Analysing and interpreting data: Cross-national dilemmas

Ferran Casas

Emeritus Professor on Social Psychology
ERIDIqv research team. www.udg.edu/eridiqv
Research Institute on Quality of Life (IRQV)
Universitat de Girona (UdG)

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JACOBS FOUNDATION
Our Promise to Youth

This international research project is pioneer

- **Based on survey methodology with children**
  - Children have traditionally been marginal in representative survey research, except for marketing purposes
- **Explores new fields**
  - 8yo, 11-point scales, different topics, ….
- **Leads new pathways**
  - We trust children as key informants and experts in their lives
- **Innovative**
  - Collects data in many different countries, using different languages, cross-culturally, ….
- **Contrasts with traditional beliefs in social sciences**
  - We have taken a few methodological decisions against the mainstream opinions in the design of our questionnaires…
- **Gaining prestige in the international scientific community**
  - There is already an impressive number of scientific publications using our international databases

Why are children so often ignored by large-scale, general population, survey research?

According to Scott (1997), there are at least four distinct causes:

- The inertia of practice.
- Tendency to accredit adults with greater knowledge, experience, and power.
- Interviewing children viewed as too problematic to be worth the possible pay-off.
- Ignorance or perhaps half-truth: Children are commonly believed to lack the communication, cognitive and social skills that are the prerequisite of good respondents.

However, although pre-teen children can and do tell us about themselves, they have also mastered the art of impression management and, like adults, will tend to edit their answers according to **what they guess they are expected to say**. By adolescence they are wary of revealing their secrets to an adult.

In order to achieve high scientific standards

- **Our data has to achieve high quality**
  - We have to be accurate and rigorous in our data collection, and transparently report on our procedures
- **We have to clearly illustrate how we take carefully into account children as active agents in our research**
  - Improve our questions by being sensitive to what children tell us, accepting children as advisers, taking into account children's opinions and points of view to contribute to human and social sciences, ….
- **We have to keep very aware and sensitive to the different socio-cultural environments we include information from in our data bases**
  - Check for the equivalence and comparability of what children from different socio-cultural environments tell us
- **We should lead new international debates**
  - Explain how subjective indicators provided by children are useful for knowledge, but also for social policy decision-making

In order to gain more prestige

- Our sampling procedures have to appear very rigorous and transparent
- Our translations of the instruments have to be back-translated, but also checked with children in order to use child-friendly wording in all countries
- The format of our questionnaires should be the same in every country in order not to include undesired errors of measurement
- Our piloting has to be accurate in every country
- We have to demonstrate control on the data administration context
- We have to demonstrate control on the quality of the data we incorporate into the international database
- **All of this in order to avoid biases and errors in our data that may mislead our analysis and interpretation of the results**

What can we learn from scientific publications about data collection from children (1)

The form of a question (open or closed) requires different cognitive and communication skills and different memory tasks:

- Open questions: are supposed to invite elaboration, discussion, justification, explanation or specification of concrete details (Gee, Gregory & Pipe, 1999). Recall: search in memory, more cognitive processing than a recognition question.
- **Closed questions**: recognition tests. Sense of familiarity with the topic.
- **Both of them**: a real or imaginary relationship with the researcher/s, and a sense of confidence-accuracy to answer (and satisfy the researcher's demand). The younger the child, the greater the preference for spurious responses rather than "don't know" responses – in order not to disappoint the adults.
- **Training sessions**: better data quality, less errors. The child learns he or she could correct the researcher (Gee, Gregory & Pipe, 1999).

What can we learn from scientific publications about data collection from children (2)

- According to different authors, children below the age of 7 do not have sufficient cognitive skills to be effectively and systematically questioned (de Leeuw, 2011). However, there are a few scientific articles published involving children younger than 7.
- Between 7 and 10 years of age, **suggestibility** is an important issue to check: they have a tendency to please and are afraid of doing something wrong (de Leeuw, 2011).
- Between 7 and 12 they can be very **literal in the interpretation of words**. Depersonalized or indirect questions, and negations, should be avoided. Memory speed is lower: **guarantee they have enough time to answer**.
- From 12 to 16, **ensuring privacy** (the social context of the survey!), and stating confidentiality are important. **Sensitivity** of questions is related to peer norms. **Motivation** is important: guard against boredom!

