

In Defense of Parenthood: Children Are Associated With More Joy Than Misery

S. Katherine Nelson,¹ Kostadin Kushlev,² Tammy English,³ Elizabeth W. Dunn,² Sonja

Lyubomirsky¹

University of California, Riverside¹

University of British Columbia²

Stanford University³

in press, *Psychological Science*

Please address correspondence to:

Sonja Lyubomirsky, Ph.D.

Department of Psychology

University of California

Riverside, CA 92521

Phone: 951-827-5041

Fax: 951-827-3985

Email: sonja.lyubomirsky@ucr.edu

Abstract

Recent scholarly and media accounts paint a portrait of unhappy parents who find remarkably little joy in taking care of their children, but the scientific basis for these claims remains inconclusive. In three studies, we used a strategy of converging evidence to test whether parents evaluate their lives more positively than do non-parents (Study 1), feel relatively better than non-parents on a day-to-day basis (Study 2), and experience more positive feelings during childcare than other daily activities (Study 3). The results indicate that, contrary to previous reports, parents (and especially fathers) report relatively higher levels of happiness, positive emotion, and meaning in life.

In Defense of Parenthood: Children Are Associated With More Joy Than Misery

Modern evolutionary psychologists position parenting at the top of the pyramid of human needs, reflecting its central role in human life (Kenrick, Griskevicius, Neuberg, & Schaller, 2010). Yet, some research has indicated that parenting is associated with reduced well-being (e.g., Evenson & Simon, 2005; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004; McLanahan & Adams, 1987). In particular, attention has revolved around a study showing that working mothers in Texas enjoy parenting less than watching TV, shopping, or preparing food (Kahneman et al., 2004).

Although recent media accounts paint a dismal picture of parenting, the underlying scientific research is surprisingly unclear and inconsistent. Meta-analyses have linked parenthood to lower marital satisfaction on average (Twenge, Campbell, & Foster, 2003) and to decreases in life satisfaction in the months after childbirth (Luhmann, Hoffman, Eid, & Lucas, 2012). Few analyses, however, directly compare parents and non-parents on global measures of well-being. Instead, most investigations control for multiple demographic variables, which vary across studies. Some of these studies find that parents exhibit a higher prevalence of depression (Evenson & Simon, 2005), along with less positive and more negative affect (Ross & Van Willigen, 1996), than non-parents, whereas others reveal a net zero or small negative parenting effect (e.g., Blanchflower & Oswald, 2004; Di Tella, MacCulloch, & Oswald, 2003; Ferrer-i-Carbonell, 2005). Furthermore, other work suggests that parents do not experience these negative outcomes (Keizer, Dykstra, & Poortman, 2010; Kohler, Behrman & Skyttthe, 2005; Rothrauff & Cooney, 2008), and, on the contrary, report relatively higher feelings of meaning, gratification, and reward (Russell, 1974; Umberson & Gove, 1989; White & Dolan, 2009). Such conflicting findings could be due to the use of divergent methods, analytical approaches, and measures,

making it almost impossible to draw clear conclusions from this literature. The importance of this topic and its prominence in popular discourse demonstrates the need for rigorous examination of the link between parenthood and well-being, using multiple methods and broad well-being measures.

To this end, we present three distinct studies that harnessed the strongest methodologies currently available to examine the correlational relationship between parenting and well-being. Specifically, a large, nationally representative survey tested whether parents are happier overall than non-parents (Study 1), and an experience-sampling study tested whether parents feel better on a moment-to-moment basis than non-parents (Study 2). Finally, Study 3 employed a within-subjects approach to examine whether parents experience more positive feelings when taking care of children than during their other daily activities. This multi-method strategy allowed us to capture the emotional experience of parenthood more comprehensively, while triangulating on the pros and cons of each individual methodology, thereby bolstering the reliability of our conclusions. Across methods, we sought converging evidence for the hypothesis that parenthood is associated with happiness and meaning, rather than misery.

