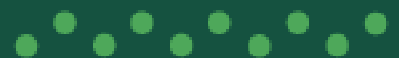




# A Multigenerational Perspective on Childcare: A Review of Rigorous Research in Low- and Middle-Income Countries

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## Photos

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# A Multigenerational Perspective on Childcare: A Review of Rigorous Research in Low- and Middle-Income Countries

## Introduction

The provision of affordable, accessible, and high-quality childcare has the potential to address multiple, widespread challenges felt by families worldwide. Childcare may contribute to what many organizations call a ‘triple social and economic dividend,’ by improving early childhood development outcomes, increasing women’s participation in the labor market, and supporting economic growth. As this review highlights, childcare can provide benefits across two and sometimes more generations of family members.

Discussions of childcare research, policy, and programming tend to be siloed across two fields—early childhood development and women’s economic empowerment. As a result, research, policy, and debate around childcare often focus on just one beneficiary—usually, the child attending care or the primary caregiver, which tends to be the mother. A 2021 meta-analysis of early childhood development interventions, including but not limited to childcare, found that only four percent of early childhood development studies examined female labor force participation, time use, or income, and as little as one percent reported outcomes related to other aspects of women’s empowerment. Only three percent of studies reported father-specific outcomes outside of parenting practices, and just one percent reported impacts for older siblings in middle childhood and adolescence not eligible for early childhood development intervention.<sup>1</sup> Similarly, research on women’s economic empowerment often does not consider the impact of childcare interventions on child outcomes.<sup>2</sup> In reviewing ten randomized evaluations of childcare interventions for this review, all ten studies reported impacts for women, but only six considered any outcomes for children.

Childcare providers and the childcare workforce represent an additional perspective to consider in relation to the potential impact of childcare care services. However, research on entrepreneurship, career, employment, and other relevant outcomes from this perspective is extremely limited. From the experimental literature, we identified only one study measuring outcomes for childcare providers. In Burkina Faso, researchers found strong economic effects for women who worked in mobile childcare centers as part of a public works program.<sup>3</sup> Much more work is needed to explore the perspective of childcare providers and the workforce.

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<sup>1</sup> Evans, David K., Pamela Jakiela, and Heather A. Knauer. "The Impact of Early Childhood Interventions on Mothers." *Science* 372, no. 6544 (2021): 794-796.

<sup>2</sup> Chaturvedi, Surabhi. *Global Evidence on the Impact of Centre-based Quality Childcare on Maternal Employment and Early Childhood Development Outcomes*. New Delhi: Initiative for What Works to Advance Women and Girls in the Economy, 2019.

<sup>3</sup> Kehinde F. Ajayi, Aziz Dao, and Estelle Koussoubé. *The Effects of Childcare on Women and Children: Evidence from a Randomized Evaluation in Burkina Faso*. CGD Working Paper 628. Washington, DC: Center for Global Development, 2022.

In recognition of the potential of childcare to improve outcomes for children, mothers, fathers, grandparents, siblings, and the household at large, this review aims to provide lessons from rigorous evidence on childcare in low and middle-income countries (LMICs) from a multi-generational perspective, considering its potential benefits for children, their primary caregivers, and other caregivers in the family. This approach speaks to the full potential of affordable, accessible, and high-quality childcare, including and beyond a triple dividend and towards long-term intergenerational change.

In this review, we summarize results from ten randomized evaluations of childcare interventions in LMICs. We pay special attention to studies that simultaneously report results for primary caregivers *and* children, and potentially other family members, which represent six of the total ten randomized evaluations reviewed. Given the overlap between childcare and early childhood interventions, and that childcare studies often do not measure child outcomes, we supplement these findings with research on center-based early childhood care and education programs. We also incorporate relevant insights from quasi-experimental and other research.

Of the ten studies covered in this review, the randomized evaluations of childcare interventions conducted in Uganda, Democratic Republic of Congo (DRC), Brazil, Nicaragua, Burkina Faso, Mozambique provide insight into the two- or multi-generational effects of childcare. Studies from Kenya, Egypt, India, and Chile provide insight into the effects of childcare just on mothers. A summary of these evaluations is included in the Annex. Key findings, discussed in more detail in the subsequent sections, include the following:



# Key Findings

## **1. Cost as a Barrier**

The cost of childcare remains the most significant barrier to its adoption. Subsidies or public services that reduce these costs typically lead to increased use of childcare.

## **2. Positive Impacts for Mothers, Constrained by Gender Dynamics and Market Opportunities**

The majority of research on the impact of childcare focuses on mothers and finds that it positively impacts mothers' participation in the workforce, their productivity, and/or the types of income-generating activities they engage in. Childcare can also lead to increases in personal income or business revenue. However, the structure of the family, such as whether it is a single or two-parent household, plays a crucial role in whether women's income increases. Gender norms and limited labor market opportunities present significant obstacles that can prevent mothers from experiencing the economic benefits of childcare.

## **3. Potential Impacts on Other Adult Family Members**

Research on the effects of childcare on adult family members besides mothers is scarce. Available evidence suggests that childcare can enable fathers or male partners to increase their labor supply and income and potentially secure more favorable employment. Additionally, it may enable grandparents to increase their income.

## **4. Impact on the Target Child: Quality Programs Benefit Child Development**

Research investigating the impact of childcare on children in LMICs is featured in slightly over half of the randomized evaluations studies identified for this review. Studies suggest that participation in high-quality, center-based childcare significantly enhances early learning and development outcomes for children. However, the effectiveness of these programs largely depends on the quality of care provided. Although many programs improve some early childhood development outcomes, they do not consistently improve all targeted outcomes.

## **5. Impacts on Other Children in the Household**

The availability of childcare may also offer educational and employment benefits for older children in the household who are not enrolled in the childcare intervention. These children, who would otherwise be tasked with caring for younger siblings, can instead pursue their own educational and work opportunities, due to the reduction of time they spend caring for younger children.

## **6. While childcare appears to be a highly promising intervention, more research should be undertaken from a two- or multigenerational perspective.**

This can lead to a better understanding of its true impact on multiple beneficiaries. By adopting a comprehensive approach, policymakers and practitioners can identify, design, and develop effective childcare strategies that contribute to positive outcomes for children, parents, families, and communities as a whole.

