

**Conditional cash transfer program, child malnutrition and school dropout in the high Andean region of Peru**

Programa de transferência condicionada de renda, desnutrição infantil e evasão escolar na região andina do Peru

Programa de transferencia monetaria condicionada, desnutrición infantil y deserción escolar en la región altoandina del Perú

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**Main topic:**

Impact of Conditional cash transfer programs

**Main practical implications:**

It contributes to the understanding of how conditional cash transfer programs can positively influence child nutrition and school permanence in specific contexts, for instance, the high Andean region of Peru.

**Originality/value:**

It provides originality by specifically exploring the impact of the conditional monetary transfer program in a particular geographic and socioeconomic region such as the high Andean region of Peru.

**ABSTRACT**

The conditional cash transfer program (CCT) in Peru aims to promote positive behaviors by providing financial support to families on the condition that they commit to ensuring their children's health and education. This research aimed to assess the impact of the National Program of Direct Support to the Poorest, known as JUNTOS, on chronic child malnutrition and school dropout among beneficiaries in the Apurímac region in 2023. The study used a quantitative research method with a cross-sectional, causal correlational design. The hypotheses were tested using the chi-square coefficient and Nagelkerke. The population included 405,759 beneficiary families, and the sample consisted of 384 beneficiaries who were surveyed using a questionnaire. The results indicated that the JUNTOS program had a significant influence on chronic malnutrition (Sig.=0.013, chi-square=8.508, Nagelkerke=0.026) and school dropout (Sig.=0.02, chi-square=5.63, Nagelkerke=0.020) among the beneficiaries. It is concluded that the JUNTOS program significantly reduced chronic malnutrition and school dropout rates by 2.6% and 2.0% respectively in the Apurímac region. Future policy efforts must expand CCT initiatives to similar regions in Peru.

**Keywords:** JUNTOS Program, conditional cash transfer program, chronic child malnutrition, school dropout, poverty.

**RESUMO**

O programa de transferência condicionada de renda (TCR) no Peru tem como objetivo promover comportamentos positivos ao fornecer apoio financeiro às famílias com a condição de que elas se comprometam a garantir a saúde e a educação de seus filhos. Esta pesquisa teve como objetivo avaliar o impacto do Programa Nacional de Apoio Direto aos Mais Pobres, conhecido como JUNTOS, sobre a desnutrição infantil crônica e a evasão escolar entre os beneficiários na região de Apurímac em 2023. O estudo usou um método de pesquisa quantitativa com um projeto correlacional causal e transversal. As hipóteses foram testadas usando o coeficiente de qui-quadrado e Nagelkerke. A população incluiu 405.759 famílias beneficiárias, e a amostra consistiu em 384 beneficiários que foram pesquisados por meio de um questionário. Os resultados indicaram que o programa "JUNTOS" teve uma influência significativa na desnutrição crônica (Sig.=0,013, qui-quadrado=8,508, Nagelkerke=0,026) e na evasão escolar (Sig.=0,02, qui-quadrado=5,63, Nagelkerke=0,020) entre os beneficiários. Conclui-se que o programa JUNTOS reduziu significativamente a desnutrição crônica e as taxas de evasão escolar em 2,6% e 2,0%, respectivamente, na região de Apurímac. Os esforços políticos futuros devem expandir as iniciativas de CCT para regiões semelhantes no Peru.

**Palavras-chave:** Programa JUNTOS, programa de transferência condicional de renda, desnutrição infantil crônica, evasão escolar, pobreza.

