

Measuring Socioeconomic Status and Environmental Factors in the SAYCARE Study in South America: Reliability of the Methods

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Objective: This paper aimed to test the reliability of two questionnaires in studies involving children and adolescents (aged 3-18 years) in seven South American cities. One assesses socioeconomic status (SES) and the other measures environmental factors.

Methods: The SES questionnaire was composed of 14 questions, which included the presence of several consumer goods, domestic services, family income, parental education level, and current parental occupation status. The environmental questionnaire was composed of 15 questions to measure the social and infrastructure characteristics of the area of residence. Parents or guardians completed the questionnaires on behalf of their children. Adolescents answered the questions themselves for environmental factors, while those related to SES factors were answered by their parents or guardians. We analyzed the reliability of the questionnaires through kappa coefficient determination. Multilevel linear regression models were applied to calculate the correlation between the total household scores, the household income, and parents' education level.

Results: The environmental questionnaire showed good reproducibility in both age groups ($k = 0.132$ - 0.612 in children and $k = 0.392$ - 0.746 in adolescents). The SES questionnaire showed strong reliability in both age groups for all indicators ($k = 0.52$ - 1.00 in children and $k = 0.296$ - 0.964 in adolescents).

Conclusions: Our multiple indicator questionnaires focused on environmental factors and SES in pediatric health surveys provided useful and easily applicable additional indicators to measure these important determinants of cardiovascular health.

Obesity (2018) **26**, S14–S22. doi:10.1002/oby.22115

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Funding agencies: The SAYCARE study was supported mainly by the Brazilian Government through the National Council of Technological and Scientific Development (CNPq; proc. 471266/2013-2) and by the São Paulo state government through the São Paulo Research Foundation (FAPESP; proc. 2014/11468-6). It was also funded by the Collaborative Projects Fund (R.D. N°501-2015-INSN-DG-OEA) from the Instituto Nacional de Salud del Niño, Lima, Perú; the Sustainability Strategy, the Research Group of Social and Economic Determinants of Health and Nutrition, the Demography and Health Research Group, and Interuniversity Services Corporation (CIS) from the University of Antioquia, Medellín, Colombia; the Secretary of University Extension and Student Welfare, University of Buenos Aires, Argentina; and the European Regional Development Fund (MICINN-FEDER) through a grant to the GENUD Research Group. The General Coordination of SAYCARE received several scholarships to develop the project. ACFDeM received a postdoctoral scholarship from the National Council of Technological and Scientific Development (CNPq; proc. 313772/2014-2) and São Paulo Research Foundation-FAPESP (proc. 2014/13367-2 and 2015/14319-4). LAM was given a visiting professor scholarship from the São Paulo Research Foundation, FAPESP (proc. 2015/11406-3). HBC received an advanced scientist scholarship from the National Council of Technological and Scientific Development (CNPq; proc. 300951/2015-9) and HBC received Research Grant for Scientific Publication Paper from the São Paulo Research Foundation (FAPESP; proc 2017/15554-2). RCVC received a PhD scholarship from Coordination of Improvement of Higher Level Personnel (CAPES).

Disclosure: The authors declared no conflict of interest.

Author contributions: ACFDeM designed the study. ACFDeM, LAM, and HBC supervised the data analysis and interpretation. ACFDeM, ECOF, RCVC, LIGZ, LA, PM, LAM, and HBC contributed to the data collection. IL and LH were involved in data interpretation. All authors were involved in the paper writing and approved the final version for submission.

Additional Supporting Information may be found in the online version of this article.

Received: 9 June 2017; **Accepted:** 14 December 2017; **Published online 21 February 2018.** doi:10.1002/oby.22115

Introduction

There are clear socioeconomic inequalities regarding mortality and morbidity because of cardiovascular diseases (CVD). Low socioeconomic status (SES) is associated with a higher risk of CVD in men and women (1). In low- and middle-income countries, low SES, female gender, and belonging to an ethnic minority leads to a higher prevalence of behavioral and psychosocial risk factors (2).

Various environment-related factors are also related to the risk of CVD, including built environment, neighborhood, health systems, family, and cultural factors (3-5). They account for important differences in the prevalence and incidence of obesity and CVD in different population groups (6).