## What is Childcare?

The term 'childcare' often indicates interest from a women's economic empowerment perspective and accordingly does not refer to a specific or very clearly defined intervention. The use of the term can overlook and even obscure some of the variation that exists in relation to the types of services provided. Childcare may better be understood as an umbrella term that includes many different interventions but signals that it enables an existing caregiver to be able to work. In low and middle income contexts, childcare typically refers to center-based interventions in which a child is enrolled in a setting outside of their home. From a child development perspective, the use of terms such as 'early childhood education' began to be used to distinguish interventions that provide not just care but enriching educational experiences to promote children's learning and development. However, the extent to which different services actually support various aspects of child development varies both in relation to the type of service provided, but also the quality of that service. The varying use of terms also relates to the disconnect between different literatures. When the term childcare is used, the focus is often on understanding impacts for women and other caregivers, when more specific terms such as preschool and pre-primary education are used, the focus is typically on child outcomes.

Key factors defining childcare services include: the age of the child targeted, the quality of care, emphasis on education, part or full-time care, and the formality of care. The context or setting is also an important concern, particularly in relation to factors such as the prevalence of maternity leave, the public provision of pre-primary education, and the age at which children enter primary education.

Childcare can provide safety and supervision of children, education, socialization, and nutrition to children in critical periods of their development. Interventions are often categorized into two overlapping groups, defined by children's age and the extent of other public service provision. The first group concerns interventions for children ages 0-3. Interventions for this age group are often referred to as daycare or early childhood programs. The second group targets children ages 3-6 and typically includes interventions such as preschool, pre-primary education, and kindergarten, and are followed by the transition into formal primary education. Depending upon the context, other terms such as creche and nursery school are also used to refer to similar services and a middle age group of children ages 2-5.<sup>4</sup> Sometimes after-school programs offering supervision, homework support, enrichment, or educational activities for primary school students are referred to as childcare. Among the studies reviewed in this review, only one randomized evaluation focuses on children above six years old in primary school and focuses on after-school care.<sup>5</sup>

Childcare is often conceptualized as addressing the gaps left by the public provision of education. Primary education plays a critical childcare role, for example, but is typically not included in the discussion of childcare because the public provision of primary education is extensive and often seen as guaranteed. Additionally, as children age, they are in need of less direct supervision. This also relates to a distinction that is sometimes made between

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<sup>4</sup> Devercelli, Amanda E.; Beaton-Day, Frances. *Better Jobs and Brighter Futures: Investing in Childcare to Build Human Capital*. Washington, DC: World Bank, 2020.

<sup>5</sup> Martínez, Claudia, and Marcela Perticará. "Childcare Effects on Maternal Employment: Evidence from Chile." *Journal of Development Economics* 126 (2017): 127-137.

care and education. As previously mentioned, use of terms such as “early childhood education” began to be used to signal that services were not just caring for young children, but also providing enriching educational experiences and skill development. As evidence on the importance of children’s early learning increased, greater emphasis on the educational aspect of these services and the expansion of pre-primary education has changed the landscape of childcare.

These distinctions can be difficult to define across contexts, particularly in relation to the varying provision of pre-primary education. For instance, the study included in this review on childcare in Uganda describes, “most of the childcare centers in our sample were preschool nurseries with lessons during the morning hours and (supervised) play or rest time in the afternoon. As such, our childcare intervention can be interpreted as providing subsidized access to preschool education.”<sup>6</sup> This is relevant because Uganda’s public provision of basic education does not currently include pre-primary education services. In other country contexts, preschool education is included in the government’s public provision of basic education, and accordingly, might not necessarily be seen as childcare.

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*The quality of childcare interventions can vary widely. Quality childcare services tend to tailor activities to the developmental stage of children, provide responsive care, intentional stimulation, and educational activities in a safe setting delivered through quality interactions between and among children and their teachers/ caregivers. Low quality services can be overcrowded and defined by little stimulation for children and even neglect.*

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Even when children are intended to be grouped by age in childcare services, in practice, this is not always strongly enforced.<sup>7</sup> Sometimes care is also provided for children from early infancy through pre-primary ages in the same room or setting, as is the case for several of the childcare studies reviewed in this publication.

The quality of childcare interventions can also vary widely. Quality childcare services tend to tailor activities to the developmental stage of children, provide responsive care, intentional stimulation, and educational activities in a safe setting delivered through quality interactions between and among children, their peers, and teachers/ caregivers. Supporting the holistic development of children on a range of outcomes is a crucial component of quality care. Low quality services can be overcrowded, with too many children per teacher, defined by little stimulation for children and even neglect.

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<sup>6</sup> Gulesci, Selim, Kjetil Bjorvatn, Denise Ferris, Arne Nasgowitz, and Vincent Somville. *Childcare, Labor Supply, and Business Development: Experimental Evidence from Uganda*. No. 17243. CEPR Discussion Papers, 2022.

<sup>7</sup> Martinez, Sebastian, Sophie Naudeau, and Vitor Azevedo Pereira. *Preschool and Child Development under Extreme Poverty: Evidence from a Randomized Experiment in Rural Mozambique*. World Bank Policy Research Working Paper 8290, World Bank, 2017.



Another key consideration of childcare interventions is whether they offer full or part-time care for children. Research included in this review has demonstrated that it is possible for both part and full-time childcare to improve outcomes for children and their caregivers, and also that full time care can generate additional impact in comparison to part-time care. However, one obstacle researchers found likely contributed to a lack of impact on mothers' earnings or working hours was when childcare only operated for three hours a day, such part-time care services likely restrict the type and amount of work in which women can engage.<sup>8</sup>

Finally, the studies covered by this review tend to focus on discrete programs and interventions, as is often the case for experimental research, but another important perspective for understanding the impact of childcare concerns legislation. Assessing the impact of laws that govern the provision, regulation, and uptake of childcare services can provide important insight. Recent analysis across 95 countries, for example, finds that the enactment of childcare laws and the regulation of the availability and affordability of childcare both increase women's labor force participation, as does quality regulation, but with a smaller impact.<sup>9</sup>

## Affordability and the Uptake of Childcare

The costs of childcare can prohibit many families from using childcare and is often cited as the biggest constraint for families.<sup>10</sup> Affordable childcare options are particularly limited for low-income families and especially for parents of the youngest children 0-3.<sup>11</sup> Despite these constraints, there is still often significant demand and take up of childcare services.