Study 1

Method

Participants. To test whether parents are happier overall, we used four waves of a nationally representative sample of U.S. respondents ($N = 6,906$, 52.7% female) who completed the World Values Survey (WVS; World Values Survey Association, 2006). The four waves of data collection occurred in 1982, 1990, 1995, and 1999, and each respondent participated only once. Respondents' ages ranged from 17 to 96 ($M = 44.33$, $SD = 18.29$). We chose to use this survey to test the link between parenthood and well-being because it 1) comprises a nationally

representative sample, 2) includes appropriate well-being and demographic variables, and 3) has been used successfully by multiple research teams (Brandt, in press; Napier & Jost, 2008; Oishi, Diener, Lucas, & Suh, 1999; Suh, Diener, Oishi, & Triandis, 1998).

Materials and procedure. Data were collected via in-person interviews for each wave. The sampling procedures varied slightly by wave; however, the WVS reported that the use of stratified or random sampling procedures resulted in a final sample for each wave that was representative of the population (World Values Survey Association, 2006). Initial analyses revealed no differences among wave years and no significant interactions between parenthood status and wave year for any of our well-being indicators (all $ps > .40$). Consequently, for all subsequent analyses, respondents were collapsed across wave year.

Respondents were asked to provide demographic information, including how many children they had (among parents, $M = 2.68$, $SD = 1.47$), age, marital status, and sex. In addition, participants completed single-item measures of happiness, life satisfaction, and thoughts about meaning in life. To assess happiness, participants used a 4-point scale to answer the following: “Taking all things together, would you say you are [*very happy* (1), *quite happy* (2), *not very happy* (3), *not at all happy* (4)]?” Responses were then reverse-coded so that higher scores would indicate higher levels of happiness. To assess life satisfaction, participants were asked, “All things considered, how satisfied are you with your life as a whole these days?” They responded on a 10-point scale ranging from 1 (*dissatisfied*) to 10 (*satisfied*). Finally, to address thoughts about meaning in life, participants were asked, “How often, if at all, do you think about the meaning and purpose of life?” Responses were made on a scale ranging from 1 (*often*) to 4 (*never*) and then reverse-scored so that higher scores would indicate more frequent thoughts about meaning in life. Single-item measures of well-being have been found to be reasonably

valid, correlating moderately with other well-being measures, including written interviews, informant reports, and measures of daily affect (Sandvik, Diener, & Seidlitz, 1993). Indeed, research using the WVS found these single-item measures of well-being to be positively related to affect balance and positive affect, and inversely related to negative affect (Suh et al., 1998).

Results

First, we assessed the bivariate association between parenthood and well-being. As shown in Figure 1 (top panel), parents reported relatively higher life satisfaction ($t[6844] = 4.35$, $p < .001$, $r = .05$), happiness ($t[6791] = 2.90$, $p = .004$, $r = .04$), and thoughts about meaning ($t[6805] = 3.70$, $p < .001$, $r = .04$). Likewise, correlational analyses showed that having more children was positively related to life satisfaction ($r[6438] = .06$, $p < .001$) and meaning thoughts ($r[6399] = .05$, $p < .001$), but not happiness. These analyses, however, are limited, as potential moderators (like age) may be present. Although circumstantial variables have not consistently been related to well-being (Diener, Suh, Lucas, & Smith, 1999), other researchers have treated demographic factors (e.g., age, sex, marital status) as potential confounds and controlled for them in their analyses. Our goal was to describe the overall relationship between parenthood and well-being, and to explore potential moderators of that relationship, rather than isolating the causal effect of parenthood on well-being by controlling for variables that might be meaningfully or artifactually related to parental status. We have included these variables as moderators in our analyses to gain a better understanding of how the emotional experience of parenthood is related to such demographic variables as sex (Table 1), marital status (Table 2), and age (Table 3).

Sex as moderator. Sex significantly moderated the relation of parenthood to satisfaction ($b = 0.07$, $p = .009$) and happiness ($b = 0.02$, $p = .005$), but not thoughts about meaning. Whereas all parents reported more frequent thoughts about meaning than non-parents, simple effects

analyses revealed that parenthood was associated with greater satisfaction ($b = 0.36, p < .001$) and happiness ($b = 0.10, p < .001$) only among fathers.¹

Marital status as moderator. Marital status also significantly moderated the relation of parenthood to satisfaction ($b = 0.08, p = .003$) and happiness ($b = 0.04, p < .001$), but not thoughts about meaning. Although the trend was in the expected direction, married parents did not differ in satisfaction ($b = 0.06, p = .13$) or happiness ($b = 0.02, p = .17$) from married people without children, but unmarried parents reported lower happiness ($b = -0.11, p < .001$) and satisfaction ($b = -0.21, p = .006$) than their childless counterparts.

