

EXPLORING PARENTAL WELL-BEING: IS CHILDCARE ASSOCIATED WITH
PARENTAL WELL-BEING AND WHAT FACTORS CAN ENHANCE IT

by

KOSTADIN KUSHLEV

B.A., Reed College, 2008

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES

(Psychology)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

August 2011

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Abstract

Recently, the idea that children can be detrimental to the well-being of their parents has gained popularity both amongst researchers and lay individuals. The previous research on parental well-being, however, has not provided any conclusive evidence in favour of this popular perception, and there is some research suggesting that parents might actually experience some benefits to their well-being as a result of having children. In addition, very little is known about the demographic and psychological factors that predict parental well-being. By overcoming various limitations of previous research designs, in the present research we examined whether taking care of children was associated with better cognitive and affective well-being outcomes. We further explored whether SES and child-centrism (i.e., the tendency of parents to put the well-being of their children before their own) were predictors of parental well-being. In a sample of 186 parents, we found that parents reported both more meaning and more positive affect when they were taking care of their children as compared to the rest of their day. We also showed that SES was negatively associated with the meaning parents experienced during childcare, a relationship that was mediated by the perceived opportunity cost of childcare. Finally, we demonstrated that when they were taking care of their children, more child-centric parents reported both more meaning and more positive affect than less child-centric parents. The implications of those findings for enhancing the well-being of parents as well as for improving future research on parental well-being are discussed.

Preface

This project was developed in collaboration with the author's adviser, Dr. Elizabeth Dunn and her collaborator, Dr. Claire Ashton-James. The author had primary responsibility for collecting and analyzing the data.

The research presented in this thesis was approved by the UBC Behavioural Research Ethics Board, under certificate number H08-02739.

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Acknowledgements

I would like to thank my adviser, Liz Dunn, for her guidance in the past two years. I feel grateful for all the valuable skills and knowledge she has helped me develop through her mentorship. I also thank the other professors that have mentored me throughout my Master's degree, especially Toni Schmader, for enriching my experience as a student at UBC. Special thanks also go to my undergraduate advisers, Kathy Oleson and Dan Gilbert, for giving me a strong basis for developing my academic skills and for exciting my interest to do research in psychology. Finally, these acknowledgements would not be complete without recognizing the extraordinary sacrifices my parents have made so that I can pursue my academic interests.

To my loving mother, father and sister

Introduction

The decision to become a parent is a major life choice that is likely to impact parents in many different ways—from their career path, to their finances and daily experience. Recently, partly fueled by isolated research findings and partly perhaps by changing social norms, the perception that having children decreases the well-being of parents has gained popularity. In *Stumbling on Happiness* (2006), Dan Gilbert states that ‘looking after kids appears to be slightly more pleasant than doing housework’, and this sentiment is also captured in recent news articles (*The Case Against Having Kids* by Anne Kingston, August 3, 2009) and other popular books (*No Kids: 40 Good Reasons Not to Have Children* by Corrine Maier, 2007). Simultaneous to these negative perceptions of parenthood gaining popularity, the birth rates in many industrialized countries have been decreasing (which suggests that these two trends might be related). In Canada, for example, the proportion of couples with no children under 25 living at home has increased by 13.8% in the period from 1981 to 2001 (Statistics Canada). Furthermore, the birth rate of Canada has decreased by 9.9% from 2000 to 2009 (CIA World Factbook). Such trends result in an increasingly older population—the median age of Canadians had increased by 50% in the period from 1971 to 2007 (Statistics Canada), which have a variety of negative economic consequences (e.g., increasing healthcare costs and decreasing tax revenues).

Is this growing public perception—that having children decreases people’s well-being—justified by empirical research? In the present work I explore what research has found about parental well-being and review findings associating parenthood with both positive and negative outcomes. Overcoming methodological limitations of previous

research, I propose a study that examines several previously neglected moderators of parental well-being, thus shedding new light on our understanding of parental well-being.

Parental Ill-Being

Research on parental well-being in the past several decades has shown parenthood to be associated with several negative outcomes including lower marital satisfaction and positive affect, as well as more depressive symptoms and negative affect.

Marital satisfaction.

One particularly well-researched question in the literature on parental well-being has been whether parents experience greater or lower marital satisfaction as compared to nonparents. Most of this research has shown that parents (with residential children at home) often report lower marital satisfaction than nonparents (e.g., Feldman, 1981; Glenn & McLanahan, 1982; Sommers, 1993; also see McLanahan & Adams, 1987 for a review). In one particularly well-designed study, for example, Lawrence, Rothman, Cobb, Rothman and Bradbury (2008) tracked recently married couples for up to 4 years after marriage. They measured the marital satisfaction of the spouses who had children four times throughout the study—at six months after marriage, one month before the birth of the first child, and at six and twelve months after the birth of the first child (and at corresponding time periods for the childless spouses). Overall, the birth of the first child was shown to hasten marital decline with parents experiencing a significantly greater decrease in their marital satisfaction as compared to the childless couples. Corroborating these findings, a relatively recent meta-analysis showed that across 90 studies (and 31,331 respondents), parents reported significantly lower marital satisfaction than nonparents ($d = -.19$, $r = -.10$; Twenge, Campbell, & Foster, 2003).

People cannot be randomly assigned to be parents or nonparents and therefore studies comparing parents with nonparents can be problematic because of the lack of random assignment. However, studies using within-subjects designs, which track marital satisfaction across the transitions to parenthood, have also found a negative relationship between having kids and marital satisfaction. Specifically, marital satisfaction has been shown to decline faster in the period between the third trimester of pregnancy to 18 months after birth of the first child than in the period between marriage and the third trimester of pregnancy (Lawrence, Nylen, & Cobb, 2007). Similarly, Wallace and Gotlib (1990) showed that marital adjustment—an alternative measure of marital satisfaction—peaked at one month postpartum and then significantly declined by six months postpartum. Furthermore, in a review of the literature on marital satisfaction and parenthood, Belsky and Pensky (1988) concluded that across the transition to parenthood “couple’s leisure activities become less frequent, positive interchanges decrease whereas conflict increases, and overall satisfaction with marriage and feelings of love for the spouse decline”. Thus, whether using between- or within-subjects designs, researchers have consistently found that having children has a negative effect on marital satisfaction.

Evaluations of specific life domains such as one’s marriage, however, are considered to be only one component of subjective well-being (Diener, 2000). In the next sections, I explore what research has shown about the relationship between being a parent and other important measures of subjective well-being such as positive and negative affect and depressive symptoms.

Depression.

Although the research on the relationship between parenthood and depression is not as abundant as the research exploring parenting and marital satisfaction (see McLanahan & Adams, 1987 for a review), some recently conducted studies provide evidence that parents tend to report more depressive symptoms than nonparents. In one recent study, for example, Evenson and Simon (2005) used a national probability sample of 13,017 US adults, whose depression symptomatology was assessed with the well-validated Center for Epidemiological Studies Depression (CES-D) Scale (Radloff, 1977). The authors found that full-nest parents (those with children still living at home) overall were significantly more depressed than nonparents, thus suggesting that children might indeed be associated with lower subjective well-being for parents. Overall, however, findings that show a positive relationship between having children and depression are much less common than findings showing a relationship between having children and decreased marital satisfaction. Whether having children is really linked to and leads to depression remains an open question.

Affect.