Studies in this review underscore the importance of how childcare is financed. These studies demonstrate that when childcare is made affordable, it can be accessed by more and more diverse families. All the experimental evidence on childcare from LMICs identified and reviewed for this publication focus on either public or private childcare models that reduce costs for families by providing a subsidy, making childcare free, or offering childcare for a small fee.

Interventions that have been evaluated include subsidized care at privately operated centers, free public preschool programs, community run preschools, and free after-school programs. Each of these interventions was found to increase the uptake of childcare services. Other quasi experimental research demonstrates the importance of affordability and public services. Evidence from China's transition from a centrally planned economy to a market

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<sup>8</sup> Halim, Daniel Zefanya; Johnson, Hillary C.; Perova, Elizaveta. *Preschool Availability and Women's Employment : Evidence from Indonesia*. Washington, D.C. : World Bank Group, 2021

<sup>9</sup> S Anukriti; Dinarte Diaz, Lelys Ileana; Elefante, Marina; Montoya Aguirre, Maria; Sakhonchik, Alena. *Filling the Gaps : Childcare Laws for Women's Economic Empowerment (English)*. Policy Research working paper ; no. WPS 10492; Paper is funded by the Knowledge for Change Program (KCP) Washington, D.C. : World Bank Group.

<sup>10</sup> Clark, Shelley, Caroline W. Kabiru, Sonia Laszlo, and Stella Muthuri. "The Impact of Childcare on Poor Urban Women's Economic Empowerment in Africa." *Demography* 56, no. 4 (2019): 1247-1272..; Devercelli et al 2020

<sup>11</sup> Devercelli et al 2020

economy and the associated decline of government support for childcare led to a significant decrease in mothers' labor force participation.<sup>12</sup>

Results on whether the positive income effects of childcare on mothers' and other family members offsets the cost of care are mixed. A childcare subsidy in Uganda improved monthly household income by 19 percent, but this corresponded to only about 80 percent of the monthly costs of childcare.<sup>13</sup> In Burkina Faso, researchers observed that operating costs of childcare were similar to the earning increases for caregivers.<sup>14</sup> However, in Nicaragua, researchers' cost-benefit analysis demonstrates that the increases on mothers' work outside the home and household income increases would pay for the childcare program.<sup>15</sup> Similarly, in the DRC, community childcare cost per child was around \$16 per month, compared to a \$38 increase per month in household income.<sup>16</sup> Additional research, including longer term research in this area is needed.

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While affordable childcare generally seems to increase the use of childcare, one potential barrier to its uptake highlighted by the childcare literature is if the primary caregiver is concerned over the perceptions of the quality of care provided to children. In Egypt, preliminary findings from an evaluation of childcare vouchers only found modest take up.<sup>17</sup> Researchers estimate modest take up was in part due to concerns over the quality of care at childcare centers; additional explanations include norms around women's participation in work outside of the home and limited employment opportunities.

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<sup>12</sup> Du, Fenglian, and Xiao-yuan Dong. "Women's employment and child care choices in urban China during the economic transition." *Economic Development and Cultural Change* 62, no. 1 (2013): 131-155.

<sup>13</sup> Bjorvatn et al. 2023

<sup>14</sup> Kehinde et al 2022

<sup>15</sup> Hojman, Andres, and Florencia Lopez Boo. "Public Childcare Benefits Children and Mothers: Evidence from a Nationwide Experiment in a Developing Country." *Journal of Public Economics* 212 (2022): 104686.

<sup>16</sup> Donald, Alethia and Julia Vaillant. "Experimental Evidence on Rural Childcare Provision." *Preliminary Draft (2023)*

<sup>17</sup> Caria, Stefano, Bruno Crepon, Hala ElBehairy, Noha Fadlalmawla, Caroline Krafft, Abdelrahman Nagy, Lili Mottaghi, Nahla Zeitoun, and Souraya El Assiouty. *Child Care Subsidies, Employment Services and Women's Labor Market Outcomes in Egypt: First Midline Results*. G2LM|LIC Working Paper No. 73, 2023

## Positive Impacts for Mothers, Constrained by Gender Dynamics and Market Opportunities

Throughout the world, women are more likely than men to be the primary caregivers of children and spend the most amount of time providing unpaid care to their children. A lack of affordable childcare is widely cited as one of the biggest barriers to women's opportunities to work. As such, emerging research on childcare in LMICs tends to focus on the impact of childcare on women as the primary caregiver of children. Within the experimental literature on childcare, we find ten studies that evaluate the impact of childcare on various measures of women's economic empowerment. Studies vary on which aspects of women's economic empowerment they measure, such as labor force participation, employment, personal income, and business revenue. A smaller number of studies also investigate aspects of wellbeing, household decision-making, and intimate partner violence.

### Labor Force Participation and Employment Types

The use of affordable childcare can increase women's participation in the labor force and/or their productivity, as demonstrated by randomized evaluations in Uganda, the Democratic Republic of Congo, Burkina Faso, Nicaragua, Mozambique, Kenya, and Chile. Additional quasi experimental research from China, Indonesia, and Ecuador also underscores this finding. Access to affordable childcare may also enable women to shift employment types or pursue better work opportunities. However, the type and amount of employment they take on varies, possibly in response to the local labor market conditions.

In Uganda, childcare subsidies led to a shift in employment type, with most women moving from wage employment to self-employment.<sup>18</sup> And in Burkina Faso, mobile childcare centers increased the likelihood of women gaining income from salaried work by 0.88 percentage points.<sup>19</sup> In Kenya, affordable childcare enabled single women, who were likely already employed, to shift from work with flexible hours, but lower pay, towards jobs with fixed hours and higher pay.<sup>20</sup>

### Income

Childcare can but does not always improve mothers' personal income or business revenue, though key considerations such as family composition and offering childcare more fully aligned with hours women work may matter.

