

# Analysis of early childhood development according to the nurturing care framework, by wealth quintiles and regions of Argentina (2019–2020)

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## ABSTRACT

**Introduction.** One of the main challenges for early childhood is to provide adequate care to reduce inequalities and promote an early childhood development (ECD). The objective of this study was to describe the relationship between the care provided to children aged 3 and 4 years according to the nurturing care (NC) framework and their ECD levels in Argentina, considering the region and wealth quintiles.

**Population and methods.** This was an observational, cross-sectional analytical study based on data from the National Survey of Children and Adolescents (MICS) of Argentina 2019–2020. A total of 11 NC indicators were selected; the level of ECD was estimated using the Early Childhood Development Index (ECDI) for a descriptive, statistical analysis.

**Results.** In 2638 children aged 3 and 4 years assessed, the average access to care indicators was 79.1%; access was high for 7 indicators (between 84.2% and 97.9%) and middle for 4 indicators (between 46.9% and 65.1%); the highest and lowest frequency corresponded to having a birth certificate (97.9%) and health insurance coverage (46.9%), respectively. Adequate ECDI levels were observed in 87.9%. Results show differences by wealth quintile and region.

**Conclusions.** The results evidence inequalities in terms of access to care and an adequate ECD of children aged 3 and 4 years from urban areas of Argentina, depending on the region where they live and their household wealth level.

**Keywords:** Argentina; child care; child development; child protection; child poverty.

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## INTRODUCTION

In 2016, the global Nurturing Care framework was proposed by *The Lancet* Early Childhood Development Series<sup>1,2</sup> and was then adopted and formalized by the World Health Organization, the UNICEF, and the World Bank in 2018.<sup>3</sup> The NC framework includes 5 domains: health, nutrition, responsive care, learning opportunities, and safety and protection. It is used to monitor and assess the conditions created by policies, programs, public services, and the community,<sup>3</sup> and the influence of such conditions on early childhood development (ECD).

According to the most recent available information, based on the UNICEF Multiple Indicator Cluster Surveys (MICS)<sup>4</sup> and NC framework indicators, 65.8% of children aged 3 and 4 years in Argentina receive minimal nurturing care<sup>5</sup> and 86.2% has an adequate ECD level as per the ECDI.

In spite of such measurements, there is little information about the correlation between NC and ECD. Although ECD measurements in Argentina are based on a history of surveys, investigations, and studies conducted by international organizations,<sup>6-8</sup> there is not enough information available about child care at a population level to make a diagnosis and establish interventions in the clinical setting.

Many of the policies and actions for early childhood prevention and care lack evidence, together with deficient monitoring and assessment policies or systematization of information from the sectors involved.<sup>9,10</sup> In particular, in Argentina, a large part of the child population is born and lives in a situation of monetary poverty and is the most affected age group in the past 3 decades. Poverty figures for this group reach between 38.3% and 78.8%, while for the general population they range between 24.4% and 63.7%.<sup>12</sup>

The objective of this study was to describe the relationship between the care received by children aged 3 and 4 years, as per the NC framework, and an adequate ECD level in Argentina in 2019–2020, considering the differences among the regions where they live and their household wealth quintile.

## POPULATION AND METHODS

Observational, cross-sectional, analytical study. The database from the MICS conducted in Argentina in 2019–2020 was used as a secondary source. That MICS took a multistage probability sample of urban areas from the 6 Argentine

regions. The database of the questionnaire for children younger than 5 years ( $n = 6343$  children) and the household questionnaire, which collects demographic information, were used.<sup>4</sup> This analysis included children aged 3 and 4 years without functional difficulties and who do not require additional and specific care.