Another important component of subjective well-being consists of the emotions people experience on a daily basis—i.e., their positive and negative affect (Diener, 2000). Some previous research has linked parenthood with experiencing less positive and more negative affect. In one study, for instance, parents (defined as people who have children 18 or younger living at home) and nonparents were asked to report on how many days of the previous week they had felt a variety of different positive and negative emotions (Simon & Nath, 2004). Although overall there were no significant differences between

parents and nonparents in terms of both positive and negative affect, the researchers did find that parents experience significantly fewer calm feelings (i.e., calm, contented and at ease) and significantly more anxious (i.e., fearful, anxious, restless and worried) and angry (i.e., outraged, mad and angry) feelings. Thus, parents reported both more of certain kinds of negative affect and less of certain kinds of positive affect. Other researchers have also found an association between being a parent and negative affect, and in particular anger. Ross and Van Willigen (1996), for example, showed that as compared to nonparents, parents reported experiencing anger more frequently. It is important to note that both of those studies used large nationally representative (Simon & Nath, 2004) or national probability samples (Ross & Van Willigen, 1996), which shows that these results cannot be attributed simply to idiosyncrasies of the samples these authors used. It should also be noted, however, that both of those studies did not find overall differences between parents and nonparents in terms of positive or negative affect, which underscores that the negative impact of children on parental affect is modest and specific to certain kinds of emotions.

The studies reported in the preceding paragraph suffer from the same methodological problem mentioned before—comparing parents with nonparents and therefore lacking random assignment. An alternative way to examine the effects of children on parental well-being is to compare people's well-being during times of the day when they are taking care of their children with other common daily activities they engage in. This is precisely what a group of researchers did by developing a new method—the Day Reconstruction Method (DRM)—that allowed them to explore people's moment-to-moment experience of positive affect (Kahneman, Krueger,

Schkade, Schwarz, & Stone, 2004). Specifically, Kahneman et al. (2004) asked hundreds of working women in Texas to report what they had done on the previous day episode by episode, thus presumably helping the women reconstruct their experiences during the previous day. The women were then asked to answer a battery of questions for each of the episodes including what they were doing and how they were feeling. In this way, the researchers were able to measure the positive affect these women experienced during various daily activities. Taking care of children ranked 12th from a list of 16 activities, below such activities as cooking, watching TV and shopping and just above activities such as commuting, working and doing housework. The methodology of this study, however, also prevents us from making any strong conclusions about parental well-being. Specifically, the authors used a sample that consisted of both parents and nonparents, and therefore their findings do not show how taking care of children ranks amongst other activities *parents* engage in. In addition, most of their sample did not report engaging in many of the activities that ranked higher than childcare (e.g., going to church) suggesting that for most people, taking care of children might rank higher amongst the activities they engage in. In short, evidence linking parenting and childcare with reduced positive affect and increased negative affect does exist but tends to be weak and inconclusive.

In conclusion, whether comparing parents with nonparents, examining well-being over the transition to parenthood or comparing taking care of children with other common daily activities, research has linked parenting with negative outcomes for parents' well-being. With the exception of the declines in marital satisfaction associated with parenthood, however, the evidence associating parenthood with decreased well-being is inconclusive. This lack of conclusive evidence raises doubts about the validity of

the popular perception, among researchers and lay individuals alike, that parenting is bad for people's well-being.

The Parenthood Paradox

Despite the findings linking parenthood with decreased marital satisfaction, reduced affective well-being and more depressive symptoms, many parents maintain that their children are a source of joy in their life and that if faced with the decision to have children a second time they would choose to do so again (see Goetting, 1986 for a review). This discrepancy between parents' direct reports of the parenting experience and evidence linking parenting with negative outcomes to parental well-being has been called the parenthood paradox (Baumeister, 1991). At the gist of this paradox lies the question: Are parents simply wrong to think that their children are a source of joy in their life, or do parents truly experience benefits to their well-being from having children? In the following pages, I examine evidence showing parents' conviction that children are a source of joy in their life and then show that this conviction of parents might be grounded in truth while also being exaggerated.

Generally, parents have a much rosier view of the impact of children on their well-being than suggested by the research reviewed above. In one study, for example, parents in Austria, Great Britain, Ireland, the Netherlands and West Germany generally agreed that 'watching children grow up is life's greatest joy' (with average agreement varying from 3.94 to 4.48 on a 1-to-5 scale; Jones & Brayfield, 1997). Similarly, in a nationally representative survey conducted in the United States, Veroff, Douvan, and Kulka (1981) found that 87% of parents reported that parenting had given them 'a great deal' or 'a lot' of fulfillment. Furthermore, when people are asked to directly report how

much they enjoy various activities throughout the day (e.g., “how much do you enjoy watching TV”), childcare ranks number one (Dow & Juster, 1985). According to the results of Dow and Juster (1985), taking care of one’s children was more enjoyed than such activities as socializing, playing and watching sports, and a variety of organized activities including going to church. The direct reports of parents about how much they enjoy childcare, then, stand in stark contrast to the previously discussed findings of Kahneman et al., (2004), who found that taking care of children ranked towards the bottom of the list of daily activities.

How can people’s direct self-reports of the joys of childcare be so different from those obtained by Kahneman et al.? By avoiding asking parents to directly report how much they enjoy childcare and instead measuring parents’ affect activity by activity, Kahneman et al. presumably showed what feelings parents *actually* experience while they are taking care of their children and not what feelings parents *think* they (should) experience. Thus, the discrepancy between Kahneman et al.’s and Dow and Juster’s findings might be a discrepancy between parents’ *actual* experience and their *theory* of what their experience *should* be. Even if the discrepancy between the findings can be explained by the difference between people’s actual experiences and their theories about what their experience should be like, this still leaves the underlying question of the parenthood paradox unanswered: why does such a stark difference exist between parents’ direct self-reports of the emotional benefits of childcare and their actual experiences during childcare?

The idealization of parenthood.

One possible answer to the parenthood paradox is that parents do not realize that children are bad for their well-being (i.e., parents theories of how their children impact their well-being are simply wrong). It is well known in social psychology that people are not very good at introspection (Nisbett & Wilson, 1977) or particularly good at knowing the emotional impact of a variety of common occurrences (Gilbert & Wilson, 2007; Wilson & Gilbert, 2005). Furthermore, recent research (Eibach & Mock, 2011) suggests that parents' idealization of having children might be a result of cognitive dissonance (Festinger, 1957)—a mere motivated illusion of parents. Specifically, Eibach and Mock (2011) hypothesized that since raising children is associated with a variety of costs to parents—from financial to temporal and emotional—parents might be motivated to inflate the benefits their children bring as a way to reduce the cognitive dissonance arising from the great costs of having children. In their first study, parents who were reminded of the costs of raising children idealized parenting to a significantly greater extent than parents who were not given such a reminder. In particular, parents in the former group were more likely to endorse statements such as “parents experience a lot more happiness and satisfaction in their lives than people who have never had children” and “nonparents are more likely to be depressed than parents”. In their second study, the authors further demonstrated that parents who were reminded of the costs of having children also reported enjoying their time with their children more as compared to other activities. Furthermore, the effects of considering the costs of parenting in both studies were shown to be mediated by dissonant feelings (i.e., feeling uncomfortable, uneasy and bothered). This study, then, gave credence to the cognitive dissonance hypothesis by

demonstrating that parents' idealization of parenthood and their reported enjoyment of times they spend with their children might both be functions of cognitive dissonance.

