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# **Parenthood and happiness: Direct and indirect impacts of parenthood on happiness**

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## **Abstract**

Does parenthood bring happiness? This paper finds that the overall impact of parenthood on happiness is negative because the negative indirect impacts exceed the positive direct on happiness. What needs emphasizing is that, while the findings show that parenthood is still a positive status, parenthood undermines life domains in significant ways. In teasing out the different routes in which parenthood affects happiness, this paper thus highlights a problem with the standard conclusion in the extant literature: there is a conflation of the positive direct and negative indirect impacts of parenthood on happiness. The paper then argues that public policy and related programs can both strengthen the positive direct impact and help reverse the negative indirect impacts of parenthood on happiness.

**Keywords:** Parenthood; children; happiness; life domains; mediation

**JEL Classifications:** A12; D10; I31; J10

## **1. INTRODUCTION**

There is an age-old view that parenthood brings happiness. Surprisingly, though, such view does not get a lot of empirical support because parenthood—and, by extension,

children—often shows a negative empirical relationship with happiness. This pessimistic conclusion, which is evident across earlier (Campbell et al. 1976; Glenn and Weaver 1979; Glenn and McLanahan 1982) and recent studies (Margolis and Myrskylä 2011; Stanca 2012; Deaton and Stone 2013), contrasts with the empirical regularity that being married or living-as-married, for instance, indicates greater happiness (Campbell 1981; Stack and Eshleman 1998; Diener et al. 2000).<sup>1</sup>

In this paper, however, I reconsider the relationship between parenthood and happiness by applying multilevel mediation regression analysis to data from the World Values Survey. What I thus obtain in my analysis is a positive direct impact (c.f., Haller and Haller 2006; Angeles 2010) and negative indirect impacts (c.f., White et al. 1986; Stanca 2012) of parenthood on happiness. More importantly, there is net loss in happiness due to the large indirect impacts of parenthood on happiness.

This paper, therefore, contributes the extant literature on the subject in two ways. First, parenthood itself is associated with more happiness but its concomitant impacts in terms of financial costs, personal sacrifices, marital strains, and other stresses that are associated with childcare and parenting are large and, in turn, undermine happiness. Second, the negative conclusion in the extant literature springs from an amalgamation of the direct and indirect impacts of parenthood on happiness. The situation thus meant a conflated interpretation of the findings. In short, while the extant literature is right in concluding a negative overall impact of parenthood on happiness, it nonetheless fails to separate the

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<sup>1</sup> Di Tella et al. (2003), Alesina et al. (2004), Ferrer-i-Carbonell and Frijters (2004), and Frey and Stutzer (2006) find negative results for parenthood or children but these are incidental to the focus of their studies.

different routes in which parenthood affects happiness. In teasing out these routes, this paper revalidates the age-old view that parenthood leads to more happiness and, at the same time, substantiates the claim that parenthood is not an easy job.

The rest of the paper has the following structure. Part 2 presents the methodology. Then, Part 3 deals with the results. Part 4 concludes the discussion.

## **2. METHODOLOGY**

### **Conceptual Framework**

I define “happiness” as a personal consideration of how one’s state of being is turning out to be well. This definition is mainly about evaluative happiness and not about emotional happiness or about eudaimonic happiness. Indeed, research has shown that these three notions of happiness can have different sets of determinants (c.f., Kahneman and Deaton 2010; Baumeister et al. 2013). This definition assumes that what a person reports as state of being is reflective of one’s internal condition and that the person is truthful in making such declaration.

The above definition leads to a happiness function of the form

$$H = h[U(\cdot)] \tag{1}$$

where  $U(\cdot)$  is the internal state of being,  $h$  is a transformation function, and  $H$  is reported

happiness of an individual. For Equation 1 to be consistent with the definition it must be the case that  $H_2 > H_1$  if and only if  $U_2(\cdot) > U_1(\cdot)$  when state  $i+1$  is superior to state  $i$  for  $i = 1, \dots, n$ .