What can we learn from scientific publications about data collection from children (3)

- Proxy reporting is no longer considered good enough if children can be interviewed themselves (de Leeuw, Borgers & Smits, 2004). For some topics children are the best informants (i.e.: bullying) and some information is outside the scope of parents' or guardian's knowledge. **There is often a very large gulf between parental observations about their child and the child's own perceptions** (Scott, 1997).
- **Language ability** (reading and language skills) is an important issue for the comprehension of questions. When literacy is a problem, a combination of methods is a good solution, with an **instructor reading the questions aloud** (or audio-recorded questions) and the pupils writing their responses on a self-administered form (Borgers et al., 2000).
- Children as young as 8 years can successfully **complete electronic questionnaires and enjoy the process** (Van Hattum & de Leeuw, 1999).

What can we learn from scientific publications about data collection from children (4)

Researchers (and research assistants) need to acquire more methodological knowledge about children as subjects (Markopoulos and Bekker, 2002):

- Make sure the **questions do not resemble test items or school questions. There are no wrong answers. The researchers do not know a correct answer.**
- **Reduce the hierarchical adult-child relationship**.
- Expert judges usually **underestimate the difficulty of a text** by several years (Johnson, 2002).
- **Children can act as advisers** of their researchers (Casas et al., 2012).
- **Children tend to ask for more guidance than adults, especially when they are unsure what a question means** (Scott, 1997).
- Children's responses are subject to the **standard biases** (as adults – well researched among adults, but not among children): **context effects, social desirability, acquiescence bias, and so on.**

Discrepancies between methodologists and children

We have identified discrepancies between what methodologists state and what children tell us in focus groups:

Methodologists	Children
7-10 – Maximum 3 response options 11-15 – 4 to 5 response options 16+ - 5 to 7 response options	Many children as young as 8 state they understand and can answer 11 response options – they simply need more time to answer
Clearly detailed introductions makes a questionnaire easier. Complexity of wording, negations, and logical operators makes a questionnaire more difficult.	Having to read more makes a questionnaire more difficult. Do not repeat headings or questions.
Scales with a label at the mid-point are easier to understand.	Scales with a label at the mid-point are "more difficult" to understand.
Completely labelled scales produce better-quality responses from children. Verbal labels are more easily understood than numeric.	End-labelled scales using numbers are very easy to understand (i.e.: 11-point satisfaction scales).

Adult centred versus child centred questionnaires

Adult centred questionnaires	Child centred questionnaires
Evaluation of a proposed questionnaire by an advisory committee of experts	Evaluation of a proposed questionnaire by asking children
Use cognitive testing methods	Use discussion groups with children
The adult is the expert	The child is the expert
"Don't know" answers are not recommended because, even though they increase the reliability of responses, they discourage respondents to report their opinion.	"Don't know" is an ethical and necessary option when children may really not know the answer to the question raised.

The format of the questionnaires (1)

- The graphic design of a question is known to make its comprehension easier or more difficult, increase or decrease the possibility of certain types of error, and even make it visually more pleasant or unpleasant, comfortable or uncomfortable for the respondent, bearing in mind that the emotional reaction to a question is in no way irrelevant to the response it may provoke.
- These aspects may additionally be influenced by factors over which the researcher has little control, such as the respondent's age, prior experience answering questionnaires and level of interest in the issues being addressed (Casas et al., 2012).
- Adults' criteria have been traditionally imposed in the design of questionnaires for children in all countries around the world (Casas et al., 2012). There is no loss of "prestige" in admitting to children that we as researchers do not know "the best format" for children of a concrete age and therefore requesting them to act as consultants to university professors to improve designs.

