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Material Resources and Children's Subjective Well-Being in Eight Countries

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Abstract The objective of this research is to examine the relationship between children's perception of their available material resources and their subjective well-being. Participants (n=13,953) resided in eight countries and were largely female (57 %), between the ages of 10–14 (M=12.05; SD=0.59). Each child completed a culturally appropriate country-survey that included demographic information and validated measures from the International Survey of Children's Well-Being project (ISCIWeB), which included the Student's Life Satisfaction Scale (SLSS) and material resources items. We tested a relational model for predicting subjective well-being and applied structural equation modelling (SEM) to the data. Results indicated that children in Uganda had limited access to material resources and the lowest average of well-being. Together with Algeria and South Africa, Uganda also had the strongest associations between the access to material resources and the SLSS. Even with access to all material

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resources evaluated, well-being scores are also lower in the case of South Korea, probably due to the so-called "Asian bias". Children from Israel, Brazil, Spain, and England were similar in their levels of satisfaction and well-being. Our model fit the data well and revealed significant relationships between material resources and child subjective well-being in each country. Preliminary results underscore the importance of assessing material well-being in children and highlight the role material resources have in influencing children's subjective well-being, especially in cases of children experiencing severe resource deprivation. Our model warrants further testing to replicate and extend our findings. Recommendations for future research are provided.

Keywords Subjective well-being · Material resources · Cross-cultural study · Children

Research examining children's subjective well-being from a multi-country perspective has been greatly understudied. This paucity of literature is remarkable considering there is evidence that early subjective well-being is associated with later adjustment and can be predicted from home factors (Kamerman et al. 2009). However, research with adult populations has shown weak relationships between socioeconomic status and subjective well-being (Diener and Biswas-Diener 2002).

Recent research with children found relationships between material resources and subjective well-being. Research conducted in England found that children who are materially deprived have lower subjective well-being, irrespective of their household income status (Main 2013; Main and Bradshaw 2012). The researchers further found that a decline in subjective well-being corresponded with an increase in the level of material deprivation. Research involving Spanish children found related results. Casas and Bello (2012) found that children with access to a computer, to the Internet, to a cell phone, and that had school clothes in good condition had subjective well-being significantly higher than children who lacked access to the above material resources.

Research examining relationships between economic factors and subjective well-being is still inconclusive. Knies (2012) and Main (2013) did not find a relationship between subjective well-being and household's income. Rees et al. (2010) found household economic factors, including income, are significantly related to children subjective well-being, even after controlling for socio-demographic factors.

The above quantitative findings are similar to the results found in qualitative studies. For example, Ridge (2002) found that children who lived in disadvantaged circumstances were able to explain how their life situation negatively impacted them, especially related to friendships and the ability to participate in their community. Children reported they were aware and worried about their family's economic situation. Harju and Thorød (2011) found that children living in a low-income household for an extended period of time were stressed, resulting in poorer mental health. Skattebol (2011) remarked that when young people do not have the economical resources to participate fully in their society, they are pressured to constraint their aspirations and choices.

International comparisons regarding this relationship with child samples are scarce. A comparison of 29 European countries (Bradshaw et al. 2011) revealed a negative association between the level of deprivation and the level of life satisfaction of young people. This finding is consistent with results from adult research (Bellani and

D'Ambrosio 2011). Referring to a more general overall well-being measure, a positive association was found between child well-being and the country's gross domestic product per capita (GDP) (Bradshaw and Richardson 2009).

This study is part of the "Children's Worlds" survey, an international investigation of child subjective well-being, which aims to collect robust and representative data on children's lives and daily activities, specifically their own perception of their well-being (http://www.isciweb.org/). With the above contexts in mind, the objective of this study is to analyse the relationship between children's perception of the material resources available to them and their subjective well-being, in a cross-national perspective, with a large cohort of children from eight countries: Algeria, Brazil, England, Israel, South Africa, South Korea, Spain and Uganda.

1 Method

1.1 Participants

The study includes children from the Children's World survey first wave data collection, which occurred between 2011 and 2012. The current study make use of data from eight countries, in these countries a total of 13,953 participants took part in the study and recruitment occurred at the respective schools in each of the countries: Algeria (n=428), Brazil (n=1,020), England (n=1,141), Israel (n=998), South Africa (n=1,002), South Korea (n=2,602), Spain (n=5,727), and Uganda (n=1,035). The sample includes slightly more females (57 %) than males and the mean age is 12 years old (range 10–14 years old; M=12.05; SD=0.59).