Equation 1 is consistent with the notion that  $H$  is an evaluation that encompasses various life domains (Diener et al. 1999). Put another way, the personal consideration of various life domains constitutes an overall consideration of one's state of being (Emmons and Diener 1985; Oishi and Diener 2001). If so, restate Equation 1 following van Praag and Ferrer-i-Carbonell (2008; see also Andrews and Withey 1976; Campbell et al. 1976), as follows:

$$H = F(D, Z) \tag{2}$$

where  $D$  is a set of life domains and  $Z$  is a set of socioeconomic characteristics. If  $Z$  determines both  $H$  and  $D$ , then a more accurate expression of Equation 2 is

$$H = F[D(Z), Z] \tag{3}$$

Accordingly, the derivative of Equation 3 with respect to  $Z$  is

$$\frac{dH}{dZ} = F_D \frac{dD}{dZ} + F_Z \tag{4}$$

Equation 4 shows that the overall impact of  $Z$  on  $H$  has two elements. In particular,

$F_D \frac{dD}{dZ}$  is the indirect impact, and  $F_Z$  is the direct impact.

Given the subject of this paper, I contextualize the above framework as follows. If  $Z$  is parenthood (or children), then the conventional view about parenthood (or children) must show a positive value; that is,  $F_Z > 0$ . Next, if parenthood (or children) entails financial costs, personal sacrifices, marital strains, and other related stresses, then evaluations such as satisfaction with financial situation (c.f., Stanca 2012), satisfaction with personal choices and control (c.f., Belsky et al. 1986; Angeles 2010), satisfaction with married life (c.f., Bernard 1982; Benin and Nienstedt 1985), etc., must show negative values; that is,  $dD/dZ < 0$ .<sup>2</sup> Lastly, if  $F_D > 0$  (i.e., relevant life domains are sources of happiness), then the indirect impact is negative by necessity; that is,  $F_D \frac{dD}{dZ} < 0$ . If so, Equation 4 depends on the size of its first term; that is, if  $\left| F_D \frac{dD}{dZ} \right| > F_Z$ , then  $dH/dZ < 0$ . In short, a critical element in the determination of the overall impact of parenthood on happiness is  $dD/dZ$ .

## **Empirical Framework**

Reported happiness exhibits a hierarchical structure, which in part reflects the influences of peer group (i.e., age cohort) and context (i.e., country). In this paper, standard analysis

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<sup>2</sup> If parenthood meant having additional inputs for family production and support, then it is possible to find  $dD/dZ > 0$ . The rising cost and sacrifices associated with parenthood today strengthens  $dD/dZ < 0$ ; but, as Ambert (1992) argues, public policy with regard to parenthood mitigate  $dD/dZ < 0$  and enhance  $F_Z > 0$ .

obtains biased estimates on the impact of parenthood on happiness because data structure itself violates the assumption of data independence. Unobservables like personality and culture could disguise the impact of parenthood on happiness.<sup>3</sup> It is essential to control for such issues, and multilevel regression does so by internalizing data structure in the analysis. The concern about reverse causality, in contrast, is less of an issue because parenthood was an existing state when reporting about happiness.

Given the above description, this paper resorts to a three-level regression analysis of the form

$$H1_{ijk} = \alpha_{0jk} + \alpha_{1jk} D1 + \alpha_{2jk} Z1 + \alpha_{3jk} SE1 + \varepsilon_{ijk} \quad (5a)$$

with random intercept (levels 2 and 3) and random slopes (levels 2 and 3) on D1, Z1, and SE1, as follows (c.f., Kenny et al. 2003; Bauer et al. 2006):

Level 2 (i.e., controlling between age cohorts within country variation)

$$\alpha_{0jk} = \beta_{00k} + u_{0jk} \quad (5b)$$

$$\alpha_{1jk} = \beta_{10k} + u_{1jk}$$

$$\alpha_{2jk} = \beta_{20k} + u_{2jk}$$

$$\alpha_{3jk} = \beta_{30k} + u_{3jk}$$

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<sup>3</sup> Stanca (2012) estimates a model that uses the ideal number of children along as control for unobservable heterogeneity in the data. The data on the ideal number of children are available only in the 3rd wave of the World Values Survey.