**RESUMEN**

El programa de transferencias monetarias condicionadas (TMC) en Perú tiene como objetivo promover comportamientos positivos mediante la entrega de apoyo financiero a las familias con la condición de que se comprometan a garantizar la salud y la educación de sus hijos. Esta investigación tuvo como objetivo evaluar el impacto del Programa Nacional de Apoyo Directo a los Más Pobres, conocido como JUNTOS, sobre la desnutrición crónica infantil y la deserción escolar de los beneficiarios de la región Apurímac en el año 2023. El estudio utilizó un método de investigación cuantitativo con un diseño transversal, causal correlacional. Las hipótesis se contrastaron mediante el coeficiente chi-cuadrado y Nagelkerke. La población incluyó 405.759 familias beneficiarias, y la muestra consistió en 384 beneficiarios que fueron encuestados mediante un cuestionario. Los resultados indicaron que el programa «JUNTOS» tuvo una influencia significativa sobre la desnutrición crónica (Sig.=0.013, chi-cuadrado=8.508, Nagelkerke=0.026) y la deserción escolar (Sig.=0.02, chi-cuadrado=5.63, Nagelkerke=0.020) entre los beneficiarios. Se concluye que el programa JUNTOS redujo significativamente las tasas de desnutrición crónica y deserción escolar en 2,6% y 2,0% respectivamente en la región Apurímac. Los esfuerzos políticos futuros deben ampliar las iniciativas de TMC a regiones similares en Perú.

**Palabras clave:** Programa JUNTOS, programa de transferencias monetarias condicionadas, desnutrición infantil crónica, abandono escolar, pobreza.

## INTRODUCTION

The Conditional Cash Transfer Program or Social Program of Immediate Support to the Poorest (*Programa social de apoyo inmediato a los más pobres in Spanish*) - JUNTOS, is a Peruvian government intervention aimed at reducing poverty and improving the living conditions of families in situations of economic and social vulnerability. This program, through the implementation of conditional cash transfers (CCTs), seeks to promote access to essential basic services, foster economic and social inclusion, and empower women. In addition, JUNTOS contributes significantly to the Sustainable Development Goals (SDGs), in particular to the goal of eradicating poverty (SDG 1), promoting gender equality (SDG 5) and reducing inequalities (SDG 10).

Conditional cash transfer programs are essential components of government actions aimed at increasing social protection for the most economically vulnerable people, enabling them to meet basic needs such as food, education and health care (de Sampaio Morais et al., 2022). These programs are based on the premise that the constraints imposed by poverty force disadvantaged families to invest less in human and physical capital (Del Boca et al., 2021). In this sense, CCTs are crucial instruments in the fight against poverty (Sahay et al., 2023), as they condition the delivery of cash payments on the fulfillment of requirements related to children's health and education (Sánchez et al., 2020).

Health and nutrition conditions within these programs usually require medical visits and vaccinations for children under five years of age, as well as mothers' attendance at periodic health information talks. In terms of schooling, conditions generally include enrollment, continuous attendance and, on occasion, the attainment of certain academic achievements (Sánchez et al., 2020). In Latin America and the Caribbean, there are currently 26 CCT programs in operation, demonstrating the popularity and effectiveness of these mechanisms in the region (García and Saavedra, 2023).

Chronic child undernutrition is a public health problem that severely affects a specific segment of the child population in Peru, with long-term social, economic and political implications (Huaylinos Antezana, 2023). This problem not only increases the risk of mortality, but also affects the cognitive development and quality of life of affected children. The main causes of child malnutrition include insufficient food intake in terms of quality and quantity, lack of basic medical care, and the occurrence of uncontrolled infectious diseases (Zavala-Hoppe et al., 2024). Secondary factors such as lack of access to food, poor medical care, lack of safe water supply and poverty further aggravate the situation (Zavala-Hoppe et al., 2024).

In some Latin American countries, including Venezuela, Colombia, Ecuador, Paraguay, Peru and Cuba, child undernutrition has a negative impact on children's cognitive development and quality of life. These countries face risk factors such as poverty, poor education, lack of basic services and various sociodemographic conditions that contribute to the deterioration of children's growth and development (Zavala-Hoppe et al., 2024). Child malnutrition is the result of a complex process with multiple immediate and underlying determinants. However, increasing attention has been paid to nutrition-sensitive programs, including social protection and cash transfer programs (de Groot et al., 2022).

CCTs, which include conditionalities related to the use of health services, have also been shown to improve the use of these maternal and child services in Latin America (Le Port et al., 2019). In Peru, in the last eighteen years, the rate of chronic child malnutrition has decreased by approximately 18 percentage points. According to the National Institute of Statistics and Informatics, in 2000 chronic malnutrition in children under five years of age bordered 31%, while in 2018 this figure was reduced to 12.2% (Mamani, 2021).