1.2 Instruments

Student Life Satisfaction Scale (SLSS, Huebner 1991). The SLSS is a validated (Huebner and Alderman 1993) brief seven item self-report measure to assess satisfaction with life as a whole for children ranging in age from 8 to 18 years. Respondents answer each question based on the thoughts they had in the past few weeks. Originally there were seven items: 1. *My life is going well*, 2. *My life is just right*, 3. *I would like to change many things in my life*, 4. *I wish I had a different kind of life*, 5. *I have a good life*, 6. *I have what I want in life* and 7. *My life is better than most kids*.

For this study, we removed items 3 and 7 due to the fact not every child in the eight countries answered them. Our intention was to perform the analyses with the five shared items that were answered by all countries. However, data preparation and screening suggested item four may not have been well understood by children due to its reversed scoring (Borgers et al. 2000). After consultation and consensus among our research team and participating countries, we used an adapted version of the SLSS, composed of items 1, 2, 5, and 6, answered on a 5-point Likert scale (from *strongly disagree* to *very much agree*). The overall Cronbach's alpha for the pooled sample was of .82.

Material Resources Items (http://www.isciweb.org/): To measure children's perceptions of material resources, participants answered four questions that measured

their perceived access to: a computer, a mobile phone, the Internet, and clothes in good condition from the "money and things that you have" questionnaire module. Resource items (e.g., "*whether you have clothes in good condition to go to school in*") were scored using a dichotomous response format (0 = no/1 = yes). In order to use these measures in the analysis, we created a variable called *material resources* by summing our four material resources items. The material resources construct ranged from 0 (*no access to material resources*) to four (*full access to material resources*).

1.3 Procedures

Each participating country's relevant human subject review board examined our methodology and human subject protection. The study was approved and data collection occurred in countries' respective schools. Only children who provided a consent form signed by them and their parents participated in countries where it was required to have active parental consent. In each of the eight countries the sample was composed of the grade where most of the children were aged 12. Our questionnaire was administered in the classrooms of the participating schools and supervised by the researchers or by trained persons (e.g., undergraduate students or school teachers). Children took approximately 30 min to complete the survey. Due to the fact the scope of our study involved eight countries, various sampling methodologies were implemented in different countries, including quota sampling and non-probability sampling. Some samples are representative samples of the whole country (e.g., England, South Korea and Spain), while others are not representative or represent of a specific area within a country. Readers are referred elsewhere for a more thorough review of the data collection procedures (see: Dinisman and Rees 2014).

1.4 Strategy of Analysis

To characterize the dimensions and variables, the data were first submitted to descriptive statistical analysis. Frequency of material resources and means of well-being are reported for each country. Additionally, we employed structural equation modelling (SEM), a statistical methodology based on the confirmation of hypotheses previously established by theoretical frameworks on the data (Byrne 2010). Through SEM we developed a model to test the relationship between perceived access to material resources and child subjective well-being. Children from each country were treated as a distinct group.

A structural equation model must meet general goodness-of-fit criteria to be considered adequate (Tabachnick and Fidell 2007). Several statistical tests and goodness-of-fit indices were used evaluate the adequacy of model fit (Raina et al. 2005). This study used Chi-square, the CFI (Comparative Fit Index), TLI (Tucker and Lewis Index), NFI (Normed Fit Index) and the RMSEA (Root Mean Squared Error of Approximation) to assess model fit. We used IBM SPSS 21 and AMOS (IBM Corp 2012) for maximum likelihood model estimation. Model fit was evaluated according the following criteria: NFI, CFI, and TLI values above .95 and RMSEA values below .08 (see Batista-Foguet and Coenders 2000; Byrne 2010).

2 Results

2.1 Characteristics of Material Resources and Well-Being

Material resources frequencies for each country are provided in Table 1. The item "having clothes in good condition to go to school" has more equity across the participant countries: in all countries almost 90 % or more of the children said they have clothes in a good condition, with the exception of the children from Uganda and Algeria. Practically every child from England and Spain (+99 %) reported having clothes in a good condition to go to school.