The format of the questionnaires (2)

- **Asking children for help and advice** usually leads to most of them approaching the task with great interest, and that the degree of seriousness, involvement and commitment throughout the whole procedure is especially high.
- The key to children's clear understanding of the formats often did not lie in the researchers providing explanations and investing time answering questions and interacting with them. Rather, **explanations given by other children** often brought them to a faster understanding than those given by researchers.
- Formats that require **more time to read are more "difficult".**
- Shading alternate lines makes questions easier to read correctly.
- Faces/emoticons were considered attractive and easy to understand, but only appropriate for "the easy questions", while the "serious" questions require other formats (particularly for 12yo).
- **Repeating questions is considered boring and time consuming**.

Training activities

- Our project suggest to use **training sheets** with the children of the 8-year-olds group before administering the questionnaires.
- It is convenient to also use them with children that may not have previous experience answering questionnaires, as for example children from rural or remote areas, children with low literacy skills and so on.
- We need to learn more about **training activities** that may improve the quality of the data we get from children when they answer a questionnaire. Suggestions and new experiences are welcome.

The attitude children perceive in the researchers

- We know that to be good informants children need to feel **confident and motivated**. Our project is based on trusting what children tell us. We need to collect information to explain our experience with detail to other researchers and to policy-makers who doubt about the usefulness of subjective indicators of children's well-being.
- When participating in our data collection, children should feel that they are the main characters (for example, using sentences such as "We need your knowledge and help"; "Your opinion is really important for us"; "Would you like to advise us?").
- During the questionnaire administration, do we facilitate children to ask the researchers about any doubts that they have?
- ***It is adult's orientation and competence that raises the difference of children's competence*** (Garbarino, Stott et al., 1989).

Which are our goals when analysing data? (1)

- Our main goal is NOT comparing countries, although that may be illustrative for international debates.
- Our main goal should NOT be to identify who are the best.
- **Our main goal should be to identify what can be improved in children's lives in each country and consistently propose political and social action.**
- Keeping that goal in mind, it makes sense to check for the subgroups of children in each country or region who display the lowest scores (i.e.: in subjective well-being). They are the potential target groups for future programs aiming to improve their situation.
- It is also interesting to compare areas or regions in a country to check for inequalities in the distribution of well-being.

Which are our goals when analysing data? (2)

- The meaning of "subgroups" can be very broad. From previous research in Spain we learned that some of the children displaying significantly lower subjective well-being than the mean were these that:
  a. Report being in residential care.
  b. Report not getting pocket money.
  c. Report their parents did no finish primary education.
  d. Were not born in Spain.
  e. Report no adult at home has a paid job.
  f. Report not having access to ICTs when they need them: computer, Internet or mobile phone.
  g. Perceive their family as less or much less wealthy than the other families.
  h. Report not feeling safe, mainly at home or at school.
  i. Report not being allowed to participate in decisions made at home.
  j. Report last year they have changed parents or adults living at home.

Challenges in our data analysis

- We need to check for the **reliability and validity** of our instruments in each country, and for their cross-cultural **comparability**.
- We have the challenge of identifying the **variables contributing to children's SWB** in each country and to explain why they are sometimes different from one country to another.
- Many additional analyses are needed to better understand **differences between boys and girls** in each country and in the aggregated database.
- We would like to develop analysis **measuring the socio-economic status of children**. However, we are still testing indicators useful to identify such status, and we have been unable to use the same indicators in all countries. New ideas are welcome.
- We still need to learn a lot about children's **daily activities** in different cultures.

Subjective Well-Being: Psychometric scales

The psychometric scales we are using in the 3rd wave are new, although inspired in previously tested instruments, we need to continue the testing. Previous research has shown that although highly correlated, these instruments capture different aspects of children's well-being depending on the socio-cultural context.