Economic measures have been associated with pathogenic and nutritional risk, which are in turn associated with infectious disease, nutritional status and growth (Hoke & McCabe, 2022). CCTs provide cash payments to poor households in exchange for compliance with conditions related to health and education (Sanchez et al., 2020). Social safety net programs can address several underlying determinants of nutrition, including poverty, food insecurity, and low access to adequate care resources. In addition, they can be used as platforms to deliver and improve the coverage and effectiveness of nutrition-specific interventions aimed at improving maternal and child nutrition (Le Port et al., 2019).

Conditional cash transfer programs, such as *Bolsa Família* in Brazil, have been crucial in the last decade to reduce inequalities and improve access to health and education, although challenges remain in nutrition and poverty eradication (Neves et al., 2020). One study showed that the combination of the transfer program with access to water and sanitation reduces infant mortality, although it does not significantly improve malnutrition (de Souza et al., 2021). Another analysis showed that, despite the trend toward healthier diets, beneficiaries in vulnerable regions continue to face deprivation (Andrade et al., 2024).

Cash transfer programs have become increasingly popular because of their proven effectiveness in reducing poverty, improving household food security, and various other welfare outcomes. In many developing countries, delayed school enrollment has been shown to contribute to low elementary school enrollment rates (Sessou et al., 2024). Poverty creates financial barriers to school enrollment, given the direct costs of educational expenses as well as the opportunity costs of schooling (Sessou et al., 2024).

According to international studies, there are three types of social programs commonly used to combat chronic child malnutrition in Latin America and the Caribbean: the conditional cash transfer program, the supplementary food program and the food security program (Mamani, 2021). In this context, the present research aims to evaluate the influence of the National Program of Direct Support to the Poorest – JUNTOS on child malnutrition and school dropout in the Apurímac high Andean Peruvian region during the year 2023. This study is situated in a broad framework, highlighting the importance of contextualizing the problem both internationally and in the specific context of Peru. Through this approach, it seeks to better understand the impact of CCTs in the region and provide a solid basis for future social policies and programs.

## METHODOLOGY

The study design adopted is non-experimental, cross-sectional, correlational-causal in nature, as detailed in Hernández et al. (2014). This type of design allows describing the correlation between two or more variables at a specific time without directly manipulating them. The study population is made up of 405,759 beneficiary families of the JUNTOS Program in the Apurímac region (Artiles et al., 2009). The selected sample includes 384 beneficiary households, stratified by geographic area with a margin of error of 5% and a confidence level of 95%.

A stratified probability sampling technique was used, with a confidence level of 95% and a margin of error of 5%. The sample size was calculated using the finite formula, which ensured that the survey results were representative and statistically significant (Figure 1).

**Figure 1.** Sample estimation

$$n = \frac{Z^2 * p * q * N}{e^2 * (N - 1) + Z^2 * p * q}$$

$$n = \frac{1.96^2 * 0.5 * 0.5 * 405,759}{0.05^2 * (405,759 - 1) + 1.96^2 * 0.5 * 0.5}$$

**Source:** Author's estimation

Where:

n = Sample size =?

N = Size of the population = 405,759

P = Probability of occurrence of the studied event = 50%.

q = Probability that the studied event does not occur = 50%.

e = Estimation error 5%.

z = 95% confidence level

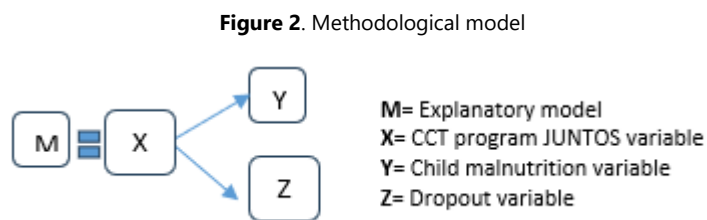
n = 384 beneficiary families

In the study of the JUNTOS program in the Apurimac region, a sample size of 384 beneficiary families was determined. This sample was distributed among the different provinces as follows: Abancay with 104 families (27.23%), Andahuaylas with 135 families (35.11%), Antabamba with 11 families (2.7%), Aymaraes with 23 families (5.99%), Cotabambas with 48 families (12.48%), Chincheros with 43 families (11.15%) and Grau with 20 families (5.2%). This distribution ensures that each province is duly represented in the sample, thus reflecting the composition of the program's beneficiary population.