Variables were selected according to the recommendations of the guide proposed by the NC framework, which presents a set of indicators based on monitoring and follow-up of the Sustainable Development Goals (SDGs) for the NC domain.<sup>3</sup> Criteria and indicators used to define the NC index, based on the MICS variable and the Demographic and Health Surveys (DHS) program<sup>5</sup> were also considered. Eleven indicators were selected for the 5 NC domains; at least 2 indicators per domain were included (*Table 1*). Each indicator was categorized according to the NC index scores from the analysis conducted by McCoy, D. et al.<sup>5</sup> in 137 countries. Considering that countries aim to expand this care to universal access (100% of the child population), for the purposes of this study, “high” access was defined as indicators between 70% and 100%; “middle”, between 40% and 69%; and “low”, from 0% to 39%.

To determine ECD levels, the ECDI indicator was used following the MICS specifications;<sup>4</sup> a global ECDI was developed for each child in the sample according to the 10 milestones in the 4 domains (*Table 2*). The region and wealth quintile variables were obtained from the database; quintile 1 (Q1) was considered the poorest and quintile 5 (Q5), the richest. Six regions were established: Metropolitan Area of Buenos Aires (AMBA), Pampa, Cuyo, Northwest (NOA), Northeast (NEA), and Patagonia.

A descriptive analysis was done using the Microsoft Office Excel 2007 and the SPSS v20 software considering the weighted database. First of all, the overall frequencies were analyzed for each study variable and then differences by wealth quintile and region were assessed in children with an adequate ECD.

## Ethical considerations

This study was conducted in accordance with the Ethics Protocol of the UNICEF MICS.<sup>4</sup> Its open access use as secondary source (<https://mics.unicef.org/surveys>) did not require the review by an ethics committee.

**TABLE 1. Indicators and variables selected by domain of the nurturing care framework**

Domain	Indicator	Definition
<b>1. Adequate health</b>		
	1 Health insurance coverage	Percentage of households with at least one family member with health insurance coverage through a labor union, the Pensioners Welfare Institute (PAMI), or a private company
	2 Health checkup in the past year	Percentage of children who had a health checkup in the past 12 months
<b>2. Adequate nutrition</b>		
	3 Absence of growth stunting	Percentage of children with a Z-score for height-for-age $\geq -2$ standard deviations (SDs) from the median child growth standard proposed by the WHO. Values $< -6$ and $> 6$ SDs were excluded.
	4 Absence of wasting or overweight	Percentage of children with a Z-score for weight-for-height $> -2$ and $< +2$ SDs from the median child growth standard proposed by the WHO, wasting, or overweight, respectively. Values $< -5$ and $> 5$ SDs were excluded.
<b>3. Responsive care</b>		
	5 Early stimulation and responsive care	Percentage of children with whom 4 or more activities to promote early stimulation and responsive care have been carried out in the past 3 days, with (a) any adult household member (b) their father (c) their mother
	6 Adequate supervision	Percentage of children who were not left alone or under the supervision of another child younger than 10 years old for more than 1 hour at least once in the past week
<b>4. Early learning opportunities</b>		
	7 Availability of children books ( $\geq 3$ )	Percentage of children who have 3 or more children books
	8 Availability of toys ( $\geq 2$ types)	Percentage of children who play with 2 or more types of toys
	9 Attendance to early childhood education facility	Percentage of children who attend an early childhood education facility
<b>5. Safety and protection</b>		
	10 Absence of corporal punishment	Percentage of children who did not suffered aggression or corporal punishment from their caregivers in the past month
	11 Birth certificate	Percentage of children whose birth was recorded before a vital statistics agency

SD: standard deviation; WHO: World Health Organization.

Source: Developed by the authors based on section 3 "Definitions and indicators," pp. 20–32<sup>4</sup> and other frameworks adopted.<sup>3,5</sup>

## RESULTS

The analyzed sample consisted of 2638 children aged 3 and 4 years. Of them, 54.1% of their households were in Q1 and Q2 of wealth and 44.9% of their mothers had not completed secondary education (Table 3).

