	0.484***	1.104***	0.734***	0.732***
	(0.094)	(0.098)	(0.096)	(0.168)	(0.173)	(0.167)
Employed	0.802***	0.522***	0.524***	0.845***	0.618***	0.613***
	(0.075)	(0.080)	(0.080)	(0.170)	(0.172)	(0.172)
Parent*Employed	-0.748***	-0.525***	-0.523***	-0.851***	-0.671***	-0.669***
	(0.102)	(0.101)	(0.101)	(0.185)	(0.183)	(0.183)
Observations	7,473	7,473	7,473	3,689	3,689	3,689

Sources American Time Use Survey Wellbeing Module 2012-2013; Behavioral Risk Factor Surveillance System Survey Data (BRFSS) 2005-2010. *Note*. Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05; each column in each panel presents coefficients from a separate regression of life evaluation (dummy for very satisfied with life in the top two panels and the life evaluation ladder in the bottom panel) on parent, employed, parent*employed, along with various sets of controls. Model 1 contains controls for age age squared, birth decade, race and ethnicity and year and may be comparable to Bertrand (2013); Model 2 controls for age race and ethnicity, education, marital status, family income, household size (only in ATUS), any physical, mental or cognitive limitation, smoker (only in BRFSS) and state of residence, and may be comparable to Deaton and Stone (2014). Model 4 combines the controls excluding smoker and household size, for direct comparability between results based on the two datasets. LPM refers to linear probability models for dummy outcomes. Regressions are weighted by ATUS and BRFSS sampling weights to account for complex survey design.

Table 2. Estimated Coefficients on Parenthood and Employment Status from Linear Probability Models of Life Evaluation for women 25-44 years, by age of the youngest child

	(1) Under 1	(2) 1 to 2 years	(3) 3 to5 years	(4) 6 to 12 years	(5) 13 to 17 years
Employed	0.077***	0.071***	0.073***	0.070***	0.078***
	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Parent	0.131**	0.204***	0.172***	0.131***	0.045
	(0.050)	(0.041)	(0.040)	(0.038)	(0.065)
Parent and Employed	-0.056	-0.216***	-0.178***	-0.097*	-0.033
	(0.063)	(0.046)	(0.043)	(0.039)	(0.072)
Observations	3,932	4,234	4,385	4,701	3,934

Sources American Time Use Survey Wellbeing Module 2012-2013; *Note*. Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1; each column presents coefficients from a separate regression model of life evaluation (dummy for very satisfied with life) on parenthood (child under 1 compared to no children in column (1); child 1 to 2 years compared to no children in column (2), child 3 to 5 years compared to no children in column (3), child 6 to 12 years compared to no children in column (4) and child 13 to 17 years compared to no children in column (5)), employed, and their interactions, along with controls for age, age squared, birth decade, race and ethnicity, education, marital status, family income, household size, state of residence and year.

Table 3. Estimated Coefficients on Number of Children and Employment Status from Linear Probability Models of Life Evaluation for women 25-44 years

	ATUS	BRFSS
One child	0.102+	0.047***
	(0.052)	(0.006)
Two children	0.138**	0.063***
	(0.050)	(0.006)
Three or more children	0.170***	0.084***
	(0.051)	(0.006)
Employed	0.065	0.043***
	(0.047)	(0.005)
One children*Employed	-0.090	-0.053***
	(0.058)	(0.007)
Two children*Employed	-0.122*	-0.068***
	(0.055)	(0.006)
Two children*Employed	-0.184**	-0.088***
	(0.060)	(0.006)
Observations	3,689	314,245

Sources American Time Use Survey Wellbeing Module 2012-2013; Behavioral Risk Factor Surveillance System Survey Data (BRFSS) 2005-2012. *Note*. Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1; each column in each panel presents coefficients from a separate regression model of life evaluation (dummy for very satisfied with life) on number of children (one, two and three children compared to no children), employed, and their interactions, along with controls for age age squared, birth decade, race and ethnicity, education, marital status, family income, household size (only in ATUS) state of residence and year. Coefficients on one child, two children, and three children are all significantly different from one another (p<0.001); Coefficient on one child is not significantly different from coefficient on employed. Coefficient on two children and three children are both significantly different from coefficient on employed. Coefficient on the interactions are all significantly different from one another.

Table 4. Estimated coefficients from ordinary least squares regressions of subjective wellbeing on parenthood, labor force status and their interaction, for women 25-44 years

	ATUS Ladder	ATUS Very satisfied with life (LPM)	BRFSS Very satisfied with life (LPM)
Parent	0.849**	0.170*	0.021**
	(0.273)	(0.075)	(0.007)
Employed	1.126***	0.180**	0.086***
	(0.247)	(0.067)	(0.007)
Out of labor force (Homemaker)	0.888**	0.200*	0.101***
	(0.312)	(0.085)	(0.010)
Parent*Employed	-0.771**	-0.158*	-0.025**
	(0.283)	(0.077)	(0.008)
Parent*Homemaker	-0.374	-0.091	0.016
	(0.346)	(0.094)	(0.011)
Observations	3,689	3,689	314,245