Age as moderator. Finally, age significantly moderated the link between parenthood and life satisfaction. Simple effects analyses revealed that young parents (ages 17-25) were less satisfied with their lives than their childless counterparts ($b = -0.39, p < .001$); mid-range age parents (ages 26-62) were more satisfied than their childless peers ($b = 0.42, p < .001$); and older parents (ages 63 and older) did not differ from older non-parents ($b = 0.16, p = .29$).

Discussion

In sum, Study 1 showed that, overall, parents report being happier, more satisfied, and thinking more about meaning than non-parents. Interestingly, these overall relationships remained positive for fathers and parents ages 26-62, but not mothers, young parents, and single parents. Whereas young and single parents were significantly less happy than their childless peers, no difference was detected between mothers and women without children.

The study's strength was the use of a large, representative sample and the ability to detect important moderators. However, our global measures may have prompted parents to overestimate their well-being, due to recall biases, dissonance reduction, or beliefs about the

¹ All moderator analyses in Studies 1 and 2 were conducted using effects coding (Cohen, Cohen, West, & Aiken, 2003).

desirability of parenting (e.g., Eibach & Mock, 2011; Robinson & Clore, 2002). Furthermore, although parenthood was positively associated with all three global measures of positive well-being included in the WVS, the thinking about meaning question may have tapped the *search* for meaning, in addition to the *presence* of meaning (Steger, Frazier, Oishi, & Kaler, 2006), and the results for this measure should therefore be interpreted with particular caution. In Study 2, we addressed both of the above concerns by using experience sampling to assess moment-to-moment experiences and by incorporating a more valid measure of the presence of meaning. Participants reported their emotions on five occasions per day for one week. We tested whether parents report more positive emotional experiences and meaning in daily life than non-parents.

Study 2

Method

Participants. The sample consisted of 329 adults (53% female) ranging in age from 18 to 94 ($M = 56.93$, $SD = 22.66$) drawn from three waves of data collection for an experience-sampling study on emotional experience in adulthood (Carstensen, et al., 2011). Sixty-six percent of the participants were European American, 33% were African American, and 1% indicated “other” race. Gender, ethnicity, and socioeconomic status were stratified across age.

Procedure. After obtaining informed consent and demographic information, participants were provided with an electronic pager and instructed to complete a brief response sheet each time they were paged. Over the next week, participants were randomly paged 5 times a day within a 12-hour window. Completed response sheets were returned by mail at the end of each day to monitor compliance. At the end of the week of experience sampling, participants completed reports of global well-being and were paid for their participation (see Carstensen et al., 2011, for a detailed description of the procedure).

Materials.

Demographics. We assessed parenthood status with a question asking participants to indicate their number of children (among parents $M = 2.41$, $SD = 1.27$). Participants were also asked about several additional demographic variables, including age, sex, ethnicity, socioeconomic status, and marital status.

Momentary well-being. Experience sampling was used to assess participants' momentary emotional well-being and sense of meaning in daily life. At each of the 35 occasions they were paged, participants indicated how much they were feeling each of 19 emotions on a scale from 1 (*not at all*) to 7 (*extremely*). The list included 8 positive emotions (*happiness, joy, contentment, excitement, pride, accomplishment, interest, and amusement*) and 11 negative emotions (*anger, sadness, fear, disgust, guilt, embarrassment, shame, anxiety, irritation, frustration, and boredom*). We created an index of overall positive emotional experience at each occasion by subtracting the average of the 11 negative emotions from the average of the 8 positive emotions for each participant. At Wave 3, participants were also asked to respond to the item, "In the bigger picture of your life, how personally significant and meaningful to you is what you are doing at the moment?" on a scale from 1 (*not at all*) to 7 (*very much*). We averaged across all sampling occasions to compute a single score for positive emotional experience and a single score for meaningfulness for each participant.