While the above findings do provide some insight into resolving the parenthood paradox, cognitive dissonance might not be the whole story. An alternative answer to the parenthood paradox is that perhaps researchers have not examined the kinds of well-being that parents truly get from their children. Having children might indeed be associated with reduced affective well-being, but perhaps at the same time parents have better cognitive evaluations of their life—an equally important component of well-being (Diener, 2000). Global life evaluations and everyday emotional experiences are correlated yet different constructs, and therefore, they can be, and often are, associated with different factors (e.g., Diener, 2000; Kahneman & Deaton, 2010). In the next section, I review previous research showing positive associations between having children and several cognitive measures of well-being.

Parental Well-Being

Life satisfaction.

Life satisfaction is one component of well-being that has been positively associated with parenthood. Specifically, it has been shown that mothers of residential children as well as empty-nest mothers report greater life satisfaction than childless women (Hansen, Slagsvold, & Moum, 2009). Furthermore, the number of children of married people has been found to be positively associated with life satisfaction (Angeles, 2009). While this evidence shows that children might have some salutary effects on parental well-being (at least for some parents), the evidence linking parenthood with life satisfaction is rather scant. What indicators of well-being might be more strongly

associated with parenthood? Baumeister's (1991) answer to this question was that children probably provide parents with a greater sense of meaning in life. Next, I review empirical evidence supporting Baumeister's contention.

Meaning.

A sense of meaning in life is another cognitive component of well-being that has been positively associated with parenthood. In one study, for example, Umberson and Gove (1989) found that overall parents report less meaninglessness than nonparents. In another study, the researchers used the DRM, which allowed them to examine how rewarding and meaningful people find a variety of common daily activities (White & Dolan, 2009). Taking care of children was found to be one of the most rewarding of 18 different common daily activities, ranking fourth only after volunteering, working and praying/meditating. While these two studies provide some evidence that parenthood might be associated with an increased sense of meaning, some of their methodological limitations prevent us from making any strong conclusions about the link between parenting and meaning. Umberson and Gove's (1989) study compared parents with nonparents and therefore lacked random assignment. White and Dolan (2009), on the other hand, had a quite broad definition of 'rewarding', which included how meaningful people found different activities but also how 'useful to other people' the activity they found the activity. Finding taking care of children 'useful for other people' is rather unsurprising, and at least on the surface of it, tells us very little about how much sense of meaning people experience. Thus, if an enhanced sense of meaning is indeed one of the major benefits that having children gives parents, more evidence is clearly needed.

Solving The Puzzle Of Parental Well-Being

Despite decades of research on parental well-being, the evidence on whether parenting is associated with increased or reduced well-being remains inconclusive. On the one hand, evidence suggests that parenting and childcare are associated with decreased affective well-being (e.g., lower positive and greater negative affect and depressive symptoms), but the few studies demonstrating those links suffer from a variety of methodological limitations. On the other hand, parenting has been associated with consistent decreases in some cognitive components of well-being such as marital satisfaction but with increases in other cognitive components such as life satisfaction and meaning. One goal of the present research is to overcome crucial methodological limitations of previous studies and explore the relationship between childcare and important components of both affective and cognitive well-being. In doing so, we hope to shed new light on parents' experiences with their children and help to provide more conclusive evidence about whether or not children are good or bad for parental well-being (as well as which specific indicators of well-being children tend to affect). To provide such more conclusive evidence, we need a method that will allow us to (1) measure parents' actual experiences with their children and not their theories about what their experiences should be; (2) avoid the comparison between parents and nonparents, which is problematic due to the lack of random assignment of those groups. The DRM (Kahneman et al., 2004) allowed us to overcome both of those disadvantages of previous research.

Firstly, the DRM is designed to overcome biases in the recollection of experiences by asking participants to look back on the previous day, episode-by-episode,

“like a series of scenes from a film.” In doing so, participants are prompted to re-live their actual experiences while engaged with a variety of activities (taking care of children, housework, commuting). Thus, the DRM measures people’s feelings during concrete, specific instances of an activity (e.g., “I did not enjoy changing my toddler’s diapers”) rather than people’s expectations and theories about how they should feel during a broad, abstract class of activities (e.g., “I should be happy when taking care of my children”). The DRM, therefore, allows us to measure parents’ *actual* experiences of taking care of children and not their theories of how childcare should make them feel. The DRM’s utility in measuring what people actually experience during episodes throughout their day has been validated through close correspondence between the DRM reports of 909 employed women and established results from experience sampling (Kahneman, et al., 2004).

A second important advantage of using the DRM is that it allows us to use a within-subjects design and avoid the problematic comparison between parents and nonparents, who differ from each other on a variety of important demographic characteristics (e.g., Somers, 1993). Specifically, by using the DRM, we can compare the well-being of parents while they are taking care of their children with the well-being of these same parents during all other activities throughout their day except childcare. This allows us to see how taking care of children compares in terms of well-being with other daily activities for the same subjects. It should be noted that although the DRM was already used by Kahneman et al. (2004) to explore how different daily activities (including taking care of children) compare in terms of positive affect, their analyses were not within-subjects. In particular, these authors rank-ordered various activities by

positive affect across all of their participants instead of exploring how these various activities compared in terms of PA within participants.

Our study is also designed to overcome other methodological disadvantages of Kahneman et al.'s study specific to addressing issues related to parental well-being. In particular, Kahneman et al. used a sample of both parents and nonparents to create their rankings of activities, which is problematic when addressing questions of parental well-being. While taking care of children might rank 12th when parents and nonparents are sampled, it is also possible that childcare could rank higher when only parents are sampled. Another limitation of Kahneman et al.'s research specific to the issues of parental well-being is that the ranking of daily activities they used were based on PA only. In the present research, we want to measure another important well-being indicator that has been particularly associated with having children and taking care of children—namely a sense of meaning (Umberson & Gove, 1989; White & Dolan, 2009). Although White and Dolan (2009) already included a measure of reward that contained an item about meaning in their research using the DRM, their methodology suffered from the same two limitations discussed above with regards to Kahneman et al.'s research. Our research overcomes these limitations by using a sample of parents only and by performing within-subjects analyses.

In addition to employing a methodology that overcomes a number of crucial limitations of previous research, in the present research we wanted to go beyond just exploring the link between children and parental well-being. Specifically, we wanted to explore possible moderators and mediators of parental well-being, thus examining *which* parents are likely to experience benefits to their well-being from having children.

Exploring predictors of parental well-being has largely been ignored by previous research, yet understanding what factors might enhance or hurt the well-being of parents is a crucial step in developing our knowledge on this topic. In the next section, I explore previous findings underscoring the importance of examining predictors of parental well-being when studying this phenomenon. I then propose to examine several factors that are likely to influence the relationship between having children and parental well-being.

Moderators

As I discussed in the previous section, having children has been associated with some benefits to well-being—such as greater life satisfaction and greater sense of meaning. However, these benefits often vary depending on a variety of demographic characteristics of parents. Although Angeles (2009), for example, showed that number of children could be related to higher life satisfaction for married individuals, their findings indicated an effect in the opposite direction for unmarried individuals, for whom the number of children was associated with lower life satisfaction. Similarly, Hansen et al. (2009) showed a positive association between having children and life satisfaction for women but no association for men. Furthermore, Umberson and Gove's (1989) association between parenthood and reduced meaninglessness was not found—and was actually reversed—for parents with children older than 18. In addition to gender of the parent, marital status and age of the child, a variety of other moderators of parental well-being have also been identified (e.g., age and educational level of the parent; see Goetting, 1986 for a review). These findings underscore the importance of going beyond examining mean differences between parents and nonparents—or exploring longitudinal

changes in well-being in parents in general—and examining parental well-being in more depth by investigating *which* parents might benefit from having children.

