

How Well School Age Children Report Family SES: Systematic Review

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Background

- Socio-economic status (SES) variables are always required in social science studies.
- More and more surveys of school-age children as a focal group of interest
 - Coleman's project in USA. (Coleman, 1966),
 - First International Mathematics Study (FIMS) (Husen, 1967),
 - The Trends in International Mathematics and Science Study (TIMSS), the Programme for International Student Assessment (PISA) and many others. National and international.
- Researchers rely on the students' responses on SES related factual questions.



Research Questions

- What is the level of accuracy of school-age children's reports on parental education and occupation?
- To what extent different SES measures are prone to be missed?
- Are there any respondents' characteristics related to the response quality?



METHODOLOGY



Methodological approach

- Systematic review of the studies devoted to investigation of the quality of children responses on family SES variables.
- Papers selection criteria:
 - Study about the quality of the school age children responses on the family SES questions;
 - Methodological focus;
 - We mostly focused on the papers published since 1990, as similar review had been done in 1989 (Looker, 1989).
- Approaches to look for relevant papers:
 - Snowball method;
 - Search in the citation and periodical databases (SCOPUS, WoS, JSTOR, EBSCO, Science Direct and others).



Sample

- 16 papers were included in the final list:
 - 15 on research question 1 about consistency;
 - 11 on research question 2 on non-response issue;
 - 8 on research question 3 about students' characteristics and response quality;
- SES measures:
 - 14 - Parents' education;
 - 14 - Parents' occupation, including occupational status, but not a profession;
 - 3 - Family structure;
 - income, home possessions, free or reduced lunches and other measures of financial support were in focus only once or twice.



Information from papers

- Correlation coefficients between children and parents answers,
- percent of agreement,
- Cohen's Kappa (inter-rater agreement),
- percentage of missing items,
- which students' characteristics are associated with the response quality.
- *The number of studies can be greater than number of papers, because there were papers with several different samples under investigation. E.g. different countries or children of different age.*



RESULTS



Consistency and non-response

Consistency indicator		Occupation		Education	
		Father	Mother	Father	Mother
Correlation	(Av. / Med.)	0.7	0.7	0.6	0.6
	Range	0.5 - 0.9	0.4 - 0.9	0.4 - 0.9	0.6 - 0.9
Cohen's Kappa	(Av. / Med.)	0.7	0.7	0.5	0.5
	Range	0.4 - 0.9	0.6 - 0.8	0.3 - 0.8	0.3 - 0.7
% of agreement	(Av. / Med.)	70	69/74	64	65 / 69
	Range	43 - 93%	20 - 94%	21 - 88%	39 - 86%
Missing cases	(Av. / Med.)	7/5	12/9	8/ 3	7 / 5
	Range	1 – 34%	0.6 - 46%	0.2 - 39%	0.7 - 15%



Some explanation of the results

- Question on **occupation** is usually open question.
- Question on **education** is a closed question with a list of possible levels of education or educational institutions that parents could graduate from.
- Parents' occupation is more salient in everyday life.



Whether inaccuracy will change the inferences?

- Does usage of children's or parents' answers lead to contradictory inferences?
- In six papers there were regression models based on children's or parents' answers:

	Occupation	Education
Results differ	0	3
Results not differ	6	3



Students' characteristics

- Parents-children consistency:
 - Age (14-15 years old is a minimum).
 - Educational achievement (higher achievement, higher accuracy).
 - Family structure (presence of a parent, relationship).
 - Family SES (higher SES, higher accuracy).
- Missing answers:
 - Age.
 - Family structure (presence of a parent, relationship).
 - Boys (more non-responses).



Conclusions

- School-age children responses are of moderate accuracy
 - The percentage of agreement between parents and children is 65-70%.
 - Correlation is about 0.7 for occupation and 0.6 for education.
 - Cohen's Kappa is 0.7 for occupation and 0.5 for education.
- Frequency analysis will be biased.
- Regression analysis are robust and provides the same inferences based on both data sources.
- School-age children responses can serve as appropriate measure of family SES for most studies and research situations. Especially question on occupation.
- The tendency to give inaccurate answers is uneven; some groups of children are more likely to make mistakes.



What can be done to increase accuracy?

- Broadening or merging categories;
- Partial verification of information from other sources, such as parents survey or administrative data; In case of verification of the responses it is necessary to pay special attention to groups that are more prone to inaccurate reports.
- Inquiry to children to clarify the education and occupation of the parents before the survey.



- Thank you!
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