The technique used for data collection was the survey, and the instruments were questionnaires validated by experts. For the variable National Program of Direct Support to the Poorest JUNTOS (monetary incentive and co-responsibility in health and education), a questionnaire of 28 items distributed in three dimensions was designed. For the variable chronic child malnutrition, a 21-item questionnaire was used, grouped into three dimensions: anemia, acute diarrheal diseases and acute respiratory infections. Finally, for the school dropout variable, a 16-item questionnaire was used, also divided into three dimensions: enrollment, attendance and completion of the school year. The questionnaires were subjected to content validation by expert judgment, ensuring clarity, coherence and relevance (Bernal, 2010). Reliability was evaluated using Cronbach's Alpha coefficient, obtaining a value of 0.89, which indicates excellent internal consistency.

The methodological design corresponds to the causal correlational cross-sectional, according to Hernandez et al (2014), is useful to analyze data from a population at a single point in time, also identify and study the interrelationship

between variables which is represented by the scheme (Figure 2).



**Source:** Author's elaboration

In this research, we were committed to following the ethical principles of the Helsinki report, ensuring participant autonomy and justice, respecting national regulations, obtaining written informed consent and minimizing risks, prioritizing privacy and confidentiality of the data collected. Non-maleficence ensured that no participant suffered harm, and justice ensured that benefits were distributed equitably, reaffirming our commitment to the well-being of all.

The data collected were processed and statistically analyzed to test a) the general hypothesis: the National Program of Direct Support to the Poorest JUNTOS has a significant influence on the reduction of chronic child malnutrition and school dropout among beneficiaries, and b) the specific hypotheses: were the monetary incentive offered by the JUNTOS Program, co-responsibility in health and co-responsibility in education have a significant influence on the reduction of chronic child malnutrition and school dropout among the beneficiaries of the JUNTOS Program in the Apurimac region in the year 2023.

## RESULTS AND DISCUSSION

The Table 1 below shows the results of the general hypothesis test on the impact of the National Program of Direct Support to the Poorest JUNTOS on child malnutrition among the beneficiaries. The results indicate that the significance level (Sig.) for malnutrition is 0.013 (less than 0.05), and the Chi-square value is 8.508, revealing that the JUNTOS program had an influence on chronic malnutrition. The Nagelkerke value of 0.026 indicates a 2.6% influence. Similarly, for school dropout, the significance level is 0.022 (less than 0.05), the Chi-square value is 5.563, and the Nagelkerke value is 0.020, showing a 2.0% influence. Therefore, the hypothesis is accepted.

**Table 1.** Influence of the JUNTOS conditional cash transfer program on child malnutrition

Variables		Logarithm of the likelihood -2	Chi-square	gl	Sig.	Pseudo R square	
JUNTOS program on chronic child malnutrition	Intersection only	31.522	8.508	10	.013	Cox and Snell	.019
	Final	22.464				Nagelkerke	.026
						McFadden	.015
JUNTOS program on school dropout	Intersection only	42.448	5.563	2	.022	Cox and Snell	.014
	Final	25.919				Nagelkerke	.020
						McFadden	.011

**Source:** Author's elaboration based on the research data

Table 2 shows the results of the hypothesis test on the influence of cash incentives on child malnutrition and school dropout among the beneficiaries. The test revealed that the monetary incentive had a significance level of Sig.=0.020 (less than 0.05), and a Chi-square value of 11.700, indicating an influence on chronic malnutrition. Nagelkerke=0.039 demonstrated a 3.9% influence. Additionally, the test also showed a significance level of Sig.=0.004 (less than 0.05) and a Chi-square value of 7.563, indicating an influence on school dropout. Nagelkerke=0.049 confirmed a 4.9% influence. Therefore, the hypothesis was accepted.

