

N° 548

MOTHERLY CARE:
THE IMPACTS OF
EXITING A CHILDCARE
PROGRAM ON CHILD
AND MATERNAL HEALTH

Chris M. Boyd, Norma Correa,
Angelo Cozzubo and José María Rentería

DOCUMENTO DE TRABAJO N° 548

**Motherly Care: The impacts of exiting a childcare program on
child and maternal health**

Chris M. Boyd, Norma Correa, Ángelo Cozzubo and José María Rentería

Setiembre, 2025



PUCP

**Departamento
Académico de Economía**

DOCUMENTO DE TRABAJO 548

<http://doi.org/10.18800/2079-8474.0548>

Motherly Care: The impacts of exiting a childcare program on child and maternal health
Documento de Trabajo 548

@ Chris M. Boyd, Norma Correa, Ángelo Cozzubo and José María Rentería

Editado:

© Departamento de Economía – Pontificia Universidad Católica del Perú

Av. Universitaria 1801, Lima 32 – Perú.

Teléfono: (51-1) 626-2000 anexos 4950 - 4951

econo@pucp.edu.pe

<https://departamento-economia.pucp.edu.pe/publicaciones/documentos>

Encargado de la Serie: Gabriel Rodríguez

Departamento de Economía – Pontificia Universidad Católica del Perú

gabriel.rodriguez@pucp.edu.pe

Primera edición – Setiembre, 2025

ISSN 2079-8474 (En línea)

Motherly Care: The impacts of exiting a childcare program on child and maternal health

Chris M. Boyd*

Norma Correa†

Ángelo Cozzubo‡

José María Rentería§

Abstract

We investigate the unintended impacts of exiting Peru’s Cuna Más public childcare program on child and maternal health. With increased public childcare use in developing countries, understanding the effects of program exit is critical. We use Cuna Más’ strict age-based graduation rule to identify causal impacts, leveraging comprehensive data from the Demographic and Family Health Survey for the period 2015-2019. Our results suggest that mothers prioritize their children’s health over their own upon program exit. While maternal mental health shows a notable decline, children’s health remains unaffected. These results have important policy implications, highlighting the need for post-program transitional support to mitigate hidden costs for mothers and enhance the positive outcomes children gain during program participation.

Keywords: Early childhood interventions, childcare, child development.

JEL classification: I12; I21; J13; J24.

*Department of Economics, Towson University, cboydleon@towson.edu.

†Department of Social Sciences, PUCP, ncorrea@pucp.edu.pe.

‡Joint Program in Survey Methodology, University of Maryland at College Park; and Department of Economics, PUCP, angelo.cozzubo@pucp.edu.pe.

§Department of Economics, PUCP, jmrenteria@pucp.edu.pe.

We thank participants for their valuable comments at the Annual Meeting on Research, Innovation and Creation (PUCP, September 26, 2024), the Eastern Economic Association Conference (NYC, March 21-23, 2025), the 3rd Annual Atlanta Workshop on Public Policy and Child Well-Being PPCW (Atlanta, March 27-28, 2025), the Towson International Development Economics Symposium (Towson University, April 4, 2025), the International Conference in Economics, Econometrics, and Finance (NJCU, June 4, 2025), and the Fourth Global Carework Summit (Duke University, June 6, 2025). We also thank Ana Paula Méndez, José Mendoza, Sarita Rivera, and Jonatan Amaya for their excellent research assistance at different stages. We gratefully acknowledge financial support from VRI-PUCP (grant N^o 2022-A-0069/PI0921).

ÚLTIMAS PUBLICACIONES DE LOS PROFESORES DEL DEPARTAMENTO DE ECONOMÍA

▪ Libros

Waldo Mendoza

2025 *Microeconomía y macroeconomía: una introducción*. Lima, Fondo Editorial PUCP.

Jorge Rojas

2024 *Lecciones de economía internacional: teoría pura*. Lima, Fondo Editorial PUCP.

Gonzalo Ruiz Díaz y Sergio Sifuentes Castañeda

2024 *Análisis de impacto regulatorio, ensayos reunidos*. Lima, Fondo Editorial PUCP.

Félix Jiménez, José Oscátegui y Marco Arroyo

2024 *Perú 1990-2021: La causa del "milagro" económico*. Lima, Fondo Editorial PUCP.

Alan Fairlie Reinoso y Ariana Figueroa

2024 *Programas de posgrado en crecimiento verde y desarrollo sostenible en América Latina: una aproximación comparativa*. Lima, INTE PUCP.

Félix Jiménez

2024 *La economía peruana del periodo 1950-2020*. Lima, Fondo Editorial PUCP.

Roxana Barrantes y José I. Távara (editores)

2023 *Perspectivas sobre desarrollo y territorio en el nuevo contexto. Homenaje a Efraín Gonzales de Olarte*. Lima, Fondo Editorial PUCP.

Efraín Gonzales de Olarte

2023 *La descentralización pasmada. Desconcentración y desarrollo regional en el Perú 2003-2020*. Lima, Fondo Editorial PUCP.

Adolfo Figueroa

2023 *The Quality of Society, Volume III. Essays on the Unified Theory of Capitalism*.
New York, Palgrave Macmillan

Efraín Gonzales de Olarte

2023 *El modelo de Washington, el neoliberalismo y el desarrollo económico. El caso peruano 1990-2020*. Lima, Fondo Editorial PUCP.

Máximo Vega Centeno.

2023 *Perú: desarrollo, naturaleza y urgencias Una mirada desde la economía y el desarrollo humano*. Lima, Fondo Editorial PUCP.

Waldo Mendoza

2023 *Constitución y crecimiento económico: Perú 1993-2021*. Lima, Fondo Editorial PUCP.

Oscar Dancourt y Waldo Mendoza (Eds.)

2023 *Ensayos macroeconómicos en honor a Félix Jiménez*. Lima, Fondo Editorial PUCP.

Carlos Contreras Carranza (ed.)

2022 *Historia económica del Perú central. Ventajas y desafíos de estar cerca de la capital*.
Lima, Banco Central de Reserva del Perú e Instituto de Estudios Peruanos.

Alejandro Lugon

2022 *Equilibrio, eficiencia e imperfecciones del mercado*. Lima, Fondo Editorial PUCP.

Waldo Mendoza Bellido

2022 *Cómo investigan los economistas. Guía para elaborar y desarrollar un proyecto de investigación. Segunda edición aumentada*. Lima, Fondo Editorial PUCP.

Elena Álvarez (Editor)

2022 *Agricultura y desarrollo rural en el Perú: homenaje a José María Caballero*. Lima, Departamento de Economía PUCP.

Aleida Azamar Alonso, José Carlos Silva Macher y Federico Zuberger (Editores)

2022 *Economía ecológica latinoamericana*. Buenos Aires, México. CLACSO, Siglo XXI Editores.

Efraín Gonzales de Olarte

2021 *Economía regional y urbana. El espacio importa*. Lima, Fondo Editorial PUCP.

Alfredo Dammert Lira

2021 *Economía minera*. Lima, Fondo Editorial PUCP.

Adolfo Figueroa

2021 *The Quality of Society, Volume II – Essays on the Unified Theory of Capitalism*. New York, Palgrave Macmillan.

Carlos Contreras Carranza (Editor)

2021 *La Economía como Ciencia Social en el Perú. Cincuenta años de estudios económicos en la Pontificia Universidad Católica del Perú*. Lima, Departamento de Economía PUCP.

José Carlos Orihuela y César Contreras

2021 *Amazonía en cifras: Recursos naturales, cambio climático y desigualdades*. Lima, OXFAM.

Alan Fairlie

2021 *Hacia una estrategia de desarrollo sostenible para el Perú del Bicentenario*. Arequipa, Editorial UNSA.

Waldo Mendoza e Yuliño Anastacio

2021 *La historia fiscal del Perú: 1980-2020. Colapso, estabilización, consolidación y el golpe de la COVID-19*. Lima, Fondo Editorial PUCP.

Cecilia Garavito

2020 *Microeconomía: Consumidores, productores y estructuras de mercado. Segunda edición*. Lima, Fondo Editorial de la Pontificia Universidad Católica del Perú.

Adolfo Figueroa

2019 *The Quality of Society Essays on the Unified Theory of Capitalism*. New York. Palgrave MacMillan.

Carlos Contreras y Stephan Gruber (Eds.)

2019 *Historia del Pensamiento Económico en el Perú. Antología y selección de textos*. Lima, Facultad de Ciencias Sociales PUCP.

Barreix, Alberto Daniel; Corrales, Luis Fernando; Benitez, Juan Carlos; Garcimartín, Carlos; Ardanaz, Martín; Díaz, Santiago; Cerda, Rodrigo; Larraín B., Felipe; Revilla, Ernesto; Acevedo, Carlos; Peña, Santiago; Agüero, Emmanuel; Mendoza Bellido, Waldo; Escobar Arango y Andrés.

2019 *Reglas fiscales resilientes en América Latina*. Washington, BID.

José D. Gallardo Ku

2019 *Notas de teoría para para la incertidumbre*. Lima, Fondo Editorial de la Pontificia Universidad Católica del Perú.

Úrsula Aldana, Jhonatan Clausen, Angelo Cozzubo, Carolina Trivelli, Carlos Urrutia y Johanna Yancari

2018 *Desigualdad y pobreza en un contexto de crecimiento económico*. Lima, Instituto de Estudios Peruanos.

Séverine Deneulin, Jhonatan Clausen y Arellí Valencia (Eds.)

2018 *Introducción al enfoque de las capacidades: Aportes para el Desarrollo Humano en América Latina*. Flacso Argentina y Editorial Manantial. Fondo Editorial de la Pontificia Universidad Católica del Perú.

Mario Dammil, Oscar Dancourt y Roberto Frenkel (Eds.)

2018 *Dilemas de las políticas cambiarias y monetarias en América Latina*. Lima, Fondo Editorial de la Pontificia Universidad Católica del Perú.

▪ *Documentos de trabajo*

- No. 547 "No Early Advantage? The Effects of Preschool Entry-Age Policies on Child Development in Peru". Chris M. Boyd and José María Rentería. Setiembre 2025.
- No. 546 "Informalidad, productividades e ingresos en el Perú: Análisis sectorial". Efraín Gonzales de Olarte. Junio 2025.
- No. 545 "Productividad y costos operativos en las instituciones microfinancieras peruanas reguladas". Giovanna Aguilar y Jhonatan Portilla. Mayo 2025.
- No. 544 "The Inflation Uncertainty-Inflation Relationship: Time Variation Across Latin America and the G7". Mauricio Alvarado and Gabriel Rodríguez. Marzo 2025.
- No. 543 "The Role of Technology Extension and Transfer in Firms' Innovation and Productivity in Peru". Miguel Ortiz and Juan Palomino. Marzo 2025.
- No. 542 "How to develop the capital market?: make countries fitness". Julio Villavicencio. Febrero 2025.
- No. 541 "Public Debt Dynamics and Sustainability: A Framework for Analysis". Waldo Mendoza, Marco Razzo and Rafael Vilca. Diciembre 2024.
- No. 540 "Efecto de los bonos sobre el consumo de bienes durante la crisis económica de la pandemia de Covid 19". Luis García. Diciembre 2024.
- No. 539 "Regime-Switching, Stochastic Volatility, Fiscal Policy Shocks and Macroeconomic Fluctuations in Peru". Gabriel Rodríguez and Joseph Santisteban. Octubre 2024.
- No. 538 "Flotación cambiaria, precio materias primas y fluctuaciones macroeconómicas: un modelo para el Perú". Waldo Mendoza y Rafael Vilca Romero. Setiembre 2024.
- No. 537 "Regime-Switching, Stochastic Volatility and Impacts of Monetary Policy Shocks on Macroeconomic Fluctuations in Peru". Paola Alvarado Silva, Moisés Cáceres Quispe and Gabriel Rodríguez. Agosto 2024
- No. 536 "La dinámica de la inversión en una economía primario exportadora: un modelo". Waldo Mendoza. Julio 2024.
- No. 535 "Perú 1895-2019: Continuidad de la Dependencia Externa y Desindustrialización Prematura". Félix Jiménez. Junio 2024.
- No. 534 "'Bonos': Lecciones de las transferencias monetarias no condicionadas durante la pandemia de COVID-19 en Perú". Pedro Francke y Josue Benites. Abril 2024.
- No. 533 "Modeling the Trend, Persistence, and Volatility of Inflation in Pacific Alliance Countries: An Empirical Application Using a Model with Inflation Bands". Gabriel Rodríguez and Luis Surco. Febrero 2024.
- No. 532 "Regional Financial Development and Micro and Small Enterprises in Peru". Jennifer de la Cruz. Enero 2024.
- No. 531 "Time-Varying Effects of Financial Uncertainty Shocks on Macroeconomic Fluctuations in Peru". Mauricio Alvarado and Gabriel Rodríguez. Enero 2024.