Then, Level 3 (i.e., controlling between country variations)

$$\beta_{00k} = \gamma_{000} + v_{00k} \quad (5c)$$

$$\beta_{10k} = \gamma_{100} + v_{10k}$$

$$\beta_{20k} = \gamma_{200} + v_{20k}$$

$$\beta_{30k} = \gamma_{300} + v_{30k}$$

In Equation 5a, H1 refers to happiness, D1 refers to life domains, Z1 refers parenthood, and SE1 refers to the other socio-economic characteristics, all at the individual level. The subscript i refers to the individual (Level 1), j refers the peer group (Level 2), and k refers to the country (Level 3). Note the numeral suffix in the Equation 5a variables indicates the specific level of the data. In this case, the numeral 1 on H1, for example, indicates the data are Level 1.<sup>4</sup>

Combining Equations 5a to 5c leads to the structural equation for the direct impacts of life domains and parenthood on happiness; that is,

$$H1_{ijk} = \gamma_{000} + \gamma_{100} D1 + \gamma_{200} Z1 + \gamma_{300} SE1 + \text{error} \quad (6)$$

where error =  $(\epsilon_{ijk} + u_{0jk} + v_{00k}) + (u_{1jk} + v_{10k})D1 + (u_{2jk} + v_{20k})Z1 + (u_{3jk} + v_{30k})SE1$ .

From Equation 6, the estimates of  $F_D$  and  $F_Z$  in Equation 4 are  $\gamma_{100}$  and  $\gamma_{200}$ , respectively.

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<sup>4</sup> The setup indicates that the intercept and parameters on life domain (D1), parenthood (Z1), and marital status (SE1) are random but the rest are non-random. There are, however, no hard-and-fixed rules on which parameters are set as random in multilevel regression.



Estimating  $dD/dZ$  (Equation 4) require another set of three-level specifications. Thus, I define the life domain equation as follows:

$$D1_{ijk} = \theta_{0jk} + \theta_{1jk} Z1 + \theta_{2jk} SE1 + e_{ijk} \quad (7a)$$

with Level 2 (i.e., controlling age cohorts within country variation) expressions as

$$\theta_{0jk} = \varphi_{00k} + m_{0jk} \quad (7b)$$

$$\theta_{1jk} = \varphi_{10k} + m_{1jk}$$

$$\theta_{2jk} = \varphi_{20k} + m_{2jk}$$

and Level 3 (i.e., controlling between country variations) expressions as

$$\varphi_{00k} = \tau_{000} + n_{00k} \quad (7c)$$

$$\varphi_{10k} = \tau_{100} + n_{10k}$$

$$\varphi_{20k} = \tau_{200} + n_{20k}$$

Combining Equations 7a to 7c leads to the structural equation for the indirect impact of parenthood on life domains, as follows:

$$D1_{ijk} = \tau_{000} + \tau_{100} Z1 + \tau_{200} SE1 + \text{error} \quad (8)$$

where  $\text{error} = (e_{ijk} + m_{0jk} + n_{00k}) + (m_{1jk} + n_{10k})Z1 + (m_{2jk} + n_{20k})SE1$ . As such, Equation 8 presents  $\tau_{100}$  as the estimate of  $dD/dZ$  in Equation 4.

Then,  $\frac{dH}{dZ} = F_D \frac{dD}{dZ} + F_Z = \gamma_{100}\tau_{000(D)} + \gamma_{200}$ . The expression  $\gamma_{100}\tau_{000} / \sqrt{\gamma_{100}^2 se_{\tau_{000}}^2 + \tau_{000}^2 se_{\gamma_{100}}^2}$ ,

where  $se$  is the standard error of the associated parameter, gives the statistical significance for  $\gamma_{100}\tau_{000}$ .

## Data and Description of Variables

For the multilevel regression, I use individual-level data from the 4th and 5th waves of the World Values Survey. The dataset I end up using for the regression analysis includes more than 70 countries and represents about 90 percent of the global population.

The proxy measure for happiness is “life satisfaction”. Data are responses to the question: *“All things considered, how satisfied are you with your life as a whole these days?”* Responses are integer values from 1 to 10, where 1 means “completely dissatisfied” and 10 means “completely satisfied”.