Methodologically, parental SES information is difficult to obtain from pediatric populations, resulting in high levels of missing data. Although the methodology for assessing SES largely differs among studies, some indicators are used as a proxy of SES, such as parental education (7) and occupation (8). The Health Behaviour in School-Aged Children (HBSC) study of the World Health Organization validated a questionnaire to measure SES among adolescents from 30 countries in Europe and North America (9) (validity coefficients above 0.4). The researchers compared the responses of adolescents with interviews with parents, and the findings suggested consistent agreement between answers of adolescents and parents (9). However, these results are not applicable to the pediatric populations from low- and middle-income countries because of the educational and social differences between Europe and North America.

Various aspects of the environment are being increasingly measured as indicators of SES, particularly those related to safety (10), segregation (10), diet (11), walkability (12), and political and social characteristics (13). There are several instruments used to identify and measure these aspects of the environment in the available literature. However, few have been tested in South American countries. Mainly, the methods used to obtain these data must be reliable and validated in the population study and, if possible, amenable to comparisons between countries. On the other hand, validation of these questionnaires is very difficult because a gold standard is often inaccessible. Therefore, evaluating at least the reliability of these questionnaires becomes indispensable to evaluate the SES and environmental indicators in different countries.

To our knowledge, this is the first study that evaluates the reliability of questionnaires aimed at measuring SES and environmental factors in children and adolescents from different countries of South America. This is an important point given the wide diversity of SES and environments we found in South America. We aimed to assess the test-retest reliability and the constructed validity of SES and the environment observation instruments adapted to the context of seven South American cities.

Methods

Study design

A detailed description of the South American Youth/Child Cardiovascular and Environmental (SAYCARE) study sample calculations, one for each questionnaire, sampling and recruitment methodology, data collection, and quality control activities have been described in

the first paper of this supplement (14). Briefly, SAYCARE is an observational, multicenter, feasibility study aimed to define obesity and CVD-related risk factors in South American children and adolescents aged 3 to 17 years who are enrolled in public and private schools of their respective participants cities of Buenos Aires (Argentina), Lima (Peru), Medellin (Colombia), Montevideo (Uruguay), Santiago (Chile), Sao Paulo, and Teresina (Brazil).

Inclusion and exclusion criteria

Subjects aged 3 to 18 years old who were residents of the study cities and whose parents or legal guardians provided informed consent were eligible. Exclusion criteria included refusal to consent, pregnancy, and inability to complete the questionnaires.

In this paper, we evaluated the internal consistency and the test-retest reproducibility (reliability) of both questionnaires. For these objectives, our sample included 242 children (3-10 years old) and 214 adolescents (11-18 years old). Of these, 226 children and 143 adolescents fit the SES questionnaires and were included in the analysis. This sample size was adequate for estimating reliability parameters considering the rate of 35 individuals for each item of the instrument ($35 \text{ initial items} \times 4 = \text{minimum } 140 \text{ subjects in total}$). The sample size was also adequate for the identification of a kappa coefficient greater than 0.80 as statistically significant ($\alpha = 0.05$ type I error, two-tailed) and a β or power (type II error) of 0.20 (15).

Another sample estimation was used to verify the reliability of the environmental questionnaire. In total, 241 children and 177 adolescents contributed to the test-retest from data. This sample allows for the identification of a kappa coefficient greater than 0.75 as statistically significant ($\alpha = 0.05$, two-tailed) and 80% power ($\beta = 0.20$) with two instrument applications.

Data collection

Principals of the selected schools received formal and detailed information about the importance, objectives, and methods of the study to gain their consent to collaborate with the project. The institutional Research Ethics Committee of the six countries involved has approved the study protocol.

Questionnaires

As part of the SAYCARE study, we developed a questionnaire to assess SES, environment, and infrastructure. To assess the reliability of each variable, the measurements were performed in duplicate in the same individual at two different times, with an interval of 15 days between time one and time two.