Global well-being. Global happiness was assessed with the 4-item Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). Depressive symptoms were assessed with the 20-item Center for Epidemiologic Studies of Depression Scale (CES-D; Radloff, 1977) at Waves 2 and 3.

Results

Initial analyses revealed no significant interactions between parenthood status and wave year for any of our well-being indicators (all p s > .40). Consequently, respondents were collapsed across wave year for all subsequent analyses.

As in Study 1, we first examined the relationship between parenthood and well-being with t -tests. Parents reported relatively higher global well-being, including more happiness ($t[325] = 2.68, p = .008, r = .15$) and fewer depressive symptoms ($t[237] = 2.97, p = .003, r = -.19$). Parents also reported higher momentary well-being, including more positive emotion ($t[327] = 3.64, p < .001, r = .20$) and more meaning ($t[176] = 2.60, p = .01, r = .19$), than did non-parents (see bottom left panel of Figure 1).

Sex, age, race, and SES did not moderate the link between parenthood and any of the well-being indicators. However, due to the important moderating role of sex (Kohler et al., 2005; Keizer et al., 2006), we examined the effects of parenthood separately for men and women. As in Study 1, parenthood was more consistently linked to higher well-being for men. Fathers scored higher than childless men on all well-being indicators (all t s > 2.30 and r s > .23). Mothers only reported fewer depressive symptoms ($t[127] = 2.06, p = .04, r = 0.18$) and marginally more daily positive emotion ($t[171] = 1.86, p = .065, r = .14$) than childless women (see Table 4). In addition, relationship status moderated the link between parenthood and depressive symptoms ($b = 1.41, p = .012$), such that parents without a partner reported fewer depressive symptoms than non-parents without a partner ($t[127] = 2.95, p < .01, r = .25$).

Discussion

Building on Study 1, we found that parents in Study 2 not only showed higher levels of global well-being than non-parents, but also reported more positive emotional experience and

meaning moment-to-moment. Thus, across Studies 1 and 2, parents reported relatively greater well-being than their childless peers both when evaluating their lives as a whole and when rating their momentary experience. Still, these findings cannot rule out possible selection effects – namely, that happier people may be more likely to become parents. If parenting is related to well-being, then parents should experience more positive states when they are taking care of their children than when engaging in their other daily activities.

Study 3

To address the issue of potential selection effects, in Study 3, we used a within-subjects approach, employing the Day Reconstruction Method (Kahneman et al., 2004) to compare how parents felt when they were taking care of their children with how they felt during the rest of their days.

Method

Participants. One hundred eighty-six parents (76% women; median age = 36), with at least one child 18 years old or younger living at home, completed our relevant survey items as part of a larger study. We recruited 66 participants in person at public places in British Columbia, Canada and 120 participants online (91 through Amazon’s recruitment service MTurk² and 29 through local schools and our lab website).

Materials and procedure. As part of a larger survey, parents were asked to report what they did on the previous day, episode-by-episode, using the Day Reconstruction Method (DRM; Kahneman et al., 2004), which provides an alternative to experience sampling. For a

² Sixty-three additional MTurk participants were excluded for failing the Instructional Manipulation Check, a validated tool for eliminating participants not following instructions; this elimination rate is consistent with past online research (Oppenheimer, Meyvis, & Davidenko, 2009).

predetermined set of eight episodes, we asked participants to report what they were doing during each episode from a list of 15 common daily activities (e.g., watching TV, cooking, taking care of children). In addition, for each of the episodes, we asked participants to answer questions about positive affect (PA) and meaning in life. As in the original DRM, the PA score was the average of three items: *happy*, *warm/friendly*, and *enjoying myself*. Meaning in life was assessed with a single item for which participants were asked to rate the extent to which they felt “a sense of meaning and purpose in life” during the episode. A separate validation study with 161 parents (Ashton-James, Kushlev, & Dunn, 2011) confirmed that this single item was strongly correlated ($r = .83$) with a 4-item version of the Meaning in Life Questionnaire’s presence of meaning subscale (Steger et al., 2006). All PA and meaning items were rated on a scale from 0 (*not at all*) to 6 (*very much*). We calculated two PA scores and two meaning scores for each parent: One for all episodes when they were taking care of their children and one for all episodes when they were not. This approach allowed us to compare PA and meaning during childcare with PA and meaning during all other activities.

