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# CHILD SOCIAL EXCLUSION

Gemma Crous and Jonathan Bradshaw

## Abstract

Social exclusion has been defined as a lack of resources, an inability to participate and a low quality of life. There have been a number of attempts to study the social exclusion of adults and at a country level. This paper attempts to operationalise the concept for children and comparatively using data derived from the Children's Worlds Survey of 12 year old children in 16 countries. It does this by adapting the Bristol Social Exclusion Matrix. Variables are selected to present sub-domains and combined using standardised scores. The results for the 16 countries are compared for each sub-domain. Analysis of the overlaps between the sub-domains is undertaken using the pooled sample and for four selected countries. The material and economic resources sub-domain explains more of the variation in the other elements of social exclusion but by no means all. Being excluded from social resources seems to be less associated with other types of exclusion in all countries. Experiences of social exclusion in childhood are linked more strongly in some countries than others and in some sub-domains than in others and these variations need further investigation. There may be limits to the extent that social exclusion can be compared across such a diverse set of countries but a multi-dimensional approach provides a more complete picture than an exclusive focus on material deprivation.

**Key words:** social exclusion; resources; participation; quality of life; childhood studies

## 1. Introduction

### 1.1. Literature review and contextualisation

Comparative studies of the well-being of children in rich countries began by focussing on the well-being of children mainly using adult reported data on household income poverty and material deprivation (Cornia & Danziger, 1997; UNICEF, 2000). Then, because it was felt that this provided too narrow a perspective on children's lives, scholars began to introduce a multi-dimensional perspective using indicators derived from administrative sources and the PISA and HBSC surveys of children, to represent a variety of additional domains of well-being – health, education, relationships, behaviour, housing and subjective well-being (Bradshaw et al., 2007; UNICEF, 2007, 2013.)

Social exclusion emerged in the 1990s into the discourse on poverty and living standards from France (*sociale exclusion*) (Bradshaw, 2004). Early advocates (Room, 1995) argued that it expanded income or expenditure based measures of poverty, to include multi-dimensional disadvantage and provided a more structural and dynamic perspective. Initially it was greeted with suspicion, especially by Levitas (1998), who drew attention to the political and ideological baggage that it had picked up. It was developed as a concept by social scientists, probably mainly because of their dissatisfaction with purely income measures of poverty. Social exclusion (and inclusion) became a theme of the European Union with 'Poverty and Social Exclusion targets' being set for 2020.

Various attempts were made to operationalise social exclusion in empirical research (Gordon et al., 2000; Burchardt, Le Grand, & Piachaud, 2002; Pantazis, Gordon, & Levitas, 2006) and

eventually Levitas and colleagues (2007) developed the Bristol Social Exclusion Matrix (B-Sem). They proposed a ‘working definition’ of social exclusion:

“Social exclusion is a complex and multi-dimensional process. It involves the lack or denial of resources, rights, goods and services, and the inability to participate in the normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole.” (p.25)

Their framework (subsequently modified slightly) contained 11 sub-domains, grouped into three domains:

- Resources,
- Participation and
- Quality of life.

This framework was used empirically in a series of studies for the UK Cabinet Office exploring multi-dimensional social exclusion across the life course including families with children (Oroyemi, Damioli, Barnes, & Crosier, 2009) and young people (Cusworth, Bradshaw, Coles, Keung, & Chzhen, 2009). Main and Bradshaw (2015) also analysed the social exclusion of families with children in the UK Poverty and Social Exclusion survey 2015. However, all these studies were based on household surveys and adult respondents.

The first and only person to have attempted to operationalise social exclusion using a survey of children is Gross-Manos (2015) following Middleton and Adelman (2003) and using the Israel data on 12 year olds from the first pilot phase of the Children’s Worlds survey. Starting with twenty two items related to social exclusion, then using factor analysis, she reduced these to three domains relating to school, area and services, and participation in social activities. She explored the association between these domains and a deprivation index based on child reported lack of items and then related this to subjective well-being (Gross-Manos & Ben-Arieh, 2016). Gross-Manos’ measure is reliable only when omitting the participation in social activities dimension.

This paper builds on that work using the second wave of Children’s Worlds data on 12 year olds funded by the Jacobs Foundation. In this article child social exclusion is compared in 16 countries and using a different methodology and conceptual framework. The Children’s Worlds survey is described elsewhere in this special issue. We have focussed on the 12 year olds and not on the 8 and 10 year old samples because there are important questions that were only asked of 12 year olds and we wanted to avoid possible problems with response sets (especially in Turkey at younger ages). The work could be adapted and replicated for the younger groups.

The conceptual framework is the B-Sem index which sees social exclusion operating in the three domains: resources, participation and quality of life, with each represented by a number of sub-domains, represented by a number of indicators (see appendix A). We have adapted the original B-Sem sub-domains to take account of the lives of children, and also taking into account that not all the elements of the B-Sem index could be represented by the indicators available in Children’s Worlds. So, for example, in the material and economic resources sub-domain, instead of using income or bills or borrowing money as indicators, a material deprivation index asked of children was used, as well as satisfaction with all the things that they had, and the number of adults in the house with a paid job. In the participation domain, the sub-domains (economic, social, cultural, education and skills, and political and civic

participations) have been dropped out and instead a global domain called participation has been used, because of the lack of questions about different kind of participation in the Children's Worlds survey. Crime has been dropped as an indicator from the original quality of life domain.

### *1.2. The aims of the study*

Taking into account the literature review and the context presented above, this article has the following objectives:

- 1) To operationalise child social exclusion in empirical research adapting the Bristol Social Exclusion Matrix (Levitas et al., 2007);
- 2) To examine how the instrument works across 16 countries;
- 3) To explore the associations between the sub-domains;
- 4) And to evaluate (overall and by country) the risk of being a materially deprived and also excluded in different sub-domains.

## **2. Methods**

The process started by selecting indicators which prima facie were relevant to each sub-domain. So, to take an example, for the material and economic resources sub-domain there are a set of deprivation items: clothes in good condition to go to school in, access to a computer at home, access to the Internet, mobile phone, books to read for fun, family car for transportation and own stuff to listen to music. These seven deprivation indicators were assessed for scalability using Cronbach's alpha. This was found to be satisfactory -  $\alpha = .797$ . They were then combined into a single index by weighting each item by the proportion of respondents in the pooled sample who had the item – this is known as prevalence weighting (Bradshaw, Holmes, & Hallerod, 1997). So for example each respondent lacking a computer was given a score of 77.3 – the proportion having a computer in the pooled sample. Then the weighted scores for each item were standardised as z scores and the z scores summed and averaged for each individual. (An alternative if we had been doing intra country level analysis would have been to take the national ownership rates as the weights for different countries, but here we are attempting comparative analysis and this needs a common threshold for all countries.)

For the two other indicators in the material and economic sub-domain we first established a threshold to produce a binary variable. So for the indicator of the number of workers in the household it was no workers versus 1 or more workers. The proportion in the pooled sample with one or more workers became the weight. Satisfaction with the things you have was scoring 5 or less on the 11 point Likert scale. These weighted scores were also standardised using z scores and then the z scores for the three indicators (deprivation, workers and satisfaction) were averaged to produce an individual score for each child.

Within each sub domain the scalability of the indicators was assessed using Cronbach's alpha and the correlation matrix was assessed to ensure indicators were operating in the same direction but that the associations were not too high to indicate redundancy.

### *2.1. Resources domain*

The resources domain includes

- material and economic resources;
- access to services and
- social resources.