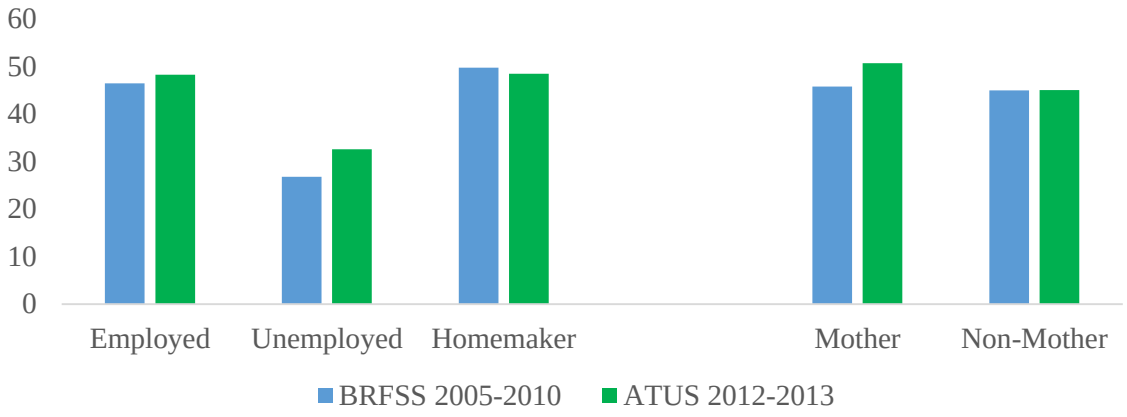
Sources American Time Use Survey Wellbeing Module 2012-2013; Behavioral Risk Factor Surveillance System Survey Data (BRFSS) 2005-2012. *Note*. Standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05; each column in each panel presents coefficients from a separate regression model of life evaluation (dummy for very satisfied with life) on parent, employed, parent*employed, along with age, age-squared, birth decade, race and ethnicity, education, marital status, family income, any physical, mental or cognitive limitation, year of survey and state of residence.

Table 5. Estimated coefficients from ordinary least squares regressions of self-reported health, sleep and rest and emotional wellbeing on parenthood, employment and their interaction for women 25-44 years old

	Very good or excellent general health (LPM)		No. of days inadequate sleep	Well-rested yesterday (LPM)	No. of days stress/depression/emotional problems	Emotional and social support (LPM)
	BRFSS	**ATUS**	**BRFSS**	**ATUS**	**BRFSS**	**BRFSS**
Parent	0.048***	0.092*	2.914***	-0.054	-0.854***	0.011
	(0.010)	(0.046)	(0.262)	(0.052)	(0.183)	(0.009)
Employed	0.038***	0.073	0.791**	-0.031	-1.136***	0.052***
	(0.010)	(0.048)	(0.265)	(0.055)	(0.184)	(0.009)
Parent*Employed	-0.044***	-0.075	-0.359	0.011	0.996***	-0.047***
	(0.010)	(0.052)	(0.286)	(0.059)	(0.191)	(0.009)
Observations	313,565	3,689	153,448	3,689	311,261	313,209

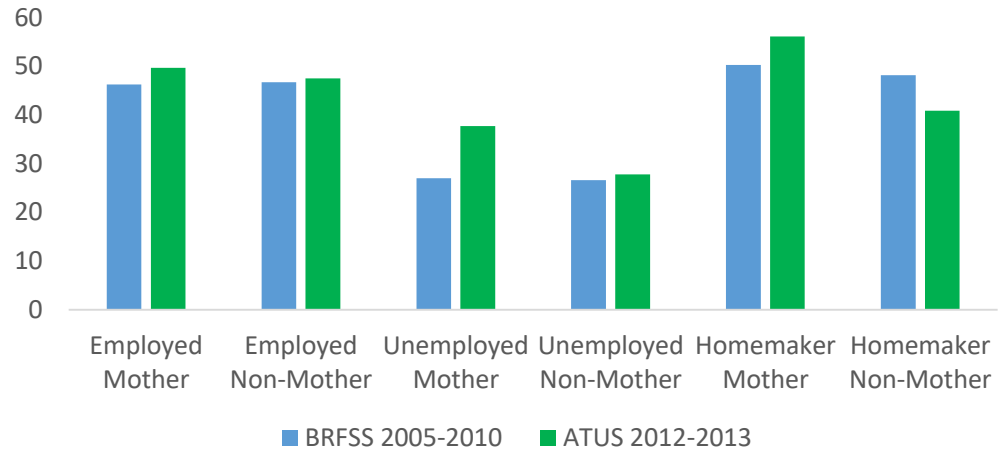
Note. Models include controls for age, age-squared, birth decade, race and ethnicity, education, marital status, family income, any physical, mental or cognitive limitation, year of survey and state of residence. ATUS and BRFSS sampling weights are used to account for complex survey design.

Figure 1: Percentage of respondents very satisfied with life by work and family status



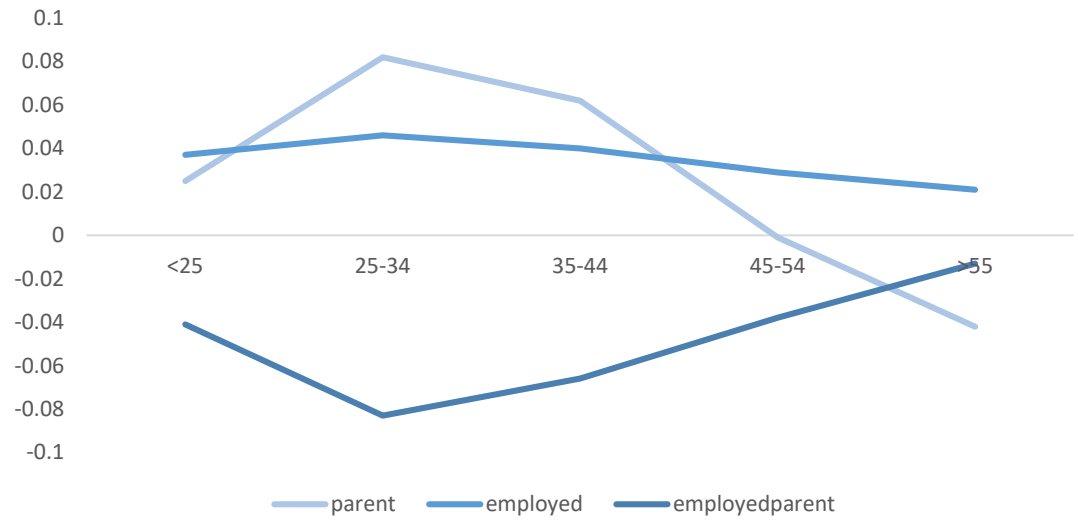
Sources American Time Use Survey Wellbeing Module (ATUS) 2012 and 2013; Behavioral Risk Factor Surveillance System Survey Data (BRFSS) 2005-2010. *Notes* All means are weighted by the ATUS Wellbeing Module person weights and the BRFSS annual surveys final weights respectively, to account for complex survey designs.