While demographic characteristics might play an important role in parental well-being, simply examining demographics does not really answer the question *why* parents of certain demographics might experience greater or lower parental well-being. Finding a positive association between having children and life satisfaction for women but not for men, for example, only begs the question why men do not experience these benefits. Researchers, however, have rarely looked at the psychological underpinnings behind the effect of demographic characteristics on parental well-being. In the next section I use research on some of the behavioral and attitudinal determinants of well-being to propose a mechanism by which higher socioeconomic status (SES) might have a detrimental effect on parental well-being.

SES, opportunity costs and parental well-being.

Many people today postpone having children till later in life so that they can first obtain higher income and better education (Boone & Kessler, 1999; Huber, Bookstein, & Fieder, 2010). Waiting to have more resources before having children seems like an intuitive strategy for ensuring better outcomes for one's children. Indeed, research has found a positive relationship between socioeconomic status (SES) and better children's health and well-being (e.g., (Chen & Matthews, 2002); Hanson, McLanahan, & Thomson, 1997). Little is known, however, about the impact of having more resources—money, education, etc.—on the well-being of parents (Goetting, 1986). There is, however, some reason to believe that higher SES might compromise the well-being of parents when they are taking care of their children. Specifically, people of higher SES

tend to have more opportunities to engage in a variety of recreational activities (Thomas, 1956; Wilson, 1980) and at the same time they might experience greater time demands from work-related activities (Becker & Moen, 1999). The availability of more activities increases the perceived costs of those activities because choosing to engage in any one activity means foregoing the benefits of a greater number of other activities (Frederick, Novemsky, Wang, Dhar, & Nowlis, 2009). This increase in perceived *opportunity costs* (Frederick et al., 2009) could lead to regret (Iyengar, Wells, & Schwartz, 2006), counterfactual thinking (Gilovich & Medvec, 1995) and rumination (Watkins, 2008). Thus, more activities one can choose from might compromise the well-being people experience during any one activity (Schwartz, 2004). To the extent that SES is associated with a greater availability of activities, then, SES might compromise the well-being of parents when they are taking care of their children.

In support of the above theorizing, one component of SES—education—has been linked to less positive attitudes towards parenthood among women (Hoffman, 1978). In addition, more educated parents have been shown to find parenthood less fulfilling (Veroff et al., 1981). Although these studies suggest that higher SES could be related to lower parental well-being, they only show that education is related to the attitudes parents have towards having children and not to the actual well-being people experience after having children. More research is, therefore, needed to determine whether SES might indeed have a negative impact on parental well-being. Furthermore, no previous research has examined the psychological processes that might underlie a possible negative relationship between SES and parental well-being. In the present research, we wanted to go beyond just showing an association between SES and well-being and answer the

question why such association might exist by examining whether greater perceived opportunity costs mediate this relationship.

In addition to examining demographic determinants of parental well-being, it is also important to explore the psychological dispositions, attitudes and characteristics of parents that are associated with greater parental well-being. Considering the great number of studies conducted on the well-being of parents, it is surprising how little research has examined the effect of such psychological factors. In the next section, I explore how the attitudes of parents regarding the centrality of children in their lives might affect their well-being.

Child-centrism.

Parents engage in a variety of child-centric styles of parenting. “Helicopter parenting”, for example, is a child-centric parenting style involving close monitoring of the behavior and activities of one’s children (Cline & Fay, 1990). In contrast, the “little emperor syndrome” is a child-centric style of parenting associated with undercontrolling one’s children’s behavior and attempting to grant their every wish (Marshall, 1997).

While these various child-centric parenting styles are characterized by very different overt behaviors towards the child, we believe that these behaviors are based on similar underlying psychological attitudes towards parenting. In particular, child-centric parents tend to treat the well-being of their children as more important than their own, see their children as the centre of their life and put the needs of their children before their own.

Recent research has suggested that in the past several decades, parents have become more child-centric by dedicating ever greater time to their children while reducing the time they engage in other social and recreational activities (Bianchi, Robinson, & Milkie,

2006). Some have suggested that this trend towards greater child-centrism might be compromising parental well-being by reducing the amount of time parents spend maintaining important social relationships and engaging in the pursuit of personal goals (Hodgkinson, 2009; Liedloff, 1994; Skenazy, 2009). To the extent that child-centrism parenting styles involve sacrificing benefits to the self for the well-being of others, however, it is also possible that child-centrism might be associated with greater well-being for parents (especially during times when they are taking care of their children).

Prosocial behavior and investing personal resources in others have been consistently associated with better outcomes for well-being. Volunteering, for example, has been associated with greater happiness (McGowan, 2006), while being more invested in one's relationships and one's job has been linked to greater relationship and job satisfaction, respectively (Bauserman & Arias, 1992; Morin, 2009; Weissenberg & Gruenfeld, 1968). Furthermore, spending money on others rather than oneself has been associated with greater happiness (Dunn, Aknin, & Norton, 2008). Indeed, Dunn et al., (2008) showed that people who were randomly assigned to spend money on others reported greater happiness than people who were given money to spend on themselves. These findings suggest that prosocial behavior and investing time, efforts and financial resources in others are associated with and can lead to greater well-being in a range of domains. If child-centric parents do indeed prioritize their children's well-being over their own and are willing to invest more resources and efforts in the raising of their children, more child-centric parents might experience greater well-being when they are taking care of their children.

Overview Of The Present Research

In summary, the purpose of the present research is twofold: (1) to overcome methodological problems with previous studies and provide new more conclusive evidence on the relationship between parenting and well-being; (2) to examine several important demographic and psychological factors that could help us understand *which* parents are likely to benefit the most from having children. To address these questions we employed the DRM (Kahneman et al., 2004), which allowed us to use a within-subjects design and compare the well-being of parents during times they were taking care of their children with these same parents' well-being during the rest of their daily activities. We examined both cognitive and affective components of well-being by measuring parents' sense of meaning and positive affect during various daily activities. Although positive affect and meaning are highly correlated (King, Hicks, Krull, & Del Gaiso, 2006), they are conceptually different. Positive affect refers to people's emotional states such as feelings of joy, excitement or enthusiasm (Watson, Clark, & Tellegen, 1988). Meaning in life, on the other hand, has been conceptualized as people's sense that their life has significance and purpose (Ryff & Singer, 1988), and that they fit in the world in some coherent manner (Allport, 1961; Heine, Proulx, & Vohs, 2006). Measuring these two constructs, then, allowed us to explore how childcare might affect two conceptually different components of well-being.

Based on previous research and theory suggesting a link between parenting and meaning (e.g., Baumeister, 1991; Umberson & Gove, 1989; White & Dolan, 2009), we hypothesized that parents will experience greater sense of meaning during childcare as compared to the rest of their day. Due to the lack of conclusive findings from previous

research, we had no specific hypotheses regarding whether there would be any differences in terms of positive affect during childcare and the rest of the activities during the day. In addition, by reasoning that high SES should be associated with greater perceived opportunity costs from taking care of children, we hypothesized that SES would be associated with decreased meaning and positive affect when parents are taking care of their children (with this relationship mediated by perceived opportunity costs). Finally, we hypothesized that child-centrism—a type of prosocial behavior—would be associated with greater meaning and positive affect when parents are taking care of their children.