The average access to the 11 NC indicators

was 79.1%; 7 indicators were in the high access category (between 84.2% and 97.9%) and 4, in the middle access category (between 46.9% and 65.1%). Having a birth certificate (97.9%) and the availability of toys at home (95.7%) encompasses almost all children, whereas the absence of corporal punishment (56.1%) and having health

**TABLE 2. Criteria for the development of the early childhood development index (ECDI)**

Domain	Selected milestones expected in children between 3 and 4 years of age	Criterion to define adequate development
<b>Alphanumeric</b>	... the child identifies/names at least 10 letters of the alphabet ... the child reads at least 4 simple, popular words ... the child knows the name and recognizes the symbols of all the numbers from 1 to 10	≥ 2 milestones
<b>Physical</b>	... the child lifts a small object with 2 fingers, such as a stick or a stone off the ground ... the mother/caregiver does not mention that the child is sometimes too sick to play	≥ 1 milestone
<b>Learning</b>	... the child follows simple instructions about how to do something correctly ... the child is given something to do, if able to do it independently	≥ 1 milestone
<b>Socio-emotional</b>	... the child gets along well with other children ... the child does not kick, bite, or hit other children ... the child is not easily distracted	≥ 2 milestones
<b>Overall score</b>	<b>Number of domains whose references were defined as adequate</b>	≥ 3 domains

Source: Developed by the authors based on UNICEF - SIEMPRO, 2021, p. 157.

insurance coverage (46.9%) showed lower levels of access in medium coverage indicators. Adequate ECD levels were observed in 87.9% of children (Table 4).

When analyzed by region, the NOA shows a lower proportion of children with an adequate ECDI (81.1%), while the Pampa has the highest proportion. When analyzed by wealth quintile, 84.9% of households in Q1 have an adequate ECDI versus 87.8% in Q5 (Table 5).

The access by region as per each NC indicator shows that the average percentage of children with an adequate ECDI is lower in the NEA (72.7%) and the NOA (75.3%). In the NEA, it corresponds to health insurance coverage (35.0%, 95% CI: 28.8–41.2), attendance to day care center or kindergarten (44.4%, 95% CI: 38.1–51.0), availability of children books (47.0%, 95% CI: 40.7–53.6), access to early stimulation activities (79.8%, 95% CI: 74.1–84.6), and annual health checkup (81.6%, 95% CI: 76.1–86.1). In the NOA, it corresponds to the absence of overweight and wasting (83.6%, 95% CI: 79.1–87.3), adequate care under adult supervision (90.6%, 95% CI: 87.1–93.4), availability of toys at home (93.3%, 95% CI: 90.2–95.6), and absence of corporal punishment (44.8%, 95% CI: 39.4–50.1).

On the contrary, the highest access percentages are observed in Cuyo and Patagonia. In Cuyo, it corresponds to having

a birth certificate (99.4%, 95% CI: 97.4–99.9), absence of overweight and wasting (91.7%, 95% CI: 87.4–95.6), adequate care under adult supervision (96.5%, 95% CI: 93.1–98.6), absence of growth stunting (95.0%, 95% CI: 91.4–97.8), and annual health checkup (95.0%, 95% CI: 90.9–97.5). In Patagonia, it corresponds to availability of toys at home (97.6%, 95% CI: 93.1–99.2), health insurance coverage (59.1%, 95% CI: 50.1–68.0), early stimulation activities (88.6%, 95% CI: 81.7–93.4), and availability of children books (70.4%, 95% CI: 61.0–77.8) (Figure 1A).

When considering households by wealth quintile, the average access to NC indicators was 72.4% in Q1 versus 92.4% in Q5 (Figure 1B). Q1 showed the lowest values, including health insurance coverage (20.2%, 95% CI: 17.4–23.4), absence of growth stunting (84.6%, 95% CI: 81.8–87.1), early stimulation activities (77.3%, 95% CI: 74.2–80.2), availability of children books (46.9%, 95% CI: 43.3–50.4), absence of corporal punishment (48.7%, 95% CI: 45.1–52.2), and birth certificate (97.0%, 95% CI: 95.4–97.9). Children in Q5 show higher values across all indicators.