Figure 1 presents the country results for the **material and economic resources** sub-domain with countries ranked by their overall sub-domains' scores. Not surprisingly Ethiopia has the highest (worst) scores in the material and economic resources sub-domain. More surprisingly (given their GDPs) Estonia ranks after Norway and above England and Germany with the lowest scores. This is because children in Estonia are less likely to be dissatisfied with the things they have – despite having a higher score on deprivation. South Korean children also have low satisfaction given their deprivation levels.

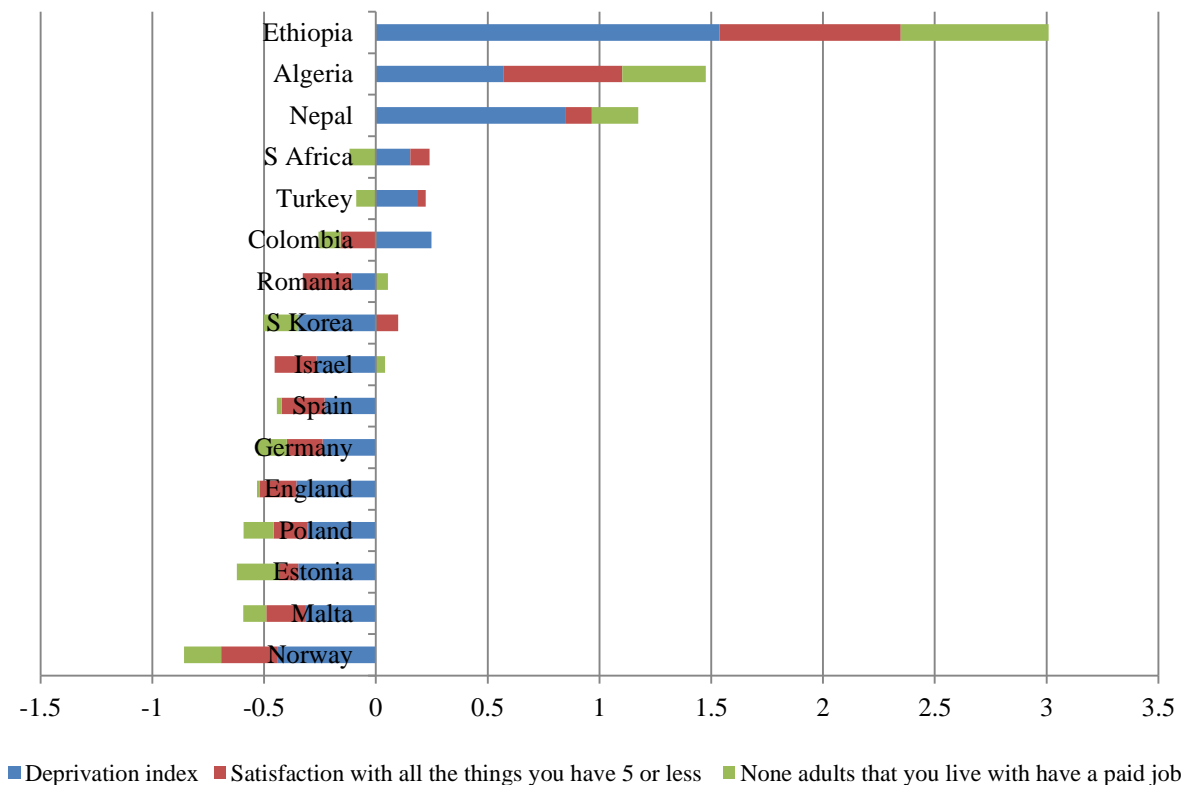


Figure 1. Material and economic resources scores by countries ranked by overall scores

This exercise was repeated for the two other elements in the Resources Domain – five indicators were combined to represent **access to services** and eight indicators combined to represent **social resources**.

Figure 2 gives the results for the **access to services** sub-domain. There is some information lacking for different countries. Where there was missing data, overall scores were produced using the average of the scores for the indicators available. In the access to services sub-domain scores are less different between countries than with the material and economic resources sub-domain. Algerian and S Korean children are the worst performers on this sub-domain, with high dissatisfaction with outdoor areas for kids to play and how they are dealt with by doctors. It can be observed that Norwegian and Spanish children are most happy with the access to services, despite Spain being one of the countries with low satisfaction with school. Children in Colombia and S Africa are the least satisfied with their local police.

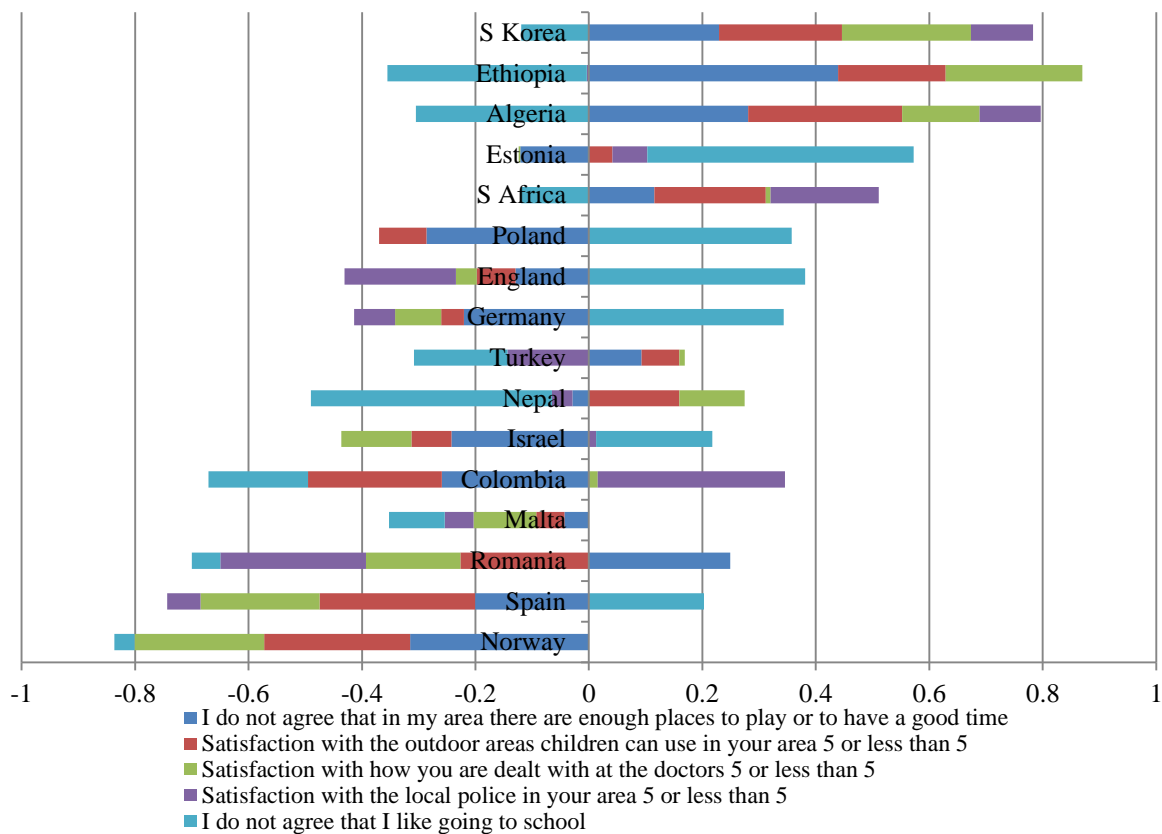


Figure 2. Access to services scores by countries ranked by overall scores

Figure 3 shows Norway at the top of the ranking again in the **social resources** sub-domain, followed by Romania, Spain and Malta, similar to the previous sub-domain. Children from S Africa, Ethiopia and Nepal reported high dissatisfaction with most of the indicators from this sub-domain, showing low levels of social resources. Surprisingly (given it is a richer country), Germany is just above these three countries, reporting dissatisfaction with teachers and people in the area, but better results when they talk about friends. This low satisfaction with teachers is also a feature in England and Poland.