- No. 530 "Experiments on the Different Numbers of Bidders in Sequential Auctions". Gunay, Hikmet and Ricardo Huamán-Aguilar. Enero 2024.
- No. 529 "External Shocks and Economic Fluctuations in Peru: Empirical Evidence using Mixture Innovation TVP-VAR-SV Models". Brenda Guevara, Gabriel Rodríguez and Lorena Yamuca Salvatierra. Enero, 2024.
- No. 528 "COVID-19 y el mercado laboral de Lima Metropolitana y Callao: Un análisis de género". Tania Paredes. Noviembre, 2023.
- No. 527 "COVID-19 y el alza de la inseguridad alimentaria de los hogares rurales en Perú durante 2020-2021". Josue Benites y Pedro Francke. Noviembre, 2023.
- No. 526 "Globalización Neoliberal y Reordenamiento Geopolítico". Jorge Rojas. Octubre, 2023.
- No. 525 "The effects of social pensions on mortality among the extreme poor elderly". Jose A. Valderrama and Javier Olivera. Setiembre, 2023.
- No. 524 "Jane Haldimand Marcet: Escribir sobre economía política en el siglo XVIII". Cecilia Garavito. Setiembre, 2023.
- No. 523 "Impact of Monetary Policy Shocks in the Peruvian Economy Over Time". Flavio Pérez Rojo and Gabriel Rodríguez. Agosto, 2023.
- No. 522 "Perú 1990-2021: la causa del "milagro" económico ¿Constitución de 1993 o Superciclo de las materias primas?" Félix Jiménez, José Oscátegui y Marco Arroyo. Agosto, 2023.
- No. 521 "Envejeciendo desigualmente en América Latina". Javier Olivera. Julio, 2023.
- No. 520 "Choques externos en la economía peruana: un enfoque de ceros y signos en un modelo BVAR". Gustavo Ganiko y Álvaro Jiménez. Mayo, 2023
- No. 519 "Ley de Okun en Lima Metropolitana 1970 – 2021". Cecilia Garavito. Mayo, 2023
- No. 518 "Efectos 'Spillovers' (de derrame) del COVID-19 Sobre la Pobreza en el Perú: Un Diseño No Experimental de Control Sintético". Mario Tello. Febrero, 2023
- No. 517 "Indicadores comerciales de la Comunidad Andina 2002-2021: ¿Posible complementariedad o convergencia regional?" Alan Fairlie y Paula Paredes. Febrero, 2023.
- No. 516 "Evolution over Time of the Effects of Fiscal Shocks in the Peruvian Economy: Empirical Application Using TVP-VAR-SV Models". Alexander Meléndez Holguín and Gabriel Rodríguez. Enero, 2023.
- No. 515 "COVID-19 and Gender Differences in the Labor Market: Evidence from the Peruvian Economy". Giannina Vaccaro and Tania Paredes. Julio, 2022.
- No. 514 "Do institutions mitigate the uncertainty effect on sovereign credit ratings?" Nelson Ramírez-Rondán, Renato Rojas-Rojas and Julio A. Villavicencio. Julio 2022.
- No. 513 "Gender gap in pension savings: Evidence from Peru's individual capitalization system. Javier Olivera and Yadiraah Iparraguirre". Junio 2022.

- No. 512 “Poder de mercado, bienestar social y eficiencia en la industria microfinanciera regulada en el Perú. Giovanna Aguilar y Jhonatan Portilla”. Junio 2022.
- No. 511 “Perú 1990-2020: Heterogeneidad estructural y regímenes económicos regionales ¿Persiste la desconexión entre la economía, la demografía y la geografía?” Félix Jiménez y Marco Arroyo. Junio 2022.
- No. 510 “Evolution of the Exchange Rate Pass-Through into Prices in Peru: An Empirical Application Using TVP-VAR-SV Models”. Roberto Calero, Gabriel Rodríguez and Rodrigo Salcedo Cisneros. Mayo 2022.
- No. 509 “ Time Changing Effects of External Shocks on Macroeconomic Fluctuations in Peru: Empirical Application Using Regime-Switching VAR Models with Stochastic Volatility”. Paulo Chávez and Gabriel Rodríguez. Marzo 2022.
- No. 508 “ Time Evolution of External Shocks on Macroeconomic Fluctuations in Pacific Alliance Countries: Empirical Application using TVP-VAR-SV Models”. Gabriel Rodríguez and Renato Vassallo. Marzo 2022.
- No. 507 Time-Varying Effects of External Shocks on Macroeconomic Fluctuations in Peru: An Empirical Application using TVP-VARSV Models. Junior A. Ojeda Cunya and Gabriel Rodríguez. Marzo 2022.
- No. 506 “ La Macroeconomía de la cuarentena: Un modelo de dos sectores”. Waldo Mendoza, Luis Mancilla y Rafael Velarde. Febrero 2022.
- No. 505 “ ¿Coexistencia o canibalismo? Un análisis del desplazamiento de medios de comunicación tradicionales y modernos en los adultos mayores para el caso latinoamericano: Argentina, Colombia, Ecuador, Guatemala, Paraguay y Perú”. Roxana Barrantes Cáceres y Silvana Manrique Romero. Enero 2022.
- No. 504 “Does the Central Bank of Peru Respond to Exchange Rate Movements? A Bayesian Estimation of a New Keynesian DSGE Model with FX Interventions”. Gabriel Rodríguez, Paul Castillo B. and Harumi Hasegawa. Diciembre, 2021
- No. 503 “La no linealidad en la relación entre la competencia y la sostenibilidad financiera y alcance social de las instituciones microfinancieras reguladas en el Perú”. Giovanna Aguilar y Jhonatan Portilla. Noviembre, 2021.
- No. 502 “Approximate Bayesian Estimation of Stochastic Volatility in Mean Models using Hidden Markov Models: Empirical Evidence from Stock Latin American Markets”. Carlos A. Abanto-Valle, Gabriel Rodríguez, Luis M. Castro Cepero and Hernán B. Garrafa-Aragón. Noviembre, 2021.
- No. 501 “El impacto de políticas diferenciadas de cuarentena sobre la mortalidad por COVID-19: el caso de Brasil y Perú”. Angelo Cozzubo, Javier Herrera, Mireille Razafindrakoto y François Roubaud. Octubre, 2021.
- No. 500 “Determinantes del gasto de bolsillo en salud en el Perú”. Luis García y Crissy Rojas. Julio, 2021.
- No. 499 “Cadenas Globales de Valor de Exportación de los Países de la Comunidad Andina 2000-2015”. Mario Tello. Junio, 2021.

- No. 498 “¿Cómo afecta el desempleo regional a los salarios en el área urbana? Una curva de salarios para Perú (2012-2019)”. Sergio Quispe. Mayo, 2021.
- No. 497 “¿Qué tan rígidos son los precios en línea? Evidencia para Perú usando Big Data”. Hilary Coronado, Erick Lahura y Marco Vega. Mayo, 2021.
- No. 496 “Reformando el sistema de pensiones en Perú: costo fiscal, nivel de pensiones, brecha de género y desigualdad”. Javier Olivera. Diciembre, 2020.
- No. 495 “Crónica de la economía peruana en tiempos de pandemia”. Jorge Vega Castro. Diciembre, 2020.
- No. 494 “Epidemia y nivel de actividad económica: un modelo”. Waldo Mendoza e Isaías Chalco. Setiembre, 2020.
- No. 493 “Competencia, alcance social y sostenibilidad financiera en las microfinanzas reguladas peruanas”. Giovanna Aguilar Andía y Jhonatan Portilla Goicochea. Setiembre, 2020.
- No. 492 “Empoderamiento de la mujer y demanda por servicios de salud preventivos y de salud reproductiva en el Perú 2015-2018”. Pedro Francke y Diego Quispe O. Julio, 2020.
- No. 491 “Inversión en infraestructura y demanda turística: una aplicación del enfoque de control sintético para el caso Kuéalp, Perú”. Erick Lahura y Rosario Sabrera. Julio, 2020.
- No. 490 “La dinámica de inversión privada. El modelo del acelerador flexible en una economía abierta”. Waldo Mendoza Bellido. Mayo, 2020.
- No. 489 “Time-Varying Impact of Fiscal Shocks over GDP Growth in Peru: An Empirical Application using Hybrid TVP-VAR-SV Models”. Álvaro Jiménez and Gabriel Rodríguez. Abril, 2020.
- No. 488 “Experimentos clásicos de economía. Evidencia de laboratorio de Perú”. Kristian López Vargas y Alejandro Lugon. Marzo, 2020.
- No. 487 “Investigación y desarrollo, tecnologías de información y comunicación e impactos sobre el proceso de innovación y la productividad”. Mario D. Tello. Marzo, 2020.
- No. 486 “The Political Economy Approach of Trade Barriers: The Case of Peruvian’s Trade Liberalization”. Mario D. Tello. Marzo, 2020.
- No. 485 “Evolution of Monetary Policy in Peru. An Empirical Application Using a Mixture Innovation TVP-VAR-SV Model”. Jhonatan Portilla Goicochea and Gabriel Rodríguez. Febrero, 2020.
- No. 484 “Modeling the Volatility of Returns on Commodities: An Application and Empirical Comparison of GARCH and SV Models”. Jean Pierre Fernández Prada Saucedo and Gabriel Rodríguez. Febrero, 2020.
- No. 483 “Macroeconomic Effects of Loan Supply Shocks: Empirical Evidence”. Jefferson Martínez and Gabriel Rodríguez. Febrero, 2020.

- No. 482 “Acerca de la relación entre el gasto público por alumno y los retornos a la educación en el Perú: un análisis por cohortes”. Luis García y Sara Sánchez. Febrero, 2020.
- No. 481 “Stochastic Volatility in Mean. Empirical Evidence from Stock Latin American Markets”. Carlos A. Abanto-Valle, Gabriel Rodríguez and Hernán B. Garrafa-Aragón. Febrero, 2020.
- No. 480 “Presidential Approval in Peru: An Empirical Analysis Using a Fractionally Cointegrated VAR2”. Alexander Boca Saravia and Gabriel Rodríguez. Diciembre, 2019.
- No. 479 “La Ley de Okun en el Perú: Lima Metropolitana 1971 – 2016.” Cecilia Garavito. Agosto, 2019.
- No. 478 “Peru’s Regional Growth and Convergence in 1979-2017: An Empirical Spatial Panel Data Analysis”. Juan Palomino and Gabriel Rodríguez. Marzo, 2019.

▪ *Materiales de Enseñanza*

- No. 14 “Programación de Experimentos en Ciencias Sociales con oTree”. Ricardo Huamán-Aguilar y Joan Miranda. Marzo, 2025.
- No. 13 “Fundamentos de Econometría”. Juan León Jara Almonte y Marcelo Manuel Gallardo Burga. Febrero, 2025.
- No. 12 “La teoría clásica de las ventajas comparativas en el comercio internacional”. Jorge Vega Castro. Junio, 2024.
- No. 11 “La teoría de protección efectiva: conceptos básicos”. Jorge Vega Castro. Mayo, 2023.
- No. 10 “Boleta o factura: el impuesto general a las ventas (IGV) en el Perú”. Jorge Vega Castro. Abril, 2023.
- No. 9 “Economía Pública. Segunda edición”. Roxana Barrantes Cáceres, Silvana Manrique Romero y Carla Glave Barrantes. Febrero, 2023.
- No. 8 “Economía Experimental Aplicada. Programación de experimentos con oTree”. Ricardo Huamán-Aguilar. Febrero, 2023
- No. 7 “Modelos de Ecuaciones Simultáneas (MES): Aplicación al mercado monetario”. Luis Mancilla, Tania Paredes y Juan León. Agosto, 2022
- No. 6 “Apuntes de Macroeconomía Intermedia”. Felix Jiménez. Diciembre, 2020
- No. 5 “Matemáticas para Economistas 1”. Tessy Vázquez Baos. Abril, 2019.
- No. 4 “Teoría de la Regulación”. Roxana Barrantes. Marzo, 2019.
- No. 3 “Economía Pública”. Roxana Barrantes, Silvana Manrique y Carla Glave. Marzo, 2018.

- No. 2 “Macroeconomía: Enfoques y modelos. Ejercicios resueltos”. Felix Jiménez. Marzo, 2016.
- No. 1 “Introducción a la teoría del Equilibrio General”. Alejandro Lugon. Octubre, 2015.

Departamento de Economía - Pontificia Universidad Católica del Perú
Av. Universitaria 1801, San Miguel, 15008 – Perú
Telf. 626-2000 anexos 4950 – 4951
<https://departamento-economia.pucp.edu.pe/>

Resumen

Este estudio investiga los impactos no intencionados del egreso del programa público de cuidado infantil Cuna Más sobre la salud infantil y materna. Con la expansión del uso de servicios de cuidado infantil en países en desarrollo, resulta crítico comprender los efectos del egreso de este tipo de programas. Para identificar impactos causales, se explota la regla estricta de graduación por edad de Cuna Más. Usando datos de la Encuesta Demográfica y de Salud Familiar (ENDES) entre 2015 y 2019, los resultados muestran que, tras el egreso, las madres priorizan la salud de sus hijo(a)s por encima de la propia. Mientras que la salud infantil no presenta efectos significativos, la salud mental materna evidencia un deterioro notable. Estos hallazgos tienen implicancias de política relevantes, pues resaltan la necesidad de brindar apoyo transicional posterior al programa a fin de mitigar los costos ocultos para las madres y asegurar la sostenibilidad de los logros alcanzados en los niño(a)s durante su participación.

Palabras clave: Intervenciones para la primera infancia, cuidado, desarrollo infantil.

Clasificación J.E.L.: I12; I21; J13; J24.

1 Introduction

Early childhood care and development programs are critical for improving health and educational outcomes for disadvantaged children (Almond & Currie, 2011). These programs also yield a range of societal benefits over time, including increased women’s employment (Halim, Perova, & Reynolds, 2023), improved social behavior (Peisner-Feinberg et al., 2001), and enhanced productivity and economic growth (Kimmel, 2006). Nonetheless, the literature has not yet focused on ways in which these programs impact the health of the mothers of beneficiary children (Evans, Jakiela, & Mendez Acosta, 2024).

The recent expansion of public childcare in developing countries (Devercelli & Beaton-Day, 2020) has generated substantial benefits for families, particularly through increased caregiver employment and improved child nutrition and cognitive development, though the latter depends on program quality (Adrangi & Jeszenszki, 2025; Attanasio et al., 2022; Behbehani, Kowalski, Selam, Dombrowski, & Black, 2024). However, the COVID-19 crisis revealed the fragility of these gains: childcare service closures disproportionately affected women, low-income households, and less-educated parents (Carolino, Gallego, Nicolella, & Pazello, 2023). Moreover, the pandemic underscored the role of public childcare not only as a support for maternal employment but also as a buffer for maternal well-being. Women experienced a decline in life satisfaction during childcare closures, with measurable improvements upon service resumption (Tobler, Christoph, Fervers, & Jacob, 2025). The strain imposed by the lack of care services also forced families into potentially harmful coping strategies, such as relying on elderly relatives, shifting to nonstandard work hours, or leaving children unsupervised (Mairhofer, Plagg, & Flarer, 2022).

Despite well-documented benefits of early childhood care programs for children’s development and mothers’ economic outcomes, scarce empirical work has examined mothers’ health following program participation. The literature from developing

countries shows contrasting evidence. For instance, an evaluation of Mexico’s day-care program found essentially no effect on maternal mental health (Angeles et al., 2014), while an Ecuadorian rural program actually increased maternal stress and depression (Rosero & Oosterbeek, 2011). Studies in high-income settings are also inconclusive. Armstrong et al. (2022), for example, show that having regular infant care attenuates the link between poor sleep and depressive symptoms for recent mothers in the U.S. and Schmitz (2020) finds that expanding public childcare raised mothers’ life satisfaction in Germany. Conversely, Krauß and Rot (2024) found that an increased availability of early childcare in West Germany decreased mothers’ self-assessed health and physical functioning, while increasing their mental and emotional problems. Yet these findings are exceptions. A systematic review of different types of childcare interventions note that virtually all rigorous studies focus on child outcomes or maternal labor supply, leaving maternal health effects largely unstudied (Evans, Jakiela, & Knauer, 2021). Even fewer studies consider the post-exit period. Most program evaluations stop at treatment end or follow children into school, with no analysis of short-term maternal health.