The widest gaps were observed in relation to health insurance coverage (Q1 20.0%, 95% CI: 17.4–23.4; Q5 86.8%, 95% CI: 82.9–90.1), availability of child books (Q1 46.9%, 95% CI: 43.3–50.4; Q5 95.2%, 95% CI: 92.5–95.1), absence of corporal punishment (Q1 48.7%, 95% CI: 45.1–52.2; Q5 75.2%, 95% CI: 70.3–79.6), and attendance to a

**TABLE 3. Sociodemographic characteristics of children aged 3 and 4 years from urban areas of Argentina 2019–2020**

Variable	Category	TOTAL		ECDI	
		N (n = 2638)	%	Adequate development (n = 2320)	Inadequate development (n = 318)
<b>Age</b>	3 years (36 to 47 months)	1297	49.2 (47.3–51.1)	84.6 (82.5–86.5)	15.4 (13.5–17.5)
	4 years (48 to 59 months)	1341	50.8 (48.9–52.7)	91.2 (89.6–92.6)	8.8 (7.4–10.4)
<b>Sex</b>	Male	1380	52.3 (50.4–54.2)	86.5 (84.6–88.2)	13.5 (11.8–15.4)
	Female	1258	47.7 (45.8–49.6)	89.5 (87.6–91.0)	10.5 (8.9–12.3)
<b>Region</b>	AMBA	856	32.4 (30.7–34.3)	87.7 (85.4–89.8)	12.3 (10.2–14.6)
	Pampa	868	32.9 (31.1–34.7)	91.0 (89.0–92.8)	9.0 (7.2–11.0)
	Cuyo	184	7.0 (6.0–8.0)	87.9 (82.8–92.1)	12.1 (7.9–17.2)
	NEA	238	9.0 (8.0–10.2)	89.9 (85.6–93.3)	10.1 (6.7–14.4)
	NOA	359	13.6 (12.3–15.0)	81.0 (76.8–84.9)	19.0 (15.1–23.2)
	Patagonia	133	5.0 (4.3–5.9)	84.6 (77.3–89.6)	15.4 (10.4–22.7)
<b>Wealth index</b>					
<b>quintiles</b>	Poorest (Q1)	828	31.4 (29.6–33.2)	84.9 (82.3–87.2)	15.1 (12.8–17.7)
	Second (Q2)	598	22.7 (21.1–24.3)	88.3 (85.5–90.7)	11.7 (9.3–14.5)
	Third (Q3)	503	19.1 (17.6–20.6)	89.2 (86.3–91.7)	10.8 (8.3–13.7)
	Fourth (Q4)	357	13.5 (12.3–14.9)	92.6 (89.7–95.1)	7.4 (4.9–10.3)
	Richest (Q5)	351	13.3 (12.0–14.6)	87.9 (84.3–91.1)	12.1 (9.1–16.0)
<b>Beneficiary of UCA</b>	Yes	1116	42.3 (40.4–44.2)	87.6 (85.5–89.4)	12.4 (10.6–14.5)
	No	1521	57.7 (55.8–59.5)	88.2 (86.5–89.8)	11.8 (10.2–13.5)
<b>Maximum level of education completed by the mother</b>	Up to incomplete secondary education	1184	44.9 (43.0–46.8)	83.2 (81.0–85.2)	16.8 (14.8–19.0)
	Complete secondary education/incomplete tertiary/university education	1078	40.9 (39.0–42.7)	91.3 (89.5–92.9)	8.7 (7.1–10.5)
	Complete tertiary/university education	367	13.9 (12.6–15.3)	93.1 (90.3–95.4)	6.9 (4.6–9.7)
<b>Maximum level of education completed by the head of household</b>	Up to incomplete secondary education	1410	53.4 (51.5–55.3)	84.3 (82.3–86.1)	15.7 (13.9–17.7)
	Complete secondary education/incomplete tertiary/university education	894	33.9 (32.1–35.7)	91.3 (89.3–93.0)	8.7 (7.0–10.7)
	Complete tertiary/university education	319	12.1 (10.9–13.4)	94.1 (91.0–96.3)	5.9 (3.7–9.0)
<b>Sex, head of household</b>	Male	1221	46.3 (44.4–48.2)	88.6 (86.7–90.2)	11.4 (9.8–13.3)
	Female	1418	53.7 (51.8–55.7)	87.4 (85.6–89.0)	12.6 (11.0–14.4)
<b>Head of household who is indigenous or descendant of indigenous peoples*</b>	Yes	156	5.9 (5.1–6.9)	88.6 (82.8–92.8)	11.4 (7.2–17.2)
	No	2405	91.2 (90.0–92.2)	87.8 (86.5–89.1)	12.2 (10.9–13.5)