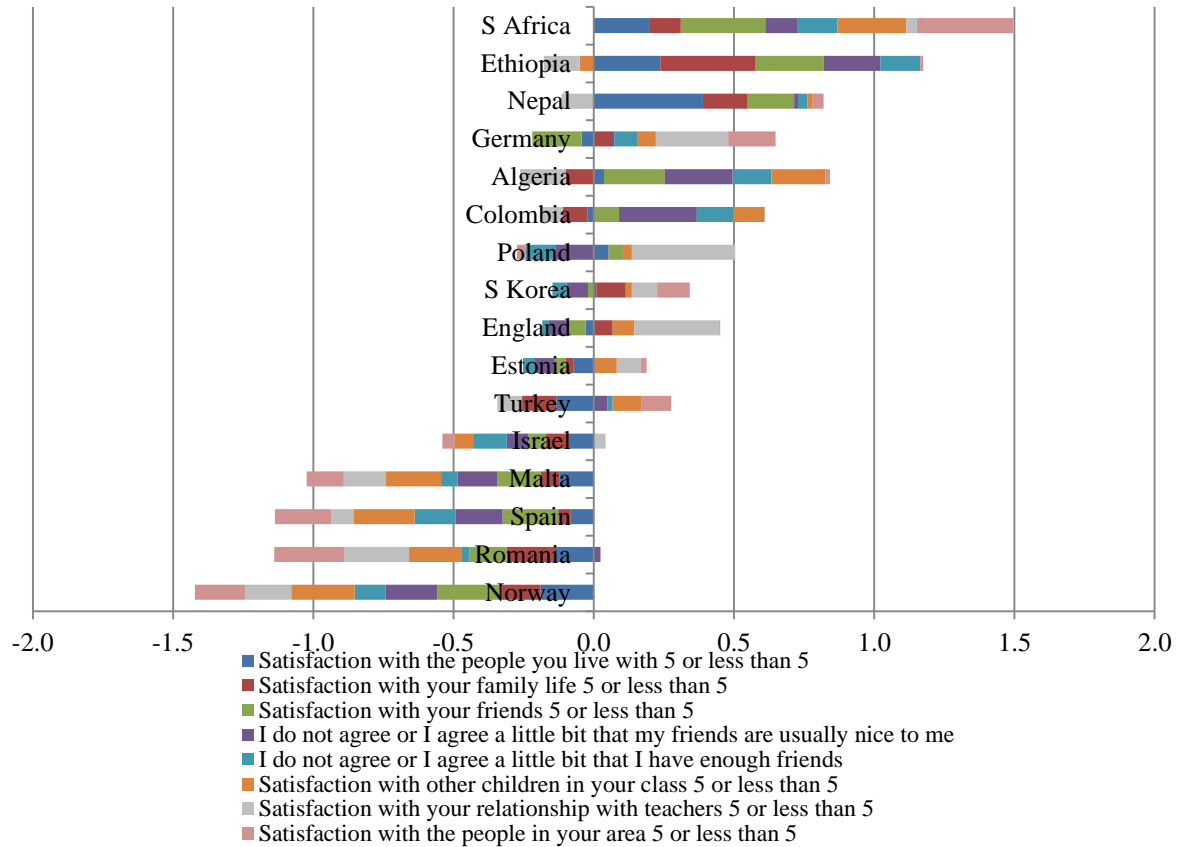


Figure 3. Social resources scores by countries ranked by overall scores

Table 1 gives the mean scores for each sub-domain. Polish and Algerian participants have scores above 0 in all three sub-domains. In regards of material and economic resources, Turkey, Colombia and Malta also have scores higher than 0. Children with less access to services are from Ethiopia, England, S Africa, S Korea and Estonia. Nepal, Colombia, Ethiopia, S Korea, Germany, England and S Africa all have lower social resources.

Table 1. Resources sub-domains' mean scores by country ranked by over resources score

	Material & economic resources	Access to services	Social resources	Overall resources domain score
Pooled sample	-0.01	-0.01	-0.01	-0.01
Norway	-0.22	-0.19	-0.20	-0.20
Romania	-0.31	-0.09	-0.16	-0.18
Spain	0.00	-0.09	-0.15	-0.08
Israel	-0.10	-0.05	-0.07	-0.07
Nepal	-0.22	-0.06	0.08	-0.07
Germany	-0.18	-0.03	0.05	-0.05
England	-0.17	0.02	0.02	-0.04
Estonia	-0.17	0.10	-0.02	-0.03
S Korea	-0.21	0.11	0.02	-0.03
Colombia	0.01	-0.04	0.04	0.00
S Africa	-0.23	0.10	0.18	0.02
Poland	0.03	0.00	0.02	0.02
Ethiopia	-0.16	0.09	0.13	0.02
Malta	0.38	-0.07	-0.14	0.05
Algeria	0.38	0.11	0.05	0.18
Turkey	0.93	-0.02	-0.02	0.29

## 2.2. Participation domain

In the B-Sem index for adult participation there are four sub-domains: economic participation (work), social participation, cultural and educational skills and civic and political participation. In our case the participation domain includes only one sub-domain reflecting the elements of participation relevant to children and the number of indicators relevant to this domain asked in the Children's Worlds survey.

The **participation sub-domain** has been calculated with the average of the six indicators in almost all countries. As we can see in figure 4 and table 2, Malta and Norway are the countries with lowest (best scores) on the participation sub-domain, followed by Colombia and Spain. At the top of the list with higher scores we can see S Korea and Ethiopia, and perhaps surprisingly followed by Germany. In countries such as England, S Africa, Nepal, Colombia, Turkey and Malta, children reported a high frequency of time spent in organised leisure time activities. Dissatisfaction with how children are listened to by adults in general scores are the highest in Nepal, S Korea and S Africa, and the lowest in Romania, Malta, Norway and Spain. Regarding the question about the town council asking children's opinion, Algeria and Ethiopia have the highest scores, in contrast with the lowest scores from Norway and Malta.