**Table 2.** Influence of the monetary incentive of the JUNTOS conditional cash transfer program on child malnutrition and school dropout

Variables		Logarithm of the likelihood -2	Chi-square	gl	Sig.	Pseudo R square	
Monetary incentive in chronic child malnutrition	Intersection only	87.236				Cox and Snell	.030
	Final	75.536	11.700	4	.002	Nagelkerke	.039
						McFadden	.021
Monetary incentive in school dropouts	Intersection only	22.226				Cox and Snell	.020
	Final	22.132	7.563	2	.004	Nagelkerke	.029
						McFadden	.021

Source: Author's elaboration based on the research data

In Table 3, the results of the hypothesis test on health co-responsibility in child malnutrition and school dropout of the beneficiaries are presented. The significance level (Sig.) was found to be 0.008, which is less than 0.05, indicating a significant influence. The Chi-square value of 3.567 also showed a significant influence of health co-responsibility in chronic malnutrition. Additionally, the Nagelkerke value of 0.012 indicated a 1.2% influence (Table 13). Similarly, the significance level was 0.002, which is less than 0.05, showing a significant influence of co-responsibility in health on school dropout. The Chi-square value of 1.460 supported this influence, and the Nagelkerke value of 0.005 showed a 0.5% influence. Therefore, the hypothesis was accepted.

**Table 3.** Influence of the co-responsibility in health of the Juntos conditional cash transfer program on child malnutrition and school dropout

Variables		Logarithm of the likelihood -2	Chi-square	gl	Sig.	Pseudo R square	
Co-responsibility in health in chronic child malnutrition	Intersection only	19.96				Cox and Snell	.009
	Final	16.395	3.567	4	.008	Nagelkerke	.012
						McFadden	.007
Co-responsibility in health in school dropouts	Intersection only	6.436				Cox and Snell	.004
	Final	4.096	1.460	2	.002	Nagelkerke	.005
						McFadden	.003

Source: Author's elaboration based on the research data

In Table 4, the results show that co-responsibility in education has a significant influence on chronic malnutrition (Sig.=0.008, Chi-square=1.529, Nagelkerke=0.005) and school dropout (Sig.=0.000, Chi-square=2.620, Nagelkerke=0.009). Therefore, the alternative hypothesis was accepted.

**Table 4.** Influence of the co-responsibility in education of the Juntos conditional cash transfer program on child malnutrition and school dropout rates

Variables		Logarithm of the likelihood -2	Chi-square	gl	Sig.	Pseudo R square	
Co-responsibility in education in chronic child malnutrition	Intersection only	29.435				Cox and Snell	.004
	Final	27.906	1.529	4	.006	Nagelkerke	.005
						McFadden	.003
Co-responsibility in education in school dropout rates	Intersection only	30.739				Cox and Snell	.007
	Final	28.119	2.620	2	.000	Nagelkerke	.009
						McFadden	.004

Source: Author's elaboration based on the research data

The results reveal that the JUNTOS program has had a significant influence on the reduction of chronic malnutrition and school dropout in the Apurimac region. The significance values (p) obtained were 0.013 for chronic malnutrition and 0.022 for school dropout, both below the standard threshold of 0.05, which indicates a statistically significant relationship between the program's intervention and the improvement observed in these key indicators.

These findings are consistent with previous studies, such as Mamani (2021), which also identified a positive impact of the program on reducing child malnutrition in rural areas. On the other hand, the research by Sanchez and Behrman (2020) provides valuable insight into the impact of the Juntos program on children's nutritional status and cognitive performance, highlighting the importance of the duration and intensity of exposure to the program.

The Huaylinos study (2023b) highlights the notable reduction in chronic malnutrition and childhood anemia at the national level through 2022. Despite this progress, considerable challenges remain in rural areas such as Huancavelica, Loreto and Cajamarca, where anemia rates exceed 50%. This underscores the urgency of implementing more effective and locally tailored strategies to address these persistent public health conditions.

Meléndez Carpio (2019) reinforces the results obtained by highlighting that the JUNTOS Program positively influences agency competencies, self-esteem and social relations in Peruvian children. Although methodological limitations in the precision of the observed effects are recognized, it is suggested that early exposure to the program during critical phases of development could have potential long-term benefits on the human capital of the beneficiaries.

Reginaldo et al. (2023) and Calla (2023) document significant improvements in access to health, nutrition and education services among JUNTOS beneficiary households. Demonstration sessions in Huancavelica have been shown to increase knowledge and good child care practices, while the monetary incentive has facilitated improvements in health care and school attendance in the Coata region. However, the importance of establishing co-responsibilities to ensure the long-term sustainability of these benefits is emphasized.