AMBA: Metropolitan Area of Buenos Aires; NEA: Northeast region of Argentina; NOA: Northwest region of Argentina; UCA: universal child allowance.

Source: Developed by the authors based on data from MICS 2019–2020.

day care center or kindergarten (Q1 61.1%, 95% CI: 56.6–65.4; Q5 84.1%, 95% CI: 79.9–87.7). No significant differences were observed in relation to absence of overweight and wasting (Q1 87.2%, 95% CI: 84.5–89.5; Q5 89.0%, 95% CI: 85.0–92.3) and birth certificate (Q1 97.0%, 95% CI: 95.4–97.9; Q5 99.5%, 95% CI: 98.1–99.9).

## DISCUSSION

As a measure of general well-being,<sup>13</sup> the results indicate that children aged 3 and 4 years in urban areas in Argentina receive minimal nurturing care, mostly at high levels, and that, among those who reach adequate ECD levels, access is unequal according to the region where they live and their household wealth level.

**TABLE 4. Access to indicators of nurturing care framework in children aged 3 and 4 years by level of early childhood development for each nurturing care indicator in Argentina 2019–2020 (percentage and 95% confidence interval)**

Domain	Variable	Access by indicator. Total			ECDI by indicator		
		Category	n = 2638	% (95% CI)	Category of access	Adequate development (n = 2320)	Inadequate development (n = 318)
Health	Health insurance coverage	No	1395	52.9 (51.0–54.8)	Middle	87.1 (85.3–88.8)	12.9 (11.2–14.7)
		Yes	1238	46.9 (45.0–48.8)		88.8 (86.9–90.4)	11.2 (9.5–13.0)
	Health checkup in the past year	No	256	9.7 (8.6–10.9)	High	84.6 (80.0–88.8)	15.4 (11.2–20.0)
		Yes	2380	90.2 (89.0–91.3)		88.3 (87.0–89.6)	11.7 (10.4–13.0)
Nutrition	Absence of growth stunting	No	244	10.0 (8.8–11.2)	High	87.3 (82.7–91.0)	12.7 (9.0–17.3)
		Yes	2203	90.0 (88.8–91.2)		88.1 (86.8–89.5)	11.9 (10.5–13.2)
	Absence of overweight/wasting	No	367	15.2 (13.8–16.7)	High	93.2 (90.3–95.4)	6.8 (4.6–9.7)
		Yes	2044	84.8 (83.3–86.2)		87.6 (86.1–89.0)	12.4 (11.0–13.9)
Responsive care	Early stimulation activities	No	395	15.0 (13.7–16.4)	High	77.0 (72.9–81.1)	23.0 (19.1–27.4)
		Yes	2243	85.0 (83.6–86.3)		89.9 (88.5–91.0)	10.1 (8.9–11.4)
	Adequate care	No	162	6.2 (5.3–7.1)	High	87.7 (81.9–92.0)	12.3 (8.0–18.1)
		Yes	2476	93.8 (92.9–94.7)		88.0 (86.6–89.2)	12.0 (10.8–13.4)
Learning opportunities	Availability of children books (≥ 3)	No	920	34.9 (33.1–36.7)	Middle	82.2 (79.6–84.5)	17.8 (15.4–20.3)
		Yes	1718	65.1 (63.3–66.9)		91.0 (89.6–92.3)	9.0 (7.7–10.4)
	Availability of toys ≥ 2 types)	No	114	4.3 (3.6–5.1)	High	89.7 (83.9–94.8)	10.3 (5.9–17.1)
		Yes	2524	95.7 (94.9–96.4)		87.9 (86.5–89.1)	12.1 (10.9–13.5)
Attendance to day care center or kindergarten	No	933	35.4 (33.6–37.2)	Middle	84.7 (82.4–87.0)	15.3 (13.1–17.7)	
	Yes	1705	64.6 (62.8–66.4)		89.7 (88.2–91.1)	10.3 (8.9–11.8)	
Safety and protection	Absence of corporal punishment	No	1159	43.9 (42.0–45.8)	Middle	86.2 (84.2–88.2)	13.8 (11.8–15.8)
		Yes	1479	56.1 (54.2–58.0)		89.3 (87.6–90.8)	10.7 (9.2–12.4)
	Birth certificate	No	54	2.1 (1.6–2.6)	Middle	76.7 (65.4–87.2)	23.3 (14.2–36.6)
		Yes	2584	97.9 (97.4–98.4)		88.2 (86.9–89.4)	11.8 (10.6–13.1)