*Table 2. Participation sub-domain's mean scores ranked by country*

Overall participation domain score	
Pooled sample	-0.004
Malta	-0.246
Norway	-0.184
Israel	-0.095
Spain	-0.093
Colombia	-0.060
England	-0.058
Romania	-0.038
Turkey	-0.026
S Africa	-0.016
Nepal	0.025
Algeria	0.094
Poland	0.105
Estonia	0.107
Germany	0.107
Ethiopia	0.117
S Korea	0.196



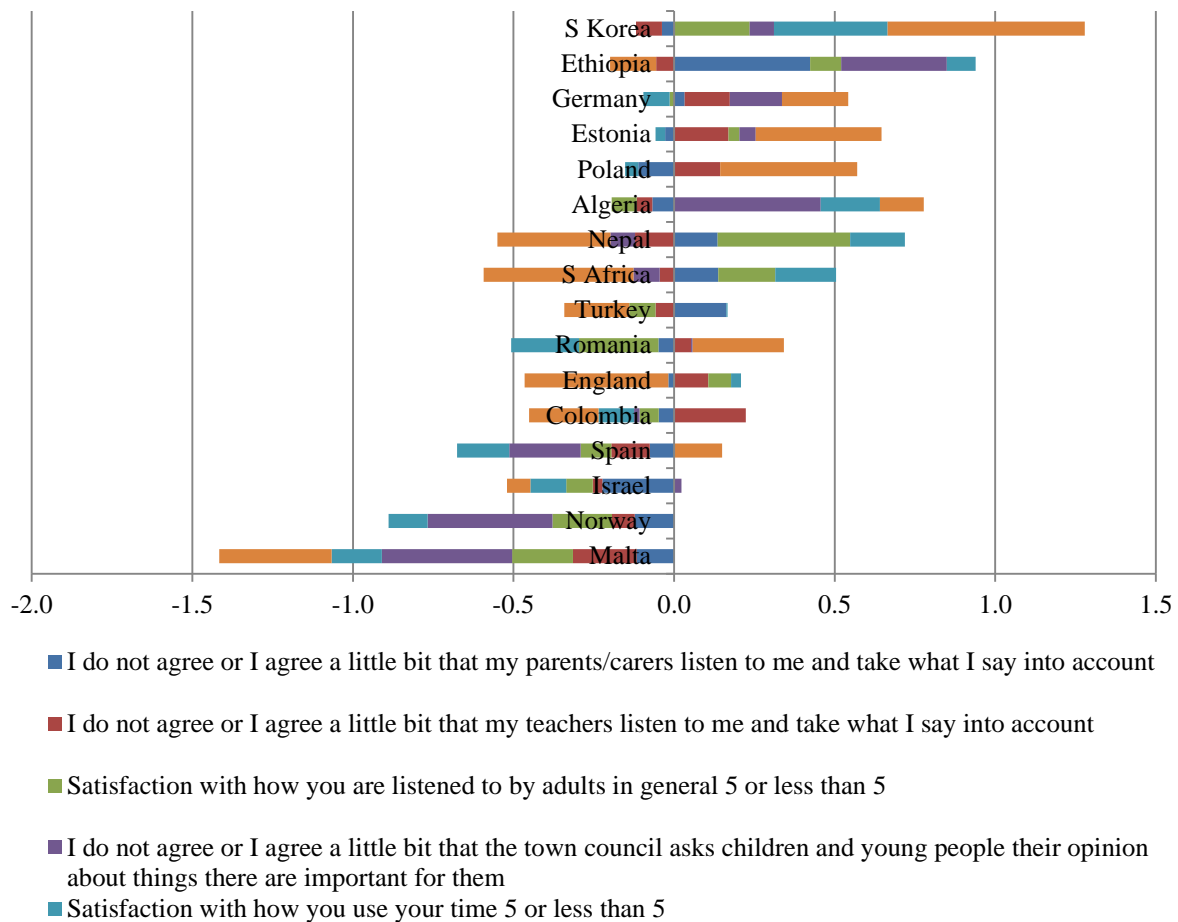


Figure 4. Participation scores by countries ranked by overall scores

### 2.3. Quality of life domain

Three sub-domains are included in the quality of life domain:

- Health and well-being,
- housing and local environment, and
- social harm.

The **health and well-being sub-domain** has been calculated with 8 indicators in most countries (see figure 5). In Figure 5 the highest (worse) sub-domain scores are in S Korea with a big difference from the other countries because of high dissatisfaction and low scores in all indicators. S Korea is followed by England, where children reported dissatisfaction with freedom, self-confidence and their own bodies. On the other hand, the lowest (best) scores are in Romania, Malta and Colombia.

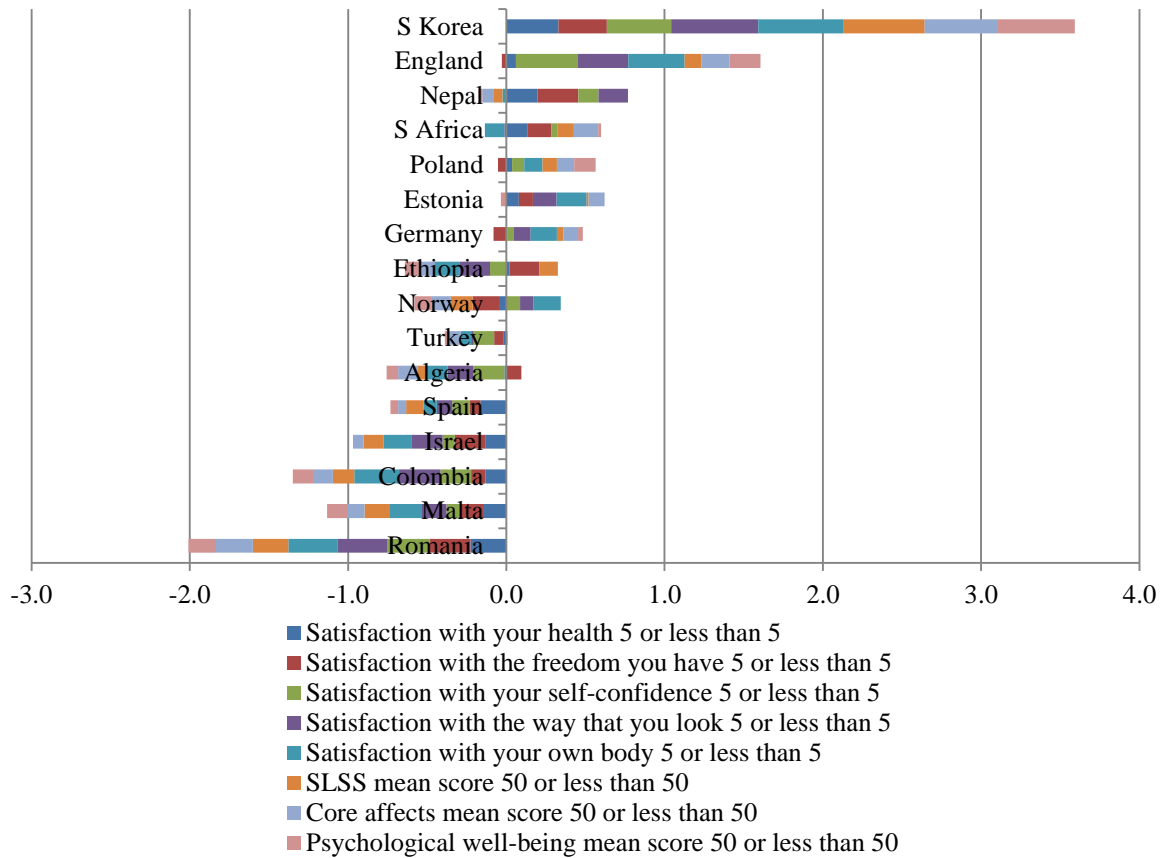


Figure 5. Health and well-being scores by countries ranked by overall scores

The **housing and local environment sub-domain** is based on five indicators (see figure 6). The highest scores are from Ethiopia, Algeria and S Africa, where children reported they don't have their own room, and/or a quiet place to study at home. The lowest mean scores are from Norway, Poland and Spain. Participants reported higher dissatisfaction with the area where they live in general in S Africa, S Korea, Germany, Algeria, Nepal and England; in contrast in Romania, Norway, Malta, Israel, Colombia and Spain they are more satisfied with it.