Ideally, life domains in Equations 6 and 8 should cover all the relevant aspects of life that serve as sources of happiness but, of course, data availability is the main constraint. Here, the regression analysis uses two proxy measures for life domains that are available from the World Values Survey.

The first life domain is financial situation and measured using the query *“How satisfied are you with the financial situation of your household?”* This first domain seeks to account for the fact that parenthood (or children) entails both expenditure outlays to raise

a family and opportunity costs on the parent. Responses are integer values from 1 to 10, where 1 means “completely dissatisfied” and 10 means “completely satisfied”.

The second life domain is personal freedom and measured using the question “*How much freedom of choice and control [do] you feel you have over the way your life turns out?*”

This second domain seeks to account for the fact that parenthood entails changes in priorities and responsibilities in favor of the children. The second domain also doubles for marital satisfaction (since data are not available from the World Values Survey). Parenthood affects the relationship between couples in terms of their interaction, albeit it does not impair all aspects of married life. Responses are also integer values from 1 to 10, where 1 means “no choice at all” and 10 means “great deal of choice”.

Parenthood is either a dummy variable “parent” or a set of category variables representing the number children. In the first setup, the value of 1 means a parent (regardless of the number of children) and zero means not a parent. In second setup, in contrast, five dummy variables refer to 1, 2, 3, 4, or 5 and above children, with zero children as the reference status. Note that the data from the World Values Survey reflect a biological relationship between parent and offspring.

The regression analysis also includes the usual socio-economic characteristics like age, gender, schooling, and occupation.<sup>5</sup> Age is reported in years. I define the peer groups by

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<sup>5</sup> Data on subjective income decile contain plenty of missing information. Hence, I excluded income status in order to have the most number of observations in the regression analysis. Arguably, financial satisfaction can double for subjective income status since both variables are positively correlated ( $r = 0.297$ ,  $p < 0.01$ ).

decadal cohorts (e.g., 20-29 form one group, etc.) for the ages 20 to 69 years. For gender, the value of 1 is for male and 0 is for female. For schooling, there are three category dummy variables for no education, primary education, and secondary education, with tertiary education as the reference status. Lastly, for employment, there are four category dummy variables for full-time employment, part-time employment, self-employed, and outside the labor force, with unemployed as the reference status.

### 3. RESULTS

The results of baseline regressions, which are shown in the Appendix, replicate the key findings in the extant literature: parenthood implies lower happiness (Table A:  $\beta_{(\text{parenthood})} = -0.1172$ ,  $p < 0.01$ ; ave.  $\beta_{(\text{children})} = -0.1113$ ,  $p < 0.05$ ). The results are also similar to the findings of Margolis and Myrskylä (2011) and Stanca (2012). Further analyses, however, suggest that the baseline regressions suffer from omitted variables bias (Table A:  $\beta_{(\text{finance})} = 0.4344$  (0.4332),  $p < 0.01$ ;  $\beta_{(\text{freedom})} = 0.1894$  (0.1891),  $p < 0.01$ ), thereby revealing that life domains are indeed relevant items for doing an analysis of the relationship between parenthood and happiness.

For brevity of presentation, though, I forego a discussion concerning the socioeconomic profile because the results essentially replicate the standard findings. In any case, the main regressions are also shown in the Appendix for completeness (Table B and C). Both tables below summarize the main results on the key parameters (i.e., parenthood, children, and life domains) and the calculations of their respective impacts on happiness.

**[Insert Tables 1 and 2]**

In particular, the first column of Table 1 reveals a positive impact of parenthood ( $\gamma_{200} = 0.0307$ ,  $p = \text{n.s.}$ ) and of life domains ( $\gamma_{100(\text{finance})} = 0.4404$ ,  $p < 0.01$ ;  $\gamma_{100(\text{freedom})} = 0.1917$ ,  $p < 0.01$ ) on happiness, albeit the former is not statistically significant. Then, the last two columns of Table 1 reveal that parenthood has a negative indirect impact on the respective life domains ( $\tau_{100(\text{finance})} = -0.3040$ ,  $p < 0.01$ ;  $\tau_{100(\text{freedom})} = -0.0780$ ,  $p < 0.05$ ). The positive direct impacts of life domains on happiness together with the negative indirect impacts of parenthood on the same life domains translate as negative indirect impacts on happiness. Specifically, the mediated effects of both financial situation ( $\gamma_{100}\tau_{100(\text{finance})} = -0.1339$ ,  $p < 0.01$ ) and personal freedom ( $\gamma_{100}\tau_{100(\text{freedom})} = -0.0150$ ,  $p < 0.01$ ) are negative. The overall impact of parenthood on happiness is negative as a result ( $\gamma_{100}\tau_{100(\text{finance})} + \gamma_{100}\tau_{100(\text{freedom})} + \gamma_{200} = -0.1181$ ).