Six studies examined the impact or association of childcare on personal income or women's business revenue. Four found that childcare increased mothers' income or revenue--in Uganda<sup>21</sup>, the Democratic Republic of Congo, Burkina Faso, and Kenya. Two studies found

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<sup>18</sup> Bjorvatn et al. 2023

<sup>19</sup> Kehinde et al 2022.

<sup>20</sup> Clark et al 2019

<sup>21</sup> Though note this was not for women who lived with a male partner

childcare did not have an impact on income in India and Chile.<sup>22</sup> In India, researchers suggest limited effects overall and no impact on income could potentially be attributed to limited access to employment in rural areas and patriarchal norms.<sup>23</sup>

Other quasi experimental research supports the findings above. In China, researchers also found a positive association between household income per capita and preschool attendance. In Indonesia, researchers suggest that childcare did not have an impact on income, but this may be because preschools operate for only 3 hours a day, which may not enable women to work in a job with longer time commitments which may increase income.<sup>24</sup>

## Gender Norms and Household Composition

Gender norms and limited opportunities in the labor market appear to be significant barriers that may block the positive impacts of childcare provision on the economic benefits for women,<sup>25</sup> as demonstrated by studies in India and Egypt.<sup>26</sup>

As evidence from Uganda and Kenya suggests, family composition may mediate the effect of childcare on mothers' employment and income, though this area is under-researched. In Uganda, childcare subsidies largely increased labor supply and business income from self-employment for single mothers, but researchers found that there was no impact on labor supply or income for women who lived with a male partner.<sup>27</sup> In this instance, the pay gap may have made it more profitable for men to take on more paid work, while women used the time childcare freed up for them for other household duties. Evidence suggests single women increase productivity in their businesses. In Kenya, vouchers had a strong impact on employment among married mothers.<sup>28</sup> No significant improvement in employment was found among single mothers, who were already more likely to be employed. However, single mothers were able to reduce the number of hours they worked without reducing earnings by switching to jobs with fixed hours.

## Other Aspects of Women's Empowerment and Gender Dynamics

Available evidence from Burkina Faso, the DRC, Kenya, and Uganda<sup>29</sup> suggests that childcare availability may not affect other components of women's empowerment and gender dynamics within the household. In Burkina Faso, while childcare led to improved measures of

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<sup>22</sup> Martínez and Peticar 2017; Nandi Arijit, Parul Agarwal, Anoushaka Chandrashekar, and Sam Harper. "[Access to Affordable Daycare and Women's Economic Opportunities: Evidence from a Cluster-Randomised Intervention in India.](#)" *Journal of Development Effectiveness* 12, no. 3 (2020): 219-239.

<sup>23</sup> Arijit et al. 2020

<sup>24</sup> Halim, Daniel Zefanya; Johnson, Hillary C.; Perova, Elizaveta. [Preschool Availability and Women's Employment: Evidence from Indonesia.](#) Washington, D.C. : World Bank Group, 2021

<sup>25</sup> J-PAL Policy Insight. [Access to Childcare to Improve Women's Economic Empowerment.](#) Cambridge, MA: Abdul Latif Jameel Poverty Action Lab, 2023.

<sup>26</sup> Stefano et al. 2023 ; J-PAL Policy Insight. 2023.

<sup>27</sup> Bjorvatn et al. 2023

<sup>28</sup> Clark et al 2019

<sup>29</sup> Ajayi, Sao and Kassoubé, 2022; Bjorvatn et al. 2023; Clark et al. 2019; Donald and Vaillant 2023.

economic empowerment and psychological wellbeing, there was no impact on household decision-making and the division of unpaid care and labor.<sup>30</sup> Likewise, in Kenya, childcare did not impact household decision-making beyond decisions around children's health or greater economic agency.<sup>31</sup> In the DRC, there was no impact on how housework was shared or changes in gender attitudes.<sup>32</sup>

Two studies measured childcare's effect on intimate partner violence and found mixed results. Researchers evaluating childcare subsidies in Uganda did not find an impact of the vouchers on intimate partner violence.<sup>33</sup> In India, childcare had modest reductions in intimate partner violence, but did not have effects on measures of agency.<sup>34</sup> While more research may be needed on this topic in general and in other contexts, complementary interventions to support women's agency, decision-making, and reduce violence may be necessary.

## Potential Impacts on Other Adult Family Members

Access to childcare may improve outcomes for other adult family members who may provide significant amounts of care to children. However, there is limited research on the impact of childcare on non-mother adult household members. While mothers typically spend the most time caring for children, other family members provide significant amounts of care for children. Among the ten studies identified in this review, only four report findings on adult household members beyond mothers, but this evidence is promising.

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*Research from Uganda, Mozambique, and the DRC suggests that fathers or male partners can also economically benefit from affordable childcare access. In multi-parent households, affordable childcare may enable fathers or male partners to increase their labor supply and income and may also enable them to find other more desirable occupations.*

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### Fathers or Mothers' Male Partners

While women disproportionately provide childcare within the household, fathers or male partners are also primary or significant caregivers. Three studies report findings on fathers or male partners.

Research from Uganda, Mozambique, and the DRC suggests that fathers or male partners can also economically benefit from affordable childcare access. In multi-parent households, affordable childcare may enable fathers or male partners to increase their labor supply and income and may also enable them to find other more desirable occupations.

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<sup>30</sup> Ajayi et al 2022

<sup>31</sup> Clark et al 2019

<sup>32</sup> Donald, Alethia and Julia Vaillant. "Experimental Evidence on Rural Childcare Provision." *Preliminary Draft* (2023)

<sup>33</sup> Bjorvatn et al. 2023

<sup>34</sup> Richardson, Robin A., Sam Harper, Norbert Schmitz, and Arijit Nandi. "[The Effect of Affordable Daycare on Women's Mental Health: Evidence from a Cluster Randomized Trial in Rural India.](#)" *Social Science & Medicine* 217 (2018): 32-41.