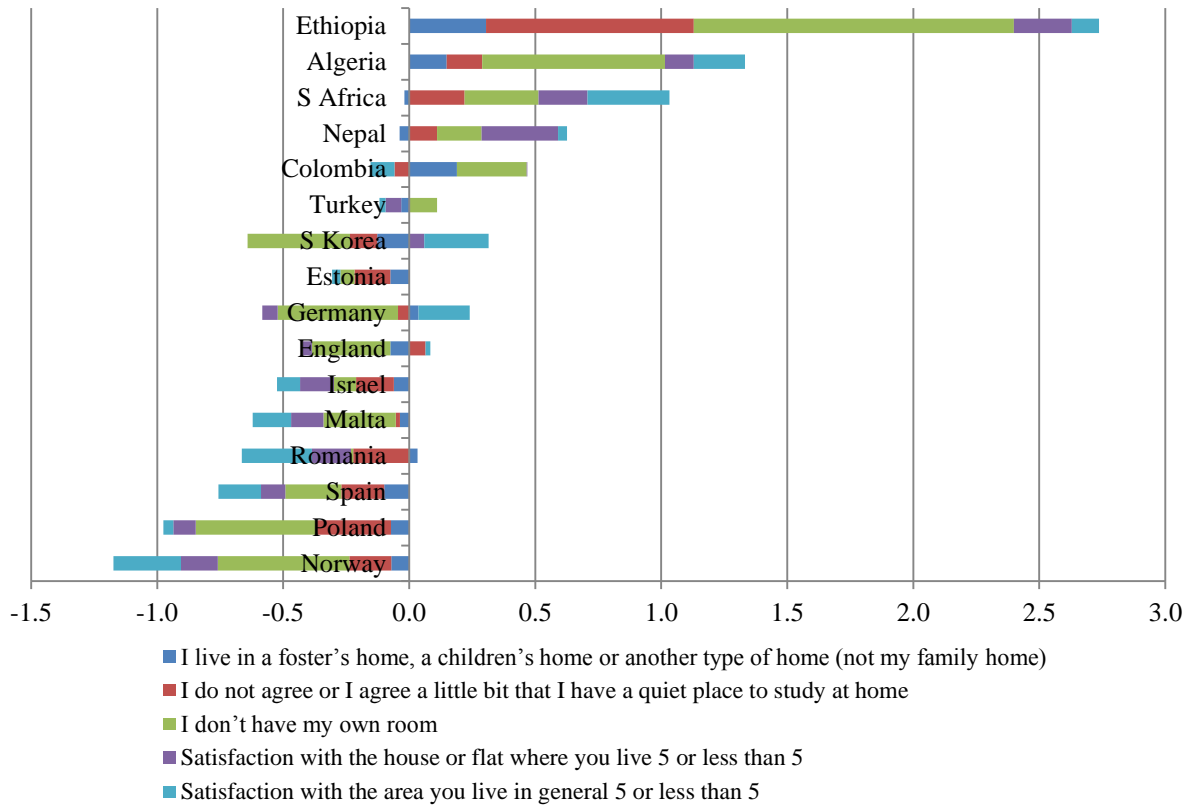


Figure 6. Housing and local environment scores by countries ranked by overall scores

The **social harm sub-domain** includes five indicators including a bullying score (for more information, see Bradshaw, Rees, Crous, & Turner, in this special issue) (see figure 7). The highest (worst) social harm scores are in S Africa and Ethiopia, and the lowest in Norway, Spain and Poland. Children in S Korea and S Africa reported not feeling safe in the area where they live, and in Ethiopia they don't feel safe at school nor at home. Commonly children from Nepal reported being hit or left out during the last month, but they feel safe at school and not at home. Children in S Korea have notably low levels of bullying.

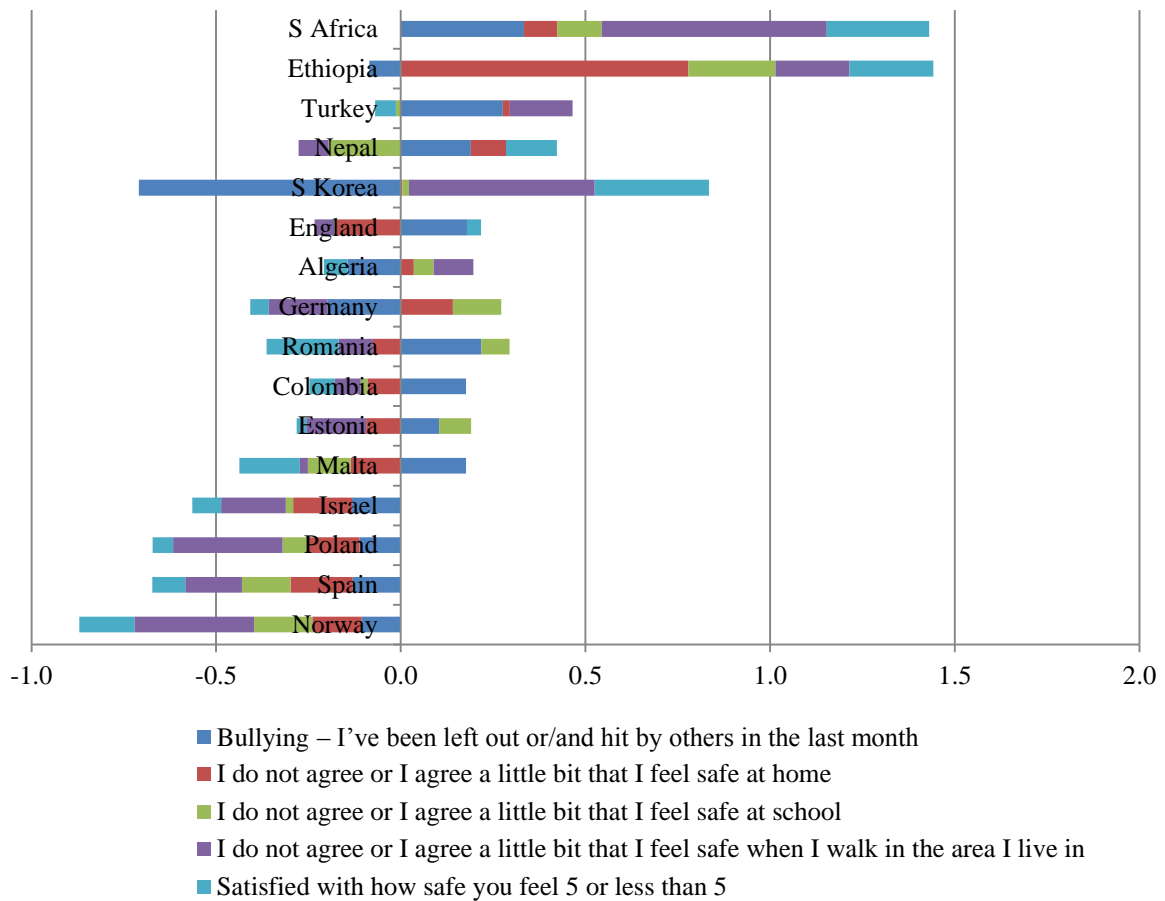


Figure 7. Social harm scores by countries ranked by overall scores

Table 3 provides a summary of the social harm results with Norway and Spain with the best scores and S. Africa and Ethiopia with the worst. England is also worse than average.