Notice, though, that Tables 1 and 2 have similar descriptions in terms of the relationship between the key variables and happiness. In the case of children (Table 2), the result for one child shows a positive direct impact on happiness ( $\gamma_{200} = 0.0069$ ,  $p = \text{n.s.}$ ) but it is not statistically significant. Results for life domains in column 1 of Table 2 reveal positive direct impacts on happiness ( $\gamma_{100(\text{finance})} = 0.4404$ ,  $p < 0.01$ ;  $\gamma_{100(\text{freedom})} = 0.1917$ ,  $p < 0.05$ )—notice that both tables report the same magnitudes for life domains. There are also the negative indirect impacts of one child on life domains, as shown in columns 2 and 3 of Table 2 ( $\tau_{100(\text{finance})} = -0.1344$ ,  $p < 0.01$ ;  $\tau_{100(\text{freedom})} = -0.0141$ ,  $p < 0.05$ ). These results together mean lower happiness overall ( $\gamma_{100}\tau_{100(\text{finance})} + \gamma_{100}\tau_{100(\text{freedom})} + \gamma_{200} = -0.1417$ ). More importantly, the results in Table 2 exhibit a similar pattern across all categories for

children, albeit robust conclusions are available only for the categories indicating three or more children.

Apparent from Tables 1 and 2, too, is that the overall impact of parenthood and children are comparable to each other (see also Tables A to C). This pattern suggests that the negative conclusion about parenthood that is reported in (most of) the extant literature is possibly the result of a conflation of the direct and indirect impacts on happiness. The point is that, while the extant literature is correct in pointing out that parenthood has an overall negative impact on happiness, a failure to separate the direct impact from the indirect impacts has nonetheless meant a misunderstanding about parenthood's impact. If so, both Tables 1 and 2 not merely revalidate the age-old view that parenthood raises happiness but they also underscore the fact that parenthood itself is not an easy job. Tables 1 and 2 furthermore present to an explanation on why a decline in fertility in many parts of the world is occurring today.

Naturally, adding family life and marital relationship among the examined life domains is likely to make the findings of this study more robust. Proxy measure for, say, marital satisfaction is useful in this context. The profile of children like age and gender comprise another set of routes in which parenthood affects happiness (Ambert 1992).<sup>6</sup> Regardless what the extensions in the analysis might be, however, it is important to emphasize that the reduction in happiness is not because parenthood itself is an unpleasant state but

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<sup>6</sup> If the characteristics of the children impacts parental happiness, then Equation 3 modifies into  $H = F[D(Z(X)), Z(X)]$ , where X is children profile and  $\frac{dH}{dX} = [F_D \frac{dD}{dZ} + F_Z] \frac{dZ}{dX}$ . Children profile is not available in the World Values Survey.

because it entails significant changes in life domains. In short, the consequent reduction in happiness occurs because being a parent interferes with and/or upsets the different sources of happiness. Indeed, the impacts of childcare and parenting on life domains become least binding, if at all, only when the children become independent from the parents and start to raise their own families.

Therefore, the above findings have some implications for public policy. First, parenthood remains a meaningful state that brings happiness to parents even if modernization and prosperity are constantly erasing its economic rationale and that of having children. The findings thus point out some opportunities for reviving, if not enhancing, the family as an institution and strengthening parenthood itself through public support. In the context of Equation 4, for instance, magnifying the size of  $F_Z$  is possible through social policy. Interventions might take the form of, say, helping individuals become personally and psychologically ready for the demands of parenthood, albeit the “right” training for parenthood is parenthood itself. Social programs in this context facilitate the re-emerge of parenthood as a robust source of happiness.