Our paper fills this gap in the literature by assessing the causal effects of exiting the Peruvian Cuna Más childcare program on both child and maternal health outcomes, leveraging the program’s strict age-cutoff and a regression discontinuity design. Given the recent surge in public childcare use in developing countries, the Peruvian experience offers relevant insights. Cuna Más was created in 2012 to enhance the cognitive, social, physical, and emotional development of children aged 6 to 36 months in locations with high poverty rates. As of January 2022, Cuna Más has served 60,000 children in urban areas through the Day Care Service (hereafter, SCD), which is the focus of this paper, and 116,000 children in rural areas through the Family Accompaniment Service. Existing research on Cuna Más’s SCD is sparse but indicates positive effects. Studies note improved child development indicators (Araujo, Dormal, & Schady, 2019; Guerrero & León, 2017), with ancillary benefits

for mothers' labor market outcomes (Boyd & Rentería, 2018). Nonetheless, further exploration of its medium-term impacts and transitions to formal schooling is still needed.

We contribute to the literature in three ways. First, we focus on program graduation, a perspective not previously explored in the context of childcare programs in developing countries. Second, we investigate not only child outcomes, but also maternal health. As noted by Evans et al. (2021), few studies in low- and middle-income countries investigate the impacts of early childhood development interventions on household members other than children. Third, our study has direct policy implications that could guide developing countries in refining childhood care programs to ensure the sustainability of positive outcomes post-exit.

To identify the causal effect of graduating from the SCD on child and maternal health, we take advantage of the program's strict graduation rule: children must exit the program at 36 months of age. Qualitative evidence suggests that this rule is strictly enforced by the SCD care centers (Arrunátegui & Giesecke, 2021; Boyd & Rentería, 2018), which makes this setting ideal for a Regression Discontinuity Design (RDD). To ensure the internal validity of our study, we perform manipulation tests and a series of robustness checks, which include analysis of sensitivity to bandwidth choice, placebo tests with different cutoffs, using different samples, donut regressions, and optimal data-driven bandwidth selection (Calónico, Cattaneo, & Farrell, 2020).

Our results indicate significant negative impacts of program graduation on maternal mental health, but no discernible effect on child nutritional outcomes. At least four reasons may explain these findings. First, graduating might induce mothers to prioritize their children's nutritional needs over their own. This conjecture aligns with the pioneering research of Bitler et al. (2023), who explored a different social program in the United States that shares analogous implications. The

authors found that termination of a child’s eligibility for the Special Supplemental Nutrition Program for Women, Infants, and Children prompted mothers to reduce their own consumption to compensate for the loss of resources due to program exit. In our study, this trade-off may be particularly important in the context of Cuna Más’s targeted areas, which are characterized by low-income households. Second, the termination of program attendance might lead to an increased maternal workload at home. More household and childcare tasks, along with a potential lack of time and work in the labor market, could lead mothers to neglect their own needs. Previous qualitative evidence from the program, analyzed by [Arrunátegui and Giesecke \(2021\)](#), underscored mothers’ difficulties in balancing work and caregiving duties. Third, the program’s design inherently emphasizes guidance and support for child development and may inadvertently set aside educational tools for mothers themselves. Lastly, evidence suggests negative psychological consequences for mothers after program graduation. Mothers experience heightened stress and anxiety, which appears to affect their mental health rather than their eating habits or overall nutritional status. Such emotional shifts disproportionately affect mothers, while children remain relatively unaffected because of the consistent care they receive. As part of the broader mixed-methods design of this research, we incorporate qualitative evidence from fieldwork conducted in Peru’s two largest cities to shed light on these elements. Given the limitations of the fieldwork and data availability, we could not explore all these channels. However, we consider this area a valuable avenue for further research into the lifecycle impacts of early childhood interventions.

The rest of the paper is organized as follows. Section 2 provides the institutional background of the Cuna Más program. Section 3 describes the data. Section 4 describes the methodology. Section 5 presents the main results, and section 6 outlines the robustness checks. Section 7 discusses the results and provides insights from the qualitative fieldwork, while section 8 concludes.

2 Institutional background

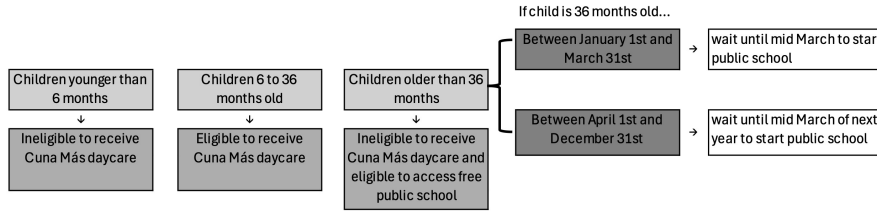
Cuna Más is one of Peru’s four main social programs, led by the Ministry of Development and Social Inclusion (MIDIS).¹ It focuses on early childhood development and was established in 2012 as a successor to the former Wawa Wasi program. Its core objective is to enhance the developmental outcomes (cognitive, social, physical, and emotional) of children aged 6 to 36 months in poor and extremely poor urban and rural areas of Peru.

Cuna Más serves urban areas with the Day Care Service (SCD), the focus of our study, and rural areas with the Family Support Service (SAF). The SCD provides free comprehensive care to children of eligible age, addressing their basic needs in health, nutrition, safety, affection, recreation, learning, and skill development. Specifically, the SCD offers children adequate nutritious meals, micronutrients, and iron supplements according to their age and conducts age-appropriate activities. This service operates eight hours daily, from Monday through Friday, at SCD facilities. By 2019, the SCD had served over 60,000 children. In contrast, the SAF operates in rural areas through home visits and group sessions at communal centers set up by the program, and aims to foster family knowledge, skills, and caregiving practices. In both urban and rural areas, Cuna Más employs a community co-management model, where tasks are collaboratively undertaken by technical teams from territorial units, the central office, and community members under a shared responsibility framework.²

The SCD is available to children aged 6 to 36 months and strictly enforces graduation at 36 months of age (Boyd & Rentería, 2018). However, alternative daycare services for children of this age, and above 36 months old, are typically unavailable in areas targeted by Cuna Más’ SCD or are costly.³ While children become eligible for public preschool at 36 months, only those who reach that age by March 31 can start the school year in mid-March, due to age cutoff policies. Children who do not

meet this requirement must wait until March of the following year to begin their studies. Thus, there is a specific group of children, who can spend up to a year without access to the SCD or the public education system simply because of their birth date (cf. Figure 1)

Figure 1: Eligibility for Cuna Más, Graduation, and Transition to School



3 Data

Our main source of data is the Peruvian Demographic and Family Health Survey (DHS)⁴, carried out annually since 2008 by the National Statistics Office (INEI). This survey provides information on the exact age of children (i.e., birth date and interview date), health status of children under five years old and their mothers, including anthropometrics. It ensures inference at the regional, urban, and rural area levels.

Although the program began with a soft launch in 2012, we used (annual) survey waves from the DHS spanning 2015 to 2019. The 2015 wave marked the first instance where both child health variables (anthropometrics) and maternal mental health variables were collected, providing the necessary data for our analysis. Additionally, because in-person SCD services were suspended in early 2020 because of the COVID-19 pandemic, we restricted our dataset to the 2019 DHS wave to ensure data consistency.

Cuna Más childcare centers are located in districts designated as poor or extremely poor by the program but cater to families without imposing a poverty admission

criterion.⁵ As districts within the country vary by population and geographic size, the number of childcare centers can differ depending on the district’s population density. In addition, depending on their location, childcare centers might either have a waitlist or try to enroll children from neighboring districts (Boyd & Rentería, 2018). For all these reasons, restricting our sample to the districts with a SCD center does not accurately reflect which children can potentially benefit from the childcare services. We therefore restricted our sample to the DHS’ primary sampling units (clusters), where at least one SCD beneficiary child was present in at least one year of our analysis period.⁶ This also allows us to include children living in areas classified as rural, but who attend or could potentially attend SCD childcare centers in neighboring urban districts (Boyd & Rentería, 2018).

Our primary RDD specification sample considers a bandwidth of three months below and above Cuna Más’ strict 36-month age cutoff.⁷ Although this is an ad-hoc bandwidth (later replaced in Section 6 by alternatives, including an optimal data-driven one), our initial choice is based on ensuring comparability of health measurements across different child ages. We argue that extending the cutoff to the entire sample (6 to 60 months) would make children in the tails of the age distribution not comparable in terms of their main health outcomes; similarly, for mothers, the caregiving needs are different for infants, toddlers, and older children.

Our main sample matches each surveyed mother, for whom mental health data was recorded, to only one child.⁸ When multiple children were recorded, we took the one whose age was closest to the cutoff to avoid losing observations, and when there were multiple births (twins or triplets), we used the first reported child.

Finally, we exclude all children reported as attending preschool to reduce potential confounding, given that preschool participation, especially in public institutions, may independently affect child health outcomes through mechanisms such as access to nutritional programs and structured care environments (cf. Figure 1).⁹ It is worth

noting that the preschool-entry cutoff is less strictly enforced than that of Cuna Más, allowing a sizable number of age-ineligible children to enroll. By excluding all children enrolled in preschool, we remove 95% of those eligible by age (born before March 31) as well as younger children who are enrolled despite being ineligible. The exclusion of children enrolled in preschool from our sample may, however, affect the external validity of our results. Thus, our analysis focuses on the causal impact of program exit at the age cutoff, acknowledging that preschool enrollment involves additional institutional and household factors.

In sum, our main analysis sample comprises 1,601 children aged 33 to 39 months old and their respective mothers for the period 2015-2019 (cf. [Table A.1](#) in the Appendix). On average, the annual DHS wave surveys around 300 children under five and their respective mothers, with 44.2% of this sample being above 36 months old and 55.8% below 36 months old.

4 Methodology

4.1 Identification strategy

The SCD’s strict graduation policy and the public school system’s rigid entry-age requirement create a unique setting that enables causal measurement of the program’s impact on children around 36 months of age and their families. Specifically, we exploit the discontinuity in the eligibility rules of the SCD program, i.e., the mandatory 36-month limit for ending participation in the SCD, to estimate the causal impact of exiting the program at 36 months. We employ an RDD that leverages the shift when children reach the end of their SCD eligibility by comparing children on the verge of aging out (along with their mothers) with those who have recently graduated from the program. The internal validity of this design relies on the exogeneity of discontinuing at 36 months of age: participation in the SCD is

determined solely by the child’s age, which cannot be controlled by the child or their family, thus avoiding potential selection bias.

We implement a fuzzy RDD as not all eligible children in our sample participate in SCD. Unlike a sharp RDD, where treatment assignment follows a strict rule, we observe a partial shift in the likelihood of receiving the treatment at the threshold. In practice, not all children under 36 months received the program, while some over this threshold did. Although the latter case is unlikely, given the program’s stringent age eligibility enforcement (Boyd & Rentería, 2018), the former is inherent to our sample’s construction (cf. Section 3).

Formally, the 36-month threshold induced an exogenous change in the probability of receiving the treatment, which may be interpreted as a causal impact on the outcome variables. Thus, in the fuzzy RDD, and following Lee and Lemieux (2010), the probability of treatment can be defined as:

$$\Pr(D_{id} = 1 \mid X = X_{id}) = \alpha_1 + \phi T_{id} + g(X_{id} - c) \quad (1)$$

Where the dummy variable D_{id} denotes the effective reception of treatment and takes the value of one if individual i , living in district d , receives SCD. The treatment variable $T_{id} = 1\{X_{id} \geq c\}$ indicates whether the assignment variable X_{id} (i.e., the children’s age in months) exceeds the eligibility threshold c (i.e., 36 months), and $g_D(\cdot)$ is a functional form as presented by Lee and Lemieux (2010).

By defining the probability of participation in SCD as $D_{id} = \Pr(D_{id} = 1 \mid X = X_{id}) + v_{id}$, where v_{id} represents the independent error term, the fuzzy RDD can be represented by the following system of equations:

$$D_{id} = \alpha_1 + \phi T_{id} + g(X_{id} - c) + v_{id} \quad (2)$$

$$Y_{id} = \alpha_2 + \psi D_{id} + f(X_{id} - c) + \eta_{id} \quad (3)$$

where Y_{id} denotes one of the outcome variables. By substituting Eq. (2) into Eq. (3), the following reduced-form equation is obtained for estimation, also including a set of fixed effects:

$$Y_{id} = \alpha_0 + \tau T + f_r(X_{id} - c) + \lambda_t + \epsilon_{id} \quad (4)$$

The causal parameter of interest, τ , is interpreted as the Local Average Treatment Effect (LATE) of exiting the SCD program. A set of fixed effects at the survey wave λ_t level are included to control for any potential time differences.

We analyze the impact of exiting SCD on child health and on the mother’s physical and mental health. For children’s health, we consider the outcome variables of stunting (height-for-age Z-score below -2), underweight (weight-for-age Z-score below -2), overweight (weight-for-height Z-score greater than 2), wasting (weight-for-height Z-score below -2), and presence of anemia (hemoglobin levels below 11 g/dl), based on international levels recommended by the World Health Organization.

For mothers, we measure physical health as the weight-for-height Z-score, the BMI z-score, anemia, high blood pressure, and a mental health index. This latter indicator is constructed using the standardized Patient Health Questionnaire PHQ-9 index, where we use the nine questions assessing depression (cf. Figure B.1 in the Appendix) and standardize the PHQ-9 index into a continuous variable ranging from 0 to 1 (hereafter, “PHQ-9 Standardized”), where 0 means no depression symptoms.

Later, for robustness, we also assess mothers’ mental health with different ways of measuring depression based on the PHQ-9 questions. Besides the PHQ-9 Stan-

standardized index, we measure the number of PHQ-9 questions for which mothers responded “several days” or more, out of nine questions (hereafter, “PHQ-9 Several Days”); the number of questions for which mothers responded “more than half the days” or “nearly every day”, out of nine (hereafter, “PHQ-9 Nearly Every Day”); and “Mild depression” as having a PHQ-9 index (0-27) greater or equal than 5, a widely accepted threshold in Psychology.