Table 3. Quality of life sub-domain’s mean scores by country

	Health & well-being	Housing & local environment	Social harm	Overall quality of life domain score
Pooled sample	-0.069	-0.005	-0.002	-0.025
Norway	-0.097	-0.243	-0.182	-0.174
Spain	-0.156	-0.152	-0.147	-0.151
Romania	-0.272	-0.131	-0.020	-0.141
Malta	-0.207	-0.129	-0.070	-0.136
Israel	-0.167	-0.111	-0.126	-0.135
Poland	-0.022	-0.209	-0.146	-0.125
Colombia	-0.196	0.046	-0.023	-0.058
Germany	-0.029	-0.072	-0.016	-0.039
Estonia	-0.023	-0.068	-0.023	-0.038
Turkey	-0.103	-0.005	0.079	-0.010
England	0.106	-0.072	-0.014	0.007
Algeria	-0.136	0.272	-0.015	0.040
Nepal	0.009	0.097	0.038	0.048

S Korea	0.301	-0.067	0.010	0.081
S Africa	-0.014	0.204	0.285	0.158
Ethiopia	-0.089	0.550	0.275	0.245

### 3. Analysis

#### 3.1. How the instrument works across 16 countries

So far the social exclusion indicators have been summarised into 3 domains and 7 sub-domains, and we have data on each sub-domain for the pooled sample and by country.

Figure 8 gives the domain scores with the countries ranked by the average of those scores. Norway, Romania and Malta have the lowest levels of social exclusion overall and Turkey, Algeria and Ethiopia have the highest. The correlations between the domain scores in the pooled sample were .525 between resources and participation, .699 between resources and quality of life, and .572 between participation and quality of life - all positive. But it can be seen in figure 8 that the country level standardized scores are not strongly associated. Thus for example Poland does comparatively better on quality of life than on participation, and South Korea does much worse on participation and quality of life than it does on resources.

The scalability of the sub-domains was assessed using Cronbach's alpha in the pooled sample and also by country. All had an alpha score over 0.7 except Malta whose score was 0.66. The alpha score for the pooled sample was 0.82.

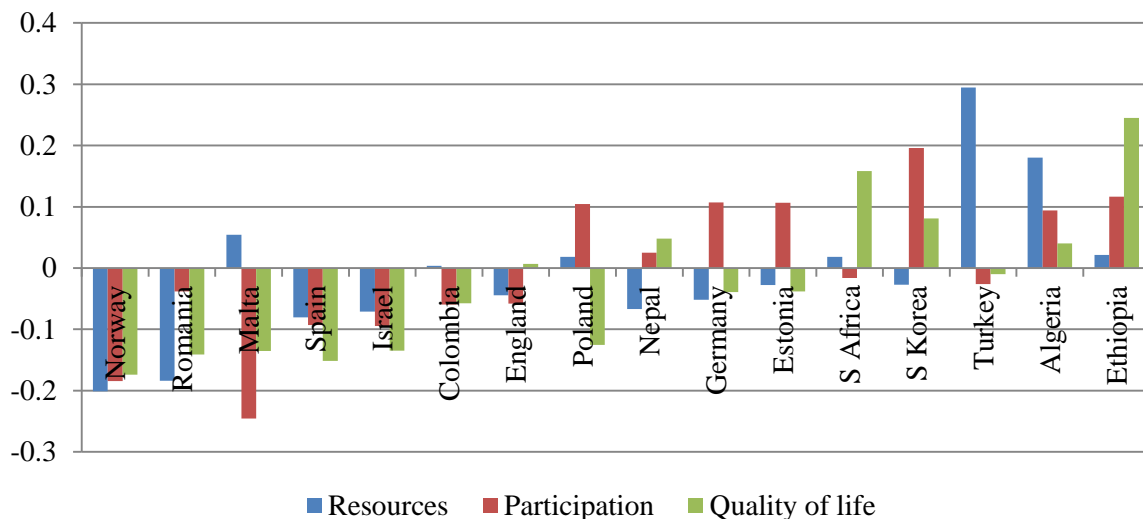


Figure 8. Domain mean scores

#### 3.2. The associations between sub-domains

In order to explore the associations between the sub-domains it was necessary to establish a social exclusion threshold for the pooled sample and separately for the countries. A threshold which included 20% was taken – that is the bottom 20% of the distribution on each of the sub-domain was treated as socially excluded on that domain for each country.

Table 4 presents the degree of overlap between sub-domains for the pooled sample, so it presents the proportion of children excluded on one sub-domain who are also excluded on another. Thus for example of those who are excluded on material and economic resources 33.4% - less than half - are excluded on access to services and 37.1% are excluded on social resources, indicating that social resources is most closely associated with material and economic resources than access to services. The lowest overlap is between material and economic resources and social harm (30.4%). The largest overlap is between participation and social resources (51.3%). Every child who is excluded in the participation sub-domain has more than 50% of chances to be excluded on health and well-being. Moreover, lacking material and economic resources is not strongly associated with any other sub-domain.

*Table 4. Overlaps analysis % excluded on one domain excluded on another pooled sample*

	Material & economic resources	Access to services	Social resources	Participation	Health & well-being	Housing & local environment	Social harm
Material & economic resources	100.0	33.4	37.1	34.0	32.6	35.9	30.4
Access to services	33.0	100.0	46.9	44.9	43.5	41.2	43.6
Social resources	35.7	45.9	100.0	49.1	48.7	42.8	47.1
Participation	34.3	46.0	51.3	100.0	51.2	43.7	48.1
Health & well-being	30.5	41.1	45.2	44.5	100.0	36.6	42.2
Housing & local environment	37.6	43.4	46.9	45.1	42.1	100.0	43.1
Social harm	31.6	45.6	50.3	49.0	47.6	42.8	100.0

The overlaps between domains in the pooled sample are governed by the very different nature of the countries and so country level analysis is probably more interesting. However there is not the space to present these results for all sixteen countries involved. So first we present two summary measures by country using the pooled sample 20% on the tail (see table 5). Ranked by the percentage of children excluded on at least 3 sub-domains, Ethiopia, S Africa and Nepal are the countries with higher percentages, and they are also the ones with higher average number of sub-domains excluded on. Taking into account that there are a total of 7 sub-domains, the pooled sample average is 1.23, and the country with the lowest average is Norway (0.48) and Romania (0.68). Six of the seventeen countries have not even one sub-domain excluded on as an average. The percentage of children excluded on at least three sub-domains is over 10% in eleven countries, and reaches 43.9% in Ethiopia.

*Table 5. Summary measures by country*

	Average number of sub-domains excluded on		% of children excluded on at least three sub-domains
	Mean	SD	
Pooled sample	1.23	1.66	18.1
Norway	.48	.99	4.4
Romania	.68	1.18	7.0
Malta	.62	1.08	7.2
Spain	.62	1.11	7.3
Israel	.71	1.25	9.1
Poland	.82	1.42	11.1
England	1.00	1.64	13.0
Estonia	1.02	1.48	14.7
Turkey	1.08	1.58	16.5
Colombia	1.15	1.57	17.1
Germany	1.28	1.77	20.0
S Korea	1.36	1.93	20.2
Algeria	1.56	1.64	22.3
Nepal	1.75	1.66	25.3
S Africa	1.88	1.91	31.0
Ethiopia	2.62	1.71	43.9

### *3.3. Country level analysis*

A rather different picture emerges if we look deeply at the country level, taking into account the 20% excluded on each sub-domain in each country. The association between the sub-domains of social exclusion at a national level are on the whole somewhat stronger than they are in the pooled sample. So we have selected five countries to represent different regions of Europe, Africa, Asia and South America: England, Spain, S Korea, S Africa and Colombia (the equivalent results for other countries can be obtained from the authors). For each country, in table 6 there are the proportions of children excluded from each sub-domain that is also excluded on other sub-domains.