Regarding "*access to a computer at home*", the majority of children from England (98 %), Spain (94 %), South Korea (97 %), Brazil (90 %), Israel (88 %), South Africa (62 %), and Algeria (55 %) perceived they have computer access as compared to 3 % of children from Uganda.

Regarding "*access to the Internet*", children from Uganda are essentially without Internet access, whereas approximately half of the children from Algeria and South Africa have access. In Spain, Israel and Brazil, approximately 90 % of children have access to Internet and children from South Korea and England have higher rates of Internet access. Regarding "*mobile phone*", a large majority of children in South Korea, England, Brazil and Spain have a mobile phone, whereas few children have this in Uganda, Algeria, Israel and South Africa.

Table 2 provides individual SLSS item averages and aggregate SLSS scores. Israel has the highest total SLSS score, followed by Spain, Algeria, and South Africa. Uganda, South Korea and England are the countries with the lowest means on the SLSS scale.

As for SLSS item means, Spain had the highest mean on "*my life is going well*", while Uganda and South Korea presented the lowest. For SLSS item 2, "*my life is just right*", Israel had the highest mean and South Korea the lowest. Spain had the highest score on item 3, "*having a good life*" and Uganda the lowest score. For the final item, "*I have what I want in life*", Israel scored the highest and Uganda and England the lowest.

Table 1 Frequencies (%) of material resources by country (*N*= 13,953)

Country	Whether has…			
	Clothes in good condition to go to school	Access to a computer at home	Access to the internet	Mobile phone
	No (%)	No (%)	No (%)	No (%)
Uganda	18.6	96.7	97.2	98.2
Algeria	11.4	44.5	55.9	57.9
South Africa	3.8	38.2	46.3	24.5
Israel	10.3	11.5	11.8	33.9
Brazil	1.4	10.4	12.8	8.9
South Korea	1.4	3.2	2.8	6.5
Spain	0.4	5.6	10.3	15.7
England	0.5	1.7	1.0	6.7

Table 2 Means (SD) of SLSS items and scale

Country	SLSS4 items				Mean SLSS4
	My life is going well	My life is just right	I have a good life	I have what I want in life	
Uganda	2.65(1.25)	2.70(1.18)	2.33(1.33)	1.63(1.28)	2.32(0.92)
Algeria	3.25(1.07)	3.21(1.10)	3.28(1.17)	2.92(1.36)	3.17(0.98)
South Africa	3.24(0.95)	3.12(1.05)	3.21(1.09)	2.79(1.24)	3.12(0.88)
Israel	3.47(0.84)	3.42(0.88)	3.47(0.95)	3.38(0.89)	3.44(0.72)
Brazil	3.20(0.86)	2.72(1.09)	3.38(0.87)	2.84(1.03)	3.04(0.78)
South Korea	2.66(0.86)	2.50(0.94)	2.81(0.87)	2.59(0.93)	2.65(0.76)
Spain	3.57(0.71)	3.12(1.00)	3.60(0.72)	3.16(0.96)	3.36(0.69)
England	3.18(0.82)	3.00(9.3)	3.02(0.96)	1.83(1.33)	2.76(0.52)

SLSS items range from 0 to 4. Higher scores indicate higher life satisfaction

2.2 Structural Equation Modelling of the Relationship Between Perception of Material Resources and Child Well-Being Regarding Children from Different Cultures

Figure 1 shows the path diagram of our model. The model was developed to verify the relationship between perceptions of material resources available and the subjective well-being of children from different countries, considering that previous studies have indicated a relationship between these constructs (see for example, Casas and Bello 2012; Main 2013). Using the four material resources items as one summated item and the latent factor of SLSS4, the model presents adequate fit indices with $\chi 2$=518.85 (*df*=40, p<.001), *CFI*=.979, *NFI*=.977, *RMSEA*=.029 (95 % *C.I.*=.027–.032).