Results

Using paired-samples *t*-tests, we found that, on average, parents reported more PA (M_s [SD_s] = 4.19 [1.20] vs. 3.96 [1.22]; $t[176] = 2.16, p = .03, r = .16$) and a stronger sense of meaning in life (M_s [SD_s] = 4.39 [1.20] vs. 3.85 [1.35]; $t[184] = 5.30, p < .001, r = .36$) during episodes when they were taking care of their children than when they were not (see Figure 1, bottom right). Sex did not significantly moderate these results, but potential sex differences cannot be ruled out given the relatively small sample size of this study.

Discussion

In short, complementing the results from our first two studies, Study 3 demonstrated that taking care of children is associated with greater positive affect and meaning compared to the other activities parents performed on the same day. Our findings reveal a more positive picture of parenthood as compared to previous reports, most notably the findings of Kahneman et al. (2004), who used the DRM to evaluate the affective experience of 909 working women in Texas during a set of daily activities, including taking care of children. It should be noted, however, that the two sets of findings are not necessarily contradictory, given the differences in our samples and because we used a different analytic strategy. Kahneman and colleagues obtained an average PA score for each activity across all participants—both parents and non-parents—and then rank-ordered daily activities by PA. Using this approach, they found that taking care of children ranked towards the bottom of the list of daily activities in terms of PA. Their analytic strategy was appropriate given the broad goals of their research; hence, their paper did not report a focused statistical test of our hypothesis that taking care of children is associated with more happiness, on average, than other day-to-day activities.

In contrast, we used a within-subjects analytic strategy by calculating two PA scores (as well as two meaning scores) for each parent: One for all episodes when the parents were taking care of their children and one for all episodes when they were not taking care of their children. This approach allowed us to compare each parent's score during childcare with the same parent's score during other activities the parent actually engaged in during the day. Thus, we were able to examine whether individual parents experienced higher or lower well-being when taking care of their children as compared to all other activities these same parents engaged in during the day.

General Discussion

Although each of our methods has clear limitations, the consistency of our findings across these three studies provides strong evidence challenging the widely-held perception that children are associated with reduced well-being. To the contrary, parents as a group reported being happier and more satisfied, and thinking more frequently about life meaning than their counterparts without children, although this overall pattern was qualified by several demographic moderators (Study 1). Furthermore, parents reported relatively more positive emotion, and more meaningfulness on a moment-to-moment basis (Study 2). Finally, parents experienced levels of positive affect and meaning during childcare that significantly exceeded their own daily average (Study 3). Notably, across all three studies, all parents reported higher levels of meaning than non-parents. In short, our results dovetail with emerging evolutionary perspectives that depict parenting as a fundamental human need (Kenrick et al., 2010).

It is important to note, however, that many of our effect sizes were small, which is unsurprising given the heterogeneity of parents and parenting experiences. Indeed, the present research speaks to this heterogeneity by showing that demographic variables moderated the overall effects of parenting on well-being. In particular, across Studies 1 and 2, fathers were significantly happier than their childless peers, while mothers primarily showed neither a cost nor a benefit. This result is not unexpected, as the pleasures associated with parenting may be offset by the surge in responsibility and housework that arrives with motherhood (Nomaguchi & Milkie, 2003). Furthermore, parents who were young or unpartnered reported experiencing lower levels of happiness and satisfaction than did non-parents. Yet, like their older or partnered counterparts, they reported relatively high levels of meaning. These findings are consistent with previous research suggesting that young parents, as well as parents with young children at home (who are typically younger themselves), report lower well-being and more stress than do their

peers without children (Mirowsky & Ross, 2002; Nomaguchi & Milkie, 2003; Umberson & Gove, 1989).

Happiness is a central life goal for people around the world and has been associated with numerous positive outcomes for work, relationships, and health (Lyubomirsky, King, & Diener, 2005). Consequently, one implication of our research is that to the extent that parenthood is associated with happiness, children may benefit as well. Indeed, positive parental factors, such as emotional expression (Haviland & Lelwica, 1987), involvement and warmth (Klein & Forehand, 2000), and self-regulation (Park & Peterson, 2006) have been associated with positive outcomes for children.