In contrast with the pooled sample, being excluded on participation is not the highest predictor of risk to be excluded in all the other domains in all countries. It is in Spain, S Korea and Colombia, but not in England and S Africa which is social resources.

In England, being excluded in social resources sub-domain is a strong predictor with more than 60% of risk of exclusion in access to services, health and well-being and social harm. In Spain, being excluded from the participation sub-domain means high risk - stronger than 62.0% - to lacking social resources and health and well-being. In S Africa and Colombia the percentages are slightly lower than in the other countries and in S Korea they are slightly higher. A surprising result is the 75% S Korean children excluded on the participation sub-domain which are also excluded on the health and well-being one.

*Table 6. Overlaps analysis of social exclusion sub-domains (SD) by country*

	Material & economic resources (1)	Access to services (2)	Social resources (3)	Participation (4)	Health & well-being (5)	Housing & local environment (6)	Social harm (7)
<b>England</b>							
SD 1	100.0	38.5	38.7	38.5	37.7	45.5	34.0
SD 2	45.5	100.0	61.2	54.8	58.7	49.8	60.3
SD 3	43.6	60.1	100.0	58.1	67.6	53.7	64.8
SD 4	43.6	57.6	59.2	100.0	64.2	49.8	58.3
SD 5	38.0	48.4	54.2	50.6	100.0	38.0	51.5
SD 6	51.9	49.1	56.5	52.4	46.9	100.0	43.2
SD 7	40.2	57.2	64.8	54.9	59.7	42.8	100.0
<b>Spain</b>							
SD 1	100.0	34.3	39.7	26.7	36.7	34.2	30.0
SD 2	35.8	100.0	44.0	33.2	42.2	42.4	43.3
SD 3	38.5	41.5	100.0	47.5	48.5	37.2	38.8
SD 4	36.5	47.2	66.0	100.0	62.3	39.3	47.4
SD 5	31.3	36.7	39.7	35.4	100.0	34.2	39.8
SD 6	46.7	53.0	52.4	38.6	54.2	100.0	48.3
SD 7	31.6	45.6	41.0	33.6	50.6	37.8	100.0
<b>S Africa</b>							
SD 1	100.0	37.6	37.9	30.2	36.6	36.6	36.5
SD 2	34.7	100.0	42.0	42.7	45.3	41.2	42.9
SD 3	39.0	46.8	100.0	42.0	57.9	46.9	44.4
SD 4	30.5	47.5	42.4	100.0	56.7	41.2	39.6
SD 5	35.1	46.4	51.0	51.3	100.0	42.7	40.0
SD 6	36.0	43.6	46.1	40.3	47.0	100.0	45.3
SD 7	36.1	46.6	43.6	38.9	43.8	45.7	100.0
<b>S Korea</b>							
SD 1	100.0	38.2	47.2	42.7	44.1	38.6	37.7
SD 2	37.3	100.0	52.8	53.7	58.8	41.3	53.0
SD 3	48.2	53.3	100.0	58.1	69.4	46.7	55.3
SD 4	43.8	53.3	57.8	100.0	75.0	49.3	60.3
SD 5	45.0	53.3	59.3	62.8	100.0	43.5	60.2
SD 6	49.5	52.9	58.6	61.3	60.2	100.0	56.0
SD 7	38.3	52.7	53.6	59.1	65.3	44.1	100.0
<b>Colombia</b>							
SD 1	100.0	34.4	34.8	37.6	30.1	41.9	32.0
SD 2	36.1	100.0	37.6	49.0	38.3	38.1	35.5
SD 3	37.2	37.6	100.0	46.9	39.3	44.3	47.2
SD 4	37.1	44.1	43.0	100.0	49.1	40.8	55.3
SD 5	35.2	40.5	42.5	50.0	100.0	42.1	43.8
SD 6	41.9	36.7	42.6	42.6	39.3	100.0	40.0
SD 7	35.6	35.7	48.2	61.3	44.2	43.4	100.0

### *3.4. Material deprivation associated with child social exclusion sub-domains*

As was argued in the introduction, in the early work on child well-being income poverty and deprivation tended to be used to represent the whole concept. So to gain a picture of its contribution to social exclusion in childhood, in table 7 the association between only the material deprivation indicator and the other sub-domains of social exclusion are explored using national thresholds for the most deprived 20% in each country. Norway, S Korea and Germany are excluded because there are no extremely deprived children. It is not possible to select exactly 20% in each country so the first column in table 7 gives the exact proportion used as the base.



As would be expected, in all countries there is a very considerable degree of overlap between the most deprived group and those excluded in material and economic resources. In Estonia for example the 18.6% most deprived are also the 18.6% most materially excluded. But what the results show is that in all countries a third or less of those deprived are also excluded on other domains. So, for example in Malta of the 23.1% most deprived only about a quarter are most excluded on access to services and less than a quarter are the most excluded on health and well-being. .

As far as we can see in table 7, in the pooled sample there is not surprisingly a strong probability (82.4%) to be lacking material and economic resources if deprived. The overall association between deprivation and the other sub-domains is strongest with housing and local environment and social resources and least strong with health and well-being and social harm. But this is not the case in all countries: in Romania, deprivation is associated with a fairly low risk of being excluded on housing and local environment (24.7%), while in Ethiopia there is a strong association between deprivation and health and well-being (39.9%).

*Table 7. Overlaps analysis % excluded on material deprivation excluded on sub-domains pooled sample and by country*

	20% most deprived	Material & economic resources	Access to services	Social resources	Participation	Health & well-being	Housing & local environment	Social harm
Pooled sample	19.8	82.4	32.0	32.8	31.1	33.6	34.5	27.9
Algeria	17.9	63.3	34.8	37.3	31.1	33.3	41.9	27.1
Nepal	18.9	56.3	26.1	28.9	37.2	31.3	33.6	28.8
Estonia	18.6	100.0	33.8	31.8	30.3	30.5	30.0	27.5
Spain	19.7	100.0	34.8	39.1	26.9	37.2	34.5	29.4
Colombia	17.6	100.0	36.5	34.1	37.8	27.9	46.9	32.1
Turkey	19.7	78.0	27.6	31.5	32.8	25.4	36.6	24.1
Ethiopia	19.5	59.8	38.4	37.4	33.5	39.9	39.7	31.0
England	19.2	94.9	37.4	36.1	34.5	32.6	44.1	33.0
Israel	23.3	59.9	29.2	23.2	21.7	16.7	18.4	16.6
Romania	19.7	87.0	32.5	37.1	24.0	13.9	24.7	26.9
Poland	20.7	100.0	28.9	38.1	35.8	35.9	40.0	28.5
S Africa	20.0	70.8	32.7	33.2	31.4	32.4	35.9	37.7
Malta	23.1	100.0	23.5	21.5	25.7	18.8	29.2	21.5

#### 4. Strengths and limitations

This is one of the first attempts to operationalise social exclusion for children and the first to use the B-Sem sub-domains of social exclusion for children and to compare child social exclusion across countries using a survey of children. Obviously it is therefore quite exploratory.

The Children's Worlds project was not designed with an analysis of social exclusion in mind. It was very much focussed on what children think and feel about their lives. The questions that can be asked of children limit the range of information; particularly information about the more objective socio-economic circumstances of children and their families such as

income and employment. Also some elements of the B-Sem index are not directly relevant to the lives of children (such as exclusion from employment and voting behaviour), so we have had to adapt it by dropping irrelevant sub-domains from the analysis. On the other hand the information available to us on some sub-domains is considerably richer than normal in a survey of adult social exclusion, including in this case the health and well-being indicators.