Jaramillo and Sanchez (2017) and Diaz and Saldarriaga (2022) highlight how the JUNTOS program has contributed significantly to the reduction of chronic malnutrition and domestic violence in Peru. Households with more educated mothers are found to experience greater benefits, underscoring the importance of early investments in human capital to improve future labor market performance and promote safer family environments.

This is consistent with previous studies on conditional cash transfer programs, such as Bolsa Família in Brazil, which have also shown improvements in health and education indicators (Neves et al., 2020). However, despite these advances, challenges persist in nutrition and intergenerational poverty, underscoring the need for complementary policies (de Souza et al., 2021). Research reinforces the importance of integrating educational and food interventions to maximize impact in vulnerable communities.

In this sense, the studies reviewed provide solid evidence that the conditional cash transfer program has contributed significantly to improving key human development indicators both internationally and in Peru, including chronic malnutrition, school dropout, child competencies, access to essential services and reduction of domestic violence. The statistical values obtained, such as significance levels and Nagelkerke coefficients, support the effectiveness of the program intervention in the Apurimac region and more broadly in the national context. However, it is important to highlight that while conditional transfer programs such as JUNTOS have a positive impact on several welfare indicators, it is crucial to also consider the challenges and possible negative effects. Studies indicate that effective implementation requires continuous attention to the specific social and economic conditions of the beneficiary populations to maximize benefits and mitigate any adverse effects.

Based on the results of the "JUNTOS" program in Apurimac, it is recommended to strengthen public policies in Peru and especially in the region by integrating educational and nutritional interventions. It is crucial to adapt strategies to local realities, especially in regions with high malnutrition and anemia such as Apurimac. Encouraging maternal education and providing incentives that promote access to health services can amplify program benefits. In addition, it is essential to establish co-responsibility mechanisms to ensure the sustainability of results in the long term. Policies should be dynamic, responding to the changing needs of vulnerable communities, thus ensuring a lasting impact on human development and intergenerational poverty reduction.

## **CONCLUSIONS**

The objective of this study was to evaluate the influence of the National Program of Direct Support to the Poorest JUNTOS on the reduction of chronic child malnutrition and school dropout in the Apurimac region during the year 2023. The findings indicate that the program had a significant, albeit modest, influence on both phenomena. Specifically, the significance values and Chi-square parameters, together with the Nagelkerke coefficient, reveal an influence of 2.6% on chronic malnutrition and 2.0% on school dropout. These results reinforce the effectiveness of the program in improving the nutritional health and educational continuity of beneficiary children in the region.

In addition, it was observed that the program's monetary incentive has a significant influence on the reduction of chronic malnutrition and school dropout. The data show that this incentive contributes 3.9% to reducing malnutrition and

4.9% to reducing school dropout. Co-responsibility in health and education is also positively associated with the reduction of these problems, although its influence is more modest. Specifically, co-responsibility in health has an influence of 1.2% on chronic malnutrition and 0.5% on school dropout, while co-responsibility in education has a contribution of 0.5% on chronic malnutrition and 0.9% on school dropout. These results underscore the importance of a comprehensive approach that combines monetary incentives and co-responsibility in health and education to maximize the impact of the program.

For future research, it is recommended that the geographic scope of the study be expanded to include other regions of Peru and that longitudinal studies be conducted to observe the long-term sustained effects of the program. It would also be beneficial to investigate other factors that may influence chronic malnutrition and school dropout, such as educational infrastructure and health services. Theoretical limitations of the study include the generalization of the results obtained in Apurimac to other regions with different socioeconomic contexts and the consideration of variables not included in this study that could influence the results. Methodologically, the study is based on self-reported data, which may introduce response biases, and uses a cross-sectional design that limits the ability to establish definitive causal relationships. Despite these limitations, this study provides valuable empirical evidence on the effectiveness of the JUNTOS program and offers a solid basis for future research and the formulation of public policies that seek to improve the health and education of children in vulnerable contexts.