- **OLS** (Over all Subjective Well-Being) – One question about satisfaction with life as a whole (Q45)
- **CW-SWBS** (Children's Worlds Subjective Well-Being Scale) – 6 items measuring context-free subjective well-being (Q25)
- **CW-DBSWBS** (Children's Worlds Domain Based Subjective Well-Being Scale) – 5 items measuring domain based cognitive subjective well-being (items fitting to be checked)
- **CW-PNAS** (Children's Worlds Positive and Negative Affects Scale) - 6 items measuring positive and negative affects (based on Barrent & Russel, 1989) (Q48)
- **CW-PSWBS** (Children's Worlds Psychological Subjective Well-Being Scale)- 6 items measuring psychological subjective well-being (based on Ryff, 1989) (Q49)

How to interpret our results?

- In each country we may have identified some **unexpected results** using subjective data provided by children. We should keep an open mind to potential new interpretations of children's worlds through children's eyes.
- We need to design **activities with children so that they can help us to better understand the results**.
- We have used representative samples in all countries in this project. We should not attribute low relevance to small percentages (i.e.: in the bullying items). **In most countries 2% of children means thousands of children**.
- When developing cross-cultural comparisons let's not forget that is not a competition. **We compare data mostly to learn things that can be useful for research or for policy debate**.
- People in diverse cultures and speaking different languages may have **different answering styles** to the same questions. This may also happen with children. Should we give priority to research exploring this topic in order to give more accurate explanations to our findings?

Some dilemmas…

- Should we search for **similar characteristics and behaviours** children have in all countries and cultures – or should we give priority to analyse in-country and cross-countries **variability**?
- Should we work more on the **cross-cultural comparability** of our instruments (i.e.: psychometric scales) – or should we invest more energies in **capturing the specificities of children in each cultural environment**?
- Methodologists are very concerned about underlining children's lack of communication, cognitive and social skills. It is very easy to "demonstrate" biased answers of children (as well as of adults!) to any questionnaire. However, should we face the challenge of demonstrating that sometimes children also display **more skills than expected**?

Weak points to review and improve (1)

- An international committee is checking for the representativeness of the sampling in each country. However, we know our samples could be improved
- We need more discussions with children (focus groups) to improve the wording. Priority should be given to the use of wordings that children use in their everyday life in each region. **Equivalent meaning for children does not mean precise translation by adults and vice versa**
- We need **discussions with children** (focus groups) in every country **to improve the format of our questionnaires**. The fact that in each wave more countries incorporate **on-line questionnaires** for data collection raises new challenges for comparability. We should try, at least, to ensure that all countries use the same online format and that online formats are as similar or equivalent as possible to paper ones

Weak points to review and improve (2)

- In some countries **researchers personally administer the questionnaires in schools** (even the online format) and, in some others, teachers do the administration, because of the lower costs. The potential bias differences are unknown.
- We have to report more in detail about **children excluded from our samples**, not only because of the sampling. Some countries have children only of exactly the same age in their sample and most haven't.
- Although in the first wave we included some **open-ended items** to know children's opinions about our questionnaire, planning and articulation of quantitative and qualitative data provided by children in as many countries as possible is highly desirable – being aware of potential ethical issues.
- We need more **research on standard biases** in children's self-administered information: context effects, social desirability, acquiescence bias, scales understanding, etc.

Future challenges

- We would like to increase the involvement of children with our project in as many countries as possible. We should **involve children in more discussions** on the analysis and interpretation of our results, as well as in its dissemination, and in the improvement of future waves of data collection
- We need to **improve the comparability of our data**, as well as the comparability of the psychometric instruments used in our questionnaire. By including new items suggested by children speaking non Indo-European languages we think we have made an important first step forward
- Only a few countries have organised data collection in order to allow **longitudinal data analysis** in the future. Longitudinal studies are highly desirable (i.e.: with different cohorts of children) and very scarce in relation to children's SWB cross-culturally.
- We should take more into account different groups of children with special needs in the future versions of our questionnaires (visual difficulties, dyslexia, etc.)

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