We estimate independent regressions for each outcome for the child and the mother. The regressions use clustered standard errors at the district level, as that is the level at which the SCD treatment occurs, following the recommendations of [Abadie, Athey, Imbens, and Wooldridge \(2023\)](#). All regressions include sampling weights ([Little, 2004](#); [Solon, Haider, & Wooldridge, 2015](#)).

We also test the robustness of our main results by changing the following elements of the specifications: bandwidth, and donut RD. Furthermore, we add region fixed-effects to Eq. (4) and a vector Z'_{ip} containing a set of predetermined controls to improve the precision of our estimates: child’s sex, mother’s age, altitude of the DHS cluster (in meters above sea level), and a dummy indicating whether the household receives the Juntos conditional cash transfer.¹⁰ This enables us to control for any potential sociodemographic differences.

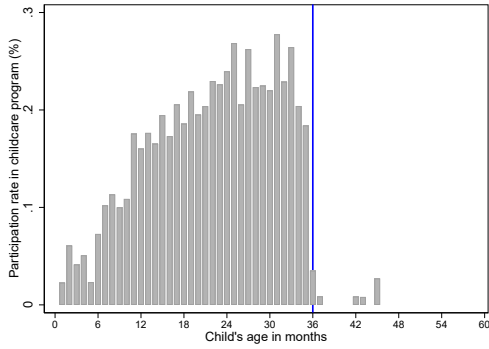
4.2 Internal Validity

Figure 2, Panel A, shows the participation rate of children in the SCD before and after they reach 36 months of age. Consistent with earlier qualitative evidence, the program strictly enforces its policy of not serving children beyond 36 months. Moreover, the children attending the SCD represent 20% of all children in the sample eligible to attend. Figure 2, Panel B, depicts the plot for McCrary’s test. This test shows there is no manipulation of the running variable (child age) around the cutoff (36 months) in the sample used for our analysis (3-month bandwidth),

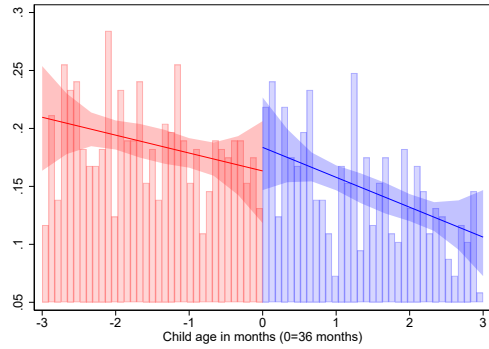
despite the decrease in observations over time, which is due to the exclusion of children attending preschool. Figure 2, also shows no jumps in covariates, such as the mother's age (Panel C), sex of the child (Panel D), and altitude of the DHS cluster (Panel E), before and after the 36-month cutoff age.

In sum, evidence supports the main assumptions for RDD identification, namely: (i) there is a significant change in the treatment assignment at the cutoff, (ii) there is no manipulation of the running variable, and (iii) there are no other discontinuous changes at the cutoff.

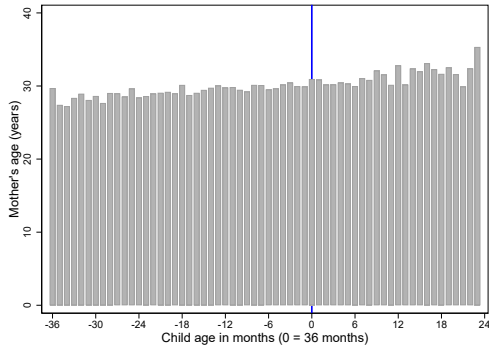
Figure 2: First Stage and Manipulation Test



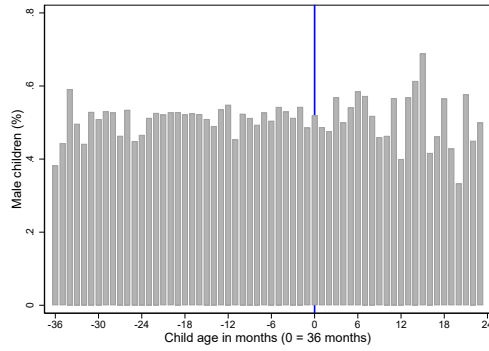
(a) Panel A. First Stage



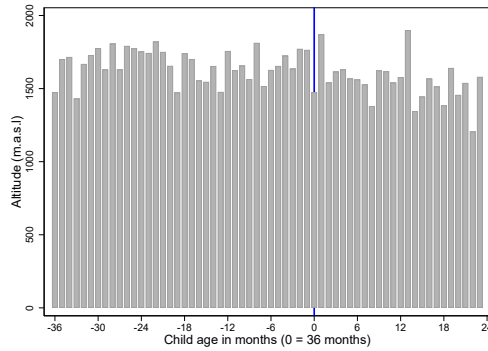
(b) Panel B. McCrary's Test



(c) Panel C. Balance Test: Mother's age



(d) Panel D. Balance Test: Child sex



(e) Panel E. Balance Tests: Altitude

5 Results

5.1 Main results

[Table 1](#) presents the impact of becoming ineligible for the SCD on child and maternal health outcomes, estimated using a fuzzy RDD, both without and with controls. For children (Panel A), we find no statistically significant differences in the likelihood of stunting, being underweight, overweight, wasting, or having anemia when comparing those under 36 months (eligible for SCD) with older children ineligible to access public preschool. In Panel B, we also observe no significant effects on mothers' physical health.

However, we detect a statistically significant increase in maternal depression symptoms. Specifically, mothers of children ineligible for both the SCD and public preschool score 0.446 higher on the PHQ-9 standardized index in the model without controls, and 0.506 higher in the specification with controls (both at the 5% significance level). Given that the PHQ-9 standardized index ranges from 0 (no depression symptoms) to 1 (maximum symptoms), and that the average score is 0.101 below the cutoff and 0.118 above (cf. [Table A.1](#) in the Appendix), these estimated effects are substantial in magnitude and suggest a meaningful deterioration in maternal mental health following loss of access to SCD childcare. These findings underscore the importance of childcare services not only for child development but also for the psychological well-being of mothers, particularly during transitions in care arrangements. We provide a detailed discussion of these results in [Section 7](#).

[Table S8.2](#) in the Supplementary Material shows that the increase in the standardized PHQ-9 index corresponds to an increase in mothers reporting depressive symptoms more often (PHQ-9 Nearly Every Day), and that exiting the Cuna Más' SCD does not significantly affect milder measures of depression.

Table 1: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Full Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.130 (0.371)	0.060 (0.411)	0.169 (0.161)	0.197 (0.180)	0.210 (0.329)	0.104 (0.301)	0.231 (0.349)	0.100 (0.315)	0.041 (0.037)	0.041 (0.037)
Observations:	1601	1601	1601	1601	1601	1601	1601	1601	1601	1601
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ-9 Standardized	
τ	-0.610 (1.379)	-0.543 (1.390)	0.821 (6.223)	-0.971 (6.438)	0.142 (0.264)	0.007 (0.250)	0.373 (0.319)	0.432 (0.343)	0.446** (0.221)	0.506** (0.248)
Observations:	1601	1601	1601	1601	1601	1601	1594	1594	1601	1601
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5.2 Heterogeneity analysis

The heterogeneity analysis reveals that the adverse maternal health effects of the mandatory exit from Cuna Más are not uniform across groups. Instead, the negative results on maternal mental health are driven by mothers with male children and in poor households, and by certain household compositions. Nonetheless, child health remains not significantly impacted by the program exit across subgroups.

Panel B in [Table S1.1](#) shows that the standardized PHQ-9 and being at risk of high blood pressure (HBP) increase, at least at the 10% significance level, among mothers of boys. Meanwhile, we find no significant effects on these or other physical health variables for mothers of girls. One possible interpretation of these findings is that it is harder to find alternative childcare arrangements for boys, than for girls, due to gendered perceptions about boys being restless, less obedient, and in general harder to take care of.

The deterioration in maternal mental health after exiting Cuna Más seems to be driven by mothers in poor households. In [Table S1.3](#), the positive effect on the standardized PHQ-9 is still significant, although only at the 10% significance level, for mothers in poor households. The corresponding estimate for mothers in non-poor households is not significant but the confidence interval is large, possibly due to the subsample being much smaller.

Splitting the sample at the mother’s median age yields no significant effects neither for younger nor for older mothers (see [Table S1.5](#) and [Table S1.6](#)).

To assess how the effects can change due to the presence of other adults in the household, who can potentially fulfill caregiving responsibilities after a child exits Cuna Más, we divide the sample into households with and without an elderly member (60 years old or older), households with and without another adult woman (at least 18 years old), and households where the mother has or does not have a male partner

(husband or cohabitant partner).

The presence of an elderly household member could, in principle, provide mothers with additional childcare support. However, elderly individuals may require care and assistance themselves, potentially limiting their ability to serve as effective substitutes for formal childcare. Motivated by this ambiguity, we explore heterogeneity by the presence of an elderly household member in [Table S1.8](#). We find that the mental-health penalty becomes not statistically significant (and the point estimates are smaller) in households with elders, whereas mothers without an elderly household member still suffer a significant (and larger in magnitude) increase in the standardized PHQ-9 score. These results suggest that elderly relatives may act as informal caregivers once Cuna Más services cease, softening the negative spillovers on mothers' mental well-being.

Similarly, mothers in households without another adult woman (85% of the total sample) still exhibit significant increases in the standardized PHQ-9 score, at the 10% significance level. This finding underscores the mental health toll for mothers navigating childcare loss in isolation (see [Table S1.10](#)). The results on mothers mental health for the subsample of households with other adult women become non significant, at conventional levels, while BMI decreases significantly (see [Table S1.9](#)). The point estimates, however, are very large, and might be a consequence of the small subsample size.

Finally, mothers living with a male partner (see [Table S1.11](#)) display a significant increases, at the 10% significance level, of the standardized PHQ-9. This result mirrors qualitative accounts of unequal caregiving norms within Peruvian households, where the male partner's presence neither offsets the lost childcare hours nor mitigates maternal stress.

6 Robustness Checks

In this section, we conduct a series of robustness checks, which include sensitivity analyses to bandwidth choice, placebo tests with different cutoffs, estimation using different samples, and regression discontinuity donuts. We also apply multiple hypothesis testing to account for the number of outcomes analyzed. Additional checks with optimal data-driven bandwidth selection and alternative polynomial fits are shown in Supplementary Material, section S4. As will be shown, our main results are consistent across different specifications for both children and mothers. All the referred tables in this section can be found in the Supplementary Material.

6.1 Sensitivity analysis

Table S2.1 shows the impact of exiting the SCD on child and maternal health using a four-month bandwidth on each side of the 36-month cutoff, instead of the three-month bandwidth used in section 5. The results remain significant and consistent in sign with this wider bandwidth.

When increasing the bandwidth to five months, the impact on mothers' mental health is still statistically significant at the 10% level (cf. Table S2.2). Moreover, the impact of exiting the SCD on the probability that the child is wasting remains positive and becomes significant at the 10% level.

Because the child's age (i.e., date of birth) is self-reported in the DHS, there may be measurement error around the cutoff. To test whether our results are impacted by measurement error, we estimate our main results by eliminating two weeks above and two weeks below the cutoff, i.e., comparing children below 35.5 months of age and children above 36.5 months in Table S2.3. These donut regressions show that the main results persist: the impact on the mother's mental health is significant at least at the 10% significance level.

Supplementary Material [S6](#) shows the results for the full sample of children, that is, whether or not their mothers were included in the high blood pressure and mental health questionnaire, for continuous and dummy child health variables¹¹. Supplementary Material [S7](#), shows the results for the full sample of mothers, excluding high blood pressure and the standardized PHQ-9 variable.

6.2 Placebo tests

We use alternative cutoff months as placebos to ensure that our results occur only for the Cuna Más-imposed exit-age cutoff at 36 months. First, [Table S3.1](#) shows the main results (i.e., 3-month bandwidth) using a 30-month cutoff instead of the 36-month cutoff. None of the results in these tables is statistically significant at conventional levels. Second, [Table S3.2](#) show the main results using a 24-month cutoff. Similarly, they show no significant impact on any of the child’s or mother’s health outcomes.

6.3 Multiple Hypothesis Testing

To account for potential inflation of Type I error due to multiple hypothesis testing, we applied the Romano-Wolf stepdown correction and report adjusted p-values in [Table S5.1](#) and [Table S5.2](#). Importantly, our main results remain unchanged after adjusting for the five child health outcomes and the five mother health outcomes, separately. Specifically, the positive impact of childcare exit on mothers’ depressive symptoms remains significant but only at the 10% significance level. While some authors caution against the automatic application of multiple testing corrections, particularly in cases of low small sample sizes, or when the goal is to make separate inferences about individual hypotheses rather than testing a joint hypothesis ([García-Pérez, 2023](#); [Rubin, 2024](#)), we opted to report corrected values to enhance the transparency and credibility of our findings. Moreover, in applied social science contexts where effect sizes are rarely exactly zero, overly conservative corrections,

such as Bonferroni, can obscure substantively important patterns by inflating Type II error rates (Gelman, Hill, & Yajima, 2012).

The Romano-Wolf method was selected over more conservative approaches such as Bonferroni or Holm due to its greater statistical power and its ability to account for clustering induced by treatment assignment (Clarke, Romano, & Wolf, 2020; Romano & Wolf, 2005, 2016). Unlike traditional methods that assume test independence, Romano-Wolf uses resampling to provide more accurate control of the family-wise error rate without unduly sacrificing power, making it especially suitable for our setting with small sample size and clustered data.

7 Discussion and Qualitative Insights

To complement the quantitative analysis, we conducted an exploratory qualitative study between August and December of 2023 in the regions of Lima and Arequipa. The qualitative study aimed to understand the process of reopening SCD centers through interviews with key stakeholders involved in the program’s implementation and management before, during, and after the COVID-19 closures. By assessing the pre-pandemic functioning of the SCD program, we can contextualize the findings presented in the section 5. Due to logistical constraints and the program’s gradual resumption of in-person services following COVID-19 related closures, direct interviews with beneficiary mothers were not feasible. Consequently, our qualitative data derive from focus groups with SCD caregivers (“*madres cuidadoras*”), many of whom had been users of the SCD program, and technical support personnel (“*acompañantes técnicos*”), as well as semi-structured interviews with regional and national program officials and external experts. These perspectives provide informed but indirect accounts of participant experiences and program dynamics.