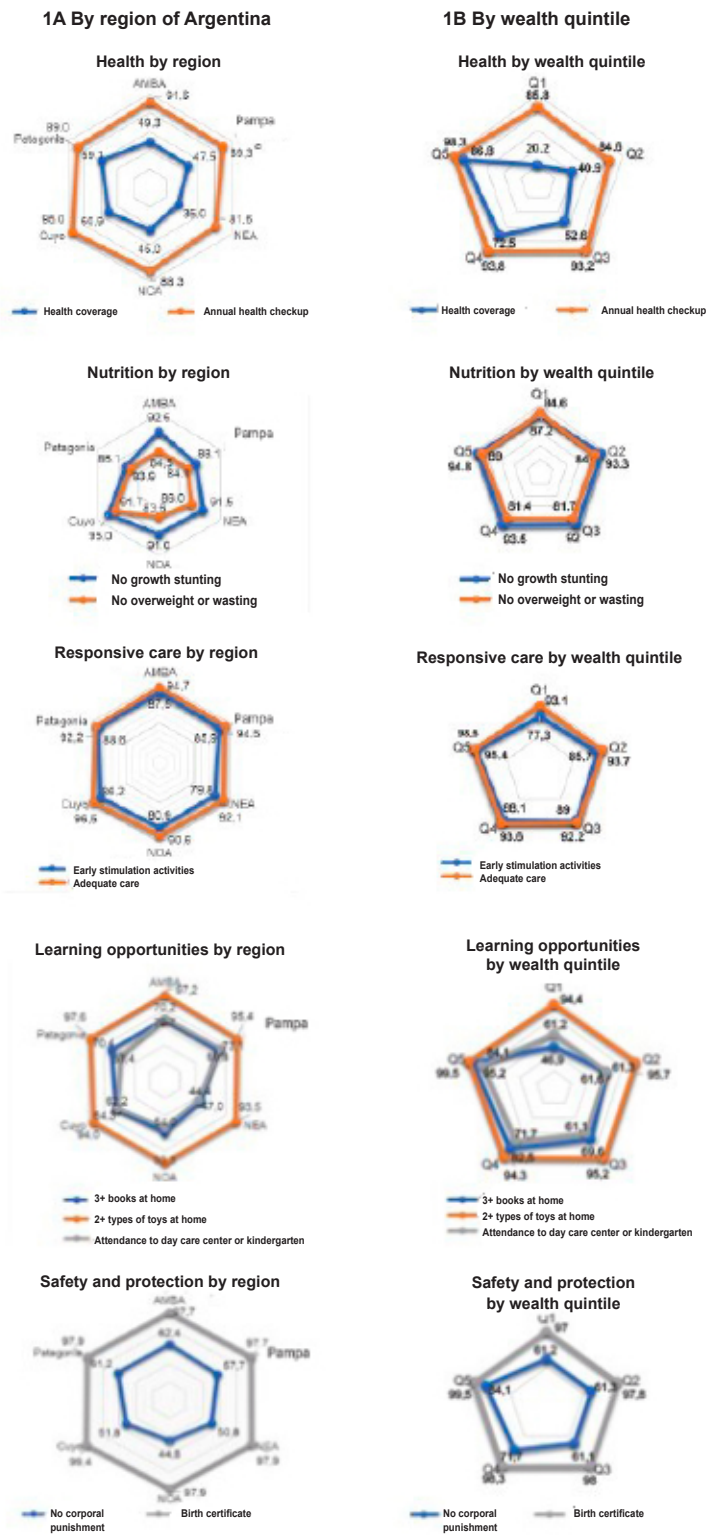
Source: Developed by the authors based on data from MICS 2019–2020. “High” (70–100%) and “middle” (40–69%) categories of access created based on NC indicator.<sup>4</sup>