We adapted several country-dependent measures based on the legislative requirements or established local standards. For children aged 3 to 10 years (preschool and primary school), it was recommended that parents or guardians fill out the questionnaires (16). Adolescents answered the questions themselves for environmental and sociodemographic factors, while the socioeconomic factors were answered by their parents or guardians during face-to-face study visits. We required that the same individual complete the survey at both time points; e.g., if the mother answered the questionnaire during the first visit, the mother had to answer again during the second visit. The questionnaires collected the following information.

Socioeconomic factors questionnaire

Domestic appliances. This questionnaire was adapted for each country based on the criteria of socioeconomic classification of the Brazilian Association of Research Companies, which considers the presence of several of the following consumer goods: number of bedrooms; number of bathrooms (with a shower and toilet); number of television sets (0, 1, 2, 3+); number of vehicles (0, 1, 2+); and ownership (yes/no) of assets, including a radio, refrigerator, DVD or videotape (VCR), freezer/duplex refrigerator, telephone line, and computer. We also analyzed the ownership of portable computers, internet (broadband or dial-up), video games (traditional and mobile), and housekeepers (17).

Parental education according to years of school. The options for parental education according to years of school were < 4 years, 4 to 8 years, 9 to 12 years, or > 12 years.

Parents' occupation. We asked "Do/did you work? Yes or no." If yes, "What kind of work do/did you do?" Codes were categorized as follows: (1) managers, (2) executives, (3) specialists and administrative, and (4) skilled/unskilled manual/staff jobs (18).

Income (\$). Monthly family income was collected in nine categories and based on the minimum wage in the country at the time of the beginning of data collection (May 2015) (19).

Environmental factors questionnaire

Social environment and infrastructure of the area of residence. Environmental characteristics were measured subjectively by using a 15-item questionnaire that included questions (yes or no) that were extracted and adapted from other instruments and asked about the quality of public spaces, appropriate environments for physical activity, perceived violence in the area, frequency of garbage collection (20), and environmental determinants of cardiovascular risk factors (21).

Statistical analysis

Stata software version 14.0 (Stata Corp., College Station, Texas) was used for all statistical analyses. The criterion for statistical significance was set at 5%. For both questionnaires, the descriptive analyses included the mean, standard deviation, percentages, and 95% confidence intervals (95% CI). We applied the χ^2 goodness of fit test as a sensitivity analysis for comparison between the sample in the first and second questionnaire application.

The percent agreement was calculated through cross-tabulation. The weighted kappa (Cicchetti-Allison's weighting method) was determined for variables with ordinal categories. Kappa coefficients were determined for dichotomized variables. The percent agreement and kappa statistics provided information about interobserver agreement. The kappa coefficient takes into account the agreement expected by chance, which is not the case for the percentage agreement, but the kappa coefficients are misleading in the case of an asymmetric appearance of disagreement. Therefore, we applied both approaches to complement each other. We applied the Altman guideline for the interpretation of kappa coefficients: 0 to 0.20, slight; 0.21 to 0.40, fair; 0.41 to 0.60, moderate; 0.61 to 0.80, substantial; and 0.81 to 1.00, almost perfect (22). The agreement analyses were conducted for the total sample and stratified by age group (preschoolers/scholars and adolescents).

From these results, we applied a meta-regression model to estimate the overall reliability of the questionnaire regarding environmental factors. To test the construct validity of the domestic appliances questions, we assessed the correlations between each domestic appliance component and (1) the total household scores and (2) the household income and parent educational level, and the results were calculated by using multilevel regression models.

Results

The participants' characteristics for both questionnaires are shown in Table 1 for the environmental questionnaire. Data from 226 children and 177 adolescents who had valid data for environmental questionnaire 1 and questionnaire 2 were analyzed. In children, 79.3% of the

TABLE 1 Participants' characteristics for environmental questionnaire

	Q1	Q2	P1
	(n = 242), %	(n = 226), %	
Children			
Sex			0.531
Female	47.0	50.0	
Male	53.0	50.0	
Age			0.088
3-5 y	37.7	46.2	
6-10 y	62.3	53.8	
Maternal education level			0.905
Incomplete high school	22.5	18.2	
High school	14.0	18.2	
Technical education	91.2	9.1	
University degree	54.3	54.6	
School type			0.001
Public	46.7	61.5	
Private	53.3	38.5	
	Q1	Q2	
Adolescents	(n = 215), %	(n = 177), %	P1
Sex			0.091
Female	51.7	59.9	
Male	48.3	40.1	
Age			0.499
11-14 y	51.7	48.5	
15-18 y	48.3	51.5	
Maternal education level			0.126
Incomplete high school	22.7	11.6	
High school	24.7	16.3	
Technical education	11.9	14.0	
University degree	40.7	58.1	
School type			0.144
Public	43.9	37.1	
Private	56.1	62.9	