In Uganda, childcare subsidies led to a 36 percent increase relative to the control group mean for fathers' income and increased the likelihood of being in wage employment.<sup>35</sup> In the DRC, researchers found that childcare positively affected husbands' participation in economic activities.<sup>36</sup> Husbands in households offered access to childcare spent significantly more time farming crops destined for sale and engaged in non-agricultural self-employment. In Mozambique, early findings showed a 10 percent increase in the likelihood that fathers would report having worked in the previous 30 days in households with children attending preschool.<sup>37</sup>

## Grandparents

One study evaluated the impacts of childcare on grandparents, who are often significant caregivers for children within the household. In Brazil, where maternal and paternal labor force participation was already high, labor force participation within the household increases were driven by grandparents, particularly grandmothers.<sup>38</sup> Free childcare enabled grandparents to engage in productive activities and increase their income. Specifically, grandparents became 20 percentage points more likely to be employed.

## Impact for the Household

Four studies report the effect of childcare on household income, and among those, three out of four suggest that childcare can increase household income. Studies from Uganda, the Democratic Republic of Congo, and Brazil find that overall household income tends to increase when childcare is accessible and affordable.<sup>39</sup> However, in India, where household income did not increase, there was limited access to employment and negative social norms around women working.<sup>40</sup>

## Impact on the Target Child: Quality Programs Benefit Child Development

Among the ten relevant studies we identify and review within the rigorous childcare literature in LMICs, only six evaluate outcomes on children. Within the childcare literature that reports outcomes for both children and parents, we find that children's participation in center-based childcare can improve children's early learning and development outcomes, but the quality of care is important for the program to achieve impact on children. Rigorous evaluations of

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<sup>35</sup> Bjorvatn et al 2023.

<sup>36</sup> Donald and Vaillant 2023.

<sup>37</sup> Martinez, Nadeau and Pereira 2012.

<sup>38</sup> Attanasio, Orazio, Ricardo Paes de Barros, Pedro Carneiro, David K. Evans, Lycia Lima, Pedro Olinto, and Norbert Schady. *Public Childcare, Labor Market Outcomes of Caregivers, and Child Development: Experimental Evidence from Brazil*. No. w30653. National Bureau of Economic Research, 2022.

<sup>39</sup> Attanasio et al. 2022; Bjorvatn et al. 2023; Clark et al. 2019; Donald and Vaillant 2023.

<sup>40</sup> Arijit et al. 2020.

interventions providing care and early education for children from 0-6 found that programs improve some, though often not all of the various ECD outcomes measured.

In Uganda, the DRC, Mozambique, Brazil, Burkina Faso, and Nicaragua childcare interventions using various models led to improvements in aggregate scores of child development, motor skills, literacy and numeracy, cognitive and problem-solving abilities, or vocabulary enhancements, particularly for younger children. In Uganda, however, effects on early learning did not persist four years after the one year childcare intervention started. Researchers hypothesize the lack of persistent effects on learning may have either been a result of Uganda's COVID-19 pandemic related school closures for 83 weeks or children in the comparison group catching up.<sup>41</sup>

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*Among the six studies in the childcare literature reporting outcomes on children, all have a positive impact or mixed impacts on intended child-level outcomes.*<sup>42</sup>

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## **Additional Research from the Early Childhood Education Literature**

Given that much of childcare takes the form of early education and in particular pre-primary education, the growing evidence base on these interventions, which tends to just focus on children, is highly relevant to the discussion of childcare. We highlight key findings from a meta-analysis, systematic review, additional experimental studies, and a report by the Global Education Evidence Advisory Panel to provide additional insights.

A recent systematic review of 71 studies from 33 LMIC countries finds that childcare (defined as center-based childcare programs such as daycare, preschool, and kindergarten) tends to positively impact early childhood development.<sup>43</sup> In reviewing all child development outcomes from care interventions, researchers find that 81 percent of the estimated impacts are positive. Childcare appears to be particularly significant for socio-emotional well-being and cognitive outcomes -- the authors find that the highest proportion of positive results is on socio-emotional wellbeing at 86 percent having positive point estimates, and cognitive outcomes with 83 percent of results demonstrating positive point estimates.

Research across high-, high-, middle- and low-income countries has also shown that access to high-quality pre-primary education has the potential to lead to long-term economic benefits if children attend regularly and the quality of care is better than what children would

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<sup>41</sup> Bjorvatn, Kjetil, Denise Ferris, Selim Gulesci, Arne Nasgowitz, Vincent Somville, and Lore Vandewalle. "[Long-Term Effects of Preschool Subsidies and Cash Transfers on Child Development: Evidence from Uganda](#)" In *AEA Papers and Proceedings*, vol. 114, pp. 459-462. 2014 Broadway, Suite 305, Nashville, TN 37203: American Economic Association, 2024.

<sup>42</sup> Ajayi, Sao and Kassoubé, 2022; Attanasio et al 2022.; Bjorvatn et al. 2023; Donald, Alethia and Julia Vaillant. "Experimental Evidence on Rural Childcare Provision." *Preliminary Draft* (2023); Hojman and Lopez Boo 2022; Martinez, Sebastian, Sophie Naudeau, and Vitor Azevedo Pereira. [Preschool and Child Development under Extreme Poverty: Evidence from a Randomized Experiment in Rural Mozambique](#). World Bank Policy Research Working Paper 8290, World Bank, 2017.

<sup>43</sup> Evans, David K. Pamela Jakiela, and Amina Mendez Acosta. [The Impacts of Childcare Interventions on Children's Outcomes in Low- and Middle-Income Countries: A Systematic Review](#). CGD Working Paper 676. Washington, DC: Center for Global Development, 2024.

experience in its absence.<sup>44</sup>

A meta-analysis of 50 studies conducted across 19 countries found that pre-primary education increased children's academic and social-emotional learning, with estimates persisting beyond the pre-primary period, and with favorable benefit-cost ratios.<sup>45</sup> Interventions that aim to improve the quality of childcare, like combining early childhood teacher training with center-based care, or improving pedagogy can improve early childhood development outcomes and may have stronger impacts than interventions that increase access alone.