Another implication of the findings is the introduction of interventions that assist parents cope with the demands of parenthood and help them in balancing responsibilities with family and work, as well as in fulfilling multiple roles like being parent, spouse, and worker. Financial costs, personal sacrifices, marital strains, and related stresses come with childcare, parenting, and related tasks that, in turn, disrupt the consideration of how one’s state of being is turning out to be well because of parenthood. In this regard, interventions are useful in easing the demands on parents’ well-being. Such interventions might take

the form of, say, healthcare and related programs for infants and young children like daycare and related childcare systems, schooling-related programs like home visitations, community-based programs like support groups, among others. In the context of Equation 4, then, interventions make a positive value of  $dD/dZ$  possible and bring about  $dH/dZ > 0$ .

Of course, the suitability, amount, and timing of social programs and related initiatives vary across societies. Naturally, there is also the issue about the availability of resources to back up such interventions. But what is logical given the findings is that the help that parents get are valuable inputs for enabling them to cope with the demands of parenthood and, in turn, empowering them to respond to the needs of their children in a more appropriate and effective manner. The amount and quality of the societal response for parents are crucial because they help compensate for the negative impacts of parenthood on happiness.

#### **4. CONCLUSION**

This paper revisited the age-old view that parenthood brings happiness using multilevel mediation analysis. The findings indicated that parenthood has a positive direct impact on happiness, but it also has negative indirect impacts on happiness because of its impact on life domains. The indirect impacts of parenthood were found to be larger than the direct impacts, thereby making parenthood appear harmful to happiness. The study found that the frequent negative conclusion about parenthood is not because parenthood itself is not a source of happiness but, rather, because it interferes with and/or upsets the different sources of happiness. In not differentiating between the direct and the indirect impacts on



happiness, most studies ended up misinterpreting the impact of parenthood on happiness. Finally, the paper argued that social policy and intervention programs are important both for strengthening the positive direct impact and for reversing the negative indirect impacts of parenthood on happiness.

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**Table 1: Direct and indirect impact of parenthood**

		Happiness	Fin. situation	Personal freedom
Direct Impact:	Financial situation	0.4404 0.0025		
	Personal freedom	0.1917 0.0025		
	Parent	<b><i>0.0307</i></b> <b><i>0.0220</i></b>	-0.3040 0.0335	-0.0780 0.0381
	Parent		-0.1339 0.0148	-0.0150 0.0073
Overall Impact:	Parent	-0.1181		

**Notes:** Figures below the estimated parameters are the standard errors. Figures in bold italics mean not statistically significant at  $p < 0.05$ . Column headings indicate the dependent variable of the regression. Life satisfaction is the proxy measure for happiness. Financial satisfaction is the proxy measure for financial situation. Choice and Control is the proxy measure for personal freedom. The main regression results are in Tables B and C in the Appendix.

**Table 2: Direct and indirect impact of children**

		Happiness	Fin. situation	Personal freedom
Direct Impact:	Financial situation	0.4404 0.0025		
	Personal freedom	0.1917 0.0025		
	Children = 1	<b><i>0.0069</i></b> <b><i>0.0244</i></b>	-0.3052 0.0370	-0.0737 0.0374
	Children = 2	<b><i>0.0256</i></b> <b><i>0.0240</i></b>	-0.2979 0.0365	-0.0731 0.0369
	Children = 3	0.0550 0.0267	-0.3035 0.0395	-0.0920 0.0399
	Children = 4	0.0858 0.0312	-0.3555 0.0451	-0.1063 0.0454
	Children ≥ 5	0.1121 0.0315	-0.4659 0.0462	-0.1188 0.0464
	Indirect Impact:	Children = 1		-0.1344 0.0163
	Children = 2		-0.1312 0.0161	-0.0140 0.0071
	Children = 3		-0.1337 0.0174	-0.0176 0.0077
	Children = 4		-0.1566 0.0199	-0.0204 0.0087
	Children ≥ 5		-0.2052 0.0204	-0.0228 0.0089
Overall Impact:	Children = 1	-0.1417		
	Children = 2	-0.1196		
	Children = 3	-0.0963		
	Children = 4	-0.0912		
	Children ≥ 5	-0.1159		
Ave. Overall Impact:	Children	-0.1129		