Figure 2 Percentage of respondents very satisfied with life by different work-family combinations



Sources American Time Use Survey Wellbeing Module (ATUS) 2012 and 2013; Behavioral Risk Factor Surveillance System Survey Data (BRFSS) 2005-2010. *Notes* All means are weighted by the ATUS Wellbeing Module person weights and the BRFSS annual surveys final weights respectively, to account for complex survey designs.

Fig 3 Estimated coefficients from ordinary least squares regressions of subjective wellbeing on parenthood, employment and their interaction, by age



Source Behavioral Risk Factor Surveillance System Survey Data (BRFSS) 2005-2010. *Note*. Models include controls for age, age-squared, birth decade, race and ethnicity, education, marital status, family income, any physical, mental or cognitive limitation, year of survey and state of residence.

Fig. 4 Estimated coefficients from linear probability models of subjective wellbeing (very satisfied with life) on parenthood, employment and their interaction, by education

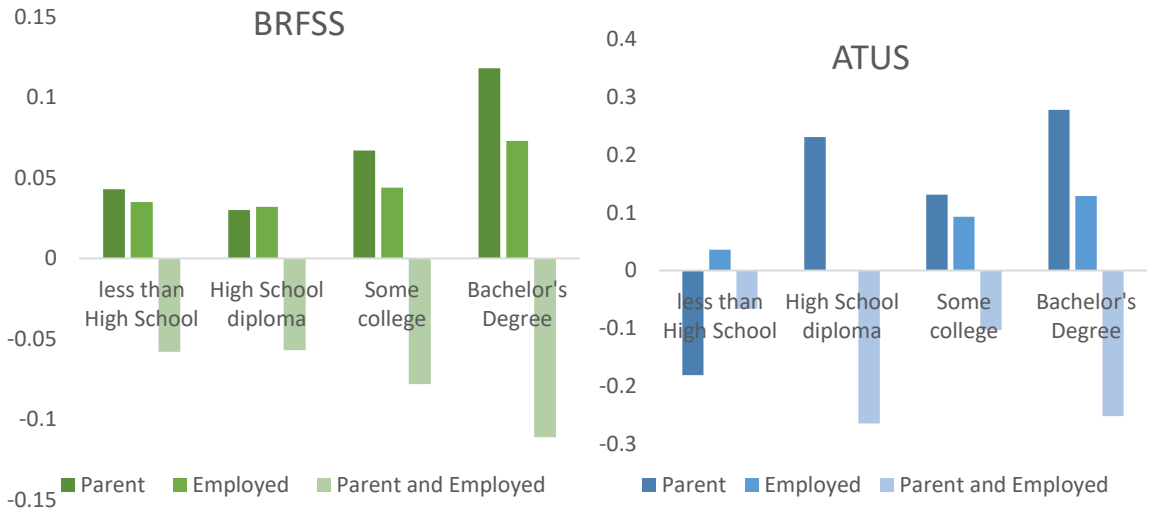


Fig. 5 Estimated coefficients from linear probability models of subjective wellbeing (very satisfied with life) on parenthood, employment and their interaction, by family income