**TABLE 5. Levels of early childhood development based on the Early Childhood Development Index (ECDI), by wealth quintile and region**

Wealth quintile index	Adequate development (n = 2320)		Inadequate development (n = 318)		Total (n = 2638)	
	Count	% (95% CI)	Count	% (95% CI)	Count	%
Poorest (Q1)	703	84.9 (82.3–87.2)	125	15.1 (12.8–17.7)	828	100.0
Second (Q2)	528	88.3 (85.5–90.7)	70	11.7 (9.3–14.5)	598	100.0
Third (Q3)	449	89.3 (86.3–91.7)	54	10.7 (8.3–13.7)	503	100.0
Fourth (Q4)	331	92.6 (89.7–95.1)	26	7.3 (4.9–10.3)	357	100.0
Richest (Q5)	309	87.8 (84.3–91.1)	43	12.2 (9.1–16.0)	352	100.0
<b>Regions of Argentina</b>						
Metropolitan Area of Buenos Aires (AMBA)	751	87.7 (85.4–89.8)	105	12.3 (10.2–14.6)	856	100.0
Pampa	790	91.0 (89.0–92.8)	78	9.0 (7.2–11.0)	868	100.0
Cuyo	162	88.0 (82.8–91.1)	22	12.0 (7.9–17.2)	184	100.0
Northeast (NEA)	214	89.9 (85.6–93.3)	24	10.1 (6.7–14.4)	238	100.0
Northeast (NOA)	291	81.1 (76.8–84.9)	68	18.9 (15.1–23.2)	359	100.0
Patagonia	112	84.2 (77.3–89.6)	21	15.8 (10.4–22.7)	133	100.0

Source: Developed by the authors based on data from MICS 2019–2020.

**FIGURE 1. Percentage of access to the nurturing care framework indicators in children aged 3 and 4 years with an adequate early childhood development index (ECDI) by region of Argentina and wealth quintiles 2019–2020**



AMBA: Metropolitan Area of Buenos Aires; NEA: Northeast region of Argentina; NOA: Northwest region of Argentina. Source: Developed by the authors based on data from MICS 2019–2020.

Despite the advances in access, the results show that the equity intended by the expansion of early childhood services in recent decades is not enough for the most vulnerable groups. According to the interpretation of the results shown in *Table 3*, it is necessary to consider, on the one side, population density, as 65.4% of children live in the Pampa region (32.9%) and the AMBA (32.4%), while 22.6% live in the north, between the NOA (13.6%) and the NEA (9.0%). And, on the other side, the relative proportion of the poorest quintiles (Q1–Q2) in each region: 86.3% of children in the NEA and 60.4% in the NOA (most of the child population), 54.3% in the Pampa, and 51.1% in the AMBA (half of the child population) in Q1 and Q2.<sup>4</sup> Such proportions reflect 2 distinct problems in each region. The Pampa and the AMBA are characterized by unequal access to care and an adequate ECDI in 50% of the households in Q1 and Q2. That is to say, effective and localized sectoral efforts are required in half of the child population. In the NEA and NOA, as structural poverty prevails in most of the child population, a lower access to care in both regions affects proportionally more children, and the population with an adequate ECDI is lower in the NOA.