P1: χ^2 goodness of fit test for comparison between the sample in the first and second questionnaire application.
Q1, questionnaire first application; Q2, questionnaire second application.

TABLE 2 Kappa coefficients for environmental questionnaire (each question and total) in both age groups: SAYCARE study

Neighborhood environment scale	Children (3-10 years old) ^a									
	Q1 (n = 241)			Q2 (n = 222)			Agreement (%) (Q1 vs. Q2)	Kappa coefficient	95% CI	
	% Yes	95% CI		% Yes	95% CI					
Sidewalks in your neighborhood	91.9	87.6	94.8	86.4	81.3	90.3	90.48	0.288	0.065	0.641
Bad sidewalks in your neighborhood	33.8	27.9	40.2	26.5	21.0	32.7	76.83	0.361	0.128	0.594
Good places to practice PA	72.0	65.8	77.4	71.1	64.8	76.7	76.47	0.407	0.194	0.621
Exposed or open garbage in the streets	31.0	25.4	37.3	38.5	32.2	45.1	78.31	0.409	0.184	0.634
Bike paths	50.0	43.6	56.4	38.5	32.2	45.1	67.47	0.340	0.140	0.541
Adolescents practice PA in your neighborhood	60.9	54.4	67.0	66.7	60.2	72.6	81.25	0.612	0.436	0.788
Knowledge about places to practice PA	87.1	82.1	90.9	92.4	88.1	95.3	84.15	0.1553	0.125	0.436
Promotion of PA in your neighborhood	58.6	52.1	64.8	72.2	65.9	77.7	71.43	0.358	0.148	0.567
Close places to practice PA	69.5	63.3	75.1	72.9	66.7	78.3	70.24	0.283	0.064	0.501
Interesting things in your neighborhood	49.4	42.9	55.8	49.5	42.9	56.2	68.29	0.362	0.160	0.565
Nice place to go	70.7	64.5	76.2	64.0	57.4	70.1	66.25	0.213	0.008	0.434
Walking is NOT safe in your neighborhood	55.9	49.4	62.2	53.6	47.0	60.1	58.82	0.179	0.029	0.386
Riding a bike is NOT safe in your neighborhood	60.0	53.5	66.2	56.1	49.4	62.6	68.29	0.364	0.163	0.565
Favorite place is NOT safe in your neighborhood	47.0	40.5	53.5	35.0	29.0	41.5	59.26	0.132	0.081	0.345
Neighborhood is violent with crime/drugs	36.1	30.2	42.4	26.0	20.7	32.1	73.26	0.265	0.036	0.494
Overall questionnaire							72.72	0.296	0.246	0.347