Method

Participants

One hundred eighty-six parents, with at least one child 18 years old or younger living at home, completed our relevant survey items as part of a larger exploratory survey on parental well-being. Seventy-six percent were women, the median age was 36, the median education level was a college/university degree, and the median household income was \$70,001-\$80,000. We recruited 66 participants in person at public places in British Columbia, Canada and 120 participants online (91 through Amazon's recruitment service M-turk¹ and 29 through local schools and our lab website).

Procedure And Measures

We used a shortened version of the Day Reconstruction Method (DRM; Kahneman et al., 2004) in which participants were asked to answer detailed questions about eight separate episodes they had engaged in on the day before as well as questions about demographics and psychological dispositions. The parents recruited in person were approached by a trained research assistant and asked whether they would like to take part in a survey conducted at University of British Columbia that takes approximately 30 minutes to complete. Those who expressed interest were then given the *Informed Consent* form, and those who agreed to participate continued to complete the survey. After they finished completing the survey, the research assistant collected the complete forms and paid participants \$10 for their participation. The parents recruited online saw a posting on the online recruitment service, Mturk, about a 30-minute survey. Participants who were

¹Fifty-three additional M-Turk participants were excluded for failing the Instructional Manipulation Check, a validated tool for eliminating participants not following instructions (Oppenheimer, Meyvis, & Davidenko, 2009).

interested were prompted to follow an online link to the *Informed Consent* page.

Participants who agreed to take part in the study were then shown the first battery of questions. The Mturk participants were paid \$.50, consistent with the pay rate of surveys of similar length on Mturk.

Socioeconomic status (SES) and other demographics.

After agreeing to take part in the survey, participants first answered demographic questions including age, gender, income, education, and marital status. Following previous research, we used income and level of education to create a single SES index for each participant by centering each of the two variables and then averaging these two centered variables (Krauss & Keltner, 2009; see Appendix A). At this first stage of the survey, participants also answered questions about the number of their children still living at home and the age of each of their children. These latter questions helped us identify the group of parents we were interested in, namely parents who have at least one dependent child under the age of 18 who still lived at home. Since we were interested in the affective and cognitive well-being of parents while they were taking care of their children, this group of parents was deemed most suitable for exploring our research questions.

Episode diary.

After answering the initial set of questions, participants were asked to recall and list the things they had done on the preceding day, episode by episode. This ‘diary’ part of the survey was organized in three different parts—*Morning* (i.e., wake-up to 12pm), *Afternoon* (12pm to 6pm) and *Evening* (6pm to bedtime)—each of which contained space to report six episodes. Participants were instructed that a new episode should be

considered any time when they went to a different location, interacted with a different person or engaged in a new activity. For each episode, participants were prompted to select a name for the episode (e.g., commuting), as well as to make notes to themselves about how they felt.

Episodic positive affect (PA), meaning and opportunity costs.

After completing the diary, participants were asked to answer a battery of more specific questions for a predetermined subset of eight episodes. We decided to ask detailed questions about a subset of episodes to reduce time demands on participants. In particular, we chose to collect specific information about the second and third episodes in the morning and the first three episodes in the afternoon and in the evening (we decided not to ask questions about the first episode in the morning as we assumed this episode was likely to include trivial activities such as getting out of bed or brushing teeth). For the predetermined eight episodes, we asked participants to report what they were doing from a list of 15 common daily activities (e.g., watching TV, cooking, taking care of children; see Appendix A). Participants were then asked to indicate to what extent they had felt happy, warm/friendly and had enjoyed themselves during the particular episode on a scale from 0 (not at all) to 6 (very much) for each item. Following Kahneman et al. (2004), we used the average of these three items as our measure of PA. Next, we assessed the perceived opportunity costs associated with each episode by asking participants to report whether or not there was something else they wanted or needed to be doing during the episode. Participants answered this question by selecting either ‘yes’ or ‘no’ (see Appendix A). Finally, we asked participants to report to what extent they had

experienced “a sense of meaning and purpose in their life” during the episode on a scale from 0 (not at all) to 6 (very much; see Appendix A).

Child-centrism.

At the end of the survey, participants completed a variety of measures assessing behavioral tendencies and psychological dispositions including a 7-item measure of child-centrism that was developed for the present research (see Appendix A). We asked participants to report how much they agreed with each of seven items on a scale from 0 (not at all) to 6 (very much). The scale included items such as “My children are the centre of my life”, “The happiness of my children is more important to me than my own happiness” and “The needs of my children come before my own.” We calculated a single child-centrism score for each participant by averaging all seven items of the scale, which had good inter-item reliability (*Cronbach’s alpha* = .78).

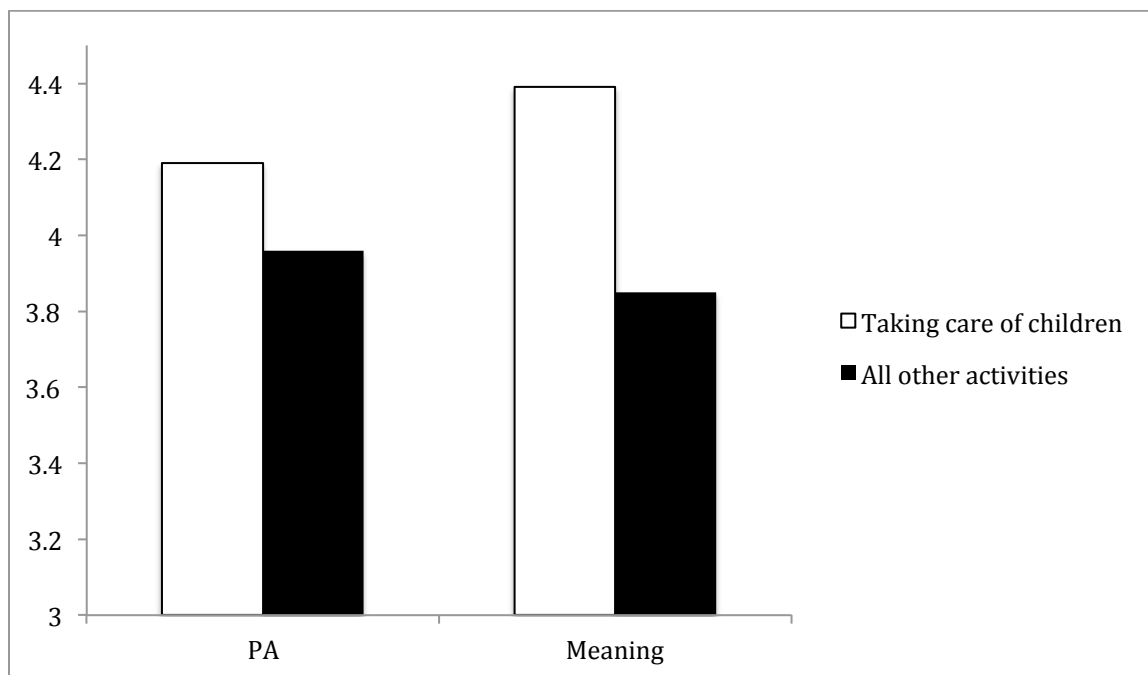
Results

Overall Comparisons: Meaning And Positive Affect (PA)

Firstly, we wanted to explore whether parents reported more PA and meaning when they were taking care of their children as compared to the rest of their day when they were not taking care of their children. We obtained an average PA score for each participant for all the episodes when the participant reported taking care of their children. Similarly, we then averaged across the participant's PA scores for all episodes when they were doing all other things except taking care of children. Using the same logic, we calculated average meaning scores separately for the episodes when parents were taking care of their children and episodes when they were not taking care of their children.