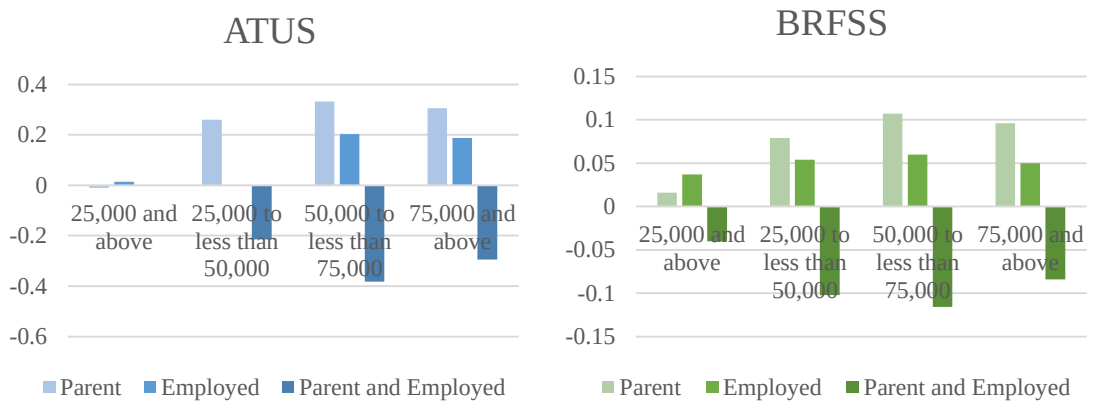
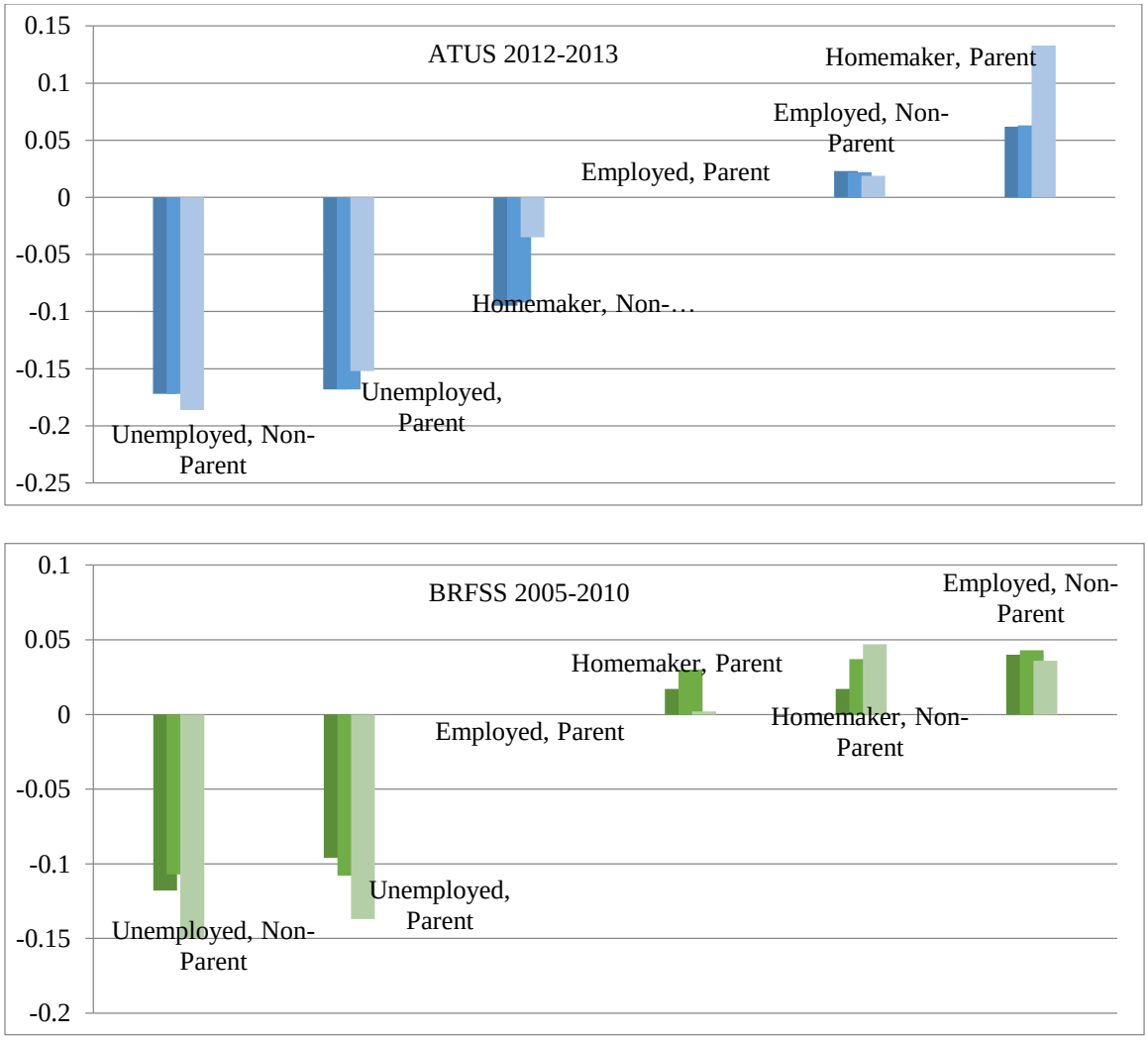


Figure 6 Estimated coefficients on multiple "treatment" levels of employment and parenthood on women's subjective wellbeing, compared to the base category employed parent



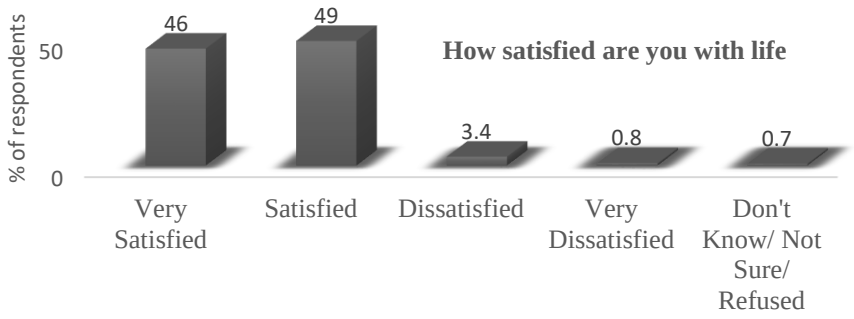
Sources American Time Use Survey Wellbeing Module (ATUS WB); Behavioral Risk Factor Surveillance System Survey Data (BRFSS). *Note*. Each column represents coefficients from Inverse Probability Weighted regressions of very satisfied with life on the multi-level "treatment" status, where the treatment is modeled in three separate multinomial logit models; all treatment models include some indicator and specification of age (age and age squared, or 4 age category dummies, or dummy for prime working age), marital status (dummy for married or 3-category marital status), race and ethnicity (dummy for white and/or dummy for Hispanic, or 4 category race variable), two or three-way interactions between race, marital status and education (dummy for graduate or standard 4 category variable); Covariate balance is checked for each selection model such that standardized differences may be close to zero, and variance ratios may be close to one, after weighting, indicating that the weighting technique using estimated propensity score, has balanced the covariates; however, given that there are over 50 covariates, across the 6 treatment statuses, not all covariates meet the above rule in any given model. Appendix F shows a sample covariate balance before and after weighting and possibly depicts the base case scenario. In each case, model 3 is more balanced than model 2; model 2 and model 1 are more or less similar.