Although it is impossible to randomly assign people to become parents, thereby precluding causal inferences, we believe the present findings may be revealing to the general public, especially for those planning a family. Contrary to repeated scholarly and media pronouncements, people may find solace that parenthood and childcare may actually be linked to feelings of happiness and meaning in life.

References

- Ashton-James, C., Kushlev, K. & Dunn, E. W. (2011). *Parents reap what they sow: Child-centrism and parental well-being*. Manuscript submitted for publication.
- Blanchflower, D. G., & Oswald, A. J. (2004). Well-being over time in Britain and the USA. *Journal of Public Economics*, 88, 1359-1386.
- Brandt, M. J. (in press). Sexism and gender inequality across 57 societies. *Psychological Science*.
- Carstensen, L. L., Turan, B., Scheibe, S., Ram, N., Ersner-Hershfield, H., Samanez-Larkin, G. R., et al. (2011). Emotional experience improves with age: Evidence based on over 10 years of experience sampling. *Psychology and Aging*, 26, 21-33.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. (3rd ed.) Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2003). The macroeconomics of happiness. *The Review of Economics and Statistics*, 85, 809-827.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276–302.
- Eibach, R. P., & Mock, S. E. (2011). Idealizing parenthood to rationalize parental investments. *Psychological Science*, 22, 203-208.
- Evenson, R. J., & Simon, R. W. (2005). Clarifying the relationship between parenthood and depression. *Journal of Health and Social Behavior*, 46, 341-358.
- Ferrer-i-Carbonell, A. (2005). Income and well-being: An empirical analysis of the comparison income effect. *Journal of Public Economics*, 89, 997-1019.

- Haviland, J. M., & Lelwica, M. (1987). The induced affect response: 10-week-old infants' responses to three emotion expressions. *Developmental Psychology, 23*, 97-104.
- Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The day reconstruction method. *Science, 306*, 1776-1780.
- Kenrick, D. T., Griskevicius, V., Neuberg, S. L., & Schaller, M. (2010). Renovating the pyramid of needs: Contemporary extensions built upon ancient foundations. *Perspectives on Psychological Science, 5*, 292-314.
- Keizer, R., Dykstra, P. A., & Poortman, A. R. (2010). Life outcomes of childless men and fathers. *European Sociological Review, 26*, 1-15.
- Klein, K., & Forehand, R. (2000). Family processes as resources for African American children exposed to a constellation of sociodemographic risk factors. *Journal of Clinical Child Psychology, 29*, 53-65.
- Kohler, H. P., Behrman, J. R., & Skytthe, A. (2005). Partner + children = happiness? The effects of partnerships and fertility on well-being. *Population and Development Review, 31*, 407-445.
- Luhmann, M., Hofmann, W., Eid, M., & Lucas, R. E. (2012). Subjective well-being and adaptation to life events: A meta-analysis. *Journal of Personality and Social Psychology, 102*, 592-615.
- Lyubomirsky, S., King, L. A., & Diener, E. (2005). The benefits of frequent positive affect. *Psychological Bulletin, 131*, 803-855.
- Lyubomirsky, S., & Lepper, H. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research, 46*, 137-155.

- McLanahan, S., & Adams, J. (1987). Parenthood and psychological well-being. *Annual Review of Sociology, 13*, 237-257.
- Mirowsky, J., & Ross, C. E. (2002). Depression, parenthood, and age at first birth. *Social Science and Medicine, 54*, 1281-1298.
- Napier, J. L., & Jost, J. T. (2008). Why are conservatives happier than liberals? *Psychological Science, 19*, 565-572.
- Nomaguchi, K. M., & Milkie, M. A. (2003). Costs and rewards of children: The effects of becoming a parent on adults' lives. *Journal of Marriage and Family, 65*, 356-374.
- Oishi, S., Diener, E. F., Lucas, R. E., & Suh, E. M. (1999). Cross-cultural variations in predictors of life satisfaction: Perspective from needs and values. *Personality and Social Psychology Bulletin, 25*, 980-990.
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology, 45*, 867-872.
- Park, N., & Peterson, C. (2006). Moral competence and character strengths among adolescents: The development and validation of the Values in Action Inventory of Strengths for Youth. *Journal of Adolescence, 29*, 891-909.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.
- Robinson, M. D., & Clore, G. L. (2002). Belief and feeling: Evidence for an accessibility model of emotional self-report. *Psychological Bulletin, 128*, 934-960.
- Ross, C. E., & Van Willigen, M. (1996). Gender, parenthood, and anger. *Journal of Marriage and Family, 58*, 572-584.