The qualitative sample consisted of four focus groups (two in Lima and two in Arequipa), involving 21 female participants, and ten key informant interviews (further

details are provided in Appendix C). Selection criteria required pre-pandemic experience to capture both historical and recent program developments. Lima and Arequipa were selected based on administrative data indicating different post-pandemic paces of reopening and operational status of SCD centers, and due to Cuna Más officials availability. The collected information corresponding to the pre-pandemic SCD dynamics provides valuable insights to explain the findings during the period of the quantitative analysis (2015-2019).

At least three pieces of qualitative evidence are worth highlighting. First, stakeholders consistently described a formalized exit protocol enacted one to two months prior to children reaching the program's age cutoff (36 months). This protocol includes notifying families of the upcoming transition, conducting child development evaluations (e.g., anthropometric measures, developmental milestones), and facilitating farewell activities. Results of these assessments are communicated to families, alongside recommendations intended to promote the continuation of health and child development practices within the home environment. Specifically, parents are recommended to continue providing ferrous supplements to fight anemia, vitamins and micronutrients, usually delivered at SCD centers, and to provide toys and engagement in activities beneficial to child development after exiting the program. The program further supports families by providing guidance on accessing public health and early education services.

While the exit protocol procedures intend to ensure an orderly transition from the program, it is important to note that they reflect institutional perspectives about what should be done after exiting the SCD rather than direct accounts from program beneficiaries about what they actually do. Additionally, the exit protocol, as described, reinforces the empirical design underpinning our regression discontinuity approach by confirming the fixed age threshold for program exit.

Second, although quantitative analyses did not detect significant impacts on child

health outcomes post-exit, qualitative evidence suggested potential adverse effects in other developmental domains. SCD caregivers and technical staff highlighted post-exit risks such as diminished peer interaction, disruptions in daily routines, and possible regression in social, motor, and language skills following program graduation. Moreover, strong emotional bonds between children and SCD caregivers were frequently noted, with some children reportedly exhibiting distress upon separation. Additionally, participants reported that families are unlikely to continue nutritional support and monitoring once children exit the SCD program. While these concerns did not manifest as measurable health impacts in the quantitative results (i.e., not significant impacts on child health), they underscore that stakeholders perceive families as vulnerable during the transition period (between the SCD and a new childcare arrangement), and suggest the need for further monitoring of longer-term child health outcomes. Nonetheless, the lack of statistically significant results in our main child health regressions can be explained by the fact that micronutrients and supplements are freely available at community health centers and parents might be accessing them, at least in the short-run. In sum, although families might not be following the full Cuna Más recommendations, they might at least be providing children with micronutrients and supplements.

Third, program implementers and SCD caregivers emphasized that mothers often confront substantial challenges following program exit, notably a childcare gap that generates psychosocial stress and economic burdens. Access to alternative childcare and early education options, such as Initial Education Institutions or community-based programs (PRONOEI), is frequently limited by factors including age cutoffs, restricted availability, limited coverage (i.e., they can be far from home or work), reduced operating hours, associated costs, and mothers might have mistrust and concerns about the quality of care and the security of the children.¹² These barriers are especially salient for adolescent and working mothers, who may face difficult trade-offs between employment, education, and caregiving responsibilities. Some

interviewees also reported that, in the absence of formal childcare, children may be left in unsafe environments. These qualitative insights provide plausible mechanisms to interpret the observed increase in maternal depressive symptoms documented in the quantitative analysis.

We acknowledge key limitations of the qualitative component. Temporal differences, particularly those related to COVID-19 and subsequent program adaptations, may affect comparability, as qualitative data were collected in 2023 (although it inquires about pre-pandemic operations), while the quantitative analysis draws on 2015–2019 data. In addition, the absence of direct beneficiary interviews limits inferences to stakeholder perspectives rather than firsthand experiences. Accordingly, while the exit protocol may plausibly support sustained child health outcomes post childcare exit, we do not claim causal effects based on qualitative evidence alone. Instead, these findings are intended to contextualize and enrich the interpretation of our quantitative results.

8 Conclusions

This study contributes to the literature by investigating the consequences of exiting a childcare program. Moreover, it extends the analysis beyond children’s outcomes to include the effects on mothers, a dimension that remains underexplored in the existing literature dealing with developing countries.

We exploit Cuna Más SCD’s strict age eligibility criteria and implement a fuzzy regression discontinuity design. We found that program graduation has significant negative impacts on maternal mental health yet no discernible effect on child nutritional outcomes or mothers’ physical health. Our results showed consistency with a large set of robustness checks.

Our results are further enriched by qualitative data gathered from caregivers and

SCD public servants through interviews and focus groups. This mixed-methods approach offers valuable insights into the mechanisms underlying our findings, which can inform future quantitative research. Transitions to alternative care arrangements, socio-emotional impacts on children and economic impacts on households are promising avenues.

Notes

1. The other three social programs are: Juntos, Qali Warma, and Pensión 65.
2. The co-management model does not impose any requirements on mothers or any family member of children attending the SCD.
3. Paid daycare services are not the rule in Peru; and they are usually located in higher-income urban areas. Non-poor families might have resources to hire nannies or domestic employees, who can take care of children. Nonetheless, the vast majority of the target population of Cuna Más does not have resources to pay for or access to private childcare. In general, this reflects the lack of formal childcare services in Peru, particularly in socioeconomically vulnerable communities, where public daycare coverage is insufficient and informal care is often the only fallback (Cruz-Saco & Pérez, 2020; Rousseau, Cavagnoud, & Espinosa Anaya, 2025). Structural barriers, such as limited capacity, enrollment restrictions, and geographic inaccessibility, further exacerbate the shortage, leaving many mothers without viable alternatives to care for their children once they exit the SCD.
4. In Spanish, Encuesta Demográfica y de Salud Familiar (ENDES).
5. Note that the recent expansion of Juntos to urban poor districts has resulted in nearly 25% of the children in our sample to be in a household receiving the Juntos conditional cash transfer.
6. The beneficiary status is declared by the respondent in the DHS
7. Note that although we mention, along the text, age in months, it refers to the age in months with decimals because we construct the child age variable from the reported dates of birth and survey

interview dates.

8. Blood pressure and the Patient Health Questionnaire (i.e., mental health) questions are asked only to a random subsample of adults in the Peruvian DHS. A third of the total sample of mothers responded to this module. Supplementary Material [S7](#) shows the results for the entire sample of mothers, without blood pressure and mental health variables.
9. When public preschool is not available, alternative schooling options to Cuna Más include community-based programs (PRONOEI), private childcare, private preschools, and informal care arrangements such as care by relatives. However, all these options have limited coverage and are costly, making public school the best choice when available.
10. Receiving the Juntos conditional cash transfer may improve child health by allowing families to have more resources to provide nutritious food for their children and it might also allow families to get private childcare arrangements in the absence of Cuna Más.
11. Note only a random group of household members were selected to answer the adult health part of the questionnaire.
12. Initial Education Institutions (Instituciones de Educación Inicial) are formal preschools in Peru, either public or private, that provide early childhood education for children aged 3 to 5. Community-Based Education Programs (Programas No Escolarizados de Educación Inicial, PRONOEI) are alternative early childhood education services delivered in community settings by trained facilitators, aimed at expanding access in rural and underserved areas.

Ethical considerations

The study protocol was approved by the Ethics Committee for Research in Social Sciences, Humanities, and Arts of the Pontifical Catholic University of Peru (Approval No. 030-2023-CEI-CCSSH_yAA/PUCP, May 18, 2023). An amendment to the protocol was subsequently approved under Approval No. 041-2023-CEI-CCSSH_yAA/PUCP, June 16, 2023.

Funding

This research received financial support from the Vicerrectorado de Investigación (VRI) of the Pontifical Catholic University of Peru (PUCP), under grant N° 2022-A-0069/PI0921.

Conflict of Interest

The authors declare that they have no conflicts of interest related to this research.

Data Availability

The datasets used in this study are publicly available from the National Institute of Statistics and Informatics of Peru (INEI) at <https://proyectos.inei.gob.pe/microdatos>. The code used for analysis is available from the authors upon reasonable request.

Acknowledgements

The authors thank José Mendoza, Ana Paula Méndez, and Jonatan Amaya for their valuable research assistance at different stages of this project.

References

- Abadie, A., Athey, S., Imbens, G. W., & Wooldridge, J. M. (2023, February). When Should You Adjust Standard Errors for Clustering? *The Quarterly Journal of Economics*, *138*(1), 1–35. Retrieved 2024-10-17, from <https://doi.org/10.1093/qje/qjac038> doi: 10.1093/qje/qjac038
- Adrangi, B., & Jeszenszki, K. (2025, March). Publicly Subsidized Childcare and the Labor Force Participation Rates of Men and Women: Evidence From OECD. *The American Economist*, *70*(1), 46–63. Retrieved 2025-07-13, from <https://journals.sagepub.com/doi/10.1177/05694345241256454> doi: 10.1177/05694345241256454
- Almond, D., & Currie, J. (2011, January). Human capital development before age five. In D. Card & O. Ashenfelter (Eds.), *Handbook of Labor Economics* (Vol. 4, pp. 1315–1486). Elsevier. Retrieved 2024-09-13, from <https://www.sciencedirect.com/science/article/pii/S0169721811024130> doi: 10.1016/S0169-7218(11)02413-0
- Angeles, G., Gadsden, P., INSP, Galiani, S., Washington University in St Louis, Gertler, P., ... ITAM INSP (2014). *The impact of daycare on maternal labour supply and child development in Mexico* (Tech. Rep.). US: International Initiative for Impact Evaluation. Retrieved 2025-07-13, from <https://doi.org/10.23846/ow11043>
- Araujo, M. C., Dormal, M., & Schady, N. (2019, July). Childcare Quality and Child Development. *Journal of Human Resources*, *54*(3), 656–682. Retrieved 2023-08-05, from <https://jhr.uwpress.org/content/54/3/656> (Publisher: University of Wisconsin Press Section: Article) doi: 10.3368/jhr.54.3.0217.8572R1
- Armstrong, B., Weaver, R. G., Beets, M. W., Østbye, T., Kravitz, R. M., & Benjamin-Neelon, S. E. (2022). Use of Child Care Attenuates the Link Between Decreased Maternal Sleep and Increased Depressive Symptoms. *Jour-*

nal of developmental and behavioral pediatrics: JDBP, 43(5), e330–e338. doi: 10.1097/DBP.0000000000001048

- Arrunátegui, G., & Giesecke, M. (2021). *¿Reinserción y permanencia en el mercado laboral con equidad de género?: alcances y limitaciones del Servicio Cuidado Diurno de Cuna Más en las madres jóvenes de Lima* (Tech. Rep.). Lima, Perú: Consorcio de Investigación Económica y Social. Retrieved from <https://cies.org.pe/investigacion/reinsercion-y-permanencia-en-el-mercado-laboral-con-equidad-de-genero-el/>
- Attanasio, O., Paes de Barros, R., Carneiro, P., Evans, D. K., Lima, L., Olinto, P., & Schady, N. (2022, November). *Public Childcare, Labor Market Outcomes of Caregivers, and Child Development: Experimental Evidence from Brazil* [Working Paper]. National Bureau of Economic Research. Retrieved 2025-07-13, from <https://www.nber.org/papers/w30653> doi: 10.3386/w30653
- Behbehani, F., Kowalski, A. J., Selam, H., Dombrowski, E., & Black, M. M. (2024, February). Childcare centre attendance and health, growth, and development among children aged 0–3 years in low- and middle-income countries: A systematic review. *Journal of Global Health*, 14. Retrieved 2025-07-13, from <https://jogh.org/2024/jogh-14-04028> doi: 10.7189/jogh.14.04028
- Bitler, M., Currie, J., Hoynes, H., Ruffini, K., Schulkind, L., & Willage, B. (2023, September). Mothers as insurance: Family spillovers in WIC. *Journal of Health Economics*, 91, 102784. Retrieved 2023-11-16, from <https://www.sciencedirect.com/science/article/pii/S0167629623000619> doi: 10.1016/j.jhealeco.2023.102784
- Boyd, C., & Rentería, J. M. (2018). *Economía del cuidado, desigualdades de género y participación en el mercado laboral: El caso de Cuna Más* (Informe final No. PMA2AN60-333). Lima, Perú: Consorcio de Investigación Económica y Social. Retrieved 2023-08-05, from <https://cies.org.pe/investigacion/economia-del-cuidado>

[-desigualdades-de-genero-y-participacion-cuna-mas/](#)