**Notes:** Figures below the estimated parameters are the standard errors. Figures in bold italics mean not statistically significant at  $p < 0.05$ . Column headings indicate the dependent variable of the regression. Life satisfaction is the proxy measure for happiness. Financial satisfaction is the proxy measure for financial situation. Choice and Control is the proxy measure for personal freedom. The main regression results are in Tables B and C in the Appendix.

## APPENDIX

List of countries:

Albania	Georgia	Montenegro	South Korea
Algeria	Germany	Morocco	Spain
Andorra	Ghana	Netherlands	Sweden
Argentina	Guatemala	Nigeria	Switzerland
Australia	Hong Kong	Norway	Taiwan
Bangladesh	India	Pakistan	Tanzania
Bosnia	Indonesia	Peru	Thailand
Brazil	Iran	Philippines	Trinidad
Bulgaria	Iraq	Poland	Turkey
Burkina Faso	Italy	Puerto Rico	Uganda
Canada	Japan	Romania	Ukraine
Chile	Jordan	Russian Fed.	United Kingdom
China	Kyrgyzstan	Rwanda	United States
Cyprus	Macedonia	Saudi Arabia	Uruguay
Egypt	Malaysia	Serbia	Venezuela
Ethiopia	Mali	Singapore	Vietnam
Finland	Mexico	Slovenia	Zambia
France	Moldova	South Africa	Zimbabwe



**Table A: Baseline regressions and test results for omitted life domains**

	Baseline 1	Model 1	Baseline 2	Model 2
Constant	8.2787 0.2004	-4.7092 0.1170	8.3260 0.2079	-4.6763 0.1176
Age	-0.0634 0.0055	0.0300 0.0033	-0.0634 0.0055	0.0293 0.0033
Age-squared	0.0007 0.0001	-0.0004 0.0000	0.0007 0.0001	-0.0004 0.0000
Male	-0.1684 0.0149	0.0477 0.0124	-0.1682 0.0149	0.0474 0.0124
With partner	0.4770 0.0343	-0.2360 0.0160	0.4751 0.0343	-0.2358 0.0160
Schooling, zero or incomplete	-0.7777 0.0281	0.6755 0.0235	-0.7761 0.0286	0.6623 0.0239
Schooling, complete elementary	-0.5111 0.0233	0.4438 0.0194	-0.5115 0.0234	0.4394 0.0195
Schooling, complete high school	-0.2613 0.0209	0.2354 0.0175	-0.2615 0.0210	0.2339 0.0174
Occupation, full-time work	0.6546 0.0254	-0.4120 0.0212	0.6525 0.0254	-0.4105 0.0212
Occupation, part-time work	0.4508 0.0333	-0.2838 0.0279	0.4484 0.0333	-0.2828 0.0278
Occupation, self-employed	0.5828 0.0294	-0.4042 0.0246	0.5807 0.0294	-0.4029 0.0245
Occupation, not in labor force	0.5646 0.0261	-0.3188 0.0217	0.5597 0.0261	-0.3188 0.0217
Parent	-0.1172 0.0328	0.1660 0.0186		
Children = 1			-0.1421 0.0342	0.1650 0.0212
Children = 2			-0.1149 0.0337	0.1599 0.0210
Children = 3			-0.0923 0.0367	0.1616 0.0238
Children = 4			-0.0878 0.0420	0.1810 0.0283
Children ≥ 5			-0.1194 0.0429	0.2236 0.0281
Financial situation		<b>0.4344</b> <b>0.0025</b>		<b>0.4332</b> <b>0.0025</b>
Personal freedom		<b>0.1894</b> <b>0.0025</b>		<b>0.1891</b> <b>0.0025</b>

**Notes:** Figures below the estimated parameters are the standard errors. Regressions include controls for country geographical location fixed effects. The dependent variable is life satisfaction. Variance components of regressions are not reported here but they are available from the author. Null hypothesis (Models 1 and 2):  $\beta_i = 0$  means no omitted variable bias ( $i = 1, 2$ ).