Appendix A

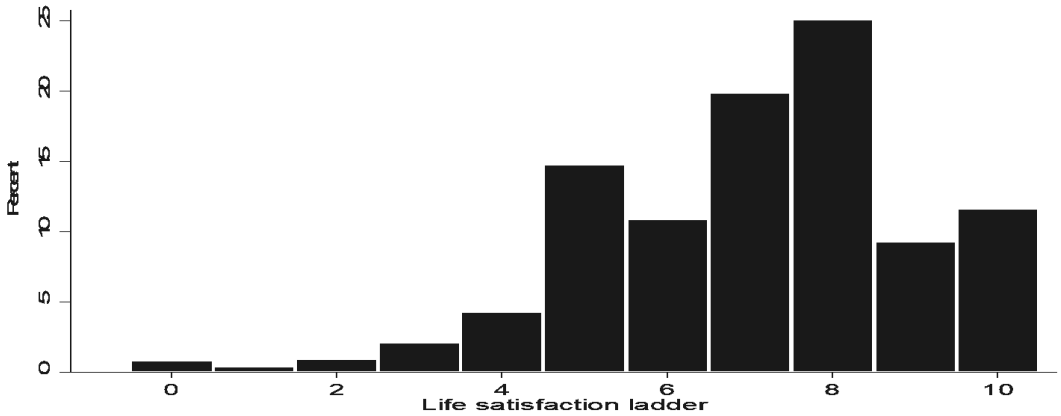
Subjective Well Being in the two Datasets –Measure, Distribution and Comparability

In the BRFSS, respondents are asked, "In general, how satisfied are you with your life – *Very Satisfied, Satisfied, Dissatisfied, Very Dissatisfied*?" In the ATUS, the equivalent question is "Please imagine a ladder with steps numbered from zero at the bottom to ten at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. If the top step is 10 and the bottom step is 0, on which step of the ladder do you feel you personally stand at the present time?"

Distribution of Original Measure of Subjective Well Being in the BRFSS

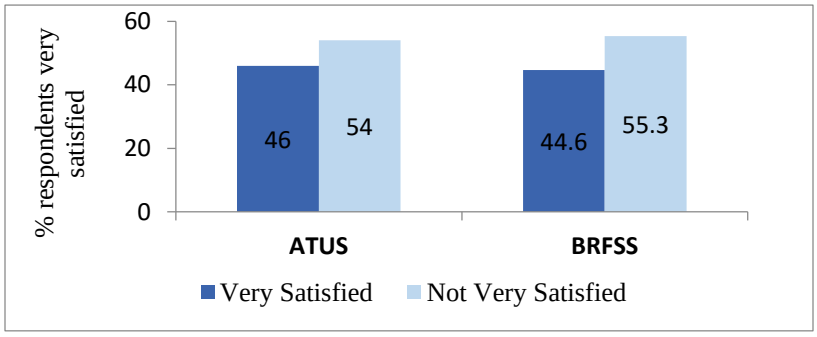


Distribution of Original Measure of Subjective Well Being in the ATUS



I use dummy variables representing whether a respondent is "very satisfied with life" or not in both datasets. This is easily done in the BRFSS data, where I dichotomize the life satisfaction variable to "very

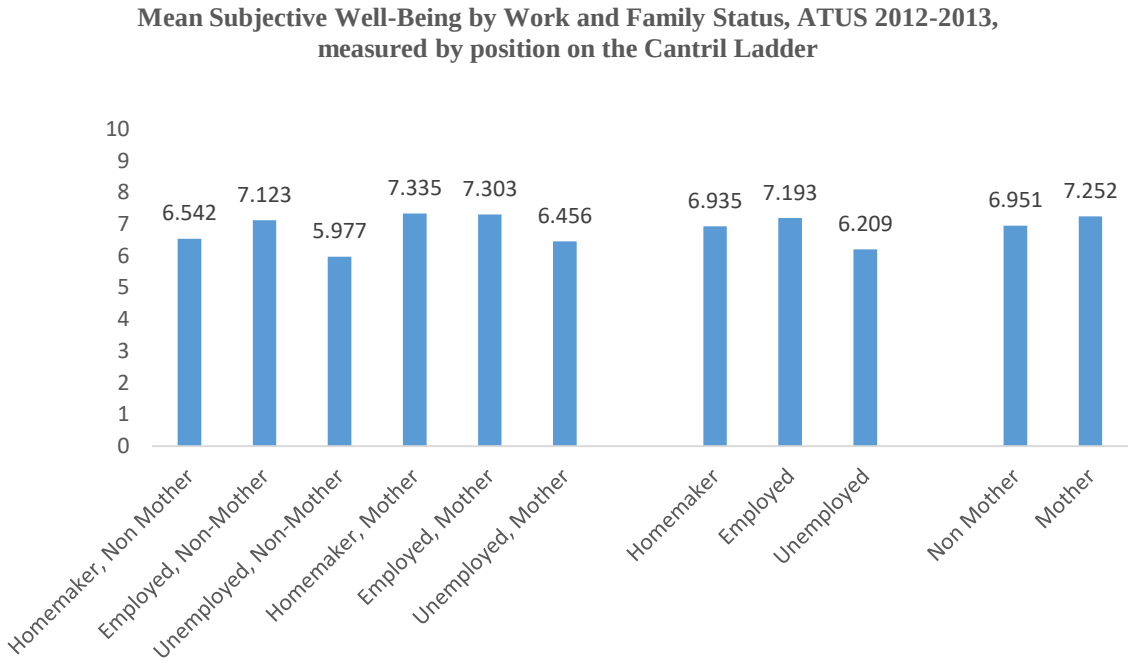
satisfied" such that respondents are either "very satisfied" or not. To make the measures comparable between the two datasets, I begin by looking at the distribution of the well-being ladder in the ATUS. See figure above –7 is the median category and 8 the third quartile for this variable, so I consider respondents who choose rungs 8 or above to have above-average subjective well-being or life satisfaction and to correspond to the category "very satisfied" in the other dataset. Alternately, I could begin by looking at the distribution of the SWB variable in the BRFSS dataset, where 46% of respondents are very satisfied. I consider the top 46% of respondents in the ATUS to be "very satisfied", just as they are in the BRFSS, and the rest not. This also pertains quite closely to the respondents who report being on the ladder rungs 8, 9 and 10 again. In each year in the BRFSS, less than 1-2% of respondents are coded as answering "don't know", "not sure" or "refused" to the life satisfaction question. I cannot make assumptions about what their true status might be in terms of the four available response categories, but do not consider it a huge distortion to assume them as *not* belonging to the topmost category, i.e. *not* "very satisfied".