- Calonico, S., Cattaneo, M. D., & Farrell, M. H. (2020, May). Optimal bandwidth choice for robust bias-corrected inference in regression discontinuity designs. *The Econometrics Journal*, *23*(2), 192–210. Retrieved 2024-10-17, from <https://doi.org/10.1093/ectj/utz022> doi: 10.1093/ectj/utz022
- Carolino, C. D., Gallego, G., Nicolella, A., & Pazello, E. T. (2023). The impact of childcare centres' closures due to COVID-19 on women's labour supply. *International Journal of Social Economics*, *50*(10), 1423–1438. Retrieved 2025-07-13, from <https://www.emerald.com/insight/content/doi/10.1108/ijse-11-2022-0748/full/html> doi: 10.1108/IJSE-11-2022-0748
- Clarke, D., Romano, J. P., & Wolf, M. (2020, December). The Romano–Wolf multiple-hypothesis correction in Stata. *The Stata Journal: Promoting communications on statistics and Stata*, *20*(4), 812–843. Retrieved 2025-07-13, from <https://journals.sagepub.com/doi/10.1177/1536867X20976314> doi: 10.1177/1536867x20976314
- Cruz-Saco, M., & Pérez, L. (2020, February). Gender Equality and Early Childhood Care in Peru: Two Sides, One Sustainable Development Model. *Contracorriente: una revista de estudios latinoamericanos*, *17*(2), 89–113. Retrieved 2025-07-13, from <https://acontracorriente.chass.ncsu.edu/index.php/acontracorriente/article/view/2022>
- Devercelli, A. E., & Beaton-Day, F. (2020). *Better Jobs and Brighter Futures: Investing in Childcare to Build Human Capital*. Washington DC: World Bank. Retrieved 2023-08-06, from <http://hdl.handle.net/10986/35062> (Publisher: World Bank, Washington, DC)
- Evans, D. K., Jakiela, P., & Knauer, H. A. (2021, May). The impact of early childhood interventions on mothers. *Science*, *372*(6544), 794–796. Retrieved 2023-10-10, from <https://www.science.org/doi/10.1126/science.abg0132> (Publisher: American Association for the Advancement of Science)

doi: 10.1126/science.abg0132

- Evans, D. K., Jakiela, P., & Mendez Acosta, A. (2024, May). The Impacts of Childcare Interventions on Children's Outcomes in Low- and Middle-Income Countries: A Systematic Review. *AEA Papers and Proceedings*, 114, 463–466. Retrieved 2024-05-24, from <https://www.aeaweb.org/articles?id=10.1257/pandp.20241015> doi: 10.1257/pandp.20241015
- García-Pérez, M. A. (2023, November). Use and misuse of corrections for multiple testing. *Methods in Psychology*, 8, 100120. Retrieved 2025-07-13, from <https://www.sciencedirect.com/science/article/pii/S2590260123000115> doi: 10.1016/j.metip.2023.100120
- Gelman, A., Hill, J., & Yajima, M. (2012, April). Why We (Usually) Don't Have to Worry About Multiple Comparisons. *Journal of Research on Educational Effectiveness*, 5(2), 189–211. Retrieved 2025-07-13, from <https://doi.org/10.1080/19345747.2011.618213> doi: 10.1080/19345747.2011.618213
- Guerrero, G., & León, J. (2017). *Evaluación de Impacto del Servicio de Cuidado Diurno del Programa Nacional Cuna Más - Resultados finales* (Informe de Evaluación). Lima, Perú: Ministerio de Desarrollo e Inclusión Social. Retrieved from https://evidencia.midis.gob.pe/wp-content/uploads/2018/05/Informe_Final_9-1.pdf
- Halim, D., Perova, E., & Reynolds, S. (2023, January). Childcare and Mothers' Labor Market Outcomes in Lower- and Middle-Income Countries. *The World Bank Research Observer*, 38(1), 73–114. Retrieved 2023-09-26, from <https://academic.oup.com/wbro/article/38/1/73/6640475> doi: 10.1093/wbro/lkac003
- Kimmel, J. (2006, June). Child Care, Female Employment, and Economic Growth. *Community Development*, 37(2), 71–85. Retrieved 2023-09-26, from <http://www.tandfonline.com/doi/abs/10.1080/15575330609490208> doi: 10.1080/15575330609490208

- Krauß, M., & Rot, N. (2024). Early Childcare Expansion and Maternal Health. *SOEPpapers on Multidisciplinary Panel Data Research*. Retrieved 2025-07-13, from https://ideas.repec.org//p/diw/diwsop/diw_sp1208.html
- Lee, D. S., & Lemieux, T. (2010, June). Regression Discontinuity Designs in Economics. *Journal of Economic Literature*, *48*(2), 281–355. Retrieved 2024-01-22, from <https://www.aeaweb.org/articles?id=10.1257/jel.48.2.281> doi: 10.1257/jel.48.2.281
- Little, R. J. (2004, June). To Model or Not To Model? Competing Modes of Inference for Finite Population Sampling. *Journal of the American Statistical Association*, *99*(466), 546–556. Retrieved 2025-02-05, from <https://doi.org/10.1198/016214504000000467> (Publisher: ASA Website _eprint: <https://doi.org/10.1198/016214504000000467>) doi: 10.1198/016214504000000467
- Mairhofer, S., Plagg, B., & Flarer, H. (2022, October). Where are the children of working parents during school closures? *European Journal of Public Health*, *32*(Supplement_3). Retrieved 2025-07-13, from <https://academic.oup.com/eurpub/article/doi/10.1093/eurpub/ckac131.097/6766784> doi: 10.1093/eurpub/ckac131.097
- Pei, Z., Lee, D. S., Card, D., & Weber, A. (2022, June). Local Polynomial Order in Regression Discontinuity Designs. *Journal of Business & Economic Statistics*, *40*(3), 1259–1267. Retrieved 2024-06-07, from <https://doi.org/10.1080/07350015.2021.1920961> (Publisher: Taylor & Francis _eprint: <https://doi.org/10.1080/07350015.2021.1920961>) doi: 10.1080/07350015.2021.1920961
- Peisner-Feinberg, E. S., Burchinal, M. R., Clifford, R. M., Culkin, M. L., Howes, C., Kagan, S. L., & Yazejian, N. (2001, September). The Relation of Preschool Child-Care Quality to Children’s Cognitive and Social Developmental Trajectories through Second Grade. *Child Development*, *72*(5), 1534–

1553. Retrieved 2023-09-26, from <https://onlinelibrary.wiley.com/doi/10.1111/1467-8624.00364> doi: 10.1111/1467-8624.00364
- Romano, J. P., & Wolf, M. (2005, March). Exact and Approximate Stepdown Methods for Multiple Hypothesis Testing. *Journal of the American Statistical Association*, 100(469), 94–108. Retrieved 2025-07-13, from <https://doi.org/10.1198/016214504000000539> doi: 10.1198/016214504000000539
- Romano, J. P., & Wolf, M. (2016, June). Efficient computation of adjusted p-values for resampling-based stepdown multiple testing. *Statistics & Probability Letters*, 113, 38–40. Retrieved 2025-07-13, from <https://www.sciencedirect.com/science/article/pii/S0167715216000389> doi: 10.1016/j.spl.2016.02.012
- Rosero, J., & Oosterbeek, H. (2011). *Trade-offs between Different Early Childhood Interventions: Evidence from Ecuador* (Working Paper No. 11-102/3). Tinbergen Institute Discussion Paper. Retrieved 2025-07-13, from <https://www.econstor.eu/handle/10419/87225>
- Rousseau, S., Cavagnoud, R., & Espinosa Anaya, N. (2025, April). Cuidado infantil, género y política pública en los barrios marginales de Lima, Perú. *Revista de Estudios Sociales*(92), 77–92. Retrieved 2025-07-13, from <https://revistas.uniandes.edu.co/index.php/res/article/view/9729> (Publisher: Universidad de los Andes) doi: 10.7440/res92.2025.05
- Rubin, M. (2024, November). Inconsistent multiple testing corrections: The fallacy of using family-based error rates to make inferences about individual hypotheses. *Methods in Psychology*, 10, 100140. Retrieved 2025-07-13, from <https://linkinghub.elsevier.com/retrieve/pii/S2590260124000067> doi: 10.1016/j.metip.2024.100140
- Schmitz, S. (2020). The Impact of Publicly Funded Childcare on Parental Well-Being: Evidence from Cut-Off Rules. *European Journal of Population*, 36(2), 171–196. Retrieved 2025-07-13, from <https://www.jstor.org/>

[stable/45294690](#)

Solon, G., Haider, S. J., & Wooldridge, J. M. (2015, March). What Are We Weighting For? *Journal of Human Resources*, 50(2), 301–316. Retrieved 2024-10-17, from <https://jhr.uwpress.org/content/50/2/301> (Publisher: University of Wisconsin Press Section: Symposium on Empirical Methods) doi: 10.3368/jhr.50.2.301

Tobler, L., Christoph, B., Fervers, L., & Jacob, M. (2025, January). When the Burden Lifts: The Effect of School and Day Care Reopenings on Parents' Life Satisfaction. *Journal of Happiness Studies*, 26(1). Retrieved 2025-07-13, from <https://link.springer.com/10.1007/s10902-024-00819-7> doi: 10.1007/s10902-024-00819-7

Appendix

A Validity of the RDD

Table A.1: Descriptive statistics (Full Sample, 36-months cutoff, bw: 3-months)

	Below Cutoff	Above cutoff
Child attends Cuna Más (=1)	0.200 (0.400)	0.008 (0.092)
Child’s age in months (with decimals)	34.439 (0.856)	37.349 (0.866)
Child’s house member receives Juntos (=1)	0.214 (0.410)	0.231 (0.421)
Male (=1)	0.507 (0.500)	0.511 (0.500)
Mother’s age in years	30.177 (6.699)	30.629 (6.786)
Child’s household is poor (=1)	0.668 (0.471)	0.692 (0.462)
Cluster altitude (m.a.s.l.)	1730.540 (1507.014)	1615.454 (1485.360)
Child is stunting (=1)	0.181 (0.385)	0.174 (0.379)
Child is underweight (=1)	0.034 (0.180)	0.030 (0.170)
Child is overweight (=1)	0.049 (0.216)	0.042 (0.202)
Child is wasting (=1)	0.003 (0.058)	0.007 (0.084)
Child has anemia (=1)	0.124 (0.330)	0.133 (0.340)
Mother’s Weight-for-height z-score	0.709 (1.174)	0.618 (1.087)
Mother’s Body Mass Index	27.539 (4.989)	27.194 (4.521)
Mother has anemia (=1)	0.040 (0.197)	0.042 (0.202)
Mother is at risk or has high blood pressure	0.066 (0.249)	0.055 (0.229)
Observations	894	707

Note: This table reports means and standard deviations (in parentheses) for key variables, separately for children just below and above the eligibility cutoff (36 months). We use a bandwidth of 3-months. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. “Child is poor” is defined based on household wealth quintiles. Health outcomes include standard anthropometric and anemia.

Table A.2: Descriptive statistics - PHQ-9 variables (Full Sample, 36-months cutoff, bw: 3-months)

	Below Cutoff	Above cutoff
PHQ-9 Standardized	0.101 (0.145)	0.118 (0.165)
PHQ-9 Several Days	0.230 (0.278)	0.260 (0.298)
PHQ-9 Nearly Every Day	0.054 (0.149)	0.066 (0.166)
Mild Depression	0.225 (0.418)	0.289 (0.453)
Observations	894	707

Note: This table reports means and standard deviations (in parentheses) for PHQ-9 variables, separately for children just below and above the eligibility cutoff (36 months). We use a bandwidth of 3-months. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. *PHQ-9 Standardized* is our primary depression index, constructed using the nine standardized items from the Patient Health Questionnaire (PHQ-9). *PHQ-9 Several Days* assigns a value of 1 to each item if the response is “several days” or more; the index is then calculated as the average across the nine items. *PHQ-9 Nearly Every Day* follows the same approach, but assigns a value of 1 only if the response is “more than half the days” or “nearly every day”, and also averages across all nine items. *Mild Depression* takes the value of 1 if the PHQ-9 index (0–27) is greater or equal than 5, as it is widely accepted in Psychology.

B Patient Health Questionnaire

Figure B.1

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

ID #: _____ DATE: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

add columns + +

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card). TOTAL:

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	_____
	Somewhat difficult	_____
	Very difficult	_____
	Extremely difficult	_____

C Qualitative Appendix

Context: During our fieldwork, the Cuna Más program was gradually resuming its face-to-face service (SCD) provision after a prolonged closure due to the COVID-19 pandemic. By mid March 2020, all SCD centers across Peru were closed. A remote service provision was gradually implemented, mostly based on phone-based interactions between caregivers and parents to monitor child development, and the distribution of food baskets (implemented after March 2020). The SCD centers began to reopen in March 2022, although at a slow pace: by October 2022, less than 25% were opened due to budget and human resource limitations according to journalistic investigations (cf. <https://saludconlupa.com/noticias/el-lento-retorno-de-las-guarderias-de-cuna-mas-en-las-regiones-del-peru/>).

Role of local actors in service delivery: Cuna Más' SCD is implemented, in communities designated as poor, using a co-management model that includes various local actors, who voluntarily collaborate with the program in service delivery. Local actors can participate in the following roles:

- Oversight Committee, formed by representatives of user families and community leaders, who supervise the use of resources and the quality of the service;
- Voluntary care workers: a) “Madres cuidadoras” (SCD caregivers), who are usually female caregivers from the community, b) Family guides, who support households with children at nutritional risk, c) SCD Support Team, in charge of cooking, cleaning, maintenance and security of the care center.

SCD caregivers, known as “Madres cuidadoras”, have a key role in program provision. They are selected through a process that includes medical and psychological examination. Cuna Más provides a stipend as acknowledgment for their work, 510 Peruvian Soles per month (~US\$141) and provides training. However, they have full time working conditions (Monday to Friday, from 8am to 5pm, in which they

care for 8 children per shift) without the benefits given to formal workers get by law (1,130 Peruvian Soles per month, health insurance, pension contribution, etc.). SCD caregivers provide the following services: early stimulation, hygiene and feeding, parent orientation, counseling for pregnant women and in cases of nutritional risk.

Scope: The qualitative component of the project consisted of an exploratory field-work in Lima and Arequipa, the regions with the most progress regarding the return to in-person operations, which was implemented between August and December 2023. The qualitative study had a total of 31 participants, divided in four focus groups of SCD caregivers (“*madres cuidadoras*”) and technical support personnel (“*acompañantes técnicas*”), and ten interviews with regional and national program officials and independent experts, as detailed in [Table C.1](#). Moreover, seven out of the 12 SCD caregiver participants were former users of the SCD or WawaWasi (the previous version of the program that operated until 2012).

Selection criteria for participants: The following criteria was applied per research technique:

- *Focus groups:* We selected key actors in local program implementation directly involved in the local implementation of the SCD, particularly those with regular interaction with mothers and children. We selected participants who had pre-pandemic experience in Cuna Más’ SCD, and were involved in the program’s adaptations made during the pandemic, as well as in the process of resuming face-to-face SCD operations since 2022.
- *Interviews:* We selected interviewees who were program officials, at the regional and national levels, who have worked for Cuna Más before the COVID’19 pandemic, and experts in child development and social protection with ample knowledge of the Cuna Más program, who that could provide a balance of Cuna Más evolution since its creation in 2012.

Ethics procedure: The study protocol was approved by the Ethics Committee for Research in Social Sciences, Humanities, and Arts of the Pontifical Catholic University of Peru (Approval No. 030-2023-CEI-CCSSHHyAA/PUCP, May 18, 2023). An amendment to the protocol was subsequently approved under Approval No. 041-2023-CEI-CCSSHHyAA/PUCP, June 16, 2023. The approved research protocol was presented to the Ministry of Development and Social Inclusion (Government of Peru) to obtain permission to access Cuna Más program, which was granted on June 26, 2023 (Carta N° 000121-2023-MIDIS/PNCM-DE)

Illustrative Participant Quotations: To complement the thematic analysis presented in the main text, this section provides selected anonymized quotations from the interviews and focus groups. These excerpts are intended to illustrate and contextualize the findings, highlighting participants' perspectives in their own words. All quotes are translated from Spanish and edited minimally for clarity, without altering their meaning.