In addition to the quality of care provided, children's attendance can also affect impact. For example, in Chile, teacher professional development for preschool teachers was found to improve classroom quality, but did not have an impact on child outcomes; additional research found that chronic absenteeism was a key concern in these preschools and the intervention did improve outcomes for children who were not frequently absent.<sup>46</sup> The potential benefits of childcare might only be realized if children engage frequently and consistently with the service.<sup>47</sup>

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*Research across high-, high-, middle- and low-income countries has shown that access to high-quality pre-primary education has the potential to lead to long-term economic benefits if children attend regularly and the quality of care is better than what children would experience in its absence.*

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Finally, childcare services can also play an important role in relation to children's health and nutrition. Preschool and other educational interventions often offer meals and promote handwashing and self-care practices related to hygiene and health. In Uganda, researchers found that a preschool subsidy offered to families led to an improvement of anthropometric outcomes three years after the intervention, even amidst the COVID-19 pandemic and Uganda's strict lockdown.<sup>48</sup> In Ghana, a program in the country's kindergarten classes was found to increase children's middle-upper arm circumference, a key indicator of malnutrition.

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<sup>44</sup> Banerjee, Abhijit, Tahir Andrab, Rukmini Banerji, Susan Dynarski, Rachel Glennerster, Sally Grantham-Mcgregor, Karthik Muralidharan et al. *2023 Cost-effective Approaches to Improve Global Learning-What does Recent Evidence Tell Us are Smart Buys for Improving Learning in Low-and Middle-income Countries?*. GEEAP, 2023.

<sup>45</sup> Holla, Alaka, Magdalena Bendini, Lelys Dinarte, and Iva Trako. *Is Investment in Preprimary Education Too Low?* World Bank Policy Research Working Paper 9723, 2021.

<sup>46</sup> Yoshikawa, Hirokazu, Diana Leyva, Catherine E. Snow, Ernesto Treviño, M. Barata, Christina Weiland, Celia J. Gomez et al. "Experimental Impacts of a Teacher Professional Development Program in Chile on Preschool Classroom Quality and Child Outcomes." *Developmental Psychology* 51, no. 3 (2015): 309.

<sup>47</sup> Arbour, Mary Catherine, Hirokazu Yoshikawa, John Willett, Christina Weiland, Catherine Snow, Susana Mendive, M. Clara Barata, and Ernesto Treviño. "Experimental Impacts of a Preschool Intervention in Chile on Children's Language Outcomes: Moderation by Student Absenteeism." *Journal of Research on Educational Effectiveness* 9, no. sup1 (2016): 117-149. doi:10.1080/19345747.2015.1109013.

<sup>48</sup> Bjorvatn, Kjetil, Denise Ferris, Selim Gulesci, Arne Nasgowitz, Vincent Somville, and Lore Vandewalle. "Long-Term Effects of Preschool Subsidies and Cash Transfers on Child Development: Evidence from Uganda" *In AEA Papers and Proceedings*, vol. 114, pp. 459-462. 2014 Broadway, Suite 305, Nashville, TN 37203: American Economic Association, 2024.

Results suggest that this effect was driven by improved WASH practices in the schools.<sup>49</sup> In India, a study conducted in the government's Integrated Childhood Development Services (ICDS) found that adding a half-time worker to the early childhood centers reduced stunting and malnutrition (in addition to improving math and language scores).<sup>50</sup>

Even high-quality childcare interventions can pose a threat to children's health, though, through increased daily contact with other children and the transmission of infectious disease. In the study on community preschools in Mozambique, caregivers reported that children attending the preschools were 14.5 percentage points more likely to be sick in the last four weeks - in most cases, having had a cough.<sup>51</sup> The study did not find significant effects on other caregiver-reported indicators of illness, and the researchers argue that their findings potentially reflect the healthy maturation of children's immune systems, and not necessarily a negative effect on child health. Overall, very few childcare studies assess child health outcomes. There can be some challenges in reporting and assessment. For example, the study of a program in Ghanaian kindergarten classrooms found a slight increase in caregiver reports of chronic health problems. Given that these conditions are unlikely to develop in relation to the short-term period covered by the study, a possible explanation is that as a result of the program, caregivers became more aware of child health and illness symptoms.<sup>52</sup>

## Impacts on Other Children in the Household

Access to childcare may have impacts for other children in the household who are not enrolled in the childcare intervention but spend significant time caring for younger children. Childcare appears to free up time spent on childcare and can enable older children to devote more time on educational or employment activities. Only three of the studies from the childcare literature examine impact on older children, from Brazil, Mozambique, and Uganda, with Brazil and Mozambique demonstrating positive effects and Uganda having no effect for childcare on its own, but a positive effect when a childcare subsidy was coupled with a cash grant to mothers.<sup>53</sup>

In Mozambique, childcare had positive effects on older, ineligible siblings ages 10-14.<sup>54</sup> These siblings presented a 4.9 percentage point increase in the likelihood that they would be enrolled in school and also spent nearly three additional hours on schooling and homework. In Brazil, adolescent siblings 15 years and above were more likely to be employed.<sup>55</sup> Researchers found that childcare in Uganda alone did not affect attendance or enrollment in school for older siblings, but when childcare subsidies were combined with a cash grant, there was a reduction in school absenteeism of 38 percent.<sup>56</sup>

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<sup>49</sup> Amadu, Salifu, et al. *Improving Early Childhood Development in Rural Ghana through Scalable Low-Cost Community-Run Play Schemes: Baseline Report (No. R144)*. Econstor, 2018.

<sup>50</sup> Ganimian, Alejandro J., Karthik Muralidharan, and Christopher R. Walters. "Augmenting state capacity for child development: Experimental evidence from India." *Journal of Political Economy* (2021).

<sup>51</sup> Martinez et al 2017

<sup>52</sup> Amadu et al 2018

<sup>53</sup> Attanasio et al. 2022.; Bjorvatn et al. 2023; Martinez, Naudeau, and Pereira. 2017.

<sup>54</sup> Martinez, Naudeau, and Pereira. 2017.

<sup>55</sup> Attanasio et al 2022

<sup>56</sup> Bjorvatn et al. 2023

A growing body of evidence highlights the role of older siblings and in particular older girls as caregivers for younger children, yet this issue is often overlooked with an exclusive focus on mothers or parents as caregivers.<sup>57</sup> The broader evidence base from early education suggests high potential for positive spillovers of childcare on both older and younger siblings.