Distribution of comparable subjective well-being measure in the ATUS and BRFSS

Sources American Time Use Survey Wellbeing Module (ATUS WB), Sandra Hofferth, Sarah M. Flood, and Matthew Sobek. 2013. American Time Use Survey Data Extract System: Version 2.4 [Machine-readable database]. Maryland Population Research Center, University of Maryland, College Park, Maryland, and Minnesota Population Center, University of Minnesota, Minneapolis, Minnesota; Behavioral Risk Factor Surveillance System Survey Data (BRFSS) Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), 2005-2012. *Notes*. I delete observations that are missing on the main dependent variable. For all other variables, I recode "don't know/ not sure" and "refused" responses to missing. Doing so affects less than 1% to a little over 3% of responses, depending on the outcome.

Appendix B.



Sources American Time Use Survey Wellbeing Module (ATUS) 2012 and 2013 *Notes* All means are weighted by the ATUS Wellbeing Module person weights and the BRFSS annual surveys final weights respectively, to account for complex survey designs. 0 depicts the bottom of the ladder or "worst possible life", while 10 depicts the top of the ladder or the "best possible life".

Appendix C. Descriptive statistics for select variables by employment and family status, ATUS Wellbeing modules 2012-2013 pooled sample

	Employed	Unemployed	Homemaker	Parent	Non Parent	Employed Parent	Employed Non Parent	Unemployed Parent	Unemployed Non Parent	Homemaker Parent	Homemaker Non Parent
Age	42.084	36.247	43.700	37.192	45.531	38.096	44.484	33.324	39.004	36.285	50.971
	(0.265)	(0.813)	(0.441)	(0.199)	(0.351)	(0.236)	(0.405)	(0.818)	(1.430)	(0.387)	(0.721)
25-44 years (%)	45.1	46.1	42	70.8	25.9	71.3	29.3	64.1	29.1	71.5	13
Wellbeing (%)											
Very satisfied with life	48.3	32.6	48.5	50.7	45	49.7	47.5	37.7	27.8	56.1	40.9
Very good or excellent general health	55.7	40.1	34.3	50.5	48.7	55	56.1	35.8	44.1	44.8	24.1
Yesterday was a good day	27.4	23.6	25.6	26.9	26.6	27.5	27.3	29.2	18.4	24.9	26.4
Yesterday was a typical day	59.6	63.8	62.3	61.1	60.1	60.1	59.3	59	68.3	63.8	60.8
Yesterday was a bad day	13	12.6	12.1	12	13.3	12.4	13.4	11.8	13.3	11.3	12.8
Well rested	36.2	41	36.2	34.1	38.2	32.7	38.3	38.7	43.3	35.9	36.4
Somewhat rested	42.7	34.8	35.4	41.2	39.8	43.7	42.1	36.3	33.4	37.2	33.7
Not rested	21.1	24.2	28.4	24.7	22	23.6	19.6	25.1	23.4	26.9	29.9
Birth Decade (%)											
Forties	2.5	1.7	4.1	0	4.8	0	3.9	0	3.2	0	8.1
Fifties	20.5	11.5	27.1	2.7	34.7	2.8	31.1	1.7	20.6	2.9	50.9
Sixties	26.1	20	22.2	23.9	25.3	26.4	26	15.9	23.8	20.8	23.5
Seventies	22.6	20.3	20.9	39.4	9.8	41.5	11.2	31.3	10	37	5.1
Eighties	22.7	29.2	20.2	29.8	17.4	26.7	20.3	38.7	20.2	34.1	6.5
Nineties	5.7	17.4	5.6	4.2	8.1	2.6	7.6	12.4	22.2	5.2	5.9
Family Income (%)											
<25,000	14.4	44.4	37.1	23.7	20.8	16.5	13.2	56.8	32.7	30.3	43.8
25,000 to <50,000	25	25.9	27.9	25.1	26.2	24	25.6	23.9	27.7	27.9	27.8
50,000 to <75,000	21.1	13.1	13	17.6	19.2	20.5	21.4	7.7	18.1	14	12
75,000 and above	39.5	16.7	22	33.6	33.8	39.1	39.8	11.5	21.5	27.8	16.4
Marital Status (%)											
Married	53.3	31.5	63.9	67.1	45.7	66.7	45.3	39.7	23.8	75.2	52.8
Previously Married	17.2	17.5	14.4	11.6	20	13.6	19.4	13.7	21.2	6.9	21.7
Never Married	29.5	50.9	21.7	21.3	34.4	19.8	35.3	46.6	55	17.9	25.5
Education (%)											
Less than High School	5.3	21.2	22.8	12.8	9.1	6.3	4.7	32.3	10.7	21.6	23.9

High school diploma	26.2	33.1	33.8	27.2	29.5	25.7	26.5	33	33.2	28.9	38.5
Some college	28.6	28.6	22.5	25.5	28.2	27.7	29	21.9	34.8	21.7	23.3
Bachelor's degree	39.9	17.1	21	34.5	33.3	40.3	39.7	12.8	21.3	27.9	14.2
Race/Ethnicity (%)											
Non-Hispanic white	67.8	49.5	58.5	57.8	68.8	62.1	71.1	42.5	56.2	52.6	64.2
Non-Hispanic black	11.9	23.2	12.7	12.3	13.3	12.4	11.7	24.9	21.6	8.8	16.5
Hispanic	14.2	20.3	22.3	23.3	11.9	19.3	11.2	29.3	11.8	30.4	14.5
Others	6.1	6.9	6.5	6.6	6	6.3	5.9	3.4	10.3	8.2	4.9
Parent (%)	37.6	48.5	49.5								
Employed (%)				62.8	73.2						
Unemployed (%)				7.8	5.8						
Homemaker (%)				29.4	21						
Observations	4,970	454	1,799	3,658	3,565	2,402	2,568	252	202	1,004	795

Appendix D. Descriptive Statistics for select variables by work and family status, BRFSS pooled sample 2005-2010