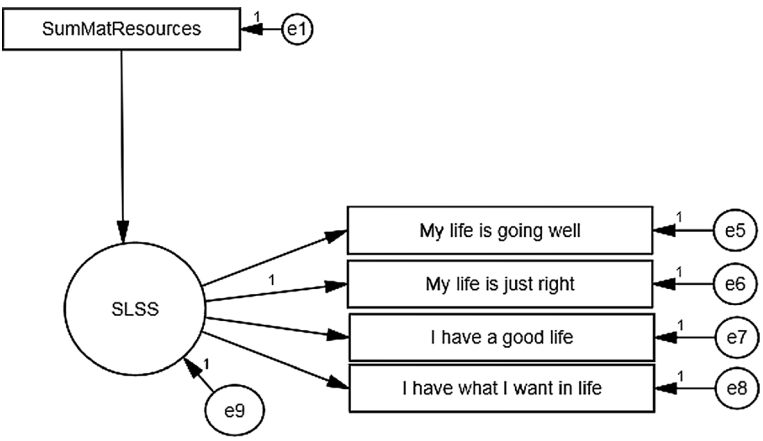

Fig. 1 Structural model of the relationship between perception of material resources available and child subjective well-being

2.3 Main Model Results

- All parameters in the model were statistically significant ($p<.05$) (Table 3).
- The material resources items have a significant and positive relationship with the SLSS for all countries, allbeit a small association for South Korea. Data shows that despite having acess to material resources, a child's subjective well-being may have not been affected by the access to the material resources measured in this study for children from South Korea.
- Countries with the largest relationship between access to material resources and the SLSS, Algeria, Uganda and South Africa, had less access to material resources.
- The SLSS items with higher factor loadings were different among countries. The item "*I have what I want in life*" had the lower factor loadings for all countries, even being negative for England. Children from England also have the lowest means for that item.

3 Discussion

The goal of our study was to test a relational model aimed at predicting international subjective child well-being from perceived access to material resources. To this end, our theoretical interest in developing and testing a model for the scientific community to replicate and extend provided critical findings. Considering the results presented, we can see that Uganda has the lowest perceived access to material resources and the lowest subjective well-being scores. On the other hand, children from South Korea had greater access to material resources but their subjective well-being scores are the second lowest, only behind Uganda's. One possible explanation for this finding could be related to the so-called "Asian bias" phenomenon, already observed by other authors (Lau 2013; Mathews 2012; Tov and Diener 2007). It is also possible to see that South Korea has the weakest relationship between access to material resources and the SLSS (.052).

Regarding the "Asian bias", several studies have shown lower mean well-being scores in Asian populations (Lau 2013). Lau addresses some relevant findings of subjective well-being of Chinese and East Asians using the Personal Wellbeing Index

Table 3 Standardized parameter estimates for the final model

	Uganda	Algeria	South Africa	Israel	Brazil	South Korea	Spain	England
SLSS <— Mat. Resources	.165**	.357**	.196**	.122**	.159**	.052*	.112**	.102**
My life is going well <— SLSS	.781**	.812**	.777**	.866**	.857**	.874**	.824**	.866**
My life is just right <— SLSS	.835**	.753**	.807**	.753**	.765**	.871**	.755**	.906**
I have a good life <— SLSS	.563**	.875**	.797**	.695**	.780**	.721**	.814**	.620**
I have what I want <— SLSS	.288**	.676**	.648**	.685**	.624**	.666**	.627**	−.482**

**$p<.01$, *$p<.05$

(PWI), and reports that standard normative means are established at 60–70, approximately ten points lower than the 70–80 point range identified for Western populations. Tov and Diener (2007) postulate this difference in well-being can be explained by emotional norms. For example, Eastern Asian societies tend to gravitate toward a more balanced emotional state (i.e., between extreme pleasant and extreme unpleasant affect), whereas many Western cultures prefer a pleasant affect over an unpleasant affect.

Item-response styles could also explain cultural differences in well-being. For instance, humility is a key value in Asian cultures. It is possible Asian respondents selected responses generally located at the midpoint of the scale, rather than extremes (Lau 2013; Tov and Diener 2007). In this sense, Mathews (2012) states that differences in well-being of North Americans and East Asians are not indicative that the first ones are happier, but rather that they are more willing to affirm their happiness on a survey form.