Neighborhood environment scale	Adolescents (12-18 years old)									
	Q1 (n = 241)			Q2 (n = 222)			Agreement (%) (Q1 vs. Q2)	Kappa coefficient	95% CI	
	% Yes	95% CI		% Yes	95% CI					
Sidewalks in your neighborhood	89.0	85.0	92.0	91.8	86.5	95.1	94.38	0.659	0.452	0.866
Bad sidewalks in your neighborhood	30.5	25.1	36.6	24.2	17.9	31.8	84.17	0.585	0.421	0.750
Good places to practice PA	79.1	74.0	83.3	81.9	75.1	87.2	88.59	0.610	0.442	0.778
Exposed or open garbage in the streets	46.3	40.3	52.5	38.1	30.5	46.3	80.67	0.587	0.437	0.738
Bike paths	53.6	47.5	59.5	44.9	37.3	52.8	81.06	0.622	0.490	0.754
Adolescents practice PA in your neighborhood	68.4	62.5	73.8	65.8	58.0	72.9	84.62	0.653	0.514	0.791
Knowledge about places to practice PA	93.2	89.7	95.6	94.6	89.9	97.2	93.51	0.410	0.112	0.708
Promotion of PA in your neighborhood	77.3	71.9	82.0	76.9	69.6	82.9	84.67	0.482	0.294	0.669
Close places to practice PA	71.5	65.9	76.5	75.8	68.5	81.8	84.25	0.555	0.395	0.716
Interesting things in your neighborhood	56.9	50.6	62.9	51.3	43.3	59.3	75.81	0.517	0.369	0.666
Nice place to go	64.6	58.7	70.1	60.1	52.3	67.4	84.67	0.677	0.552	0.803
Walking is NOT safe in your neighborhood	39.4	33.5	45.7	31.1	24.2	39.0	76.86	0.479	0.314	0.644
Riding a bike is NOT safe in your neighborhood	45.7	39.6	51.9	32.9	25.8	40.8	79.67	0.580	0.435	0.725
Favorite place is NOT safe in your neighborhood	50.0	43.8	56.2	24.3	18.0	32.0	69.84	0.392	0.251	0.534
Neighborhood is violent with crime/drugs	34.7	29.0	40.8	31.1	24.1	39.1	89.06	0.746	0.620	0.871
Overall questionnaire							73.26	0.587	0.548	0.627

^aKappa coefficients for parent-completed environmental questionnaires. Kappa coefficients ≥ 0.41 and considered at least moderate are highlighted in bold. PA, physical activity.

questionnaires were completed by the mother and 20.7% by the father. In adolescents, 70.6% of the questionnaires were answered by mothers and 29.4% by fathers. Because of other SAYCARE objectives (e.g., validate the sedentary behavior questionnaire), a wider sample than initially calculated was assessed. We lost 18 children’s data in the reliability study (mainly because questionnaire 2 information was not provided or was provided incompletely). In our sample, significant differences were observed only for school type in children.

Table 2 presents the kappa coefficients for the environmental questionnaire (each question and total) for both age groups. In children, the overall questionnaire reliability coefficient was fair with substantial perceptual agreement in adolescents. The reliability coefficient was moderate with higher agreement as well.

For the SES questionnaire, we analyzed the 226 children and 143 adolescents who had valid data for SES questionnaire 1 and questionnaire 2

TABLE 3 Reliability coefficients for socioeconomic questionnaire (each question) in both age groups: SAYCARE study

	Q1 (n = 242), %	Q2 (n = 226), %	P1	Kappa coefficient (% agreement)
Children				
Mother education level			0.991	
Incomplete high school	22.2	23.7		k = 0.955 (97.9%)
High school	14.8	15.8		
Technical education	10.2	10.5		
University degree	52.8	50.0		
Mother current occupational status			0.356	
Management	30.4	34.3		k = 0.851 (92.7%)
Service	12.3	2.9		
Sales/office	14	14.3		
Blue-collar	37.4	48.6		
Unemployed	5.9	0.0		
Father education level			0.76	
Incomplete high school	18.8	13.9		k = 0.91 (96.4%)
High school	18.1	13.9		
Technical education	8.7	8.3		
University degree	54.4	63.9		
Father current occupational status			0.146	
Management	30.0	50.0		k = 0.797 (90.3%)
Service	18.1	10.7		
Sales/office	18.1	7.1		
Blue-collar	33.1	32.1		
Unemployed	0.6	0.0		
Family income (\$)			0.997	
<2 MW	23.8	25.6		k = 0.733 (88.9%)
5 to 10 MW	27.4	28.2		
10 to 20 MW	13.4	12.8		
≥21 MW	9.8	10.3		
Don't know/will not inform	25.6	23.1		
Adolescents				
Mother education level			0.931	
Incomplete high school	22.4	22.9		k = 0.964 (98.4%)
High school	25.7	23.8		
Technical education	12.2	10.5		
University degree	39.7	42.9		
Mother current occupational status			<0.001	
Management	23.8	4.9		k = 0.34 (78.5%)
Service	10.9	2.9		
Sales/office	13	6.7		
Blue-collar	40.4	80.4		
Unemployed	11.9	4.9		
Father education level			0.884	
Incomplete high school	26.3	29.5		k = 0.916 (96.1%)
High school	18.3	20.0		
Technical education	11.3	9.5		
University degree	44.1	41.0		
Father current occupational status			<0.001	
Management	25.0	8.1		k = 0.35 (79.1%)
Service	15.1	3.0		

TABLE 3. (continued).