We used the average scores we obtained in this manner to conduct two paired-samples t-tests. As predicted, we found that parents reported a greater sense of meaning during episodes when they were taking care of their children ($M = 4.39$) as compared to episodes when they were doing all other things except taking care of children, $M = 3.85$; $t(184) = 5.30$, $p < .001$ (see Figure 1). Furthermore, we found that on average parents reported more PA when they were taking care of their children ($M = 4.19$) as compared to when they were not taking care of their children, $M = 3.96$; $t(176) = 2.16$, $p = .032$ (see Figure 1). Thus, we found that childcare was associated with both greater cognitive and greater affective well-being for parents.

Figure 1. *Comparison of average PA and meaning scores.*



People reported both significantly more PA and significantly greater sense of meaning when they were taking care of their children as compared to doing all other activities throughout the day.

SES, Opportunity Costs And Well-being

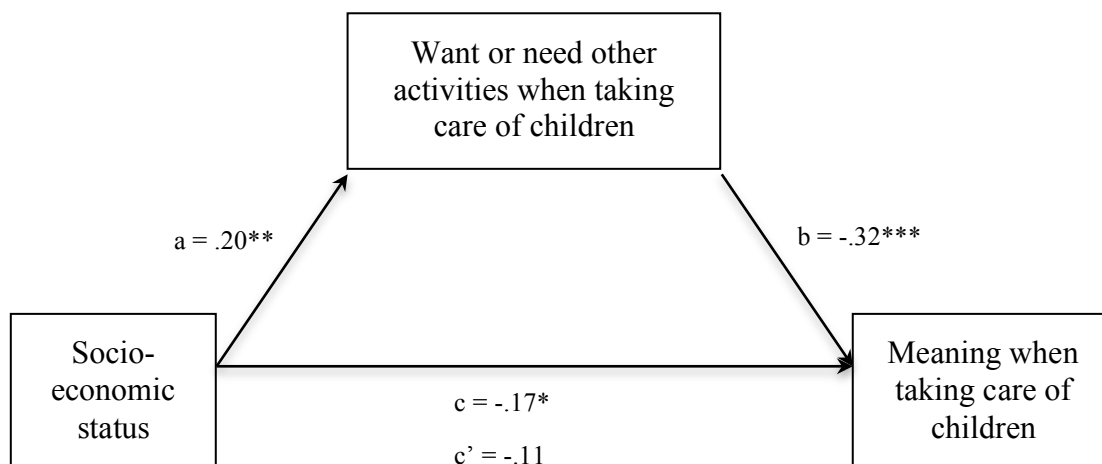
To examine the relationship between SES and the experience of meaning when parents were taking care of their children, we entered SES into a regression predicting meaning, while controlling for the sense of meaning parents reported during the rest of their day when they were not taking care of their children. By controlling for the meaning people experienced during activities other than taking care of their children, we managed to partial out the variance associated with people's general tendency to experience meaning during various activities. This allowed us to examine whether SES is specifically linked to the meaning parents experience while they are taking care of their children. As predicted, we found that SES was negatively linked to the sense of meaning parents experienced during childcare, $\beta = -.17$, $t(180) = -2.59$, $p = .01$. This relationship

remained significant controlling for parents' age, gender and marital status (p 's < .01). In addition, we examined the correlations between SES and meaning during childcare, and SES and meaning while not taking care of one's children. These analyses showed that SES was negatively related to meaning during child care, $r(182) = -.20$, $p = .008$, and unrelated to meaning when parents were not taking care of their children, $r(181) = -.05$, $p = .51$. In short, our regression and correlational analyses suggested that SES was negatively associated with the experience of meaning parents report *specifically* while taking care of their children.

We then explored our mediational hypothesis that the relationship between SES and meaning would be mediated by the perceived opportunity costs parents report while taking care of their children. As we predicted, high-SES parents were more likely to report wanting or needing to be doing other activities during childcare, suggesting they perceived greater opportunity costs associated with taking care of children, $\beta = .20$, $t(182) = 2.75$, $p = .007$. We then entered perceived opportunity costs into a regression predicting the meaning parents reported during childcare, controlling for SES and meaning when parents were not taking care of their children. As predicted, these analyses indicated that perceived opportunity costs were negatively related to the meaning people experienced while they were taking care of their children, $\beta = -.32$, $t(179) = -5.01$, $p < .001$. Furthermore, this regression showed that the relationship between SES and meaning during childcare was reduced when perceived opportunity costs were controlled for, $\beta = -.11$, $t(179) = -1.70$, $p = .092$ (see Figure 2). Although the relationship between SES and meaning during childcare remained marginally significant, a Sobel's test suggested that this relationship was significantly attenuated when controlling for perceived opportunity

costs, *Sobel's* $z = 2.41$, $p = .016$ (Baron & Kenny, 1986). Thus, our results suggested that the relationship between SES and meaning while taking care of children was partially mediated by the higher perceived opportunity costs parents of higher SES tended to experience during childcare.

We ran the same series of analyses to explore whether SES is related to the PA people experienced during times when they were taking care of their children. We found that SES was not related to PA when taking care of children, controlling for PA when taking care of children ($\beta = -.012$, $t(172) = -.161$, *ns*). Indeed, Pearson correlations indicated that SES was associated with neither PA when parents were taking care of their children, $r(175) = -.002$, *ns*, nor PA when parents were not taking care of children, $r(177) = .057$, *ns*. Thus the effect of SES on parental well-being was specific to meaning.

Figure 2. *Mediational model of SES and meaning*

Wanting or needing to be doing other activities partially mediates the relationship between SES and sense of meaning when parents are taking care of their children. The values for c , c' and b are derived after controlling for meaning when not taking care of children. Even when not controlling for this variable, however, those values (of c , c' and b) and the conclusion of the mediational model are virtually identical. $*p < .05$; $**p < .01$; $***p < .001$

Child-Centrism And Well-Being

We ran a series of similar analyses to explore whether child-centrism was associated with a sense of meaning and with PA when people were taking care of their children. Firstly, we used regression to predict parents' sense of meaning when taking care of children from their scores on the child-centrism scale, again controlling for the sense of meaning participants reported while doing all other activities except taking care of their children. Using this regression model, we found that child-centrism was positively associated with the sense of meaning parents reported during episodes when they were taking care of children, controlling for their meaning during episodes when they were not taking care of their children, $\beta = .166$, $t(174) = 2.48$, $p = .014$. This relationship remained substantively unchanged (p 's $< .028$) controlling for gender, age, SES and marital status. Using Pearson correlations, we showed that child-centrism was

positively associated with the sense of meaning parents experienced when taking care of children, $r(176) = .22, p = .004$ but not significantly associated with the sense of meaning they reported during all other episodes throughout the day when they were not taking care of their children, $r(175) = .11, p = .142$.

Next, we used regression to predict parents' PA when taking care of children from their scores on the child-centrism scale, controlling for the PA participants reported while doing all other activities except taking care of their children. Using this regression model, we found that child-centrism was positively associated with the PA parents reported during episodes when they were taking care of children, controlling for their PA during episodes when they were not taking care of their children, $\beta = .146, t(167) = 1.99, p = .049$. This relationship remained substantively unchanged (p 's $< .062$) when we controlled for gender, age, SES and marital status. Using Pearson correlations, we also found that child-centrism was positively associated with the PA parents experienced when taking care of children, $r(170) = .17, p = .022$, but not significantly associated with the sense of meaning they reported during all other episodes throughout the day, $r(171) = .10, p = .190$. Thus, as we predicted, we found that child-centrism was positively associated with both meaning and positive affect during childcare.