## Future Directions and Research Gaps

Key policy relevant research gaps exist, and filling these may aid in improving existing programs, developing new services, informing future policies on childcare, and aligning fields of intervention and research.

More research on childcare interventions should be undertaken from a two- or multi-generational perspective. Among the ten studies in the childcare literature we reviewed for this publication, only six focus on two or more generations of family members. Integrating a multi-generational perspective in childcare programming, policy, and research can lead to a better understanding of its true impact on multiple beneficiaries. Moreover, cost-effectiveness analyses for childcare should consider the full range of benefits provided by childcare beyond its impact on enrolled children or mothers alone.

Future research should aim to explore how childcare might impact eligible children, their primary caregivers and other household members, such as older siblings and grandparents. While it is promising that some studies are incorporating other family members in this analysis, more is needed to ensure the field can speak to the impact of childcare on beneficiary children, other children in the household, and primary and secondary caregivers.

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Future research should also explore the cost-effectiveness and impact of different models of childcare in LMICs. Development and innovation are needed to find effective and sustainable ways to meet the needs of all families, including the most vulnerable, across urban vs. rural contexts, differing family and community settings, and in relation to existing public services. A

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<sup>57</sup> Cuartas, Jorge, Joshua Jeong, Catalina Rey-Guerra, Dana Charles McCoy, and Hirokazu Yoshikawa. "Maternal, paternal, and other caregivers' stimulation in low-and-middle-income countries." *PLoS One* 15, no. 7 (2020): e0236107.



critical concern is the quality of care provided to children and the potential tension between issues such as quality, affordability, and coverage. Research on childcare can continue to contribute to the field of early childhood development, addressing issues such as universality, equity, children's school readiness, and transitions between levels and services, as well as women's economic empowerment and issues such as women's livelihoods activities and career pathways. In relation to the latter, research should consider not just economic outcomes just as employment and income, but also other areas such as mental health, agency, and intimate partner violence. Ultimately, a multigenerational perspective on childcare aims to advance the wellbeing and development of all members of the family.

Childcare providers such as teachers, other 'caregivers,' and/or business owners may also benefit from other aspects of childcare intervention such as entrepreneurship, income generation, and work opportunities, though there is little rigorous evidence to date on this aspect of childcare. Future investigation is needed to determine how childcare interventions can be a viable employment and entrepreneurial opportunity for service providers, while also offering quality care for children and improving quality for children. Moreover, additional research that supports policymakers with how best to identify, train, and support a workforce for implementation at scale is a critical concern.

By adopting a comprehensive approach, policymakers and practitioners can identify, design, and develop effective childcare strategies that contribute to positive outcomes for children, parents, families, communities, and society as a whole.

## Annex

**Table 1: Summary of studies that assess the impact of childcare on two or more generations in LMICs**

Country	Intervention	Impact on Children	Impact on Mothers	Impacts on Fathers or Grandparents	Impacts on the Household
<i>Brazil</i> <sup>i</sup>	<p>Large-scale publicly provided childcare for children 0-3 in Rio de Janeiro.</p> <p>9.5 hours of care on weekdays, including food.</p>	<p>Improved nutritional intake and gains in height-for-age and weight-for-age measures. Anthropometric impact was larger for girls.</p> <p>Improvement in cognitive development through 4 years after intervention, but no gains after 4 years.</p> <p>Adolescent siblings 15 years and above were also more likely to be employed.</p>	<p>Positive impacts on labor market outcomes for adults (this is not disaggregated by gender), but this is driven by grandparents and adolescent siblings.</p> <p>Lack of average impacts on labor market outcomes were because most parents were already working before winning the childcare lottery.</p> <p>Decline in parenting stress and improved attitudes towards the child.</p>	<p>Labor force participation increases driven by grandparents (particularly grandmothers).</p>	<p>Significantly higher household income one and four years after the lottery, but not after 7 years when children were old enough for public school.</p>

<i>Burkina Faso</i> <sup>ii</sup>	<p>Community-based mobile childcare centers for children 0-6 integrated within an urban public works program. Operational during hours of public works program. Centers operated by public works employees who received 3 days of trainings. Food also provided.</p> <p>Estimate monthly cost \$16.6 per child if used at full capacity; in practice the operating costs were \$25.2</p>	<p>Increased use of childcare centers. Improved development scores for gross and fine motor skills, but no impact on children's language scores.</p>	<p>Improved employment outcomes, most strongly for women with children 0-2 years old, and especially concentrated in increased salary work. However, the operating costs for the childcare centers were similar to earnings increases. Positive impact on women's financial resilience and savings. Strongest economic effects for women who work in the childcare centers.</p> <p>Increase in psychological wellbeing, but no change in participation in household decision-making and gender attitudes.</p>	<p>Not reported.</p>	<p>No change in intrahousehold division of unpaid care and labor.</p>
The DRC <sup>iii</sup>	<p>New community-based daycare centers in rural villages for children 2-6 years old. Centers operated for six hours a day five days a week for one year.</p> <p>Lunch co-funded by the center and parents.</p> <p>The cost for each center was \$144 a month, and around \$16 per child per month.</p>	<p>Gains in ECD outcomes, especially for younger children between 6 to 48 months. Younger children experience a 7% increase in their developmental status. No significant impact on older children.</p> <p>Results for children in higher quality centers are mixed. Researchers found a higher prevalence of altruistic behavior and gender egalitarianism among children who attended higher-quality centers. However, other general development scores are not higher at higher quality centers, which may suggest that increases in income at the household also contributes to improved development.</p>	<p>Increased engagement in commercial activities (especially agriculture), leading to gains in productivity. Increased engagement does not come at the cost of sleep or leisure.</p> <p>Women's monthly revenue increases by 28.7%. Increase in women's subjective wellbeing, concentration and sense of control, along with decrease in need to multitask while farming.</p>	<p>Husbands increase engagement in commercial activities and are more likely to participate in entrepreneurship and commercial farming.</p>	<p>Increase in household monthly revenue by 34.2%, reduction on time spent on childcare.</p> <p>Significant gains in agricultural yields on household plots, particularly on those where women have decision-making power over crop revenue.</p> <p>No changes in food security, gender attitudes, or how housework is shared.</p> <p>Gains in household income are higher than the cost of childcare.</p>