	Employed	Unemployed	Homemaker	Parent	Non Parent	Employed Parent	Employed Non Parent	Unemployed Parent	Unemployed Non Parent	Homemaker Parent	Homemaker Non Parent
Age	41.049	38.553	39.844	36.565	45.285	37.312	44.585	33.951	43.437	35.595	51.694
	(0.034)	(0.117)	(0.065)	(0.032)	(0.051)	(0.038)	(0.056)	(0.130)	(0.192)	(0.061)	(0.131)
25- 44 years (%)	0.483	0.442	0.591	0.707	0.259	0.701	0.276	0.619	0.254	0.750	0.147
Wellbeing (%)											
Very satisfied with life	46.5	26.8	49.8	45.8	45.1	46.3	46.7	27.1	26.6	50.3	48.3
Very good or excellent general health	62.3	42	54.7	60	57.8	63.3	61.3	42.6	41.4	57.7	46.3
No emotional or mental problems last month	59.4	47.8	61.7	58.1	59.8	58.3	60.5	48.5	47	60.4	65.1
Well rested	21.1	26	27.1	20.2	25.7	18.1	23.9	23.1	29	24.1	35.4
Not well rested	22.7	25.9	22.2	26.2	19.1	26.5	19.1	29.6	22.2	24.5	15.9
Birth Decade (%)											
Forties	8.4	7.8	9.4	1	17.4	0.9	15.5	1	15	1.1	32.7
Fifties	23.8	19.8	16.4	9.9	36	11.1	35.7	8.1	32.2	7.6	40.9
Sixties	26.4	21.9	24.7	32.5	17.8	35.2	18.1	24.5	19	28.5	14.2
Seventies	24.3	21.8	33	38.1	11.6	36.9	12.5	32.6	10.4	42.6	6.3
Eighties	16.1	26.1	16.2	17.7	16.1	15.1	17.1	31.2	20.7	19.9	5.7
Nineties	1	2.7	0.3	0.8	1.2	0.8	1.2	2.6	2.7	0.3	0.3
Family Income (%)											
<25,000	15.5	45.9	25	22.2	17.5	17.3	13.8	50.2	41.4	25.3	24.4
25,000 to <50,000	24.3	19.9	21.2	22.3	24.5	23.1	25.4	18.9	20.9	21.4	20.6
50,000 to <75,000	18.7	8.8	13.5	16	17.7	17.9	19.4	8.1	9.6	14	12.2
75,000 and above	33.4	10.3	26.2	30.7	29	35	31.9	9.4	11.3	27.3	23.4
Marital Status (%)											
Married	61.4	43.1	85.4	71.5	56.5	69	54.1	45.4	40.7	85.3	85.5
Previously Married	16.4	21	5.6	12.2	17.5	14.5	18.1	18.8	23.3	4.5	8.5
Never Married	22.3	35.9	9.1	16.4	26	16.5	27.7	35.8	36	10.2	6
Education (%)											
Less than High School	5.3	16.7	18.8	11.1	6.5	6.6	4.1	20.7	12.5	19.1	18.2
High school diploma	23.9	34.8	29.6	25.1	27	23.1	24.6	35.9	33.5	26.5	38.4
Some college	28.7	26.8	23.4	27.1	27.9	29	28.4	25.2	28.5	23.2	23.9
Bachelor's degree	42.1	21.8	28.1	36.7	38.6	41.4	42.8	18.2	25.6	31.2	19.4
Race/Ethnicity (%)											
Non-Hispanic white	70.6	54.3	63.8	63.4	73	66	74.9	46.2	62.8	62.4	67.8
Non-Hispanic black	11	17.5	3.7	10.6	9.6	12.3	9.7	19.8	15.1	3.5	4.3
Hispanic	12.2	19.8	26.2	19.5	11.1	15.1	9.3	25.5	13.7	28.1	21

Others	6.3	8.4	6.2	6.6	6.4	6.5	6.1	8.4	8.4	6	6.9
Parent (%)	48.6	51.5	73.6	100	0						
Employed (%)				64.5	79.5						
Unemployed (%)				8.4	9.2						
Homemaker (%)				27.1	11.3						
Observations	562,025	57,511	124,578	339,789	404,325	236,047	325,978	24,493	33,018	79,249	45,329

Sources American Time Use Survey Wellbeing Module (ATUS WB), Sandra Hofferth, Sarah M. Flood, and Matthew Sobek. 2013. American Time Use Survey Data Extract System: Version 2.4 [Machine-readable database]. Maryland Population Research Center, University of Maryland, College Park, Maryland, and Minnesota Population Center, University of Minnesota, Minneapolis, Minnesota; Behavioral Risk Factor Surveillance System Survey Data (BRFSS) Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), 2005-2012. *Notes* All means are weighted by the ATUS Wellbeing Module person weights and the BRFSS annual surveys final weights respectively, to account for complex survey designs.

Appendix E. Estimated coefficients from ordinary least squares regressions of life satisfaction, self-reported health, sleep and rest, and emotional wellbeing on parenthood, employment and their interaction for women 25-44 years old, by Education