Discussion

In the present research, we showed that parents experience both greater positive affect (PA) and a greater sense of meaning during times they were taking care of their children than the rest of their daily activities when they were not taking care of their children. In addition, we identified demographic, behavioral and dispositional predictors of parental well-being. Specifically, we showed that higher SES predicts greater need or desire to be doing other activities while taking care of children, which, in turn, predicted less meaning while parents were taking care of their children. Additionally, parents who were more child-centric (i.e., put the happiness of their children before their own and were willing to sacrifice for their children) reported experiencing both greater positive affect (PA) and meaning while they were taking care of their children.

Comparing Our Results To The Results Of Kahneman Et Al. (2004)

At first glance, it might appear that our finding that taking care of children is associated with greater PA and meaning than other activities contradicts the results of Kahneman et al. (2004), who found that taking care of children ranked 12th in terms of PA from a list of 16 activities. Since we used a different analytic strategy from Kahneman et al., however, our findings are not incompatible with theirs (although the conclusions the two sets of findings support are quite different). As discussed in the introduction, the reason we used a different analytic approach is the we wanted to answer a somewhat different question from the one Kahneman et al. set out to address. Specifically, we used a within-subjects approach to compare each parent's well-being when the parent was taking care of children with this same parent's well-being when not taking care of children. Thus, the specific question we examined was whether individual

parents experienced greater or lower well-being when taking care of their children as compared to all other activities these *same* parents engaged in during the day. Instead of using this within-subjects approach, Kahneman et al. obtained an average PA score for each activity across all participants; then they used these PA scores to rank-order the daily activities. Thus, the question they addressed was how different activities throughout the day rank in terms of PA across all participants—both parents and nonparents. Kahneman et al.’s analytic approach, therefore, does not speak to our question of how childcare compares to other activities within subjects, specifically for parents.

Another reason why Kahneman et al.’s findings do not conflict with our findings lies in the fact that certain daily activities are less frequent than others. Thus, on any given day, most parents might not be engaging in many of the activities that, in Kahneman et al.’s list ranked higher than taking care of children. For example, only a small proportion of Kahneman et al.’s sample reported engaging in intimate relations (.11), exercise (.16) or prayer/worship/meditation (.23), but since these three activities ranked higher in terms of PA than taking care of children, this latter activity appeared three positions lower on the rank-ordered list of activities. This implies that, for most parents, childcare might rank much higher in terms of PA than suggested by Kahneman et al.’s rank-ordered list of daily activities. Their findings, therefore, are not incompatible with our findings that on average parents experience greater PA and meaning when they are taking care of their children as compared to when they were not taking care of their children.

SES And Opportunity Costs

Our finding that SES is associated with perceived opportunity costs, which then predict meaning during childcare, is the first finding that shows how a demographic factor can affect parents' perceptions of childcare and well-being during childcare. This finding underscores the importance of examining both demographic and psychological moderators in studies that examine parental well-being. Furthermore, this finding showcases how the particular sample of parents recruited can have crucial impact on the results and conclusions of the study. Thus, for example, a study with parents in the upper end of the SES ladder might show that spending time with children does not confer any emotional benefits to parents, whereas a study that has parents from the lower end of the SES spectrum might show a strong effect of spending time with children on meaning. One of the reasons why different studies have reached very different conclusions about whether parenting increases or decreases well-being, therefore, might be simply that the samples of parents used in these studies were different in terms of important demographic moderators. In short, our findings underscore the importance of going beyond overall comparisons between parents and nonparents, and focusing instead on understanding *which* parents might experience well-being benefits from childrearing.

In addition to the implications for methodological issues in parental well-being research, our findings have implications for applied research exploring how to increase parental well-being. Recently, for example, there has been a surge of interest to explore the effect of mindful parenting on the well-being of both parents and children (Cohen & Semple, 2010; Maloney & Altmaier, 2008; Singh et al., 2010). Our findings suggest that training programs designed to increase mindfulness—the moment-to-moment awareness

of the present (Brown & Ryan, 2003)—might be particularly effective in increasing the well-being of parents of higher SES because such parents might be most afflicted by distractions when interacting with their children.

It is important to note that SES was only related to meaning and perceived opportunity costs for the episodes when parents were taking care of their children. Our analyses indicated that SES was not related to meaning and perceived opportunity costs when parents were not taking care of their children. The absence of a relationship between SES and these outcome variables when parents were not taking care of children is not readily accounted for by our theorizing presented in the introduction. Specifically, we argued that since SES is associated with a greater availability of work-related and leisure activities, the perceived opportunity costs associated with each one of those activities should be increased. This would, then, in turn, compromise some of the experiential benefits that people normally get from those activities. Our results, however, suggested that the effect of SES on perceived opportunity costs and well-being are specific to particular activities, in this case, childcare.

There are two possible explanations for the absence of a relationship between SES and meaning when parents were not taking care of their children. Firstly, SES might be related only to the meaning parents experience while taking care of their children and not to the meaning they experience during other activities throughout their day. In this case, we would expect no relationship between SES and meaning during each individual activity except childcare. The second possibility is that SES is positively related to meaning during some activities and negatively related to meaning during others. If this is the case, when we averaged across all of the activities except childcare, we could have

seen no relationship between SES and meaning. Our results support this latter explanation. Specifically, we found that SES was negatively related to meaning during activities such as working ($r(81) = -.25, p = .021$) and commuting ($r(89) = -.20, p = .053$). In contrast, we found trends for a positive relationship between SES and such activities as shopping ($r(42) = -.20, p = .183$). These findings do suggest a possible explanation for our findings. Specifically, SES might compromise meaning during routine and mundane daily activities (e.g., working, commuting, childcare) because people are more likely to perceive opportunity costs for such activities. SES, on the other hand, might not compromise meaning and other well-being benefits when people are doing other, more enjoyable activities; especially activities in which having more money can make a considerable difference to the quality of the experience (e.g., shopping). When Anne, who possesses great wealth and has an MBA from Harvard, is at work or has to take care of her children she might be thinking about some of the other things she could be doing instead such as having a supreme dining experience at one of the exclusive restaurants in the city. When she is enjoying a favourite leisure activity such as playing golf or shopping, on the other hand, her well-being might not be compromised by distracting thoughts about the other things she could be doing. This post-hoc explanation for our results should, of course, be treated with caution.

In addition to not finding any relationship between SES and meaning when not taking care of children, we did not observe any relationship between SES and PA, both during childcare and when not taking care of one's children. Thus, the predicted effect of SES on well-being when taking care of children was specific to meaning. One explanation is that SES tends to have a stronger effect on cognitive components of well-

being such as meaning than on affective components of well-being such as PA. We found some support for this possibility in our data. Specifically, SES was not significantly related to PA for any of the 15 daily activities, whereas it was related to meaning in the case of childcare, commuting and working. Future research should try to understand better what components of well-being are more likely to be compromised by higher SES, and whether the relationships between SES and various well-being indicators depend on the type of activity one is engaging in.

Child-Centrism

A second predictor of parental well-being during childcare that we identified in the present research was child-centrism—the extent to which parents put their children’s well-being before their own. Specifically, we found that more child-centrism was associated with reporting both more PA and more meaning when parents are taking care of their children. Is it possible, however, that more child-centric parents perceive greater costs to parenting, which drives them to inflate the well-being benefits they experience when taking care of their children. This possibility is raised by the previously discussed findings of Eibach and Mock (2011). Specifically, these authors showed that parents who were reminded of the costs of parenting reported enjoying the time they spent with their children more—presumably in order to reduce the cognitive dissonance experienced when they thought about the costs of parenting—than parents who were not reminded of these costs. To the extent that parenting might be associated with greater costs for parents who are willing to sacrifice more for their children (i.e., more child-centric parents), such parents might be motivated to inflate their reports of PA and meaning from childcare.