“For children with anemia, the ferrous sulfate supplement is given between 10 a.m and 11 a.m. Not all of them take it at the center because the Ministry of Health is prescribing it to be taken on an empty stomach, so we only have the mother’s report as a reference for whether the supplement was given at home. For children without anemia, micronutrients (iron, zinc, vitamin A) are given at lunchtime” (Focus group, technical support personnel, Lima).

“When children are enrolled in the program, families are told that they will leave after 36 months. One month before, they are reminded that their time in the program is coming to an end. The children are also told that they will be going to kindergarten. On the day they leave, a farewell song is sung to them. Sometimes, they are given a small gift” (Focus Group, SCD caregivers, Lima).

“With the children, we talk to them about going to school and how they are now grown up. Families are given guidance before leaving, so they don’t lose the habits they’ve developed. For the SCD caregiver [‘madres cuidadoras’], it is difficult because you see how the child has grown, learned new things, and become independent—and then, at that moment, they leave” (Focus group, SCD caregivers, Arequipa).

“A child should eat five times a day; Cuna Más guarantees three meals, and the family must provide two. However, once they leave the program, most children are only given three meals a day, like any adult, and no longer receive the necessary amount of iron. In the program, hemoglobin levels are monitored, but after leaving, it is unknown whether this monitoring will continue.” (Focus group, technical support personnel, Arequipa).

“Some children can develop a stronger attachment to the caregiver mothers than to their biological mothers. After leaving the program, some even recognize the caregiver mothers as their mom” (Focus group, technical support personnel, Arequipa).

“When there are no available spots in PRONOEI or public nurseries, some mothers look for daycare centers because they work. There are private daycares that charge 400 soles, some provide food and may charge more. There are also private preschools starting at age two that include daycare and meals for additional fees. Those who cannot afford it leave their children in the care of family members or the mothers simply stop working” (Focus groups, SCD caregivers, Lima).

“Mothers trust that at Cuna Más their children are well cared for. When they have to go somewhere else, it is difficult. . . economically, they have to pay. They do not know what the children are doing, unlike here. It

also affects when mothers have to stop working because they have no one to leave their child with, like the families who work in agricultural fields and are there all day. There are private services, but there is a lot of distrust, and the price is not affordable because they are asked for additional things” (Focus group, SCD caregivers, Arequipa).

“Children who are born from April onwards practically lose a whole year. The program should consider allowing them to continue until the school holidays, and then move on to kindergarten, because they are left without care for five months or more, and the following year they have to readapt—this time to preschool” (Focus group, SCD caregivers, Lima).

Table C.1: Qualitative database

Scope	Participant profile	Interview	Focus group
National level	Executive Director, Cuna Más Program	1	
	Representative, Ministry of Development and Social Inclusion	1	
	Former director, Wawa Wasi program	1	
	Early childhood development expert	1	
	Social protection expert	1	
Regional level Lima case study	Cuna Más territorial head	1	
	Local government representative (Lurigancho-Chosica)	1	
	Technical assistants, Cuna Más program		1 (4 participants)
	Community caregivers, Cuna Más program		1 (7 participants)
Regional level Arequipa case study	Cuna Más territorial head	1	
	Local government representative (Yura)	1	
	Technical assistants, Cuna Más program		1 (5 participants)
	Community caregivers, Cuna Más program		1 (6 participants)
Sample	Sub-total	9	22
	Total	31 participants	

Supplementary Material

The Supplementary Material is organized in six sections: Heterogeneity Analysis (section S1), Sensitivity Analysis (section S2), Placebo Tests (section S3), Non-parametric Analysis (section S4), Multiple Hypothesis Testing (section S5), and Additional Child Outcomes (section S6) and Additional Mother Outcomes (section S7).

S1 Heterogeneity Analysis

Table S1.1: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Male Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	0.012 (0.294)	-0.079 (0.240)	0.055 (0.127)	0.049 (0.124)	-0.206 (0.304)	-0.079 (0.280)	0.000 (0.316)	0.110 (0.283)	0.012 (0.010)	0.014 (0.013)
Observations:	814	814	814	814	814	814	814	814	814	814
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.825 (1.363)	-0.087 (1.203)	0.818 (6.409)	2.023 (6.418)	-0.284 (0.197)	-0.166 (0.167)	0.742** (0.377)	0.710* (0.373)	0.282 (0.184)	0.323* (0.183)
Observations:	814	814	814	814	814	814	809	809	814	814
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.2: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Female Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-1.216 (1.640)	-0.299 (1.262)	0.548 (0.979)	0.660 (0.862)	2.145 (3.039)	1.100 (1.212)	0.839 (1.552)	-0.171 (1.045)	0.092 (0.251)	0.118 (0.168)
Observations:	787	787	787	787	787	787	787	787	787	787
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	1.304 (3.996)	0.736 (2.933)	2.474 (16.145)	1.462 (12.090)	2.010 (2.798)	0.718 (0.892)	-1.420 (2.115)	-0.968 (1.043)	1.194 (1.903)	1.130 (1.292)
Observations:	787	787	787	787	787	787	785	785	787	787
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.3: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Poor Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	0.030 (0.480)	0.025 (0.446)	0.163 (0.202)	0.149 (0.196)	0.010 (0.181)	0.012 (0.162)	-0.070 (0.344)	-0.161 (0.270)	0.013 (0.014)	0.006 (0.012)
Observations:	1086	1086	1086	1086	1086	1086	1086	1086	1086	1086
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.944 (1.246)	-0.577 (1.006)	-2.187 (4.509)	-1.764 (3.906)	0.027 (0.155)	0.021 (0.130)	0.044 (0.261)	0.026 (0.227)	0.370 (0.236)	0.408* (0.237)
Observations:	1086	1086	1086	1086	1086	1086	1082	1082	1086	1086
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. The poverty variable is constructed using categories 1 (very poor) and 2 (poor) from the wealth index variable as indicated in the Demographic and Family Health Survey. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.4: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Non-poor Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.655 (0.558)	-0.491 (0.783)	0.159 (0.159)	0.338 (0.267)	0.826 (1.201)	0.733 (1.658)	1.199 (1.016)	2.109 (1.614)	0.122 (0.152)	0.191 (0.208)
Observations:	515	515	515	515	515	515	515	515	515	515
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	0.069 (4.678)	0.035 (7.206)	9.268 (23.338)	5.437 (37.430)	0.557 (1.019)	0.061 (1.448)	1.441 (1.217)	1.920 (1.912)	0.797 (0.550)	1.495 (0.952)
Observations:	515	515	515	515	515	515	512	512	515	515
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. The poverty variable is constructed using categories 1 (very poor) and 2 (poor) from the wealth index variable as indicated in the Demographic and Family Health Survey. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.5: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - Sample of mothers older than the median, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.269 (0.355)	-0.144 (0.324)	0.127 (0.117)	0.109 (0.099)	0.417 (0.401)	0.360 (0.343)	0.300 (0.305)	0.103 (0.270)	0.044 (0.047)	0.058 (0.047)
Observations:	823	823	823	823	823	823	823	823	823	823
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	0.277 (1.429)	0.718 (1.371)	3.049 (7.038)	4.631 (6.894)	0.288 (0.279)	0.213 (0.254)	0.376 (0.359)	0.370 (0.348)	0.192 (0.193)	0.151 (0.169)
Observations:	823	823	823	823	823	823	820	820	823	823
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.6: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Sample of mothers younger than the median, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	0.371 (1.354)	0.945 (2.577)	0.342 (0.637)	0.434 (0.968)	-0.632 (0.897)	-0.955 (1.698)	0.128 (1.081)	-0.658 (1.776)	0.019 (0.036)	0.029 (0.067)
Observations:	778	778	778	778	778	778	778	778	778	778
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-3.513 (5.185)	-3.931 (7.897)	-10.831 (17.636)	-15.260 (30.241)	-0.252 (0.861)	-1.210 (2.335)	0.199 (0.691)	0.720 (1.476)	1.327 (1.481)	2.217 (3.361)
Observations:	778	778	778	778	778	778	774	774	778	778
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.7: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health
- (Households With an Elderly Member Sample, 36-months cutoff, bw: 3-months)
- Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-1.259 (1.610)	-0.549 (1.066)	0.419 (0.493)	-0.035 (0.296)	-0.028 (0.802)	0.394 (0.889)	0.708 (1.486)	0.698 (1.148)	0.105 (0.098)	0.185 (0.185)
Observations:	133	133	133	133	133	133	133	133	133	133
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	0.471 (3.503)	-0.410 (2.643)	-1.168 (14.425)	-3.276 (11.554)	-0.617 (1.073)	0.115 (0.940)	0.561 (0.626)	0.111 (0.349)	0.104 (0.462)	0.392 (0.251)
Observations:	133	133	133	133	133	133	133	133	133	133
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.8: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Households Without an Elderly Member Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.022 (0.408)	0.178 (0.451)	0.155 (0.168)	0.192 (0.186)	0.245 (0.352)	0.164 (0.324)	0.162 (0.334)	-0.027 (0.299)	0.039 (0.040)	0.035 (0.039)
Observations:	1468	1468	1468	1468	1468	1468	1468	1468	1468	1468
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.701 (1.482)	-0.553 (1.483)	0.925 (6.644)	-0.729 (6.850)	0.194 (0.271)	0.039 (0.245)	0.369 (0.340)	0.429 (0.372)	0.455** (0.231)	0.522** (0.265)
Observations:	1468	1468	1468	1468	1468	1468	1461	1461	1468	1468
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.9: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Households With Another Adult Woman Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	0.139 (0.813)	0.430 (0.814)	0.393 (0.438)	0.489 (0.359)	-0.774 (0.903)	-1.227 (0.855)	1.628 (1.465)	2.199 (1.570)	0.062 (0.056)	0.088 (0.079)
Observations:	249	249	249	249	249	249	249	249	249	249
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-3.679 (3.019)	-5.799* (3.006)	-8.373 (12.377)	-23.688** (12.060)	-0.936 (0.637)	-0.618 (0.543)	-0.173 (0.582)	-0.524 (0.599)	1.071 (0.879)	0.924 (0.694)
Observations:	249	249	249	249	249	249	249	249	249	249
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.10: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Households Without Another Adult Woman Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.131 (0.389)	-0.014 (0.382)	0.126 (0.161)	0.138 (0.169)	0.332 (0.334)	0.257 (0.285)	0.100 (0.304)	-0.046 (0.243)	0.040 (0.039)	0.038 (0.035)
Observations:	1352	1352	1352	1352	1352	1352	1352	1352	1352	1352
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.105 (1.433)	0.027 (1.309)	1.989 (6.594)	1.307 (6.080)	0.330 (0.273)	0.167 (0.221)	0.419 (0.350)	0.469 (0.364)	0.324* (0.183)	0.357* (0.192)
Observations:	1352	1352	1352	1352	1352	1352	1345	1345	1352	1352
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.11: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Women With a Male Partner Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.428 (0.340)	-0.409 (0.326)	0.070 (0.179)	0.054 (0.174)	-0.131 (0.215)	-0.044 (0.217)	-0.265 (0.362)	-0.292 (0.331)	0.006 (0.019)	0.019 (0.017)
Observations:	985	985	985	985	985	985	985	985	985	985
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	0.261 (1.159)	0.546 (1.114)	1.639 (4.549)	1.985 (4.376)	-0.235 (0.194)	-0.197 (0.201)	0.286 (0.305)	0.296 (0.275)	0.320* (0.187)	0.341* (0.203)
Observations:	985	985	985	985	985	985	981	981	985	985
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. We define partner as cohabiting partner. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S1.12: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Women Without a Male Partner Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	0.699 (1.394)	2.579 (6.017)	0.493 (0.546)	1.013 (1.873)	0.916 (1.393)	1.073 (2.571)	1.543 (1.664)	2.392 (4.560)	0.127 (0.170)	0.241 (0.499)
Observations:	616	616	616	616	616	616	616	616	616	616
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-3.018 (5.182)	-3.171 (10.273)	-3.190 (18.910)	-2.336 (38.133)	1.009 (1.219)	0.794 (1.694)	0.616 (0.998)	1.256 (3.179)	0.742 (0.962)	1.977 (4.038)
Observations:	616	616	616	616	616	616	613	613	616	616
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. We define partner as cohabiting partner. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

S2 Sensitivity Analysis

Table S2.1: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Full Sample, 36-months cutoff, bw: 4-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.320 (0.321)	-0.045 (0.334)	0.023 (0.152)	0.073 (0.151)	-0.010 (0.332)	-0.158 (0.300)	0.317 (0.339)	0.161 (0.305)	0.060 (0.040)	0.062 (0.040)
Observations:	2095	2095	2095	2095	2095	2095	2095	2095	2095	2095
Bandwidth:	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.990 (1.362)	-0.983 (1.355)	-0.780 (6.041)	-2.756 (6.084)	0.098 (0.271)	-0.035 (0.245)	0.263 (0.286)	0.338 (0.291)	0.363** (0.175)	0.394** (0.182)
Observations:	2095	2095	2095	2095	2095	2095	2087	2087	2095	2095
Bandwidth:	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00	± 4.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 4-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S2.2: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Full Sample, 36-months cutoff, bw: 5-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.361 (0.286)	-0.120 (0.275)	0.007 (0.126)	0.059 (0.121)	-0.000 (0.269)	-0.108 (0.245)	0.368 (0.290)	0.224 (0.250)	0.062* (0.036)	0.063* (0.036)
Observations:	2602	2602	2602	2602	2602	2602	2602	2602	2602	2602
Bandwidth:	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.366 (1.073)	-0.606 (1.052)	0.516 (4.866)	-1.966 (4.791)	0.091 (0.229)	-0.010 (0.214)	0.185 (0.238)	0.207 (0.235)	0.248* (0.135)	0.261* (0.135)
Observations:	2602	2602	2602	2602	2602	2602	2591	2591	2602	2602
Bandwidth:	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00	± 5.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 5-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S2.3: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Full, Two-Week Donut Sample, 36-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.033 (0.521)	-0.023 (0.566)	0.124 (0.295)	0.124 (0.312)	-0.806* (0.433)	-0.923* (0.498)	-0.297 (0.618)	-0.292 (0.545)	0.027 (0.039)	0.040 (0.039)
Observations:	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.033 (1.769)	0.426 (1.777)	0.432 (6.881)	-0.481 (7.075)	0.060 (0.465)	0.100 (0.444)	0.462 (0.443)	0.535 (0.451)	0.457* (0.273)	0.611* (0.317)
Observations:	1313	1313	1313	1313	1313	1313	1309	1309	1313	1313
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