Rothrauff, T., & Cooney, T. M. (2008). The role of generativity in psychological well-being:

Does it differ for childless adults and parents? *Journal of Adult Development, 15*, 148-159.

Russell, C. S. (1974). Transition to parenthood: Problems and gratifications. *Journal of Marriage and Family, 36*, 294-302.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire:

Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*, 80-93.

Suh, E., Diener, E., Oishi, S., & Triandis, H. C. (1998). Shifting basis of life satisfaction judgments across cultures: Emotions versus norms. *Journal of Personality and Social Psychology, 74*, 482-493.

Twenge, J. M., Campbell, W. K., & Foster, C. A. (2003). Parenthood and marital satisfaction: A meta-analytic review. *Journal of Marriage and Family, 65*, 574-583.

Umberson, D., & Gove, W. R. (1989). Parenthood and psychological well-being: Theory, measurement, and stage in the family life course. *Journal of Family Issues, 10*, 440-462.

White, M. P., & Dolan, P. (2009). Accounting for the richness of daily activities. *Psychological Science, 20*, 1000-1008.

World Values Survey Association (2006). *World and European Values Surveys Four Wave Integrated Data File, 1981-2004*. [data file] The European Values Study Foundation and World Values Association. Available from www.worldvaluessurvey.org.

Table 1

Sex moderator analyses for Study 1

Predictor	Satisfaction		Happiness		Meaning	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>
Sex	-0.02	.55	-0.01	.25	-0.08	< .001
Parenthood	0.11	<.001	0.02	.005	0.03	.003
Parenthood X Sex	0.07	.009	0.02	.005	0.01	.21
<i>R</i> ²	.06	< .001	0.002	.001	0.011	<.001
<i>n</i>	6,807		6,754		6,769	

Note. Sex and parenthood were effects coded (males = 1, females = -1; parents = 1, non-parents = -1).

Table 2

Marital status moderator analyses for Study 1

Predictor	Satisfaction		Happiness		Meaning	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>
Marital Status	0.32	< .001	0.10	< .001	-0.03	.008
Parenthood	-0.02	.48	-0.02	.08	0.06	< .001
Parenthood X Marital Status	0.08	.003	0.04	< .001	0.004	.72
R^2	.03	< .001	0.03	< .001	.003	< .001
<i>N</i>	6.828		6.775		6.790	

Note. Marital status and parenthood were effects coded (married = 1, not married = -1; parents = 1, non-parents = -1).

Table 3

Age moderator analyses for Study 1

Predictor	Satisfaction		Happiness		Meaning	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>B</i>	<i>p</i>
Age	0.01	.001	0.00002	.97	0.00	.86
Parenthood	0.10	.001	0.03	.007	0.04	.002
Parenthood X Age	0.01	< .001	0.001	.22	0.00	.24
<i>R</i> ²	.01	< .001	.001		.002	.001
<i>n</i>	6,816		6,763		6,780	

Note. Age was centered on mean age; parenthood was effects coded (parents = 1, non-parents = -1).