## REFERENCES

- Andrade-Silva A, Farias DR, Carrilho TRB, de Castro IRR, Kac G, de Castro MBT. Trends in Complementary Feeding Indicators in Children Aged 6–23 Months According to Participation in a Conditional Cash Transfer Program: Data from the Brazilian Food and Nutrition Surveillance System, 2015–2019. *Int J Environ Res Public Health*. 2024 Jul 15;21(7):923. <https://doi.org/10.3390/ijerph21070923>
- Bliss J, Golden K, Bourahla L, Stoltzfus R, Pelletier D. An emergency cash transfer program promotes weight gain and reduces acute malnutrition risk among children 6–24 months old during a food crisis in Niger. *J Glob Health*. 2018 Jun;8(1):010410. <https://doi.org/10.7189/jogh.08.010410>
- Bliss J, Jensen N, Thiede B, Shoham J, Dolan C, Sibson V, Fenn B. Factors Associated With the Risk of Acute Malnutrition Among Children Aged 6 to 36 Months in Households Targeted by an Emergency Cash Transfer Program. *Food Nutr Bull*. 2016 Sep;37(3):387–400. <https://doi.org/10.1177/0379572116654772>
- De Groot, R., Yablonski, J., & Valli, E. (2022). The impact of cash and health insurance on child nutrition during the first 1000 days: Evidence from Ghana. *Food Policy*, 107, 102217. <https://doi.org/10.1016/j.foodpol.2021.102217>
- De Groot, R., Yablonski, J., & Valli, E. (2022). The impact of cash and health insurance on child nutrition during the first 1000 days: Evidence from Ghana. *Food Policy*, 107, 102217. <https://doi.org/10.1016/j.foodpol.2021.102217>
- De Sampaio Morais, G. A., Magno, L., Silva, A. F., Guimarães, N. S., Ordoñez, J. A., Souza, L. E., Macinko, J., Dourado, I., & Rasella, D. (2022). Effect of a conditional cash transfer programme on AIDS incidence, hospitalisations, and mortality in Brazil: a longitudinal ecological study. *The Lancet HIV*, 9(10), e690–e699. [https://doi.org/10.1016/S2352-3018\(22\)00221-1](https://doi.org/10.1016/S2352-3018(22)00221-1)
- De Souza AA, Mingoti SA, Paes-Sousa R, Heller L. Combination of conditional cash transfer program and environmental health interventions reduces child mortality: an ecological study of Brazilian municipalities. *BMC Public Health*. 2021 Mar 31;21(1):627. <https://doi.org/10.1186/s12889-021-10649-4>
- Del Boca, D., Pronzato, C., & Sorrenti, G. (2021). Conditional cash transfer programs and household labor supply. *European Economic Review*, 136, 103755. <https://doi.org/10.1016/j.eurocorev.2021.103755>
- Díaz, J.-J., & Saldarriaga, V. (2022). (Un)Conditional Love in the Time of Conditional Cash Transfers: The Effect of the Peruvian JUNTOS Program on Spousal Abuse. *Economic Development and Cultural Change*, 70(2), 865–899. <https://doi.org/10.1086/713881>
- Elizabeth Calla Grande. (2023). Efecto del incentivo monetario del Programa Juntos en el acceso a los servicios de salud, nutrición y educación. Estudio de caso cualitativo en un distrito rural de Puno. *Waynarroque - Revista de Ciencias Sociales Aplicadas*, 6(Vol. 3, Num. 2), 73–86. <https://doi.org/10.47190/rcsaw.v3i2.80>
- Garcia, S., & Saavedra, J. E. (2023). *Conditional cash transfers for education* (pp. 499–590). <https://doi.org/10.1016/bs.hesedu.2022.11.004>
- Hoke, M. K., & McCabe, K. A. (2022). Malnutrition, illness, poverty, and infant growth: A test of a syndemic hypothesis in Nuñoa, Peru. *Social Science & Medicine*, 295, 113720. <https://doi.org/10.1016/j.socscimed.2021.113720>
- Huaylinos Antezana, M. I. (2023a). Desnutrición crónica infantil en Perú: Avances y perspectivas. *Revista Vive*, 6(18). <https://doi.org/10.33996/revistavive.v6i18.269>
- Huaylinos Antezana, M. I. (2023b). Desnutrición crónica infantil en Perú: Avances y perspectivas. *Revista Vive*, 6(18). <https://doi.org/10.33996/revistavive.v6i18.269>
- Jaramillo, M., & Sánchez, A. (2017). Impacto del programa Juntos sobre nutrición temprana. *Grupo de Análisis Para El Desarrollo*, 61, 61–72. <https://hdl.handle.net/20.500.12820/255>
- Le Port, A., Zongrone, A., Savy, M., Fortin, S., Kameli, Y., Sessou, E., Diatta, A. D., Koulidiati, J.-L., Kodjo, N. E., Kamayera, F., Mahamadou, T., Martin-Prevel, Y., & Ruel, M. T. (2019). Program Impact Pathway Analysis Reveals Implementation Challenges that Limited the Incentive Value of Conditional Cash Transfers Aimed at Improving Maternal and Child Health Care Use in Mali. *Current Developments in Nutrition*, 3(9), nzz084. <https://doi.org/10.1093/cdn/nzz084>
- Mamani, M.-O. (2021). Impacto del Programa Juntos sobre la desnutrición crónica infantil en el Perú, 2016–2018. *Semestre Económico*, 10(2), 32–49. <https://doi.org/10.26867/se.2021.v10i2.118>
- Meléndez Carpio, G. (2019). *Programas de Transferencia Monetaria Condicionada y desarrollo psicosocial infantil: evidencia del impacto de JUNTOS durante los primeros 4 años de vida*. <https://doi.org/10.57784/1992/41089>