While there is a strong record of comparative studies of living standards using income, deprivation and other indicators of well-being, there have been no studies that have sought to operationalise social exclusion in comparative research. The Children's Worlds survey has the advantage of including countries with a very wide range of living standards and cultures but there are reasons to doubt whether a single conceptual framework can be applied appropriately across such a range, and indeed whether national comparisons using that framework are appropriate. Can we really compare the rural Ethiopian child with the urban Norwegian child? Judging tentatively from this analysis we think we can. Most of the differences observed make sense on the face of it.

## **5. Discussion and conclusions**

### *5.1. The B-Sem as an instrument to operationalise child social exclusion*

The notion of social exclusion has been contested and remains lacking in salience in many parts of the world. It may have had its day, replaced by happiness studies and research on well-being. It is too early to claim on the basis of this work that it leads us to new pastures. But this article has demonstrated that child social exclusion can be operationalised. As Levitas and colleagues (2007) did, the social exclusion indicators have been summarised into 3 domains and 7 sub-domains.

The results of the article show a picture of the contribution of material deprivation to child social exclusion, using national thresholds for the most deprived children in each country. In general, using deprivation rather than the material and economic resources sub-domain reduces slightly the degree of overlap with the other social exclusion sub-domains. These findings indicate that child poverty represented by material deprivation is not a good proxy for other aspects of child social exclusion. That is a contrast with the early work on child well-being poverty, where deprivation tended to be used to represent the whole concept.

### *5.2. About participation*

Participation appear to be the most important domain that it is most closely associated with the other sub-domains in the pooled sample and in almost all other countries, followed by social resources. In contrast, material and economic resources explain nothing like the majority of the variation between countries in social exclusion in the other sub-domains. These results contrast with the Gross-Manos' social exclusions measure (Gross-Manos, 2015) where the measure is reliable only when omitting the participation in social activities dimension. That is because, as discussed by Gross-Manos and Ben-Arieh (2016), social participation is measured by involvement in social activities, whereas in this article participation refers to being listened and taken into account by the adults, satisfaction with how the time is used and also participating in organised leisure activities.

### *5.3. Country comparison and policy insights*

The domains of social exclusion are related to each other but distinct in both the pooled sample and in country level analysis depending on which country. There are in fact big variations in the social exclusion rates in different domains in different countries and these might lead us to potentially policy relevant insights. The results are highlighting the importance of measuring child social exclusion worldwide and by country because of the variation in cultural and political characteristics.

In the pooled sample, and particularly in Spain and S Korea, participation is strongly associated with social resources exclusion. So, if children are listened to and taken into account by adults (parents, carers, teachers, town council, etc.) they are less likely to be excluded on the participation domain. Also it is important for children to be able to decide how they use their time and to participate in organised leisure time activities to promote their social inclusion. Moreover, it is worrying that materially deprived children in England and Ethiopia are at higher risk of being excluded in almost all other sub-domains and especially in the housing and environment sub-domain in the case of England and in the health and well-being sub-domain in the case of Ethiopia.

The results can make us think about what aspects decision makers take into account in order to prevent child social exclusion through their policies. Usually, policy makers tackle poverty and social exclusion with policies made from an adult-centric view: the main objective is to cover children basic necessities such as food and education. It is often turned into programmes that help paying for instance school meals and books. However, children in this study are reporting an interesting and alternative point of view. This does not mean that we do not have to take into account the basic necessities, but also include children's opinions in the decision making process. For example, children have a higher risk of social exclusion if they are not satisfied with the place and area where they live, and if they are not participating in organised leisure time activities, and both of them things can be improved with local policies.

### *5.4. New questions and further investigation*

New questions can present themselves from the results: Why is material deprivation less associated with social exclusion sub-domains in Israel and Malta? Is material deprivation a weak characteristic to define child social exclusion in those countries? And why is material deprivation a particularly strong characteristic to define child social exclusion in Colombia? Why is the health and well-being sub-domain in Romania less associated with deprivation than in the other countries? However, there are no clear answers and further investigation need to be carried out.

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## Appendix A: Child social exclusion matrix

Resources domain		Participation domain		Quality of Life domain	
Sub-domain	Indicators	Sub-domain	Indicators	Sub-domain	Indicators
Material and economic resources	Deprivation index - Whether has NO one of these items: - Clothes in good condition to go to school in - Access to a computer at home - Access to the Internet - Mobile phone - Books to read for fun - Family car for transportation	Participation	I do not agree or I agree a little bit that my parents/carers listen to me and take what I say into account	Health and well-being	Satisfaction with your health 5 or less than 5
	Satisfaction with all the things you have 5 or less		I do not agree or I agree a little bit that my teachers listen to me and take what I say into account		Satisfaction with the freedom you have 5 or less than 5
	None adults that you live with have a paid job		Satisfaction with how you are listened to by adults in general 5 or less than 5		Satisfaction with your self-confidence 5 or less than 5
	I do not agree or I agree a little bit that in my area there are enough places to play or to have a good time		I do not agree or I agree a little bit that the town council asks children and young people their opinion about things there are important for them		Satisfaction with the way that you look 5 or less than 5
Access to services	Satisfaction with the outdoor areas children can use in your area 5 or less than 5	Participation	I do not agree or I agree a little bit that the town council asks children and young people their opinion about things there are important for them	Housing & local environment	Satisfaction with your own body 5 or less than 5
	Satisfaction with how you are dealt with at the doctors 5 or less than 5		Satisfaction with how you use your time 5 or less than 5		SLSS mean score 50 or less than 50
	Satisfaction with the local police in your area 5 or less than 5		I rarely or never spend time in organised leisure time activities		Core affects mean score 50 or less than 50
	I do not agree or I agree a little bit that I like going to school		Satisfaction with how you are dealt with at the doctors 5 or less than 5		Psychological well-being mean score 50 or less than 50
Social resources	Satisfaction with how you are dealt with at the doctors 5 or less than 5	Participation	I do not agree or I agree a little bit that I like going to school	Social harm	I live in a foster's home, a children's home or another type of home (not my family home)
	Satisfaction with the local police in your area 5 or less than 5		I do not agree or I agree a little bit that the town council asks children and young people their opinion about things there are important for them		I do not agree or I agree a little bit that I have a quiet place to study at home
	I do not agree or I agree a little bit that I like going to school		Satisfaction with how you are dealt with at the doctors 5 or less than 5		I don't have my own room
	Satisfaction with the people you live with 5 or less than 5		Satisfaction with how you are dealt with at the doctors 5 or less than 5		Satisfaction with the house or flat where you live 5 or less than 5
	Satisfaction with your family life 5 or less than 5				Satisfaction with the area you live in general 5 or less than 5
					Bullying – I've been left out or/and hit by others in the last month
					I do not agree or I agree a little bit that I feel safe at home
					I do not agree or I agree a little bit that I feel safe at school
					I do not agree or I agree a little bit that I feel safe when I walk in the area I live in
					Satisfied with how safe you feel 5 or less than 5

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Satisfaction with your  
friends 5 or less than 5

I do not agree or I agree a  
little bit that my friends are  
usually nice to me  
friends

I do not agree or I agree a  
little bit that I have enough  
Satisfaction with other  
children in your class 5 or  
less than 5

Satisfaction with your  
relationship with teachers  
5 or less than 5

Satisfaction with the  
people in your area 5 or  
less than 5

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