We believe, however, that the above possibility is unlikely in the case of our study for several reasons. Firstly, we asked parents to report their episode-by-episode PA and meaning *before* we asked them to report the extent to which their parenting is child-centric. It could not be the case, then, that answering the child-centrism questions could have in any way influenced parents' answers on the PA and meaning questions. Secondly, our study was designed to avoid explicitly asking parents how much PA and meaning they experienced while taking care of children. Instead, parents were asked to report separately what they were doing and how they were feeling during a particular episode. Thus, for any given episode when parents were taking care of their children, they could have also reported cooking dinner or commuting. In contrast to Eibach and Mock's study in which parents were explicitly asked to report how much they enjoyed spending time with their children, in our study it was much less likely that parents' answers on the PA and meaning questions could have alleviated any possible cognitive dissonance. Thus, our findings suggest that parents who are willing to sacrifice for their children *actually* experience better well-being outcomes².

Evolutionary Perspectives

Recently, Maslow's famous pyramid of human needs proposed in 1943 was revised to incorporate our improved understanding of human needs today (Kenrick, Griskevicius, Neuberg, & Schaller, 2010). Instead of self-actualization, the highest human need identified in the new pyramid is parenting. Using this updated pyramid of needs, Lyubomirsky and Boehm (2010) reviewed empirical evidence suggesting that the satisfaction of each of the needs in the pyramid—with the exception of parenting—is

clearly associated with increased happiness. The fact that the satisfaction of basic human needs is associated with happiness makes sense from an evolutionary perspective—people are rewarded for fulfilling their fundamental needs by feeling good. But why would parenting, if indeed it is the highest human need, not provide the same increases to happiness as the satisfaction of other needs? According to Lyubomirsky and Boehm (2010), the answer to this question might be purely methodological. To mention just a few methodological issues, most studies on parental well-being lack a true control group and measure global life evaluations, which might fail to capture the moment-to-moment benefits that parents experience when with their children. In our study, we showed that avoiding these methodological issues does indeed help to reveal a positive association between taking care of one's children and well-being. Our findings, therefore, suggest that satisfying the highest human motive—parenting—might be no different from satisfying other fundamental human needs with respect to its relationship to well-being, thus helping to resolve the 'puzzle of parenthood' identified by Lyubomirsky and Boehm (2010).

In addition to showing that parenting behavior is associated with greater well-being for parents, we showed that the higher parents score in terms of child-centrism, the greater the emotional benefits they derive from taking care of their children. In other words, parents who were willing to sacrifice more and incur greater costs on themselves for the well-being of their children were rewarded by experiencing greater emotional benefits. Our findings, therefore, go beyond showing that parenting behaviors might be rewarded with positive experiential benefits and demonstrate that the more sacrifices parents make the greater those benefits are likely to be. Thus, we might have evolved not

only mechanisms that reward parents for their parenting efforts in general, but also mechanisms that reward them more when they put greater efforts into childrearing.

Limitations And Future Directions

One of the main limitations of the present research is that the findings are correlational. We suggested, for example, that the association between SES and meaning is mediated by perceived opportunity costs. Because of the correlational nature of our research it is also possible that SES, by compromising meaning, increases the perceived opportunity costs of taking care of children (i.e., the association between SES and perceived opportunity costs might be mediated by meaning). Parents of higher SES might experience less meaning while they are with their children, which might make them think to a greater extent about the other activities they need or want to be doing instead. Indeed, our analyses indicated that meaning significantly mediated the relationship between SES and perceived opportunity costs, giving credence to this alternative mediational model. More experimental research is, therefore, needed to support the mediational model we proposed in the current research and show that perceived opportunity costs do indeed have a negative causal effect on the meaning parents experience when they are with their children. Future research could explore the direction of the relationship between perceived opportunity costs and meaning by finding effective manipulations of perceived opportunity costs. It could be interesting to see whether parents who shut off their Blackberries, iPhones or other smart phones might experience fewer opportunity costs, which could lead to a stronger sense of meaning when they are spending time with their children. In addition, studies that explore the effectiveness of mindfulness intervention

programs for parents could show that becoming more mindful improves the emotional benefits of parents by decreasing perceived opportunity costs associated with childcare.

Another fruitful area for research is to further elucidate the negative relationship between SES and meaning when taking care of one's children. We found that perceived opportunity costs only partially mediated the relationship between SES and meaning during childcare, and the relationship between SES and meaning remained marginally significant after controlling for perceived opportunity costs. This suggests that there might be other mechanisms, which could explain why parents of higher SES experience less meaning while taking care of their children.

Conclusion

The present research has shown that parents might experience greater well-being when they are taking care of their children as compared to when they are doing all other activities *except* taking care of children. Our findings are in sync with many parents' intuitions that children are sources of joy in their lives and suggest that the negative picture of parenting painted by the media (e.g., Time Magazine, 2011) might not be justified. Going beyond this overall comparison, we have also explored a variety of important predictors, moderators and mediators of parental well-being including SES, perceived opportunity costs and child-centrism. These findings have implications for the methodologies that future studies should use to address issues of parental well-being (e.g., measuring moderators, using representative samples), as well as implications about parenting as a fundamental human need and its evolutionary underpinnings. Finally, our results suggest a number of future directions and possible interventions for increasing

parental well-being including mindfulness training, cutting out distractions or increasing parents' dedication to the well-being of their children.

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Appendix A: Survey Questionnaires

Income

What is your total annual household income?

\$10,000 or less	\$10,001 - \$20,000	\$20,001 - \$30,000	\$30,001 - \$40,000
\$40,001 - \$50,000	\$50,001 - \$60,000	\$60,001 - \$70,000	\$70,001 - \$80,000
\$80,001 - \$90,000	\$90,001 - \$100,000	\$100,001 - \$110,000	\$110,001 - \$120,000
\$120,001 - \$130,000	\$130,001 - \$140,000	\$140,001 - \$150,000	\$150,000 +

Education

What is the highest level of education you have completed?

Some high school or less.

High school diploma or equivalent.

Some college/university.

College diploma.

University diploma.

Some graduate school.

Graduate degree.

List of Daily Activities

What were you doing during episode 2A? (please check all that apply)

computer/internet/email.	commuting.	shopping.	doing housework.	working.
taking care of your children.	napping/resting.	intimate relations.	preparing food.	eating.
praying/worshipping/meditating.	exercising.	watching TV.	on the phone.	socializing.
Other: _____				

Perceived Opportunity Costs

During this episode, was there another activity that you wanted to do or needed to be doing instead?

Yes No

Meaning in Life

During this episode, to what extent did you feel a sense of meaning and purpose in your life? (0—not at all; 6—very much)

Child-Centrism Scale

Instructions: Please indicate the extent to which you agree with each of the following statements.

(0—very strong disagreement; 6—very strong disagreement)

1. My children are the centre of my life.
2. The happiness of my children is more important to me than my own happiness.
3. My children are the most frequent topic of my discussions.
4. I do not mind leaving my children to spend time with my friends.
5. I would be willing to make almost any sacrifice for my children.
6. My schedule revolves around my children.
7. The needs of my children come before my own