**Table B: Regression results, parenthood = “parent”**

	Happiness	Fin. situation	Personal freedom
Constant	3.5616 0.1308	7.4321 0.2106	7.5790 0.1916
Age	-0.0305 0.0039	-0.0668 0.0064	-0.0160 0.0054
Age-squared	0.0003 0.0000	0.0008 0.0001	0.0002 0.0001
Male	-0.1188 0.0125	-0.1440 0.0156	0.0689 0.0155
With partner	0.2466 0.0245	0.4641 0.0394	0.1345 0.0264
Schooling, zero or incomplete	-0.0889 0.0237	-1.2187 0.0294	-0.7783 0.0293
Schooling, complete elementary	-0.0648 0.0196	-0.8108 0.0244	-0.4671 0.0242
Schooling, complete high school	-0.0240 0.0176	-0.4387 0.0219	-0.2314 0.0218
Occupation, full-time work	0.2347 0.0214	0.8233 0.0266	0.3076 0.0265
Occupation, part-time work	0.1598 0.0280	0.5914 0.0349	0.1690 0.0347
Occupation, self-employed	0.1704 0.0247	0.8012 0.0308	0.3121 0.0307
Occupation, not in labor force	0.2363 0.0219	0.6892 0.0274	0.1364 0.0272
Parent	0.0307 0.0220	-0.3040 0.0335	-0.0780 0.0381
Financial situation	0.4404 0.0025		
Personal freedom	0.1917 0.0025		

**Notes:** Figures below the estimated parameters are the standard errors. Regressions include controls country geographical location fixed effects. The column headings indicate the dependent variable. Life satisfaction is the proxy measure for happiness. Financial satisfaction is the proxy measure for financial situation. Choice and Control is the proxy measure for personal freedom. The variance components of the regressions are not reported but available from the author.

**Table C: Regression results, parenthood = “children”**

	Happiness	Fin. situation	Personal freedom
Constant	3.6083 0.1321	7.4055 0.2173	7.5512 0.1986
Age	-0.0315 0.0039	-0.0662 0.0064	-0.0152 0.0055
Age-squared	0.0003 0.0000	0.0008 0.0001	0.0002 0.0001
Male	-0.1188 0.0125	-0.1441 0.0156	0.0691 0.0155
With partner	0.2431 0.0249	0.4698 0.0390	0.1356 0.0257
Schooling, zero or incomplete	-0.1073 0.0241	-1.1898 0.0300	-0.7531 0.0298
Schooling, complete elementary	-0.0725 0.0197	-0.7995 0.0245	-0.4588 0.0244
Schooling, complete high school	-0.0261 0.0176	-0.4367 0.0220	-0.2283 0.0219
Occupation, full-time work	0.2353 0.0214	0.8187 0.0266	0.3045 0.0265
Occupation, part-time work	0.1593 0.0280	0.5886 0.0349	0.1661 0.0347
Occupation, self-employed	0.1702 0.0247	0.7983 0.0308	0.3103 0.0307
Occupation, not in labor force	0.2318 0.0219	0.6882 0.0274	0.1354 0.0272
Children = 1	0.0069 0.0244	-0.3052 0.0370	-0.0737 0.0374
Children = 2	0.0256 0.0240	-0.2979 0.0365	-0.0731 0.0369
Children = 3	0.0550 0.0267	-0.3035 0.0395	-0.0920 0.0399
Children = 4	0.0858 0.0312	-0.3555 0.0451	-0.1063 0.0454
Children $\geq$ 5	0.1121 0.0315	-0.4659 0.0462	-0.1188 0.0464
Financial situation	0.4404 0.0025		
Personal freedom	0.1917 0.0025		

**Notes:** Figures below the estimated parameter are the standard errors. Regressions include controls country geographical location fixed effects. The column headings indicate the dependent variable. Life satisfaction is the proxy measure for happiness. Financial satisfaction is the proxy measure for financial situation. Choice and Control is the proxy measure for personal freedom. The variance components of the regressions are not reported but available from the author.