Adolescents	Q1 (n = 214), %	Q2 (n = 143), %	Kappa coefficient (% agreement)
Sales/office	9.4	4.0	
Blue-collar	47.9	83.8	
Unemployed	2.6	1.0	
Family income (\$)			<0.001
≤2 MW	34.5	58.7	k = 0.296 (72.6%)
5 to 10 MW	31.5	11.9	
10 to 20 MW	11.3	15.4	
≥21 MW	7.4	1.4	
Don't know/will not inform	15.3	12.6	

P1: χ^2 goodness of fit test for comparison between the sample in the first and second questionnaire application. Significance differences (P<0.05) between Q1 and Q2 are in bold.
MW, minimal wage; Q1, questionnaire first application; Q2, questionnaire second application.

(Table 3 and Table 4). In adolescents, the loss was higher than that in children, but we were able to maintain a sample size that allowed us to estimate the reliability of the questionnaires. Regardless of the socioeconomic indicators, the reliability coefficient results of the children (range 0.733-1.00) were better than those of the adolescents (range 0.193-0.964).

The Supporting Information Table S1 shows Pearson’s correlation coefficients between the continuous score of the domestic appliance and the household income and parental education level. In both age groups, the total score showed a moderate to strong construct validity coefficient with the parental education level and a moderate construct validity coefficient with family income. We performed an internal consistency analysis, and the results showed moderate-to-strong consistency (Supporting Information Table S2) for both questionnaires in both age groups.

Discussion

We demonstrated differences in the reliability of different environmental and SES indicators across pediatric populations. Especially in children, we observed that the reliability coefficient was fair, and in adolescents, the reliability coefficient was moderate. The parental education level was strongly associated with the domestic appliances component in both age groups. We stratified our results by age groups because of differences in the data collection methodologies. These differences in results among age groups might be due to the fact that adolescents are more attentive to environmental issues because they are the ones who practice the activities.

The structure of the perceived neighborhood environment scale consisted of two factors, which was different than the original instrument. Our environmental questionnaire scale showed acceptable reliability, and it was in line with results previously reported by Barbosa-Filho (23). This reinforces the importance of

evaluating other environmental contexts in different populations (as in the case of SAYCARE study), which may be related to health indicators among young people, such as the household environment (24).

Epidemiological research and inequality studies normally use asset (or wealth) indices, education levels, and/or family income, considering their easy and stable classification of the socioeconomic situation, but the magnitude of the reliability and/or validity has varied according to the SES indicator used (2,25). In general, these variables are chosen arbitrarily because the selection of the component variables of these indicators lacks a “best practice manual” to improve their discrimination capacity and their stability over time. Another important aspect was recently shown by Ewerling and Barros (26), which was that the evaluation of socioeconomic indicators varies according to the year of the survey. This study shows that the best assets are those that can discriminate between households and have a high correlation with parental education level or with the household income.

According to our results (>60% agreement), the SAYCARE questionnaires are recommended to collect reliable SES status and environmental data for youth population from low- and middle-income countries, and face-to-face interviews would probably improve the data quality.

The strengths of our analysis include a moderately large, socioeconomically diverse South American pediatric population, which may increase the external reliability and/or validity of our findings. Among the study’s limitations, it is well known that adolescents’ answers are measured with error, and misclassification of these variables may have distorted our measures of association. In addition, sample sizes varied across age groups, with implications for power in detecting significant racial and/or ethnic patterns and interactions. Notwithstanding these limitations, our study results suggest that the reliability of environmental and SES markers are moderate and may not be the same across age groups. The study provides a useful and easily applicable additional indicator to measure these important determinants of cardiovascular health. **O**

TABLE 4 Reliability coefficients for domestic appliances questions (each question) in both age groups: SAYCARE study