Neves JA, Vasconcelos FAG, Machado ML, Recine E, Garcia GS, Medeiros MAT. The Brazilian cash transfer program (Bolsa Família): A tool for reducing inequalities and achieving social rights in Brazil. *Glob Public Health*. 2022 Jan;17(1):26-42. <https://doi.org/10.1080/17441692.2020.1850828>

Reginaldo Huamani, R., Tapia Camargo, M. S., Carhuachuco Rojas, E. S., Núñez Martínez, A. P., & Mancha Chahuayo, M. (2023). Efecto de las sesiones demostrativas sobre cuidados en salud en madres con niños menores de dos años inscritas en el programa Juntos del puesto de salud Santa Ana, Huancavelica 2019. *GnosisWisdom*, 3(1), 02–07. <https://doi.org/10.54556/gnosiswisdom.v3i1.51>

Sahay, A., Dervišević, E., & Perova, E. (2023). Conditional cash transfers and violence against women – Does the type of violence matter? *Social Science & Medicine*, 333, 116136. <https://doi.org/10.1016/j.socscimed.2023.116136>

Sánchez, A., Meléndez, G., & Behrman, J. r. (2020). Impact of the Juntos Conditional Cash Transfer Program on Nutritional and Cognitive Outcomes in Peru: Comparison between Younger and Older Initial Exposure. *Economic Development and Cultural Change*, 68(3), 865–897. <https://doi.org/10.1086/701233>

Sessou, F. E., Hidrobo, M., Roy, S., & Huybregts, L. (2024). Educational impacts of an unconditional cash transfer program in Mali. *Economics of Education Review*, 101, 102547. <https://doi.org/10.1016/j.econedurev.2024.102547>

Vilca Mamani, A., García Castro, E. B., Lipa Tudela, L., Calancho Mamani, E., & Cruz Huisa, R. M. (2023). Impacto de los programas sociales alimentarios sobre la desnutrición infantil en la región de Puno. *Comuni@cción: Revista de Investigación En Comunicación y Desarrollo*, 14(3), 220–234. <https://doi.org/10.33595/2226-1478.14.3.871>

Zavala-Hoppe, A. N., Holguin-Murillo, N. J., López-Calle, D. P., & Macias-Velez, G. N. (2024). Factores de riesgo y estrategias de prevención en la desnutrición infantil en Latinoamérica. *MQRInvestigar*, 8(1), 1427–1445. <https://doi.org/10.56048/MQR20225.8.1.2024.1427-1445>

**Contribution of each author to the manuscript:**

Task	% of contribution of each author				
	A1	A2	A3	A4	A5
A. theoretical and conceptual foundations and problematization:	25%	25%	25%	15%	10%
B. data research and statistical analysis:	30%	30%	20%	15%	5%
C. elaboration of figures and tables:	25%	30%	20%	15%	10%
D. drafting, reviewing and writing of the text:	35%	25%	15%	15%	10%
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