Living in poverty and experiencing basic material resource deprivation affects development and affect the subjective well-being of children (Bedin and Sarriera 2014; Bradshaw 2002; Duncan et al. 1998; Joen, Ha, and Choi 2013). However, once a moderate level of material provision is achieved, happiness levels are established, settling approximately at the levels pointed by Cummins (2003) as *set-point*. Diener and Biswas-Diener (2002) reviewed the wealth and subjective well-being literature and concluded wealth is minimally related to happiness. For example, an increase in wealth does not usually result in increased happiness, and people who want to have wealth and money are unhappier than those who do not wish for it. Diener and Biswas-Diener found poverty prevention and goal directed behaviour, instead of material wealth, are associated with increased happiness. It seems that there are myriad risks for poverty but few benefits for wealth in terms of well-being (Ryan and Deci 2001). People who overvalue material goods and wealth have lower scores of well-being.

The above literature seems to explain the mixed results we found related to material deprivation and subjective well-being in each country. When a "tolerable" or "adequate" level of perceived material resources is achieved, the data suggests material resources do not significantly affect the children's subjective well-being. Our results are consistent with the *Easterlin Paradox* (Easterlin 1974), which states that an increase in national GDP only improves happiness in poorer countries, not in wealthy countries. He also found that a positive relationship between income and happiness within countries was very weak when the comparison was between societies in time or space.

In order to explain this paradox, it seems that other variables should be considered, such as the effect of culture and religion, as these socio-cultural factors could have major influences on a child's orientation related to materialism and on their aspiration toward wealth. Thus, for example, Israeli children who identified themselves as being "very religious", even being deprived in quite high proportions of the four material resources items, have answered 10 in the question asking how satisfied they were with all the things they have. In another example the low rates of subjective well-being at England opposed to Spain, may be explained in the materialistic tendency of the English society (UNICEF 2011).

An alternative explanation for the paradox relates to the manner in which material deprivation is measured. In this study we used a short absolute measure. Using longer, relative measures based on what children in the specific society believe is important,

may have yielded different results (i.e. the work of Main 2013). Then again, a longer measure could fatigue the child and result in missing data. A thoughtful approach to scale inclusion is vital.

Our study has several strengths. This is the first known study to propose and test a model that explains the relationship between children's perceptions of their available material resources and their subjective well-being. This line of investigation is important because of differences in child and adult perceptions of child well-being (Ben-Arieh 2010, 2012a, b; Langton and Berger 2011; Stuart and Jose 2012). The results provide a model and insight to researchers, clinicians, and policy-makers regarding possible well-being trends in the participating countries. In addition, we developed a well fitting model that examines the relationship between access to material resources and child subjective well-being using a sample from eight different countries.

The positive relationship that was found between material resources and the SLSS for all countries, and especially the stronger relationship between these two constructs together with a very low average subjective well-being that was found in Algeria, Uganda and South Africa, make explicit the importance that material resources have for children's subjective well-being, especially in cases of more extreme deprivation. While the effect of poverty on health has been extensively researched (Lupien et al. 2001; Nersesian et al. 1985; Wood 2003), its relationship to children's subjective well-being is hardly dealt with, and this is one of this study's main contributions. These findings and possible explanations should be checked in further studies that will focus on these topics, and will perhaps try to develop the model presented here. A second strength was the use of a large, multi-country sample to provide the scientific community with preliminary data from which future research can be built upon. For example, future studies could investigate cultural differences in factor loadings of the SLSS, such as the case of the item "*I have what I want in life*" that were negative for England in this study.

The present study has several limitations. First, the study largely used non-probability sampling methodology, which could limit the generalizability of findings. A second limitation is our sample was restricted to children aged 10–14 years old. Our results may not be generalized to children in other age groups. Finally, The use of relatively limited data that were available in all countries also restricted other options of data analysis, and this is a limitation that studies with cross-countries have to deal with.

Although we acknowledge the limitations of our study and that our findings need to be interpreted thoughtfully, we believe the results have important scientific and global implications related to perceived material resources and children's subjective well-being. Our findings have implications related to the emerging scientific understanding of the basic nature and development of children's overall satisfaction with life. Our results provide policy-makers, educators, and clinicians with important information that can translate in to a richer, more comprehensive understanding of children's subjective well-being.

The current study supports our predictive model which demonstrates that children's assessments of their material resources are associated with subjective well-being. These findings call for improvements to the conditions of children's material resources especially in developing countries, as this might have a strong effect on their well-being. However, not only children in developing countries suffer from deprivation of material resources, each country has its percentage (even if luckily very low) of

children living in more deprived life circumstances and this study calls for special attention to be paid to them.

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