S3 Placebo Tests

Table S3.1: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Full Sample, 30-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	0.131 (1.665)	-0.138 (0.692)	-0.018 (0.587)	-0.099 (0.387)	-0.260 (1.119)	-0.227 (0.821)	0.589 (1.100)	0.785 (1.968)	0.211 (0.540)	0.177 (0.383)
Observations:	1902	1902	1902	1902	1902	1902	1902	1902	1902	1902
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	2.258 (3.110)	2.821 (5.110)	7.260 (9.970)	10.821 (20.173)	0.347 (1.024)	0.335 (1.007)	-0.194 (1.134)	-0.094 (0.651)	-0.369 (0.471)	-0.489 (0.855)
Observations:	1902	1902	1902	1902	1902	1902	1895	1895	1902	1902
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 30-months cutoff. We use a 3-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S3.2: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Full Sample, 24-months cutoff, bw: 3-months) - Sample Weights

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	2.927 (20.750)	-1.631 (3.164)	1.213 (5.812)	0.031 (2.114)	6.137 (37.251)	-2.843 (6.342)	-6.630 (38.326)	1.206 (4.235)	0.447 (2.573)	-0.099 (0.424)
Observations:	1701	1701	1701	1701	1701	1701	1701	1701	1701	1701
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	5.893 (28.529)	-0.106 (10.981)	15.974 (85.460)	-6.461 (50.351)	-1.042 (6.853)	0.468 (1.110)	6.139 (72.318)	-1.342 (2.102)	0.770 (5.398)	-0.265 (0.811)
Observations:	1701	1701	1701	1701	1701	1701	1693	1693	1701	1701
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 24-months cutoff. We use a 3-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

S4 Non-parametric analysis

Instead of using the ad-hoc bandwidth, we present the results of a data-driven bandwidth in this sub-section, chosen by using the `rdrobust` command in Stata. The initial dataset for this analysis includes all children under 60 months old whose mothers respond to questions about high blood pressure and mental health. [Table S4.1](#) show the impacts of exiting the SCD on child health and maternal health, respectively, using a polynomial of degree 1. These tables show that the bandwidth at the left side of the 36-month cutoff varies from 5.05 months to 11.44 months, depending on the outcome variable. The bandwidth at the right side of the cutoff varies from 5.4 to 7.24 months. However, the results are similar to those in our main specification: only the impact on the standardized PHQ-9 index increases at the 10% significance level.

Additionally, [Table S4.2](#) show the same specification, but using a polynomial of degree 2; the results remain the same. Finally, [Table S4.2](#) also show the specification with a polynomial of degree 3; in this case, the impact of exiting the SCD on mental health becomes not statistically significant. The mean squared error (MSE) criterion proposed by [Pei, Lee, Card, and Weber \(2022\)](#) suggests that a first-degree polynomial is the optimal choice for our data.

Table S4.1: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health
- (Full Sample, 36-months cutoff, optimal bandwidth, local linear polynomial RD)
- Sample Weights and Triangular Kernel

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.421 (0.290)	-0.098 (0.300)	-0.022 (0.116)	0.056 (0.117)	0.076 (0.293)	-0.066 (0.275)	0.068* (0.039)	0.071 (0.044)	0.459 (0.319)	0.251 (0.286)
Eff. Observations:	3546	3365	4780	3822	4249	4027	2985	2705	3465	3315
Opt. Bandwidth (left):	± 7.51	± 7.04	± 11.43	± 8.15	± 9.85	± 9.14	± 5.29	± 5.05	± 7.41	± 6.96
Opt. Bandwidth (right):	± 6.35	± 6.10	± 6.50	± 6.95	± 6.17	± 6.01	± 7.24	± 5.67	± 5.90	± 5.89
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.267 (1.209)	-0.567 (1.173)	1.855 (5.823)	-1.795 (5.756)	0.114 (0.225)	-0.021 (0.210)	0.262 (0.242)	0.336 (0.251)	0.299** (0.150)	0.311** (0.149)
Eff. Observations:	3805	3825	3524	3437	4386	4095	4638	4193	3975	3916
Opt. Bandwidth (left):	± 8.19	± 8.37	± 7.52	± 7.24	± 10.23	± 9.41	± 11.44	± 10.06	± 9.09	± 8.95
Opt. Bandwidth (right):	± 6.75	± 6.43	± 6.07	± 6.18	± 6.29	± 5.94	± 5.60	± 5.40	± 5.78	± 5.68
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights and a triangular kernel are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use the optimal bandwidth. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S4.2: 2015-2019: Impact of Exiting Cuna Más on Child and Mother Health - (Full Sample, 36-months cutoff, optimal bandwidth, local polynomial RD) - Sample Weights and Triangular Kernel with different polynomials

Panel A: Effects on Child Health										
	Stunting		Underweight		Overweight		Anemia		Wasting	
τ	-0.536 (0.354)	-0.124 (0.351)	-0.044 (0.166)	0.167 (0.182)	0.294 (0.422)	0.042 (0.371)	0.059 (0.062)	0.052 (0.050)	0.536 (0.384)	0.296 (0.337)
Eff. Observations:	5608	5584	6158	4432	5679	5975	3486	3030	5575	5485
Opt. Bandwidth (left):	± 13.80	± 13.18	± 16.03	± 9.74	± 14.31	± 15.19	± 6.86	± 5.34	± 13.24	± 12.75
Opt. Bandwidth (right):	± 8.46	± 10.10	± 7.63	± 8.02	± 7.79	± 8.32	± 7.57	± 7.49	± 9.86	± 9.92
Polynomial:	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
τ	-0.406 (0.537)	0.087 (0.703)	0.288 (0.249)	0.400 (0.309)	1.002 (0.786)	0.832 (0.717)	-0.013 (0.076)	-0.010 (0.082)	0.534 (0.569)	0.236 (0.529)
Eff. Observations:	5812	5446	4875	4727	4687	4570	4131	4176	5543	5441
Opt. Bandwidth (left):	± 14.41	± 12.96	± 10.34	± 10.26	± 10.52	± 10.21	± 8.95	± 9.19	± 13.18	± 12.84
Opt. Bandwidth (right):	± 9.04	± 8.92	± 11.33	± 9.80	± 8.17	± 7.91	± 7.37	± 7.17	± 9.54	± 9.15
Polynomial:	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Panel B: Effects on Mother Health										
	Weight-for-height		BMI		Anemia		HBP		PHQ9	
τ	-0.204 (1.506)	-0.615 (1.473)	3.196 (7.480)	-1.328 (7.266)	0.126 (0.278)	-0.026 (0.275)	0.440 (0.385)	0.531 (0.396)	0.506* (0.281)	0.533* (0.294)
Eff. Observations:	5756	5878	5598	5804	6010	6082	5778	6283	5634	5615
Opt. Bandwidth (left):	± 13.56	± 14.14	± 13.36	± 14.08	± 14.80	± 15.56	± 14.66	± 16.54	± 14.56	± 14.58
Opt. Bandwidth (right):	± 11.07	± 10.85	± 9.79	± 10.04	± 10.21	± 8.41	± 7.94	± 7.66	± 6.72	± 6.52
Polynomial:	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic	Quadratic
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
τ	-1.016 (2.495)	-1.766 (2.709)	3.199 (11.392)	-3.564 (12.448)	0.138 (0.431)	-0.196 (0.479)	0.568 (0.553)	0.665 (0.614)	0.704 (0.480)	0.745 (0.516)
Eff. Observations:	5765	5582	6003	5738	4952	5030	6289	6379	5804	5942
Opt. Bandwidth (left):	± 13.95	± 13.25	± 14.79	± 13.78	± 11.32	± 11.94	± 15.88	± 16.29	± 14.21	± 14.74
Opt. Bandwidth (right):	± 9.97	± 9.93	± 10.15	± 10.07	± 8.55	± 7.38	± 10.10	± 9.70	± 9.58	± 9.47
Polynomial:	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic	Cubic
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights and a triangular kernel are selected. Panel A reports the effects for Child Health, whereas Panel B presents the effects on Mother Health. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use the optimal bandwidth. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

S5 Multiple Hypothesis Testing

Table S5.1: Multiple Hypothesis Testing: Impact of Exiting Cuna Más on Child Health - (Full Sample, 36-months cutoff, bw: 3-months) - Sample Weights - Without Controls

	τ	s.e	p-value	Romano-wolf
Stunting	-0.130	0.371	0.725	0.723
Underweight	0.169	0.161	0.294	0.555
Overweight	0.210	0.329	0.523	0.723
Anemia	0.231	0.349	0.509	0.723
Wasting	0.041	0.037	0.275	0.555

Note: Standard errors are clustered at district level. Multiple Hypothesis Testing results from a fuzzy regression discontinuity design are presented. 100 bootstrap replications are used. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. We include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S5.2: Multiple Hypothesis Testing: Impact of Exiting Cuna Más on Mother Health - (Full Sample, 36-months cutoff, bw: 3-months) - Sample Weights - Without Controls

	τ	s.e	p-value	Romano-wolf
Weight-for-height	-0.610	1.379	0.658	0.733
BMI	0.821	6.223	0.895	0.891
Anemia	0.142	0.264	0.590	0.733
HBP	0.373	0.319	0.243	0.347
PHQ9	0.446	0.221	0.043	0.090

Note: Standard errors are clustered at district level. Multiple Hypothesis Testing results from a fuzzy regression discontinuity design are presented. 100 bootstrap replications are used. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. We include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

S6 Results: Full Sample of Children

Table S6.1: 2015-2019: Impact of Exiting Cuna Más on Child Health - (Full Child Sample, 36-months cutoff, bw: 3-months, continuous variables) - Sample Weights

Effects on Continuous variables								
	Height-for-Age		Weight-for-Age		Weight-for-height		Hemoglobin	
τ	0.788 (0.758)	0.677 (0.695)	0.927 (0.734)	0.819 (0.707)	0.640 (0.694)	0.569 (0.712)	-0.625 (1.003)	0.545 (0.774)
Observations:	5207	5207	5207	5207	5207	5207	5182	5182
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S6.2: 2015-2019: Impact of Exiting Cuna Más on Child Health - (Full Child Sample, 36-months cutoff, bw: 3-months, dummy variables) - Sample Weights

Effects on Dummy variables										
	Stunting		Underweight		Overweight		Wasting		Anemia	
τ	-0.422 (0.271)	-0.450 (0.279)	0.129 (0.114)	0.139 (0.118)	-0.027 (0.191)	-0.059 (0.201)	-0.013 (0.043)	-0.008 (0.042)	0.035 (0.247)	-0.081 (0.246)
Observations:	5207	5207	5207	5207	5207	5207	5207	5207	5207	5207
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. The full sample of children includes all of them whether or not their mothers were included in the high blood pressure and mental health questionnaire. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

S7 Results: Full Sample of Mothers

Table S7.1: 2015-2019: Impact of Exiting Cuna Más on Mother Health - (Full Mother Sample, 36-months cutoff, bw: 3-months, extra variables) - Sample Weights

Effects on Extra variables						
	Weight-for-height		BMI		Anemia	
τ	1.348 (0.982)	1.392 (1.028)	7.216* (4.319)	6.185 (4.549)	-0.323 (0.213)	-0.374* (0.212)
Observations:	5002	5002	5002	5002	5002	5002
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. Controls include child's sex, mother's age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

S8 Additional Outcomes

Table S8.1: 2015-2019: Impact of Exiting Cuna Más on Child Health - (Full Sample, 36-months cutoff, bw: 3-months, continuous variables) - Sample Weights

Effects on Continuous variables								
	Height-for-Age		Weight-for-Age		Weight-for-height		Hemoglobin	
τ	1.200 (0.996)	0.548 (0.899)	1.236 (1.167)	0.694 (1.039)	0.740 (1.165)	0.498 (1.105)	-1.789 (1.474)	-0.069 (1.097)
Observations:	1601	1601	1601	1601	1601	1601	1596	1596
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child’s sex, mother’s age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table S8.2: 2015–2019: Impact of Exiting Cuna Más on Mother Depression – (Full Sample, 36-months cutoff, bw: 3-months) – Sample Weights

Effects on PHQ-9 Index								
	PHQ-9 Standardized		PHQ-9 Several Days		PHQ-9 Nearly Every Day		Mild Depression	
τ	0.446** (0.221)	0.506** (0.248)	0.585 (0.375)	0.700* (0.415)	0.522** (0.229)	0.571** (0.258)	0.870 (0.598)	1.017 (0.659)
Observations:	1601	1601	1601	1601	1601	1601	1601	1601
Bandwidth:	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00	± 3.00
Polynomial:	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
Controls	No	Yes	No	Yes	No	Yes	No	Yes

Note: Standard errors are clustered at district level. Sample weights are selected. *PHQ-9 Standardized* is our primary depression index, constructed using the nine standardized items from the Patient Health Questionnaire (PHQ-9). *PHQ-9 Several Days* assigns a value of 1 to each item if the response is “several days” or more; the index is then calculated as the average across the nine items. *PHQ-9 Nearly Every Day* follows the same approach, but assigns a value of 1 only if the response is “more than half the days” or “nearly every day”, and also averages across all nine items. *Mild Depression* takes the value of 1 if the PHQ-9 index (0–27) is greater or equal than 5, as it is widely accepted in Psychology. Results from a fuzzy regression discontinuity design are presented. The running variable is centered at a 36-months cutoff. We use a 3-months bandwidth around the cutoff. The full sample includes children between the chosen bandwidth and their respective mothers, drawn from DHS clusters with at least one Cuna Más beneficiary between 2015 and 2019. Children enrolled in preschool are excluded. Controls include child’s sex, mother’s age, altitude, region fixed effects, and a dummy indicating whether any household member receives the JUNTOS cash transfer program. We also include survey fixed effects. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.