Children	Q1 (n = 242), %	Q2 (n = 226), %	P1	Kappa coefficient (% agreement)	Adolescents	Q1 (n = 214), %	Q2 (n = 143), %	P1	Kappa coefficient (% agreement)
Number of TVs at home			0.235		Number of TVs at home			<0.001	
0	6.6	0.0		k = 0.868 (95.7%)	0	6.1	43.6		k = 0.177 (68.8%)
1	40.5	47.6			1	32.7	26.1		
2	34.5	35.7			2	29.4	10.6		
≥3	18.4	16.7			3	31.9	19.7		
You have DVDs at home			0.825		You have DVDs at home			<0.001	
No	17.0	22.5		k = 0.392 (28.7%)	No	27.0	57.0		k = 0.104 (59.9%)
Yes	60.0	52.5			Yes	72.0	43.0		
You have computers at home			0.037		You have computers at home			0.187	
No	31.2	35.0		k = 0.662 (50.3%)	No	61.7	55.4		k = 0.425 (78.6%)
Yes	38.8	17.5			Yes	38.3	44.6		
You have video games at home			0.918		You have video games at home			0.99	
No	73.5	70.3		k = 0.23 (26.3%)	No	1.9	1.3		k = 0.62 (69.1%)
Yes	22.1	24.3			Yes	98.1	98.7		
You have telephones (fixed) at home			0.832		You have telephones (fixed) at home			<0.001	
No	24.2	20.5		k = 0.925 (97.5%)	No	7.1	58.8		k = 0.193 (70.0%)
Yes	75.8	79.5			Yes	92.9	41.2		
Your child has individual bedroom			0.026		You have individual bedroom			<0.001	
No	40.0	18.7		k = 0.688 (84.9%)	No	34.3	53.5		k = 0.517 (75.8%)
Yes	60.0	81.2			Yes	65.7	46.5		
Number of cars at home			0.11		Number of cars at home			0.056	
0	31.7	26.2		k = 0.97 (98.8%)	0	60.9	80.0		k = 0.434 (87.5%)
1	38.7	47.6			1	25.5	9.2		
≥2	29.1	26.2			2	13.7	10.8		
You have internet at home			0.266		You have internet at home			0.031	
No	13.5	5.3		k = 0.782 (94.3%)	No	56.4	70.1		k = 0.387 (79.8%)
Yes	86.5	94.7			Yes	43.6	29.9		
Housekeeper			0.729		Housekeeper			<0.001	
No	55.4	51.2		k = 0.12 (21.5%)	No	58.9	86.3		k = 0.117 (68.6%)
Yes	44.6	48.8			Yes	41.1	13.7		

TABLE 4. (continued).

Children	Q1 (n = 242), %			Q2 (n = 226), %			P1			Kappa coefficient (% agreement)		
	Q1	Q2	P1	Q1	Q2	P1	Q1	Q2	P1	Q1	Q2	P1
Number of toilets at home			0.233			0.233						
0	17.8	18.4		17.8	18.4		14.0	18.4	<.001	14.0	18.4	<.001
1	37.2	26.3		37.2	26.3		76.5	56.7		76.5	56.7	
2	26.7	39.5		26.7	39.5		6.1	18.9		6.1	18.9	
3	15.0	7.9		15.0	7.9		2.7	4.5		2.7	4.5	
≥4	3.3	7.9		3.3	7.9		0.8	1.5		0.8	1.5	
												k = 0.594 (92.5%)

P1: χ^2 goodness of fit test for comparison between the sample in the first and second questionnaire application. Significance differences ($P < 0.05$) between Q1 and Q2 are in bold. Q1, questionnaire first application; Q2, questionnaire second application. MW, minimal wage.

Acknowledgments

All authors acknowledge each school dean/chair and the children, adolescents, and their respective parents for their voluntary participation in the SAYCARE study. We also acknowledge Mr. Andrew Mello Silva for management of the SAYCARE database. In Colombia, we acknowledge the undergraduate students Carolina Alzate Echeverri, Luisa Fernanda Arroyave Zuleta, Sarah Lucía Ortiz Calderón, and Paola Zapata for helping collect information and for data entry.

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