Table 4

Mean differences in well-being variables for males and females in Study 2

	<u>Variable</u>	<u>Parents</u>		<u>Non-Parents</u>		<i>t</i>	<i>p</i>	<i>r</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Males	Happiness	5.42	0.95	4.95	1.14	-2.78	.01	.22
	Depression	8.33	6.23	12.11	9.95	2.45	.02	-.23
	Positive Affect	2.38	1.21	1.70	1.03	-3.63	< .001	.29
	Meaning	4.11	1.15	3.50	1.08	-2.39	.02	.25
Females	Happiness	5.42	0.99	5.27	1.18	0.89	.38	.07
	Depression	10.62	6.92	13.73	9.84	2.06	.04	.18
	Positive Affect	1.98	1.22	1.61	1.21	1.86	.07	.14
	Meaning	4.47	1.10	4.22	1.08	0.97	.34	.10

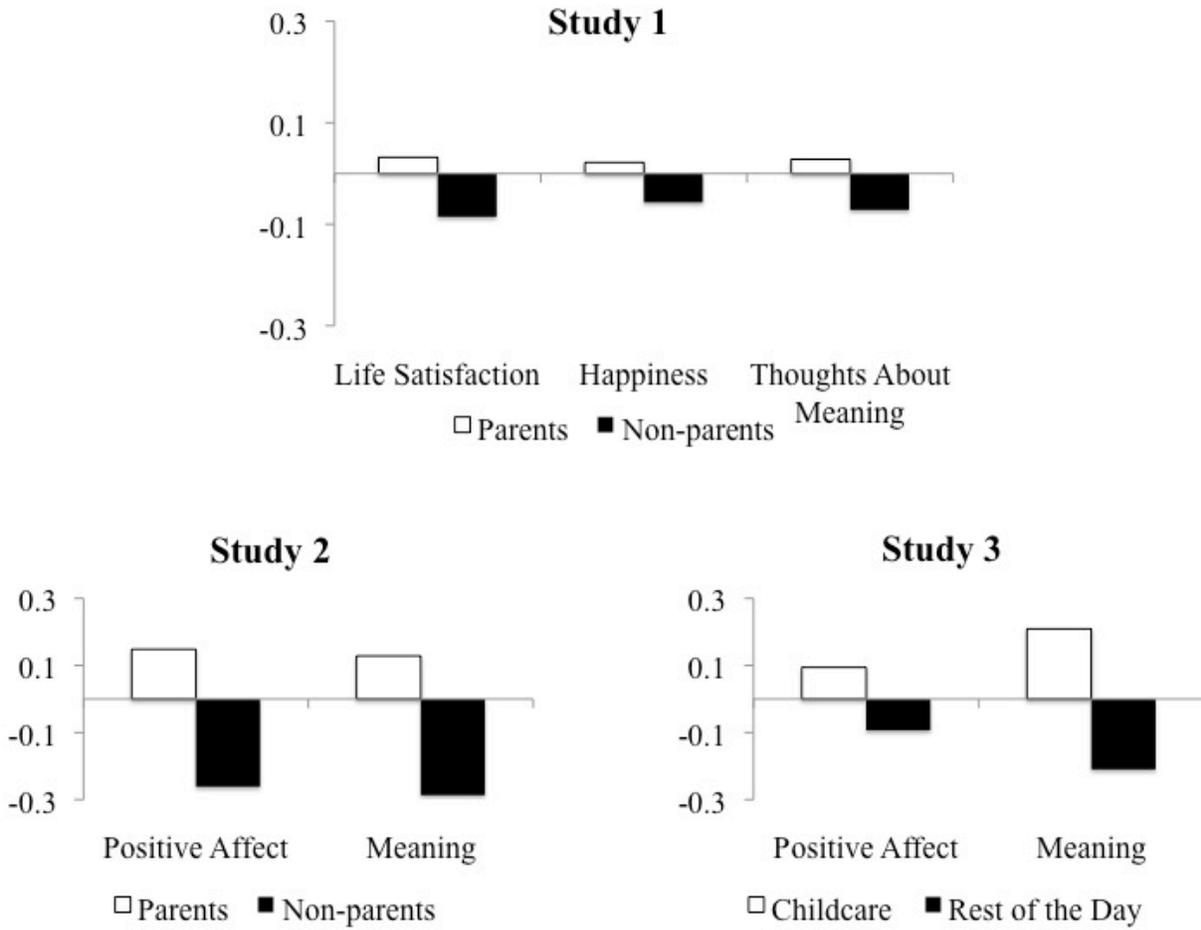


Figure 1. Summary of the primary findings in Studies 1-3. Although all analyses reported in the paper were conducted on raw scores, the figures present standardized means to facilitate comparisons between the various scales used in each study.