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Very satisfied with life (LPM)	Very Satisfied with Life (LPM)	Life Evaluation Ladder	Very good or excellent general health (LPM)	Very good or excellent general health (LPM)	No. of days last month did not get enough rest or sleep	Well-rested yesterday (LPM)	No. of days stress, depression, emotional problems	Yesterday was a good day (LPM)
	BRFSS	**ATUS**	**ATUS**	**BRFSS**	**ATUS**	**BRFSS**	**ATUS**	**BRFSS**	**ATUS**
Less than high school									
Parent	0.043**	-0.181	-1.296*	0.007	-0.008	1.000*	-0.036	-0.466+	0.081
	(0.013)	(0.135)	(0.619)	(0.013)	(0.111)	(0.429)	(0.127)	(0.264)	(0.125)
Employed	0.035*	0.036	0.639	0.027+	0.083	0.837	-0.060	-0.452	0.283+
	(0.016)	(0.177)	(0.812)	(0.016)	(0.146)	(0.550)	(0.167)	(0.327)	(0.163)
Employed and Parent	-0.058***	-0.066	-0.306	-0.015	-0.021	0.125	-0.073	0.396	-0.297+
	(0.017)	(0.189)	(0.867)	(0.017)	(0.156)	(0.588)	(0.178)	(0.350)	(0.175)
Observations	22,273	297	297	22,159	297	10,744	297	21,853	297
High school graduate									
Parent	0.030***	0.231**	1.134**	0.058***	0.120	1.867***	0.043	-0.182	0.081
	(0.009)	(0.086)	(0.352)	(0.009)	(0.088)	(0.296)	(0.080)	(0.164)	(0.087)
Employed	0.032***	0.170+	0.960*	0.054***	0.102	0.771*	0.146+	-1.102***	0.031
	(0.010)	(0.093)	(0.377)	(0.010)	(0.094)	(0.316)	(0.086)	(0.172)	(0.093)
Employed and Parent	-0.057***	-0.265**	-1.233**	-0.048***	-0.123	-0.254	-0.094	0.577**	-0.058
	(0.010)	(0.100)	(0.407)	(0.011)	(0.101)	(0.341)	(0.093)	(0.186)	(0.101)
Observations	72,667	757	757	72,489	757	33,207	757	71,682	757
Some college									
Parent	0.067***	0.131	0.821*	0.070***	0.015	3.248***	-0.062	-1.400***	0.073
	(0.010)	(0.087)	(0.338)	(0.010)	(0.088)	(0.312)	(0.084)	(0.172)	(0.080)
Employed	0.044***	0.093	0.805*	0.047***	-0.009	1.451***	-0.022	-2.253***	0.026
	(0.010)	(0.092)	(0.356)	(0.010)	(0.093)	(0.321)	(0.088)	(0.175)	(0.084)
Employed and Parent	-0.078***	-0.103	-0.594	-0.058***	0.053	-1.026**	0.065	1.823***	-0.020
	(0.011)	(0.098)	(0.379)	(0.011)	(0.099)	(0.342)	(0.094)	(0.186)	(0.089)
Observations	87,002	993	993	86,848	993	42,325	993	86,191	993
Bachelor's degree and above									
Parent	0.118***	0.278**	1.371***	0.056***	0.080	4.814***	0.018	0.023***	0.069
	(0.010)	(0.091)	(0.282)	(0.008)	(0.083)	(0.276)	(0.086)	(0.006)	(0.085)
Employed	0.073***	0.129	0.906***	0.037***	0.077	1.884***	0.053	0.053***	0.113
	(0.010)	(0.087)	(0.270)	(0.008)	(0.079)	(0.272)	(0.082)	(0.006)	(0.082)
Employed and Parent	-0.111***	-0.252**	-1.246***	-0.063***	-0.129	-1.803***	-0.107	-0.048***	-0.105
	(0.010)	(0.093)	(0.288)	(0.009)	(0.084)	(0.288)	(0.088)	(0.007)	(0.087)
Observations	132,303	1,642	1,642	132,069	1,642	67,172	1,642	131,992	1,642

APPENDIX F. Treatment Effects Models -Estimated Coefficients on Multiple "Treatment" Levels of Employment and Parenthood on Subjective Wellbeing

	ATUS 2012-2013			BRFSS 2005- 2010		
	(1)	(2)	(3)	(1)	(2)	(3)
Employed, Non-Parent	0.023	0.022	0.019	0.040***	0.043***	0.036***
	(0.026)	(0.025)	(0.026)	(0.005)	(0.005)	(0.005)
Unemployed, Parent	-0.168***	-0.168***	-0.152***	-0.096***	-0.108***	-0.137***
	(0.039)	(0.038)	(0.043)	(0.016)	(0.015)	(0.013)
Unemployed, Non-Parent	-0.172***	-0.172***	-0.186***	-0.118***	-0.107***	-0.150***
	(0.051)	(0.049)	(0.048)	(0.012)	(0.011)	(0.009)
Homemaker, Parent	0.062	0.063	0.133**	0.017	0.030*	0.002
	(0.052)	(0.050)	(0.051)	(0.012)	(0.013)	(0.011)
Homemaker, Non-Parent	-0.095*	-0.092*	-0.035	0.017	0.037**	0.047***
	(0.039)	(0.038)	(0.043)	(0.014)	(0.012)	(0.013)
Observations	7223	7223	7223	89,888	126,696	145,780
Potential Outcome Mean	0.450***	0.450***	0.445***	0.435***	0.435***	0.440***
for Employed, Parent	(0.023)	(0.022)	(0.023)	(0.004)	(0.004)	(0.004)

Sources American Time Use Survey Wellbeing Module (ATUS WB); Behavioral Risk Factor Surveillance System Survey Data (BRFSS). *Note*. Each column represents coefficients from Inverse Probability Weighted regressions of very satisfied with life on the multi-level "treatment" status, where the treatment is modeled in three separate multinomial logit models; all treatment models include some indicator and specification of age (age and age squared, or 4 age category dummies, or dummy for prime working age), marital status (dummy for married or 3-category marital status), race and ethnicity (dummy for white and/or dummy for Hispanic, or 4 category race variable), two or three-way interactions between race, marital status and education (dummy for graduate or standard 4 category variable); Covariate balance is checked for each selection model such that standardized differences may be close to zero, and variance ratios may be close to one, after weighting, indicating that the weighting technique using estimated propensity score, has balanced the covariates; however, given that there are over 50 covariates, across the 6 treatment statuses, not all covariates meet the above rule in any given model. Appendix F figure below shows a sample covariate balance before and after weighting and depicts the base case scenario. In each case, model 3 is more balanced than model 2; model 2 and model 1 are more or less similar.

Stata output showing covariate balance before and after weighting for age, BRFSS model 3