<i>Mozambique</i> <sup>iv</sup>	<p>Community based preschool providing part-time care for children 5 days a week. Enrollment for childcare was limited for children 3-5, though age was not always strictly enforced. No feeding program was included.</p> <p>\$3 per child per month</p>	<p>Preschoolers scored higher than non-preschoolers on a comprehensive child development screening. Significant improvements in cognitive development and problem-solving abilities, communication, receptive vocabulary, fine-motor skills, and socio-emotional and behavioral outcomes for children aged 3-5. No improvement for language. Increased likelihood of primary school enrollment for preschoolers. Effects were larger for children from vulnerable households. No effects on stunting or wasting. Increased likelihood of being sick in the last four weeks, but this may be due to children's developing immune system.</p> <p>Modest positive effects on older, ineligible siblings (aged 10-14). These siblings were more likely to be enrolled in school. Older children spent fewer hours per week providing care for children and spent nearly three additional hours on schooling and homework activities.</p>	<p>Primary caregivers experienced an increase in their labor supply. Increased women's employment.</p>	<p>A significant increase in father's labor force participation.</p>	<p>Not reported</p>
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Nicaragua <sup>v</sup>	<p>Free half-day public center-based childcare for children ages 0-4 in poor urban areas. A meal was offered and micronutrients were available for children 6-24 months.</p> <p>\$147 per child for two years</p>	<p>Large and positive impacts on socio-emotional skills, however there was no impact on language. Researchers suggest the lack of impact on language may have resulted from the curriculum's prioritization of social and personal development over language development or lack of quality individual interactions with educators given more children to fewer teachers that were recommended.</p>	12 percentage points increase on mother's works.	Not reported.	Not reported
Uganda <sup>vi</sup>	<p>Full subsidy for childcare centers in the community for children 3-5 years old for one year. Food provided.</p> <p>Total cost on average was \$111.2 per year</p>	<p>Increase in full-day enrollment of target children. Large and positive impact on child development approximately one year later.<sup>58</sup> Improvements to children's anthropometric outcomes persisted at the long term follow up, however, effects on early learning did not persist. Researchers hypothesize the lack of persistent effects on learning may have either been a result of Uganda's COVID-19 pandemic related school closures for 83 weeks or children in the comparison group catching up.</p> <p>Childcare alone does not impact attendance or enrollment in school for older siblings. No effect on violence against children within the household.</p>	<p>Childcare increased mothers' revenues from self-employment and business profits, without an increase in labor supply, productive assets, or number of employees. Mothers are also more likely to be employed. Family composition matters for the subsidy's impact. Labor supply and business income from self-employment largely increases for single mothers, but there is no impact on labor supply or income for women who lived with a male partner. Evidence suggests single women increase productivity in their businesses. Increased levels of happiness and life satisfaction also were reported.</p>	<p>Among couples, the childcare subsidy increased fathers' income and labor supply from wage work. Among fathers, the likelihood to be in wage employment increased. There was an increase in income.</p>	<p>Large increases in household revenue and profit. Increase in consumption and food security. No impact on domestic violence.</p> <p>Researchers cite the immediate returns in income are lower than the cost of formal childcare.</p>

<sup>58</sup> An alternative intervention providing equal-value cash grants instead of childcare subsidies led to part-time childcare enrollment instead of full-time, but did not increase childcare attendance to the same extent as the subsidies, and did not significantly impact child development scores (Bjorvatn et al. 2023).



*Table 2: Summary of studies that assess the impact of childcare just on women in LMICs*

<i>Country</i>	<i>Intervention Description</i>	<i>Impact on Mothers</i>
Chile <sup>i</sup>	After school public childcare for children 6-13 across the country	Women's employment increased by 5 percent and labor market participation increased by 7 percent. The intervention did not impact women's monthly income. Increase of household educational expenditure and use of free preschool for younger children
Egypt <sup>ii</sup>	Childcare vouchers or childcare vouchers + employment services in greater Cairo for women of children one through five years old.	Midline findings suggest a modest take-up of vouchers, especially those that covered a higher percentage of cost. Vouchers or vouchers + employment services did not increase job searching behavior. Researchers estimate this potentially due to norms around childcare and women's work, limited employment opportunities, and concerns around the quality of childcare provided in centers.
India <sup>iii</sup>	Access to full-time community-based daycare with meals, education, and linkage to health services operated by a non-governmental organization, including food and basic education to children one to six years old	<p>Reduced time spent on childcare. Limited impacts on employment and no impacts on income. Increased likelihood of working for cash and the likelihood that women spent time working in the last 24 hours, but no effects on labor market outcomes such as probability of working in the past seven days or year-round. Researchers suggest that limited effects could be due to limited access to employment in rural areas and patriarchal norms.</p> <p>Modest reductions in mental distress and intimate partner violence. No change in women's agency or work burden.</p>
Kenya <sup>iv</sup>	Vouchers offered to mothers of young children for subsidized childcare in Nairobi	Increased use of childcare among women who received vouchers. Women who were offered vouchers were more likely to be employed. Average number of hours worked did not increase. Vouchers had a strong impact on employment among married mothers. No significant improvement in employment among single mothers who were already more likely to be employed. Single mothers were able to reduce the number of hours they worked without reducing earnings by switching to jobs with fixed hours. On average, mothers who were offered vouchers earned more per month (no differences between married and single mothers). No impact found on household decision making or greater economic agency beyond being more likely to make decisions about child's health.

Table 1. Summary of studies that assess impact of childcare on two or more generations in LMICs

- i Attanasio et al 2022
- ii Ajayi et al 2022
- iii Donald and Vaillant 2023
- iv Martinez, Naudeau & Pereira, 2013; Martinez, Naudeau & Pereira 2017
- v Hojman and Boo 2022
- vi Bjorvatn et al 2023; Bjorvatn et al 2024

Table 2. Summary of studies that assess impact of childcare just on women in LMICs

- i Martinez and Pertica 2017
- ii Caria et al 2023
- iii Nandi et al 2020; Richardson et al 2018
- iv Clark et al 2019

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