Differences according to wealth quintiles show a positive trend in access to care and ECDI between Q1 and Q4, while the higher level of access in Q5 does not result in the maintenance of the ECD trend, despite evidence validating the relationship,<sup>14–16</sup> which requires further investigation in future studies. In the poorest quintiles, the indicators show greater dependence on caregivers at home as the main setting for children in a poverty situation.<sup>17</sup> A lower attendance to day care centers and kindergartens, a greater presence of corporal punishment, and less availability of adequate materials and activities at home are challenges in the knowledge of this environment and the coverage of policies and programs.

Regarding anthropometric status, 15.2% of the children had an inadequate weight, mainly overweight (13.0%). This is a widespread problem at a regional and global level,<sup>18</sup> and does not vary according to the wealth quintile, which would indicate a systematic and structural quality problem, not an access problem.

The evidence from this study seeks to provide feedback and strengthen decision-making, with actions that promote better quality access to health and nutrition, early education, promotion

of positive parenting and learning opportunities, in order to achieve full child development.

Five years after its launch, the NC framework has been adapted and operationalized<sup>19</sup> to obtain an approximation between conditions created by parenting policies, the level of access, and its contribution to ECD. In this context, multidimensional NC indexes compare care between low- and middle-income countries<sup>5</sup> or between municipalities, such as the one used in investigations conducted in Brazil, which selected 31 indicators to develop the Index of Early Childhood Friendly Municipality (Índice Município Amigo da Primeira Infância, IMAPI) to monitor 5570 municipalities and diagnose regional inequalities<sup>20</sup> similar to those found in this study. Also, a study analyzed the history of the Chile Crece Contigo program<sup>21</sup> in Chile and another study examined the concern for corporal punishment in children based on the de Cero a Siempre strategy in Colombia.<sup>22</sup> Other recent studies analyzed the correspondence between NC indicators and child development levels in Brazil,<sup>23</sup> whose results converged with the indicators selected for this study. In this line, the results provide descriptive constructs that contribute to developing consensus on how the selected indicators impact on ECD domains<sup>24</sup> in children in Argentina.

Among the limitations of the study, it is worth noting that, in Argentina, there is little evidence that provides characteristics and nuances of the frequency, quality, or responsiveness of the care received by children<sup>5</sup> in specific interventions or in the validation of indicators and instruments. These gaps, found in other contexts and consensuses,<sup>5</sup> limit the interpretation of results in the assessment of ECD, which is little accompanied by systematized data from early childhood service providers.<sup>13,15</sup> For this reason, the results should be interpreted according to the specific indicators selected and the cut-off points used.<sup>5</sup> A second limitation of this study is that the sample covers only urban areas, with indicators that may have exacerbated by the lockdown established during the COVID-19 pandemic. The need to include provincial and municipal data contributes to the knowledge of policies that are poorly related across the sectors and levels of government.

The strengths of this study are that the sample was representative at a national level; results have been recently collected; indicators were relevant, territorially located, and multisectoral,



according to the best available evidence of the NC model. It is also worth mentioning that there is a need to design and implement multisectoral policies, with monitoring, assessment, and systems established as per Law 27611 for the Comprehensive Health Care and Control of Pregnancy and Early Childhood.<sup>25</sup>

## CONCLUSIONS

According to the results, there are inequalities in terms of access to care and an adequate ECD of children aged 3 and 4 years from urban areas of Argentina, depending on the region where they live and their household wealth level. Access to care is unequal among regions, especially in the NEA and NOA, but it is not associated with a lower ECDI. The impact of socio-economic level partially explains the lack of relation in certain regions, but future studies are required. ■

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